Elder Planning Counselor Designation Program

DESK REFERENCE

Module 1 - Aging & Health Issues
Twelfth Edition V2

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Module 1 - Aging & Health Issues

In this module, you will find the following chapters:

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Elder Planning Counselor Designation Program

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Chapter 1

Situation Critical – Our Population is Aging

1 - 1 KEY OBJECTIVE OF THIS CHAPTER

This chapter focuses on the dramatic aging of the world's population, with emphasis on Canada. We will look at both the causes of this demographic shift and at some of its consequences.

We will also gain some perspective on Canadian elders - on their health, their financial well-being, their concerns and their values. This information is of vital interest to anyone who wants to connect with Canadian elders in a meaningful and compelling fashion.

1 - 1.1 How Will This Objective Be Achieved?

We will review a myriad of statistical data in order to "profile" the elder population. In addition, we will look at the social, psychological and physiological factors that have helped to shape elder attitudes and thinking.

1 - 2 INTRODUCTION

During the first half of the 21st century, nothing will have as great an impact on our society as the dramatic aging of our population. The demographic shift we are about to witness will touch virtually every aspect of society. It will force us to make dramatic changes to our health care system. It will bring into question the viability of many of our cherished social programs. And it will alter both the workforce and the broader economy. And yet, we remain largely unprepared for the "silver" tsunami that is rapidly approaching shore.

1 - 2.1 Definition of an Elder

According to the Canadian Oxford Dictionary, a senior citizen is "an elderly person, especially a person over 65."

Most government benefits and programs for elders are available only to people who are 65 years of age or older.

In some cases, limited benefits may be available as early as age 60. And many businesses offer special programs, services and pricing to people as young as 50. So, at what age does one officially become an elder?

It is largely a matter of ongoing debate, and most of the current definitions of elder can easily be contested. Many of the names given to this group are also being rejected, challenged and changed. Even the Government of Canada is systematically changing the term “senior” to “older adult.”

Some would argue that increases in life expectancy would justify reserving the term elder for individuals who are much older than 65 (just as 50 is the new 40, 75 may be the new 65). Others, meanwhile, would argue that a steady decline in the average age of retirement would justify a move in the other direction.

It is also important to remember that "elder" is a very broad term. It should go without saying that the issues, concerns and circumstances of a 65-year-old are dramatically different from those of an 85 or 90-year-old.

The Canadian Initiative for Elder Planning Studies considers anyone who is 55 years of age, or older, to be an elder. By this definition there were 13.2 million elders in Canada in 2024, representing roughly 32.4% of the total population.

According to Statistics Canada's population projections, in less than 10 years (2031) over a third of Canada's population will be 55 years of age or older.

1 - 3 DEMOGRAPHIC TRENDS

For most of human history, life was difficult, brutish and short. Human populations were at the mercies of famines, disease, hostilities, the vagaries of animal herds and changing weather and climatic conditions.

The infant mortality rate was extremely high - likely in the area of 500 deaths per 1,000, and life expectancy at birth rarely exceeded 10 or 12 years. Even with exceptionally high birth rates (as high as 80 per 1,000) population growth was, at best, anaemic.

By 1 A.D. world population reached approximately 300 million people. More than 16 centuries later, in 1650, world population had risen to roughly 500 million. This represented a paltry annual population growth rate of less than 0.0004%.

But then something remarkable happened. Even in the face of a precipitous decline in the birth rate per 1,000, world population began to grow at an astonishing rate.

Table 1-1 World Population Growth (2024)

Year	Population	Births per 1,000
1 A.D.	300,000,000	80
1200	450,000,000	60
1650	500,000,000	60
1750	795,000,000	50
1850	1,265,000,000	40
1950	2,516,000,000	38
1995	5,760,000,000	31
2024	8,100,000,000	18

CIA World Factbook – 2024

In the one-hundred-year period between 1650 and 1750 world population grew by nearly 300 million people - significantly more growth than what was experienced in the previous 1600 years!

Between 1850 and 1950 world population doubled with the addition of more than a billion people. And then, in the 45 years that followed (1950-1995) world population more than doubled again.

In 2023, world population exceeded eight billion and according to a United Nation's study ("World Population Prospects") it will reach 9.8 billion by the year 2050 and 11.2 billion by the year 2100.

1 - 3.1 Life Expectancy at Birth

The fact that world population began to grow exponentially while the world birth rate was dropping precipitously is counter intuitive. All things being equal, a drop in the birth rate should produce a reduction in population growth.

But all things are not equal. During the past 200 years there has been a startling increase in human life expectancy - particularly in the developed world and that includes decreased infant mortality.

The following chart tracks Canadian life expectancy at birth since 1850:

Table 1-2 Canadian Life Expectancy at Birth (2024)

Year	Life Expectancy (in years) at Birth
1850	39.0
1900	56.0
1950	67.0
1996	78.6
2024	84.0

In less than 200 years, Canadian life expectancy at birth has more than doubled to 84.0 years. Canadian females - it should be noted - have a life expectancy at birth that is roughly four years longer, on average, than their male counterparts (85.1 years versus 81.3 years). While the less developed world has not experienced the same absolute level of improvement in life expectancy at birth - it has made significant inroads in recent years. Between 1950 and 2024, worldwide life expectancy at birth went from 46.5 years to 73.3 years - an astonishing 27-year improvement in roughly three generations.

The following chart ranks current life expectancy at birth figures for a cross section of countries.

Table 1-3 Life Expectancy at Birth (2024) - Country Rankings

Country	Life Expectancy (in years) at Birth	Ranking
Monaco	89.6	1
Japan	85.0	4
Canada	84.0	6
Australia	83.3	13
United States	80.8	48
India	67.7	192
Chad	59.6	222
Afghanistan	54.1	227
World Average	**73.3**	

CIA World Factbook, 2024

Further improvements in life expectancy at birth are anticipated. According to United Nations demographers' worldwide life expectancy at birth should reach 76 years by the middle of the 21st century. It is important to note that life expectancy increases as we age. The following chart illustrates the life expectancies of Canadian men and women at ages 65, 75 and 85.

Table 1-4 Canadian Life Expectancy (2024)

Current Age	Male Life Expectancy (Age)	Female Life Expectancy (Age)
65	85.6	88.0
75	88.1	89.9
85	92.1	93.3

OSFI Mortality Projections, Canada, 2024.

1 - 3.2 Factors Driving Improvements in Life Expectancy

Improvements in worldwide life expectancy are largely attributable to five things:

1. **Lower rates of infant mortality** – In 2024 the worldwide infant mortality rate is at a low of 25.5 deaths per thousand according to Macrotrends. In the developed world, infant mortality rates as low as 1-2 deaths per thousand are common. In Canada there is room for improvement. Our infant mortality rate is currently 4.4 deaths per thousand – only 42nd lowest in the world (and behind such countries as Russia, Cuba and Belarus).

2. **Better nutrition** - Starting with the widespread introduction of the potato into human diets approximately 300 years ago, huge strides have been made with respect to diet quality. We have access to a healthier, substantially more varied diet than any previous generation. As recently as 100 years ago, it was unheard of to have access to fresh fruits and vegetables - at reasonable cost - 12 months of the year.

3. **Improved sanitation** - For most of us basic sanitation is an afterthought. We forget that two short centuries ago open sewers ran through the streets of major cities and clean drinking water was far from a given.

4. **A safer environment** - In the past 50 years there have been many innovations when it comes to safety.

   Among them: the widespread use of household fire and carbon monoxide alarms; the removal of lead from gasoline, household paints and plumbing supplies; the introduction of automobile seat belts and air bags; and the banning of such toxic substances as DDT and Asbestos.

5. **Superior health care** - From antibiotics to immunization programs, there has been a steady stream of life saving healthcare breakthroughs during the past 100 years. And despite the deficiencies of the current system, the health care we receive today is still dramatically better than what was available 10, 20 or 30 years ago.

1- 3.3 Median Age

Declining birth rates and increases in life expectancy have impacted the median age (the point at which one half of the population is younger and one half is older) in most countries. In Canada, the median age rose to 42.4 in 2024 - an increase of 16.2 years (or more than 50%) since 1971.

Table 1-5 Median Age in Canada 1911 – 2024

Year	Median Age
1911	23.8
1931	24.7
1951	27.0
1971	26.2
1991	33.5
2001	37.6
2024	42.4

With a median age of 42.4, Canada is in the middle of the pack as compared to other developed nations. Japan (49.5), Italy (48.1), and Germany (46.7) have median ages that are significantly higher. The United States (38.5) and Australia (37.9) have median ages that are lower. And the United Kingdom (40.6) and France (42.4) are largely on par with Canada.

It should also be noted that there are substantial differences in median age between provinces. Within Canada median age tends to increase as you move from west to east. British Columbia provides the only glaring exception to this rule.

Table 1-6 Median Age by Province – 2024

Province	Median Age		Province	Median Age
British Columbia	42.0		Quebec	43.1
Alberta	38.1		New Brunswick	45.7
Saskatchewan	38.2		P.E.I.	41.7
Manitoba	37.7		Nova Scotia	44.2
Ontario	40.4		Newfoundland / Labrador	47.8
Nunavut	26.9		NWT	35.8
Yukon	39.5			

1 - 3.4 Population Age Structure

Over the course of the next 25 years, the age structure of the world's population will continue to shift, with older age groups making up an increasingly larger share of the total. Between now and 2050, the number of people in the world who are 65 years old, or older, will grow substantially. Over the same period the world's youth population (those under age 15) will experience virtually no growth. In recent years, several developed nations have experienced a demographic change that is unprecedented in the history of mankind. These countries now have more people over the age of 65 than under the age of 15! Japan, Germany, Italy and even Canada (among other nations), are boldly going where no society has ever gone before.

Table 1-7 Population Age Structure - World (2024)

Country	Population under Age 15	Population Age 65 and over
Japan	12.3%	29.2%
Germany	13.8%	23.3%
Italy	12.1%	23.3%
Canada	15.7%	18.8%

CIA World Factbook, 2024

Canada joined the ranks of this illustrious group in 2015.

Table 1-8 Population Age Structure - Canada 1966 – 2043

	Population under Age 15	Population Age 15-64	Population Age 65+
1966	6,591,000	11,883,000	1,539,000
2024	6,373,000	26,800,000	7,680,000
2043	7,026,600*	29,731,600*	11,041,600*
	Percentage of Population under Age 15		**Percentage of Population 65+**
1966	32.9%		7.7%
2024	15.6%		18.8%
2043	14.7%*		23.1%*

**Based on Statistic Canada's Medium Growth (M1) population projection.*

1 - 3.5 Growth of Elder Population - by Province

Provinces on either coast (i.e., B.C., Quebec, Newfoundland, New Brunswick) tend to have the oldest populations. According to Statistics Canada, out of the country's 737 municipalities that have 5,000 residents or more, seven B.C. communities have the oldest populations, six of which are located on Vancouver Island.

More than half of the residents in these seven communities are 65 or older.

The communities are Qualicum Beach, Sidney, Parksville, Southern Gulf Islands, Nanaimo Electoral Area E, Nanaimo Electoral Area G, and Osoyoos.

Exact Provincial breakdowns can be seen in the chart on the following page.

The elders make up somewhat smaller shares of the population of the territories.

During the next 20 years, there will be substantial differences in the growth rate of the elder population, province by province. The elder populations of Newfoundland and Labrador and New Brunswick will grow significantly – reaching close to a third of the population in these two provinces. The provinces with the fastest elder population growth are likely to have the greatest difficulty adapting.

Table 1-9 Percentage of Population Age 65 and over

Province or Territory	2021	2043		Province or Territory	2021	2043
Alberta	14.4 %	18.9%		Nova Scotia	21.8 %	26.8%
Manitoba	16.5 %	19.7%		New Brunswick	22.5 %	28.1%
Ontario	18.1 %	22.9%		Newfoundland / Labrador	23.1 %	32.8%
British Columbia	19.7 %	24.3%		Yukon	13.8%	19.3%
Saskatchewan	16.7 %	19.2%		Northwest Territories	9.2 %	15.7%
Quebec	20.3%	25.7%		Nunavut	4.1 %	8.5%
Prince Edward Island	20.2%	23.9%		*Source – 2021 Census and Statistics Canada (Projections based on Medium Growth and Medium Inter-provincial Migration Scenario)*		

1 - 3.6 Dependency Ratios

Populations may be broken into three broad age groups: children (under age 15); working age (15-64); and the old (65 and older). The first and the last group are considered "dependent" since they are supported largely through the efforts of the middle group. The ratio of the working age population to the dependent population is called the dependency ratio. The ratio of the working age population to the age 65 and older population is called the old age dependency ratio.

Old age dependency ratios have risen in every major world region. As a result, the world community is now facing an elderly support burden that is nearly 50 percent larger in 2024 than it was in 1998. The impact of this will vary from region to region. Less developed countries continue to have relatively high birth rates (often over 30 births per thousand). Even with the rapid growth of the elderly population in these countries, the bulk of their dependent population will remain children during the coming quarter century.

Nearly 9 of every 10 people making up the combined dependent age groups in the less developed regions of Africa, Asia, and Latin America are under the age of 15 today.

Only in Canada and other more developed countries will elderly dependants continue to outnumber dependants under the age of 15.

Rising dependency ratios will put enormous pressure on existing social programs.

Consider the situation in Canada. At the dawn of the 20th century there were 20 people working for every one retired person. By the early years of the 21st century this ratio had dropped to 4 people working for every retired person - and by 2043 there will only be two and a half people working for every retiree. The number of people available to "pay the freight" is shrinking while the costs of Canada's generous social programs are poised to skyrocket.

Annual Old Age Security (OAS) payments will total 81 billion dollars in 2025 (up 40% in just 5 years!). OAS is the largest expenditure of the federal government. OAS is a "pay as you go" program (there are no reserves - it is funded entirely through current tax revenues). By 2043 the number of Canadians eligible for Old Age Security payments will grow by more than 40% and the program will cost (in today's dollars) close to $116 billion. During this same period Canada's working age population will only grow by 11% – but they will be on the hook for an additional $35 billion in expenses!

The same spiralling costs will hit our cherished health care system. In 2024, the annual expenditures of Canada's publicly funded health care system totalled approximately 260 billion dollars (according to the Canadian Institute for Health Information). Close to half of this amount was spent on Canadians who were age 65 and older. As this group grows during the next 20 years an additional burden of roughly 45 billion dollars will be placed on the shoulders of Canadian taxpayers.

1 - 4 THE SILVER TSUNAMI

The fact that people are living much longer represents one of the crowning achievements of the last century but also a significant challenge.

Longer lives must be planned for. Societal aging can affect economic growth and many other issues, including the sustainability of families, the ability of states and communities to provide resources for older citizens, and international relations. There will also be a large increase in disability caused by increases in age-related chronic disease in all regions of the world. In a few decades, the loss of health and life worldwide will be greater from noncommunicable or chronic diseases (e.g., cardiovascular disease, dementia and Alzheimer's disease, cancer, arthritis, and diabetes) than from infectious diseases, childhood diseases, and accidents. Despite the weight of scientific evidence, the significance of population aging, and its global implications have yet to be fully appreciated.

Preparing financially for longer lives and finding ways to reduce aging-related disability will become national and global priorities. Experience shows that for nations, as for individuals, it is critical to address problems sooner rather than later.

1 – 4.1 A Host of Challenges

While global aging represents a triumph of medical, social, and economic advances over disease, it also presents tremendous challenges. Population aging strains social insurance and pension systems and challenges existing models of social support. It affects economic growth, trade, migration, disease patterns and prevalence, and fundamental assumptions about growing older.

Aging experts and economists have identified nine emerging trends in global aging.

Together, these trends present a snapshot of challenges and opportunities that clearly show why population aging matters:

- The overall population is aging. For the first time in history, and probably for a good portion of the future, people aged 65 and over will outnumber children under the age of five.
- Life expectancy is increasing. Most countries, including developing countries, show a steady increase in longevity over time, which raises the question of how much further life expectancy will increase.
- The number of the oldest old is rising. People aged 85 and over are now the fastest growing portion of many national populations, followed by centenarians.
- Noncommunicable diseases are becoming a growing burden. Chronic noncommunicable diseases are now the major cause of death among older people in both more developed and less developed countries.
- Some populations will shrink in the next few decades. While the world population is aging at an unprecedented rate, the total population in some countries is simultaneously declining and that includes countries like China.
- Family structures are changing. As people live longer and have fewer children, family structures are transformed, leaving older people with fewer options for care.
- Patterns of work and retirement are shifting. Shrinking ratios of workers to pensioners and people spending a larger portion of their lives in retirement increasingly strain existing health and pension systems.
- Social insurance systems are evolving. As social insurance expenditures escalate, an increasing number of countries are evaluating the sustainability of these systems.
- New economic challenges are emerging. Population aging will have dramatic effects on social entitlement programs, labor supply, trade, and savings around the globe and may demand new fiscal approaches to accommodate a changing world.

Some governments have begun to plan for the long term, but most have not. The window of opportunity for reform is closing fast as the pace of population aging accelerates. In some countries the share of gross domestic products devoted to social insurance for older people is expected to more than double in upcoming years. Countries therefore have only a few years to intensify efforts before demographic effects come to bear.

Nations – including Canada - must quickly recognize the scope of the new demographic reality and adjust current policies accordingly. Experience has shown that such adjustments may be painful - changes in retirement age and medical benefits, for example, are not widely popular. But experience also shows that it is easier to address problems sooner rather than later, when the cost of waiting may become insurmountable.

We can think about preparing for older age on both an individual and societal level. On an individual level, people need to focus on preventive health and financial preparedness. We know that many individuals approach older age with little or no savings. A simple example illustrates the financial cost of waiting to save and the value of a more farsighted perspective. A 40-year-old worker who begins to save $10,000 per year will accumulate $700,000 by the time they are 70 years old, assuming an interest rate of 5 percent per year. If they had begun saving when they were 30 years old, they would only have needed to save $5,500 per year to accumulate the same amount by age 70. Calculating the cost of waiting at the national level is much more complex, but similar reasoning applies. Just as for individuals, small and gradual changes distributed over a longer time horizon are more easily absorbed by a country than sudden and more substantial actions required to meet a particular savings target over a shorter time horizon.

Countries and international organizations are now developing detailed models in recognition of looming costs and the need for pension reforms to ensure sustainable old-age support. Given current policies, the pension, health, and long-term care costs associated with an aging population will lead to significant increases in public spending in most nations over the next half century. Gross domestic product growth rates are projected to fall across much of the developed world which will further aggravate and already difficult situation.

While some countries have initiated changes in retirement age that promise to ease the burden of public spending, most of these changes are inadequate. During the next few years, countries must exploit a fast-closing window of opportunity to intensify reform before demographic effects come to bear. Similar to the impact of an individual worker delaying savings, delays at the national level will increase the costs of adjustment and shift an enormous economic burden to the next generation of workers and taxpayers.

1 – 4.2 The Oldest Old

An important feature of population aging is the progressive aging of the older population itself. Over time, older people survive to even more advanced ages. For research and policy purposes, it is useful to distinguish between the old and the oldest old, often defined as people aged 85 and over. Because of chronic disease, the oldest old have the highest population levels of disability that require long-term care. They also consume public resources disproportionately.

The growth of the oldest old population has a number of implications:

- Pensions and retirement income will need to cover a longer period of life.
- Health care costs will rise even if disability rates decline. Increased longevity has not necessarily translated into a healthier life. Among the health conditions that are of increasing concern for older people are hearing and vision loss, cardiovascular diseases, dementia and obesity.
- Intergenerational relationships will take on an added dimension as the number of grandparents and great-grandparents increase. Four-generation families will become more common. The aging of the baby boom generation, for example, is likely to produce a great-grandparent boom. As a result, some working adults will feel the financial and emotional pressures of supporting both their children and older parents and possibly grandparents simultaneously.
- The number of centenarians will grow significantly for the first time in history, and this will likely redefine the concept of old age and aging.

1 – 4.3 Changes in Family Structure

As people live longer and have fewer children, family structures will be transformed. This has important implications in terms of providing care to elders.

Most older people today have children, and many have grandchildren and siblings. However, in countries with extremely low birth rates, future generations will have few if any siblings. As a result of this trend and the global trend toward having fewer children, people will have less familial care and support as they age.

As a result, there will be a growing need for long-term care services worldwide, which have traditionally been provided informally by family caregivers but are increasingly being given by paying careers. This has led to a significant level of abuse and neglect of older persons – a trend that cuts across all economic and social strata.

As life expectancy increases in most nations, so do the odds of different generations within a family coexisting. In more developed countries, this has manifested itself as the "beanpole family," a vertical extension of family structure characterized by an increase in the number of living generations within a lineage and a decrease in the number of people within each generation. As mortality rates continue to improve, more people in their 50s and 60s will likely have surviving parents, aunts, and uncles. Consequently, more children will know their grandparents and even their great-grandparents, especially their great-grandmothers. There is no historical precedent for a majority of middle-aged and older adults having living parents. While the picture of the nuclear or extended family that stays together through life is still the norm in most nations, it is changing in many countries around the world. Among baby boom generations in the West, the family unit may take a variety of shapes. This reflects higher rates of divorce, remarriage, blended and stepfamily relations, and adults who have never married or are voluntarily childless.

Further, many couples and single mothers delay childbearing until their 30s and 40s, households increasingly have both adults working, and more children are being raised in single-parent households. People who are currently divorced constitute a small proportion of the older population. This will soon change in many countries as younger populations with higher rates of divorce and separation age. In the United States, for example both the marriage and divorce rates have been dropping this millennium. That said, the divorce rate among people ages 50 and older has doubled in the past 20 years, according to research by Bowling Green State University. Divorce rates in Canada from reports released in 2021 show that they are decreasing at slower rates for the age group 55-59 than younger groups. Two things are at play here. People are getting married at older ages and more people are choosing to live in common law relationships. Aside from rights at intestacy if one partner dies, the issues and options for married couples and those in common law relationships are quite similar.

This trend has gender-specific implications: Nonmarried women are less likely than nonmarried men to have accumulated assets and pension wealth for use in older age, and older men are less likely to form and maintain supportive social networks. Canada has experienced a steady increase in the average age of divorce, meaning aging Canadians are increasingly likely to find themselves alone as they approach or enter retirement.

Childlessness is another important factor that will affect caregiving but has received relatively scant attention. In modern societies, around 20 percent of women do not give birth. Rising percentages of childless women are seen in Europe and North America and, increasingly, in Latin America and Southeast Asia as well.

Research in many cultural settings shows that older people, even those living alone, prefer to be in their own homes and communities. This preference is reinforced by greater longevity, expanded social benefits, increased home ownership, elder-friendly housing, and an emphasis in many nations on community care. While multigeneration households are dwindling in the more developed world, two- and three-generation households are still the norm in most less developed countries. Despite the apparent robustness of such living arrangements for older people, concerns are emerging. For example, unmarried women or widows without children can have little support and nowhere to live if extended family will not take them in.

1 – 4.4 Aging and Work

No set of issues has stimulated public discourse about population aging more than work, retirement, and economic security in old age. In Western democracies, in Eastern Europe's transitional economies, and in much of the less developed world, policymakers struggle with the balance between public and private income security systems.

A prominent economic concern in our aging world is the shrinking of the workforce relative to the number of pensioners. Typically, this ratio declines as people live longer and as their participation in the workforce falls.

From the 1950s to the mid-1980s, workforce participation rates for older men declined in most of the more developed countries. But beginning in the 1990s, this trend reversed.

Among women in more developed countries, there has been a steady increase in workforce participation at older ages for the past two decades. Although data on less developed countries are inconsistent, the most common picture shows workforce participation rates decreasing for older men and increasing for older women. The latter trend will have important implications for the ability of women to accumulate and control economic resources in older age.

As life expectancy has increased through the 20th century, retirement ages have decreased. Consequently, people are spending more time in retirement. In 1960, men on average could expect to spend 46 years in the workforce and a little more than one year in retirement. By 1995, the number of years in the workforce had decreased to 37 while the number of years in retirement had jumped to 12. Today, the average time in retirement has more than doubled for the average retiree. Statista reports that the number of employed people in Canada has been on an upward trend since 2015 and was forecast to continuously increase between 2024 and 2025. A February 2023 report found fewer people had retired in the past year, compared to the year before, among people aged 55 to 64. Yet, increased longevity has meant that most workers who retire in their early to mid-60s live for another 20 years.

1 – 4.5 Sustainability

In response to escalating pension expenditures, an increasing number of countries across the development spectrum are evaluating the sustainability of old-age social insurance systems.

In the future, the economic well-being of older populations will depend on a combination of income sources—earnings from continuing to work, social insurance programs, occupational pensions, and private savings. Public policies affect each of these sources, and proposed policy reforms have both costs and benefits. Many countries already have taken steps toward reforming their old-age social insurance programs. One common reform has been to raise the age at which workers are eligible for full public pension benefits. Another strategy for bolstering economic security for older people has been to increase the contribution or tax rate on workers. While payroll taxes raised revenues, they have the potential to discourage work in the formal sector. Other measures to enhance income for older people include new financial instruments for private savings, tax incentives for individual retirement savings, and supplemental occupational pension plans. A trend toward defined contribution plans (in which employees contribute a portion of earnings, sometimes with matching contributions from employers, into investment accounts that they control) rather than defined benefit plans (in which employers guarantee specified levels of pension payments in the future) is evident. An important question concerning this trend is whether defined contribution plans, which shift risk and decision making to the employee, will provide adequate income security for the duration of retirement.

1 – 4.6 Emerging Challenges

Academics and policymakers have begun to direct attention to the potential economic impact of unprecedented demographic change. Population aging will strain some national budgets.

Countries with extensive social programs targeted to the older population—principally health care and income support programs—find the costs of these programs escalating as the number of eligible recipients grows and the duration of eligibility lengthens. Further, few countries have fully funded programs; most countries fund these programs on a pay-as-you-go basis or finance them using general revenue streams. Governments may be limited in how much they can reshape social insurance programs by raising the age of eligibility, increasing contribution rates, and reducing benefits.

Consequently, shortfalls may need to be financed using general revenues. Projections of government expenditures show major increases in the share of gross domestic products devoted to social entitlements for older populations.

And there are additional troubling economic concerns. A country with a high proportion of workers will tend to be dominated by savers, placing downward pressure on the rate of return to capital in that economy. Countries with older populations will be tapping their savings and driving rates of return higher because of the scarcity of capital.

Retirement resources typically include public and private pensions, financial assets, and property. The largest component of household wealth in many countries is housing value. This value could fall if large numbers of older homeowners try to sell houses to smaller numbers of younger buyers.

1 - 5 A PROFILE OF CANADIAN ELDERS

The Canadian population is made up of various generations of different sizes, and each influences society according to their world view, their defining characteristics, their values and where they are in terms of life cycle.

Given that the baby boomer generation is getting older and currently transitioning from the labour force to retirement, their needs are different today. For example, their children may have left the parental home to live on their own. This generation may redefine how retirement and end-of-life are experienced given that, compared to previous generations, it had fewer children, is working longer, and has adopted different values.

Younger generations, such as millennials and Generation Z, are more educated and diverse than previous generations. These generations, who are still young, are more exposed to ethnocultural, religious and gender diversity and technology and this has significantly impacted their lifestyle and values. These generations now make up a considerable share of the working-age population, leading to changes in the labour market.

In this vein, a generational perspective of demography can be very useful in understanding current and future societal changes.

It is difficult to precisely define the term "generation" because it can have more than one meaning. For our purposes, generations are cohorts of people who have grown up in a specific social, economic, and political context that can shape their view of the world. The year of birth determines which generation a person belongs to.

In short, a cohort is a group of people born around the same time who share a series of common experiences.

Depending on where they are in their life cycle, these generations also influence the economy and society not only because of their size, but also because of their distinct values and attitudes toward life.

In Canada there are currently seven distinct generations:

1. Greatest Generation: people aged 97 or older (born before 1928)
2. Interwar Generation: people aged 79 to 96 (born between 1928 and 1945)
3. Boomer Generation: people aged 59 to 78 (born between 1946 and 1965)
4. Generation X: people aged 44 to 58 (born between 1966 and 1980)
5. Generation Y (millennials): people aged 28 to 43 (born between 1981 and 1996)
6. Generation Z: people aged 12 to 27 (born between 1997 and 2012)
7. Generation Alpha: people aged 11or younger (born between 2013 and 2021)

For our purposes, the first three groups (Greatest Generation, Interwar Generation, and the Baby Boomer Generation) are of most interest. We can't ignore the aging Gen Xers who are adding to the elder population.

The baby boomer generation, comprising people aged 59 to 78, continues to be the largest generation of elders in Canada contributing disproportionately to the growing number of people age 65+. The 2021 Census counted 9,212,640 baby boomers. However, the demographic weight of baby boomers in the overall population is declining. For the first time, in 2021, this generation accounted for less than one-quarter (24.9%) of the Canadian population. By comparison, they represented more than two in five Canadians (41.7%) in 1966, at the end of the baby boom period in Canada (1946 to 1965). Statistics Canada says that as of July 1, 2023, there are now more millennials than baby boomers in the country, a share that will continue to increase as the oldest Boomers pass away.

Between 2016 and 2021, the number of baby boomers fell 3.1% mainly because of mortality, as this generation is growing older and is now more concentrated at ages where mortality is higher. Baby boomers have now passed the ages at which immigration to Canada occurs in large numbers, so immigration is no longer a major factor of growth for this generation. The fact that baby boomers are reaching more advanced ages is gradually putting more pressure on the health and home care system, as well as on pension plans, although many people in this generation are currently choosing to stay in the workforce longer.

The oldest of this large generation will be turning 85 in 2031, an age at which activity limitations and loss of autonomy are more common.

Millennials, or people aged 28 to 43, represent the fastest-growing population and as mentioned earlier, now outnumber Boomers. The number of people in this generation increased 8.6% between 2016 and 2021, compared with 5.2% for the overall population, thanks to higher rates of immigration among the millennial generation compared to other generations. The 2021 Census counted 7,926,575 millennials. More than half of the immigrants who settled in Canada from 2016/2017 to 2020/2021 were millennials. Immigrants therefore contributed significantly to the increase in the size of this generation, which currently makes up a large share of the working-age population.

With the Greatest Generation, aged 97 or older, and the Interwar Generation, aged 79 to 96, moving toward later life, their numbers have declined in recent years. Because immigration no longer significantly contributes to the size of these older generations, the only factor really affecting their numbers is mortality. According to 2021 Census data, the Greatest Generation comprised 135,560 people, and the Interwar Generation 2,716,910. Their size fell 67.2% and 20.8%, respectively, since 2016.

Population projections suggest that millennials may very soon—by 2029—become the largest generation in the country. For the first time, they would outnumber baby boomers, who would remain the largest generation until then.

Boomers have been the largest generation in the country until surpassed by Millennials by mid-year 2023. They are responsible for many of the changes in the world and the impact on social, economic and even political issues. The share of each generation in the total population varies from one province and territory to another. It is important to consider these differences in planning exercises related to the school systems or health and home care services, for example. Millennials outnumber baby boomers in Alberta (23.3% versus 21.4%), Yukon (25.0% versus 24.2%), the Northwest Territories (25.2% versus 19.2%), and Nunavut (24.1% versus 10.6%). These regions have younger populations on average than other regions in Canada, particularly due to higher fertility than elsewhere. Alberta's younger population is also partly due to the age structure of interprovincial migration. More than 30% of Newfoundland and Labrador's population is made up of baby boomers, the highest proportion of all provinces and territories. This province also has the oldest population in Canada. Conversely, only 10.6% of Nunavut's population is part of the baby boomer generation. Together, the Interwar and Greatest Generations—the generations with the oldest people—represent more than 8% of the population of Newfoundland and Labrador (8.6%), Prince Edward Island (8.1%), Nova Scotia (8.7%), New Brunswick (8.8%), Quebec (8.5%), and British Columbia (8.2%).

The country's large urban centres (also known as census metropolitan areas or CMAs) have younger populations than other areas, higher average population growth and greater ethnocultural diversity. Millennials (23.3%) outnumber baby boomers (22.3%) in Canada's six largest urban centres with a population greater than one million: Toronto, Montréal, Vancouver, Ottawa–Gatineau, Calgary, and Edmonton.

The 2021 census is the first census in which this has been observed for the large urban centres of Toronto, Montréal, Ottawa–Gatineau and Vancouver. However, baby boomers (24.7%) remain the biggest generation in large urban centres with fewer than one million inhabitants, ahead of millennials (21.5%). The same is true in areas outside large urban centres, where they represent 29.7% of the population, ahead of millennials (17.9%) and Generation X (17.6%). These findings are due in part to the strong economic vitality of large urban centres and the contribution of immigration, which is concentrated in these areas and tends to boost the number of millennials.

As a result, large urban centres and the rest of the country have different needs that reflect its resident populations and generations. For example, the six largest urban centres, which also have a younger population, have special needs in terms of daycare centres, schools, and public transit for commuting.

Outside these large urban centres, there are millions more baby boomers, which generate and will continue to generate different needs in terms of specialized transportation, health care and home care services, and the construction of housing that better meets the needs of retired people or of retirement homes.

1 – 5.1 Elder Cohorts

As noted above, in Canada there are three distinct elder "cohorts." A cohort is defined as a group of people who were born around the same time who have shared a set of common experiences.

The Greatest Generation - This group consists of elders born prior to the 1930s. The Great War, the Depression and the Second World War were the defining moments in their lives. These events had a profound impact on their attitudes and thinking. Growing up in difficult circumstances, they tend to be hard workers who are risk adverse, financially conservative, religious and community oriented. They grew up in large traditional families and did not have the same access to formal educational opportunities that most of us now take for granted.

The Baby Boomers - The front end of the baby boom is now well into its elder years. The life experiences of this group are dramatically different from those of the Greatest Generation. The boomers grew up in smaller, not necessarily traditional, family units. They tend to be far less conservative in their thinking and much more amenable to risk. Surrounded all their lives by affluence and opportunity, they also tend to be far more independent than earlier cohorts. Boomers also have the distinction of being the most highly educated generation in history.

The Interwar Generation - This elder cohort shares characteristics with both other elder groups. Born during the 1930s and the early 1940s, the Interwar generation values family life, self-reliance, self-discipline and saving money - which makes it very much, like the Greatest Generation.

But this group also feels that life is to be enjoyed, which makes it very much like the baby boomers. The Interwar Generation is more health conscious, independent, active, and well-traveled than the generation that came before it.

1 – 5.2 Profile of the Oldest Old

Seniors aged 85 and older are growing in number and as a proportion of the population. Despite being impacted by the COVID-19 pandemic, this population continues to increase faster than Canada as a whole. The growth of this population will accelerate even further in coming years, as the first baby boomer cohorts will turn 85.

These older Canadians have contributed greatly to society through their long working lives, by taking care of younger generations, transmitting their experience and knowledge, acting as role models for younger people, and being memory-keepers of the past and of family traditions. They also have unique needs. Many face activity limitations and need health and home care services — the rapid growth of this population in coming years is likely to add to the existing pressures in the health care and home care sectors.

An increasing number are no longer living in private dwellings and need different types of housing options, such as seniors' residences at first, and nursing care facilities as they get older. Those who stay longer in private homes may have specific needs related to home care, transportation, and security.

- Over 861,000 people aged 85 and older were counted in the 2021 Census, more than twice the number observed in the 2001 Census.
- The population aged 85 and older is one of the fastest-growing age groups, with a 12% increase from 2016. Currently, 2.3% of the population is aged 85 and older.
- While the COVID-19 pandemic claimed many lives among the oldest Canadians, this population continued to grow rapidly.
- Over the next 20+ years (by 2046), the population aged 85 and older could triple to almost 2.5 million people.
- Over 9,500 centenarians are now living in Canada — a 16% increase from 2016. Centenarians represent 0.03% of the Canadian population.
- While women still outnumber men, the ratio of women to men among people aged 85 and older is decreasing.
- As a significant proportion of people aged 85 and older have activity limitations or health-related issues, more than one-quarter live in a collective dwelling, such as a nursing care facility, long-term care facility or seniors' residence. This proportion increases with age.
- Much like young adults, older seniors are also living downtown: in three-fifths of the country's large urban centres, there is a higher percentage of people aged 85 and older living in the downtown core than in the large urban centre as a whole. Downtown areas tend to have more services and amenities, such as hospitals, long-term care and other housing types better adapted to the specific needs of older populations.

- As more seniors are living to 85 and beyond, an increasing number of individuals will face limitations and long-term health challenges. This will put increasing pressure on all levels of government to ensure adequate support, in areas such as housing, health care and home care, as well as transportation, among other things.

Historically, men have tended to outlive women. As recently as the 1950s, there were elder men in Canada, than there were elder women. A dramatic reduction in maternal death rates is largely responsible for turning the tables. Today, the majority of Canada's elder population is female.

Although the majority of people aged 85 and older are still women, the 2021 census shows that the number of men in that age group is increasing at a faster pace.

In 2021, there were 1.7 women for every man aged 85 and older compared with 1.9 persons of female sex for every person of male sex in 2016.

This is because of stronger increases since the end of the 1970s in life expectancy for men, meaning that the gap between the number of men and the number of women in this age group is shrinking.

This trend is even more pronounced among centenarians. There were just over five persons of female sex for every person of male sex aged 100 and older in 2016. By 2021, this had fallen to just over four women for every man.

Differences in the number of men and women can have implications on the lives of older Canadians, particularly women. Living alone, especially after the loss of a spouse, can lead to feelings of loneliness and social isolation, which in turn can have health consequences.

As abilities decrease and activity limitations increase with age, many people aged 85 and older move from living in private dwellings to living in collective dwellings such as seniors' residences, nursing care facilities and long-term care facilities — places where they can receive care and support.

In 2021, almost 238,000 people aged 85 and older were living in these collective dwellings, representing close to 3 in 10 people (28%) in this age group.

The proportion of people living in collective dwellings increases rapidly with age, from one in five among the 85-to-89 age group to more than half of centenarians.

Moreover, almost three-quarters of residents of collective dwellings aged 85 and older were women, increasing to 85% among centenarians.

The growing number of older seniors increases the demand for health care and access to the types of specialized care provided by seniors' residences and nursing care facilities. There are now over 100,000 people aged 85 years and older living in nursing care facilities in Canada.

Among Canadians aged 85 and older living in collective dwellings, the proportion of those living in nursing care facilities increases with age, from 40% for people aged 85 to 89 to almost 60% for centenarians.

Conversely, the proportion in seniors' residences decreases with age from 40% to 24% for the same age groups. This trend is expected as the prevalence of activity limitations and health issues increases with age.

The proportion living in facilities that provide multiple levels of care (both independent living for seniors as well as nursing care) was around 16% for those aged 85 to 89, 90 to 94, and 95 to 99. It fell to 12% for centenarians.

1 - 5.3 Elder Life Experiences

Canada's elders have lived through what was arguably the most topsy-turvy, tragic, triumphant, disastrous, successful century ever.

Their lives began in the Age of Steam and continued through to the Age of the Atom. Many were born before the ominous 'isms'—fascism, communism, Nazism—that dominated 20th century politics and lived to see them bundled off to the trash cans of history. The world of their birth was far removed from the cultural and technological realities of today.

At the turn of the 20th century, Canada's population was slightly more than 5 million. Most births took place at home, likely on a farm or in a rural community.

The flag was the Union Jack, not the Maple Leaf. Canada was driven by horsepower and steam power. For Canadians living outside of the large cities (Toronto, Ottawa, and Montreal) light was provided by kerosene lanterns, not by electricity.

Families were large by today's standards. Many had six, eight or more children and it was not uncommon for one or more of them to die in childhood. Tuberculosis, diphtheria, and polio were common killers.

Sanitation was of major concern. Indoor plumbing did not yet exist in smaller communities. Milk was not pasteurized or homogenized. Medicine was primitive, antibiotics were still unheard of, and it was possible for an individual to die from an infected tooth.

The oldest of Canadian elders have memories of the "Great War," a four-year long conflict that killed approximately 60,000 young Canadians. Many more remember the 1929 stock market crash and the depression that followed.

The "Dirty Thirties" as they came to be known, were hard on Canadians. Prices collapsed, unemployment skyrocketed, and in the dust bowl prairies many farmers went broke. At the end of the decade World War II broke out and it eventually claimed 40,000 Canadian lives.

During the 1940s, Unemployment Insurance and the Family Allowance were introduced. And then, in 1946, the baby boom began - a demographic phenomenon that would impact Canadian life for decades thereafter.

New technologies were introduced. Television supplanted radio as the medium of choice. Penicillin, discovered during the war, produced a family of germ-killing compounds that defeated more and more diseases. A housing boom took hold; suburbs grew like weeds and Canada became increasingly urban.

With the 1960s came the contraceptive pill and the sexual revolution. There were also numerous technological advances. People who were born before planes and automobiles now had an opportunity to watch man walk on the moon via colour TV. They could fly across the ocean at supersonic speeds.

Canadian health care, as we know it today, was developed in the 1960s and 1970s. In the decades that followed came personal computers, automated banking machines, cell phones and the internet.

The oldest of Canadian elders have seen it all: the tragedy of war, depression, assassinations, political turmoil, and terrorism. As well as such bright moments as: the triumph of freedom and democracy, the collapse of Communism, and mind bending technological advances.

Many of these events helped to shape elder thinking.

1 – 5.4 The Centenarians

- ❖ Centenarians have a positive attitude about life
- ❖ Centenarians employ successful stress reduction techniques (e.g., humour, meditation, and exercise)
- ❖ They usually maintain the same weight during their adult lives
- ❖ Most do not use alcohol or smoke
- ❖ They stay active - mentally and physically
- ❖ They usually have strong social connections

Many centenarians continue to pursue their love of music, poetry and self-expression. They visit with family and friends, participate at parties and picnics, attend church and regularly visit senior's centres and shopping malls. They keep their minds and their bodies active.

Experts believe that the key to living longer is to avoid, rather than to survive, disease. The best way to accomplish this is through a healthy lifestyle (e.g., quality diet, regular exercise, and the maintenance of strong social contacts).

Modern medicines and genetic predisposition also contribute to longevity.

The world of their birth, while only 100 years ago in real time, was seemingly another planet in comparison to the cultural and technological realities of today.

The society of their childhood was Edwardian, largely English, mainly white, and mostly rural. It was class-conscious, church going, deferential, and moralistic.

1 - 6 HEALTH & ELDERS

With old age comes an inevitable decline in health and in many cases a loss of self-sufficiency and independence. Fortunately, this decline occurs gradually and most elders learn to adapt. As a result - even though many older Canadians suffer from one or more chronic conditions - this does not prevent them from leading largely normal lives.

Surprisingly, only about 20% of Canadians, age 65 and older, are heavy users (more than 12 encounters with the health care system annually) of formal health care services. In fact, in most cases elder usage of formal health care services does not differ dramatically from that of younger adults.

According to surveys, less than half of elders suffer from disabilities that limit daily activities and less than one third, with severe problems require formalised care.

Despite people’s fear of being "institutionalized" in an old-age or nursing home, less than 10% of elders are living in these facilities. Over 90% of Canadians, age 65 and over, live active and independent lives within their communities.

And while many elders fear that they will lose their mental faculties, there is no conclusive evidence to suggest that there is a dramatic decline in intellectual function or memory due to age. Aging does commonly bring a loss of sight and hearing, and this can create the appearance of mental confusion.

Declines in mental capacity and increases in mental illness appear to affect only a small proportion of elders.

When asked to describe their current health, most Canadian elders respond positively. More than eighty percent of Canadians 65 years of age and older describe their health as good, very good or excellent. And among Canadians 75 years of age or older, more than seventy percent describe their health as good, very good or excellent.

Elder women tend to report more aliments than elder men. While it is possible that women suffer from more illnesses than men, it may just be that they are far more attuned to their bodies and much more likely to identify problems and seek care.

Both men and women gain at least part of their sense of good health from being able to continue to manage their affairs independently within their communities. The health care they require tends to be long-term support, rather than expensive, short-term medical intervention.

1 - 6.1 Chronic Conditions

Even though a stunning majority of Canadian elders describe their health as good, chronic illnesses are a sad reality of the aging process. Thirty two percent of non-institutionalized elders report that they suffered from chronic pain or discomfort and 46% have experienced some level of activity restriction due to a chronic health problem.

Most elders are taking some form of medication. In fact, 9 out of 10 non-institutionalized Canadian elders report the use of at least one type of medication - and most are taking three or more.

Women tended to take a wider variety of medications than their male counterparts. More than one-quarter of women aged 65 or older took at least five different types, compared with only 16% of elder men. The drugs most commonly taken were non-narcotic pain relievers, blood pressure medication, heart medication, diuretics and stomach remedies.

The variety of medications taken was strongly related to illness. Elders with multiple chronic conditions reported having taken an average of five types of medication, while those with no chronic illnesses averaged only one.

Many elderly over the age of 75, with the majority being women, say that they have at least one of the nine following common conditions: arthritis, heart disease, diabetes, cataracts, cancer, hypertension, osteoporosis, stroke, or varicose veins.

1 - 6.2 Health Care and the Oldest Old

As noted, most elders describe their health in positive terms and few are heavy users of formal health care services. This is not the case, however, among the "old" old.

Heath care usage increases dramatically with age. Public health care expenditures on Canadians who are age 85 and older are roughly 3-4 times higher than the expenditures on Canadians who are 65-74 years old. Most of these elders are women, and while they do tend to live longer than elder men, it is a mixed blessing. The typical 65-year-old woman will outlive her male counterpart by close to 3 years … but, on average, only one year of this additional life expectancy will be disability free - and two years of this additional life expectancy will involve a severe disability.

Most of these elderly women will spend their final years disabled, institutionalized and heavily dependent on government assistance.

1 - 6.3 Mental Health and Life Satisfaction

The Public Health Agency of Canada defines positive mental health as the capacity to feel, think and act in ways that enhance enjoyment of life and one’s ability to cope with challenges.

In a 2017–2018 survey, about 72.0% of seniors (73.0% of men and 71.1% of women) reported that their mental health as very good or excellent. In comparison, fewer adults aged 20–64 reported their mental health as very good or excellent (68.5%). Older seniors aged 85+ were, however, the least likely to report good or very good mental health (63.1%).

Similar results were reported in the case of life satisfaction. About 90.8% of seniors reported being very satisfied or satisfied with their life, but this proportion decreased to 86.4% among those aged 85+. Overall, 86.9% of seniors reported being happy every day or almost every day.

In terms of psychological well-being, 80.8% of Canadian elders (82.0% of men and 79.7% of women) reported high psychological well-being. Only 76% of Canadians 20-64 reported high psychological well-being.

1 - 6.4 Health Care Expenditures

Elders are responsible for an inordinately large share of Canada's health care expenditures. According to a 2021 study by the Fraser Institute 45.7% of all public health care costs involved Canadians aged 65 and over.

Between now and 2043 the number of Canadians aged 65 and over will increase by roughly 40% and this will put tremendous financial pressure on our cherished public health care system. Tens of billions of dollars will be required just to maintain the status quo.

1 - 7 CANADIAN ELDERS - FINANCIAL WELL-BEING

Many - perhaps most - of us underestimate the financial where-with-all of Canadian elders. Most of them are in significantly better shape than most of the Canadian population.

Compared to the rest of us, Canadian elders:

- Have substantially less debt
- Have more discretionary income
- Spend more money on gifts
- Give more to charity
- Have substantially more household wealth

With apologies to infamous bank robber Willie Sutton - the elder market is "where the money is."

1- 7.1 Elder Income

Historically elder Canadians have been among the poorest segments of society - at least in terms of income. As a result, governments have established a variety of programs to assist them.

The Canada Pension Plan, Old Age Security, the Spousal Allowance and the Guaranteed Income Supplement are federal government programs designed to boost elder incomes. Certain tax provisions (e.g., the $2,000 pension income credit, the $7,500 plus age related federal non-refundable tax credit, and new pension income splitting provisions) meanwhile, help to ensure that Canadian elders retain more of the income that they do generate. Even municipal governments have demonstrated their concern for elders through transit discounts and special admission charges at municipal facilities.

Businesses have also gone out of their way to help elders to stretch their dollars further. Many retailers, hotels, restaurants, insurers and travel companies offer elders special rates, blanket discounts or enhanced services at no additional cost.

The proliferation of this "special" treatment combined with a significant rise in elder incomes over the past 20 years has resulted in far fewer elders living on the margins.
The typical elder now has an income that exceeds that of the under 30 age group and, according to Statistics Canada, the incidence of low income has fallen faster for elders than for Canadians as a whole.

It should also be kept in mind that total income is not necessarily a good measure of poverty. "Disposable income" is likely a better indicator. Many seniors are mortgage free and most have no dependents. They have also already acquired - and paid for - large capital items.

Their need for income is, as a result, substantially less than that of most working age Canadians. It should come as no surprise, therefore, that elders tend to have a lot of disposable income.

In addition, there is some evidence to suggest that Canadian elders are taking steps to ensure that their incomes remain relatively low, in order to ensure that they continue to benefit from a wide variety of social programs. Transferring substantial capital to children - often on a *quid pro quo* basis - is one way to accomplish this.

Elders also tend to have a much better understanding of the income tax system. The basic lesson of Canadian tax law is simply this: have assets, not income. And this is precisely what many elders focus on. Owning a principal residence outright lowers an elder's need for income (since no mortgage payments are required). It is also one of the best places possible to invest money: not only have home values appreciated well over time, but there is no tax whatsoever on this growth.

Considering all this, it is safe to say that the actual level of poverty experienced by Canadian elders (based solely on gross income) is highly inflated. A better measurement for elders would be their "potential income" level, which would consider their likely life expectancy and the disposal value of their assets.

1 - 7.2 Economic Well-Being

Income is known to be an important determinant of health, with those living in low-income – including seniors – at greater risk of poor health. Seniors living in low-income may be unable to access nutritious foods have difficulties paying their mortgage, rent or utilities, be unable to complete necessary repairs on their homes, and experience limitations in terms of access to and affordability of transportation and non-insured health services, all of which can impact negatively on health.

In 2021 only 5.6% of Canadian seniors had incomes below the Low Income Cut Off. This number represents a large decrease from 29% in 1978. Rates have dropped over this time period following the earlier introduction of retirement and financial income supplement programs in Canada. The decrease in the proportion of seniors living in low-income has been similar for men and women when measured using both before- and after-tax income.

However, the decrease for women has been slightly greater, contributing to the narrowing gap between the percentage of men and women living in low-income. Between 1978 and 2021 the gap in after-tax income between senior men and women decreased from 10.0% to 1.4%.

However, not all subpopulations of seniors are experiencing such low proportions of those living in low-income.

A significant proportion of Aboriginal seniors – especially unattached Aboriginal seniors - were living in low-income households. Immigrant seniors living in Canada for less than 20 years were also more likely to live in low income households. And finally, unattached elder women were also much more likely to be living in low-income households.

1 - 7.3 Low Income Cut Off

In order to measure levels of economic inequity in Canada, Statistics Canada has developed the Low Income Cut Off (LICO). It varies based on household and community size and it is calculated by taking the percentage of the average family's income spent on food, shelter and clothing and then adding a flat 20%.

The 2021 (before tax) LICO for a single person in a rural area was $18,941. This amount increases to $27,514 for individuals living in urban areas with a population of more than 500,000. In the case of a two-person household the 2021 (before tax) LICO was $23,580 for rural areas and $34,254 for cities with more than 500,000 people.
As noted, the LICO is a measure of inequity, not a measure of poverty. This, unfortunately, has not stopped a whole variety of activists from referring to the LICO as "the poverty line." It is nothing of the sort.

While someone with an income at the LICO may be "disadvantaged" in relative terms, they are a long way off from living in abject poverty - from being unable to afford the necessities of life.

A review of Canadians who are making do with an income that is less than the LICO produces some startling results.

Table 1-10 Canadians Living below the LICO by Age (2021)

Age	Percent Living Below LICO
Under 18	6.4%
18-64	8.2%
65 and over	5.6%

As already noted, reasonable income combined with limited obligations (e.g., children, mortgages, work related expenses) are an attractive combination.

The income of elder men tends to be significantly higher than that of their female counterparts. In elder families' men are responsible for roughly two thirds of the family's income.

This is primarily a reflection of women's lower rate of labour force participation and the wage gaps that have historically existed between men and women.

Income inequalities have, however, decreased during the past 25 years. And the growth in seniors' income in the 1980s was especially beneficial to those with the lowest incomes.

1 - 7.4 Widowhood – The Impact on Income

The death of a spouse can be one of life's most traumatic events, particularly for many older women who may have devoted most of their lives to their husbands and children. Suddenly, many of them are alone, often for the first time since marrying. And suddenly, they have myriad decisions to make about their future, including key financial decisions.
To complicate matters further, few women of the pre-Boomer generations worked extensively outside of the home. They do not have substantial Canada Pension Plan benefits; private pension plan amounts or Registered Retirement Savings to rely on. As a result, the income generated by senior females tends to trail that of their male counterparts. In 2021, for example, senior men had average total incomes ($51,600) that were almost 40% higher than those reported by senior women ($37,000).
The financial well-being of senior women (age 65 and over) tends to be very closely connected to their marital status. In 2005, for example, only 4.7% of senior women who had a spouse had a total income that was below Statistics Canada's Low Income Cut Off. This figure skyrocketed to 42.0% in the case of senior woman who were unattached.

Remarkably, the number one determinant of whether a senior woman lives with an income above or below the LICO is simply this: does she have a spouse, or not?
The fact that most seniors are faring well financially, should not obscure the fact that a significant sub-set of seniors (largely unattached and widowed females) are living on, or close to the edge.

It is also important to remember that widowed women, 65 years of age or older, are not -by any stretch of the imagination - an insignificant demographic group. In 2022, forty-five percent of all women, age 65 and older, were widows and they outnumber their male counterparts (widowers) by a margin of more than three to one (1.6 million to 472,000).

1 - 7.5 Sources of income

The following are the major sources of elder income in Canada:

- OAS (including Guaranteed Income Supplements)
- CPP/QPP
- Retirement Pensions & RRSPs
- Non-RRSP investments
- Employment Income
- Other government transfers and sources.

Table 1-11 Major Sources of Elder Income on a Percentage Basis (2024)

Private Pension (including RRSP)	31.0%
Canada Pension Plan (CPP)	16.1%
Old Age Security (OAS)	19.2%
Employment Income / Other	17.8%
Investments	10.8%
Other Government Transfers	5.1%

Source: Statista, 2024

The extent to which elder Canadians are relying on government transfers is troubling given the enormous pressure that will be exerted on programs like Old Age Security and the Canada Pension Plan in the coming years, as our population and old age dependency ratio both increases. Over 40% of the typical elder's income comes from government transfers.

1 - 7.6 Elder Wealth

Elder households are the wealthiest households in Canada - by a significant margin! People, age 55 and older, have had years to accumulate assets - and it shows.

Table 1-12 Median Net Worth by Age

Age	Net Worth
Under 35	$48,800
35-44	$234,400
45-54	$521,100
55-64	$690,000
65+	$543,000

Statistics Canada, 2019 – Latest statistics

The above chart looks at individuals. Senior families had significantly more net worth than non-senior families. In 2019, senior families had a median net worth of $840,900 compared to a median net worth of $443,400 for non-senior families.

Not only are elder households the wealthiest in Canada, but they have also gained the most ground this century. *Between 1999 and 2019, the change in the median net worth of Canadian households (adjusted for inflation) varies substantially depending on age:*

- Canadians under the age of 35 experienced an increase in median net worth of just 8.6%.
- The median net worth of Canadians aged 35-44 increased by 46.2%
- Canadians 45-54 experienced an increase in median net worth of 55.0%
- In the case of Canadians aged 55-64, median net worth increased by 50.6%
- And Canadians, 65 years of age and older, experienced a stunning increase in median net worth of 70.2% … the largest of any age group

The tremendous growth in the median net worth of older Canadians has been driven largely by real estate.

Not only is a principal residence the single most important asset held by Canadians (accounting for one third of all personal wealth), but it has appreciated rapidly in recent years.
Between 1999 and 2024, real estate appreciated in value by more than 100%. Older Canadians, of course, tend to be homeowners - and many are also mortgage free.
With the recovery of the stock market after 2008, private pension assets experienced significant gains, and were a major contributor to growth in household wealth in the past few years. Once again, senior families own substantially more of these assets than younger Canadians.

1- 7.7 Debt

Debt seems to be a normal thing for Canadians these days. After a brief decline during the pandemic, the Canadian household debt-to-income ratio soared to 184.5% in the first quarter of 2023. That means Canadians owe nearly $1.85 for every dollar of disposable income.

And an RBC survey found that the Canadians between the ages of 35 and 44 carrying debt had a total debt-to-disposable income ratio of 250%. And indebted Canadian millennials (under age 35) had debt loads worth 165% of their disposable income. This ballooning debt has been mainly driven by rising mortgage balances as demand pushed home prices to record levels across the country. In general, younger Canadians tend to be more heavily indebted, with overall household debt peaking in one's 40s before declining sharply into one's 50s and beyond.

Additional findings from the RBC survey:

- Forty-somethings tend to have large mortgage balances and lines of credit, but they also have a lot going for them: They have higher incomes and have moved beyond the expensive child-care years (on average). Survey respondents in this age category were the most heavily indebted, with nearly $648,000 in total debt.
- Respondents in their 50s were focused on paying down debt and ramping up savings for retirement. The survey found that the average 50- to 59-year-old who carries a mortgage owed about $367,000, while total debt was about $566,000.
- While most people should strive to be mortgage free in retirement, it is becoming more common for retirees to carry a mortgage balance. Indeed, the 60-somethings surveyed, who still had a mortgage, owed about $256,000, while their total debt load was still about $436,000.
- Even Canadians aged 70 and older are carrying mortgage and line of credit debt. Of the 70-year-olds who responded to the survey, 11% still carried a mortgage balance and that average balance was still about $217,500. Furthermore, 15% of those aged 70 and up carried a HELOC, with an average balance exceeding $124,000.
- Debt in one's 70s may be explained by the fact that retirees want to remain in their homes as long as possible. So, they are accessing funds through a line of credit or reverse mortgage – in order to stay in their homes and enjoy a better standard of living.

Still, it should be noted, that 60% of families headed by individuals aged 65 and older were entirely debt free – only 40% carried some form of debt. Interestingly, rretirees who owned homes or who had higher household income, higher levels of education and better financial knowledge were most likely to hold debt.

Most retirees reported that their finances were what they had expected them to be prior to retirement. They also reported that their income was enough to cover expenses and that they were able to stay on top of the bills and keep up with their financial commitments.

Rising interest rates and their impact on debt have also been less of a concern for Boomers—Canada's largest cohort. Those aged 65 and older account for nearly a quarter of tax filers and 20% of total household income. And as a general rule, this group is far less sensitive to interest rate hikes. That's because only 14% of boomer households still have mortgage debt and for those that do, the average balance is half the size of a millennial mortgage.

Boomers and older Generation Xs have also amassed a bigger basket of interest-earning assets—which stand to benefit from a higher interest rate environment. Canadians' personal term deposits in chartered banks have risen $200 billion above pre-pandemic levels, largely due to the lure of higher interest rates.

For Canadians aged 65 and older, employment income is also less important (accounting for a smaller share of their total income), as their assets insulate them from income shocks associated with job losses. Two-thirds of income for Canadians aged 65 and older comes from private pensions and government transfers. Only 18% is employment income.

Table 1-13 Incidences of Home Ownership/Percent with Mortgages

Family Unit	Own Principal Residence	Percent with Mortgages
Under 35	43.6%	88.5%
35-54	70.1%	81.2%
55-64	76.3%	38.5%
65 and over	74.6%	14.0%

The Wealth of Canadians, Statistics Canada 2018.

1- 7.8 Elder Spending

Despite the many financial advantages that baby boomers have, their consumption levels are the lowest on average (compared to other cohorts). This group is spending over a third less on discretionary goods and services than younger Canadians in their thirties.

Some highlights on the subject of elder spending:

- ❖ Senior-headed households reported the highest share of spending on food purchased from stores.
- ❖ Spending on health care increases with age. Senior-headed households reported spending 6.8% of their goods and services budget on health care.
- ❖ Elders spend more money on gifts, and they give substantially more to charitable organizations.

1 - 8 ELDER WISDOM

Most Canadian elders continue to have their wits about them. They are repositories of experience and wisdom. They have experienced the most incredible of times … and lived to tell the tale!

The new crop of elders (the baby boomers) has much higher levels of education than previous generations. Many of them have post-secondary degrees.

This is, of course, very good news since innumerable studies have shown that higher levels of education are associated with a very broad range of positive behaviours, attitudes and socioeconomic outcomes. People with a higher education have better health, less chance of being in a lower income, and a lower likelihood of social isolation.

Higher levels of educational attainment also produce high levels of volunteering, charitable giving, voting and political involvement, and literacy.

Literacy, in the current knowledge intensive economy, is more important than ever. Quality of life is, in fact, heavily dependent on it.
Literacy skills allow people to seek out, understand and apply information. Literacy can help elders to make informed decisions on such important matters as health, housing and finance. Literacy is also the foundation upon which other skills (e.g., computer use) are built.

1 - 8.1 Cognitive Impairment

A very small percentage (7-8%) of Canadian elders suffers from severe forms of cognitive impairment (e.g., Alzheimer's, Parkinson's, and Vascular Dementia). Most elders continue to live active, engaged and independent lives within their communities.

1 – 9 THE IMPLICATIONS FOR CANADIAN SOCIETY

As noted already, the social and economic impact of a rapidly aging society will be significant. In Canada, there are now over 7.5 million people over 65 years of age making up 18.8% of the total population and that by 2043, seniors will represent close to 25% of the population, up from 12.6% in 2001.

The current middle-aged cohorts representing the baby boom generation born between 1946 and 1965 make up 24.9% of the Canadian population. In 2012, the first boomers started to reach age 65 and we are now experiencing a marked acceleration in the number and proportion of elders.

And remember it is not just that Canadians are living longer and growing older – we are also experiencing a significant drop in the birth rate. As such, the real challenge does not relate solely to the number of older persons, but also to the proportions of older persons to younger ones.

Considering all this, several concerns have emerged. Among them: concern about the demands on a health care system that is already somewhat compromised; to declining economic capacity and growth, a shrinking workforce, and the sustainability of our public pension system.

Accepting that the elderly population will continue to grow and that the aging process itself plays a part in health deterioration, it is reasonable to expect increased demand for health care resources.

Canada's total health expenditure as a function of GDP is in the top quartile as compared to other developed countries.

Given the expected upward pressure on costs due to such factors as population growth, aging, the increased prevalence of chronic diseases as well as the accelerating costs of pharmaceuticals, home care, new technologies and human resources in the health sector, health care costs will continue to be a major concern.

With advances in best practices and learning from the experiences of other countries more advanced than Canada in the aging continuum which have meaningfully managed costs, Canada would be well served to investigate potential restructuring of health care delivery financing, health system reforms meeting the needs of seniors, policies that focus on quality of life and more responsive cost/benefit models. More on this subject will be covered in a later chapter.

The shift in age structure of the population in Canada also influences our workforce and corresponding labour supply patterns. The education and health care sectors are particularly at risk of losing a large share of their workforce due to relatively young retirement ages which are rendered more alluring by generous retirement incentives. Other sectors experiencing shortages of skilled workers include skilled construction tradespeople, medical technologists and technicians, aircraft mechanics and police officers.

Considering the challenges, we face, Canada should also be exploring strategies which encourage increased reproduction rates, immigration, labour force participation within select groupings, mentoring behaviour, graduated redeployment strategies and extended work life. Advances in technology and market globalization are transforming industrialized countries from resource-based economies to knowledge-driven economies. Underscoring how human capital is becoming an increasingly important engine of growth, it has the potential also to enlarge the effective labour force and to slow the pace of anticipated erosion or shrinking of the wage-income tax base. In short, if – as a society – we can become more productive, this will go a long way toward solving future fiscal challenges.

We also need to realize that population aging is potentially divisive. It may pit one generation against another. The working-age population may be increasingly called upon to support, financially and otherwise, a growing proportion of the population having reduced individual output and requiring supplemental care and support. Importantly, though, the younger generations will benefit also from the significant wealth of those seniors in the form of commerce, taxation streams and inheritance.

1 - 10 SOME FINAL THOUGHTS

If you could apply one label - and one label only - to Canadian elders, it would be this: *Canadian Elders are healthy, wealthy and wise.*

- Very few are heavy users of public health care
- Less than 10% are suffering from serious cognitive impairment
- 93% are living active and independent lives within their communities
- They have significantly more wealth than other households
- They have little debt, but the bankruptcy rate in seniors is the highest
- They have the most discretionary income
- They spend more on gifts and charity than any other group
- They have experienced the largest "real gains" in both income and asset growth (over the past three decades)
- They have their wits about them - and a wealth of experience

Better still, there is every reason to expect that the lot of Canadian elders will improve in the immediate future. The baby boom generation is extremely well educated and likely, therefore, to have better health, more social contact and more financial where-with-all than any previous generation of elders.

The fact that most women boomers were active participants in the labour force - even after marriage and children - will also significantly boost household income - and widowhood, in the future, may no longer be a precursor to life on the margins. The next generation of retirees will also likely be the first to fully capitalize on programs like the Canada Pension Plan and Registered Retirement savings. Further advances in health care and prescription drugs are likely as well. Both will improve the quality (health span) and the length (lifespan) of every Canadian's "golden years."

The fact that many Canadian elders are doing so well, however, should not blind us to the fact that a significant sub-set of elders are struggling - struggling financially, struggling with debilitating illness, and struggling with cognitive limitations.

There are two broad groups of elders in Canada: the healthy, wealthy and wise; and the unhealthy, unwealthy and cognitively challenged. Very old, widowed or unattached, women make up the majority of the second group.

- 7% of elders have been institutionalized
- 7-8% of elders suffer from serious cognitive limitations
- The final year or two of an elder's life usually involves severe disability
- Chronic conditions eventually foster social isolation
- Some elders (especially older women) live with an income substantially below the LICO
- Some elders have poor literacy and numeracy skills
- A significant portion of elderly people is entirely dependent on government transfers and social assistance

To make matters worse, there are storm clouds building on the horizon. We are about to experience a dramatic shift in our population. In the future there will be far fewer working Canadians and many more retirees. This shift will have an impact on virtually every aspect of our society.

It will also place an enormous strain on many of our cherished social programs. The very viability of programs like Old Age Security, The Canada Pension Plan and Medicare will come into question. And yet, most of us remain comfortably asleep at the wheel.

Fortunately, every crisis also creates opportunity. As the number of elders in Canada swells, and as the existing order buckles under the strain, many entrepreneurs will prosper - simply by filling the gaps and addressing the needs of this changing and growing market.

The boomers - the "age wave" - are entering their elder years en masse. The oldest Gen Xers are right behind them. In the words of Ken Dychtwald, author of "Age Wave Impact" … "Clearly, this is a dynamic business opportunity unlike any we have seen."

But to catch the wave, you must understand the market. The material that follows will provide you with a keen insight into the lives of elder Canadians. You will gain a perspective on where they have been, the challenges they face, what they value, and how they think. The better you understand elder Canadians, the more effective you will be at connecting with them in a meaningful and compelling fashion.

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Chapter 2

The Social Aspects of Aging

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2 - 1 KEY OBJECTIVE FOR THIS CHAPTER

This chapter focuses on some of the major social changes that have taken place in Canada over the course of the past century - as well as, at some of the challenges - and opportunities - which these changes have created. Emphasis will be placed on how social changes have affected our growing elder population.

2 - 1.1 How Will This Objective Be Achieved?

We will look at a variety of different subjects including social trends, social aging theories, elder roles,stages of aging, elder challenges, and elder myths.

2 - 2 INTRODUCTION

Elder life is not all about knitting, bridge and doting on the grandchildren. Many elders remain vital and engaged well into their 70s and 80s - often taking on new challenges and pursuing new interests and activities.

Michelangelo sculpted into his eighties. The great Spanish Cellist and conductor, Pablo Casals, came out of retirement at age 74, ran the Prades Festival until age 90, and conducted the inaugural performance of his *Himno a las Naciones Unidas*, at the United Nations, two months shy of his 95th birthday. Verdi composed two of his greatest operaswhen he was well into his seventies.

The Oracle of Omaha, and one of the richest men on the planet, Warren Buffet, continuedto manage the affairs of Berkshire Hathaway until age 82.

Actor turned politician, Ronald Reagan, became President of the United States five yearsafter hitting retirement age - spending most of his seventies in the low-key role of "most powerful man on earth." Another former president, George Bush Sr., celebrated both his80th birthday and the opening of his presidential museum by jumping out of a plane and skydiving!

There is nothing to stop any of us from carrying on as usual - or even pursuing newinterests - well into our elder years.

Making appropriate use of elder skills and talents will become vital in the immediate future - as elders become a substantially larger portion of the world's population. There are already more people aged 65 and over in the world than at any previous time in history.In fact, according to Ken Dychtwald (author of The Age Wave) “2/3s of all men and women who have lived beyond age 65 in the entire history of the world are alive today.”

We are among the first people ever to live with the expectation of a long and largely healthy old age. So profound is the current demographic revolution that every aspect ofsocial life and society will be impacted. We are boldly going where no society has evergone before. We are life span pioneers - trailblazing new paths for ourselves and the generations to come.

2 - 2.1 Social "Age Grading"

Our place in the social structure changes as we age. Every society is age graded. That is,it assigns different roles, expectations, opportunities, status, and constraints to people of different ages.

For example, there are common social expectations about the appropriate age to attendschool, begin work, have children, and retire—even though many people deviate from these expectations and some of these expectations change over time.

To call someone a toddler, child, young adult, or elder is to imply a full range of social characteristics. As we age, we pass through a sequence of defined stages, each with its'own social norms and characteristics. In sum, age is a social construct with social meanings and social implications.

The specific effects of age grading, or age stratification, vary across cultures and historical periods. A primitive society, for instance, would have had very different expectations associated with stages of childhood, adolescence, and old age than does contemporary Canadian society. Even within our own culture, those who are old todayhave different experiences of aging than previous or future groups of the elderly.

Much of the following discussion will focus on what it means to be elderly in contemporary Canadian society - and on how elders are changing - along with our viewand expectations of them.

2 – 3 THE HISTORY OF SOCIAL AGING THEORIES

The sociological study of aging is concerned with the social aspects of both individualaging and an aging society. The individual experience of aging depends on a variety ofsocial factors, including public policies and programs, economic status, social support,and health status.

As noted already, growth in the size of the elderly population and increases in life expectancy have led to population aging, or an increase in the proportion of older peoplerelative to younger people.

These changing demographics create challenges for many social institutions, such as health care and retirement income systems, families, and the labour force, and therefore have important policy implications, especially in the areas of social security, pension, andhealth care policy.

2 – 3.1 Theoretical Perspectives on Aging

What roles do individual senior citizens play in your life? How do you relate to and interact with older people? What role do they play in neighbourhoods and communities, in cities and in provinces? Sociologists are interested in exploring the answers to questions such as these through a variety of different perspectives including functionalism, symbolic interactionism, and critical sociology.

2 – 3.2 Functionalism

Functionalists analyze how the parts of society work together to create a state of equilibrium. They gauge how each part of society functions to keep society running smoothly. How does this perspective address aging? Structural functionalists argue that each age performs a specific function in society. Much of the focus in this approach is on how the elderly, as a group, cope with the functional transition of roles as they move into the senior stage of life. How do individuals adapt to the different roles, norms, and expectations of old age, and to their changing physical and mental capacities?

Functionalists find that people with better resources who stay active in other roles adjust better to old age. Three social theories within the functional perspective were developed to explain how older people might deal with later-life experiences.

The earliest gerontological theory in the functionalist perspective is **disengagement theory**, which suggests that withdrawing from society and social relationships is a natural part of growing old. There are several main points to the theory. First, because everyone expects to die one day, and because we experience physical and mental decline as we approach death, it is natural to withdraw from individuals and society. Second, as the elderly withdraw, they receive less reinforcement to conform to social norms. Therefore, this withdrawal allows a greater freedom from the pressure to conform. Finally, social withdrawal is gendered, meaning it is experienced differently by men and women.

Because men focus on work and women focus on marriage and family, when they withdraw, they will be unhappy and directionless until they adopt a role to replace their accustomed role that is compatible with the disengaged state.

The suggestion that old age was a distinct state in the life course, characterized by a distinct change in roles and activities, was groundbreaking when it was first introduced. However, the theory is no longer accepted in its classic form. Criticisms typically focus on the application of the idea that seniors universally naturally withdraw from society as they age, and that it does not allow for a wide variation in the way people experience aging.

The social withdrawal that early researchers recognized, and its notion that elderly people need to find replacement roles for those they have lost, is addressed anew in **activity theory**. According to this theory, activity levels and social involvement are key to this process, and key to happiness. According to this theory, the more active and involved an elderly person is, the happier he or she will be.

The proponents of "activity theory" argued that isolation and withdrawal were not part of a natural progression of aging and that psychological and social needs in old age are no different from middle age. This implied that to age optimally, one should stay active and maintain the activities of middle age if possible, substituting new activities when necessary.

Critics of this theory point out that access to social opportunities and activity are not equally available to all. The theory proposes that activity is a solution to the well-being of seniors without being able to account for how the distribution of access to these social opportunities and activities reflects broader issues of power and inequality in society. Moreover, not everyone finds fulfillment in the presence of others or participation in activities. Reformulations of this theory suggest that participation in informal activities, such as hobbies, are what most effect later life satisfaction.

Continuity theory, in turn, built on activity theory. It proposed that normal aging involves people attempting to maintain continuity in their lifestyles, activities, andrelationships, as they age, through adapting to both internal (attitudes, values, temperament) and external changes (activities, roles, the environment).

According to continuity theory**,** the elderly do not drastically change their lifestyles, behaviours, or identities. They make specific choices to maintain consistency in internal personality structures and beliefs, and external structures (e.g., relationships), remaining active and involved throughout their elder years. The focus of this approach is to examine how the elderly attempt to maintain social equilibrium and stability by making future decisions on the basis of already developed social roles. One criticism of this theory is its emphasis on creating a model of "normal" aging, which is inadequate as a description of those with chronic diseases such as Alzheimer's and tends to treat "non-normal" aging as pathological.

Many research studies conducted in the 1960s and 1970s tested and compared disengagement, activity, and continuity theories. They resulted in little support for disengagement theory, and the overall conclusion was that withdrawal is not at all a universal pattern or a normal part of aging. However, while the idea of disengagement asa universal and inevitable process has been abandoned, it left a lasting impression on thefield and an ongoing interest in understanding life satisfaction.

2 – 3.3 Critical Sociology/Gerontology

Critical gerontology is a prominent strand of sociological theories of aging that incorporates contributions from political economy, feminism, and the humanities. A central idea of critical gerontology is that aging is a socially constructed experience andprocess. In other words, the experience of aging largely depends on social context and cultural meanings of aging—how others react to the aged. The goal of work in this area is inclusiveness and emphasis on the experiences of disadvantaged or underrepresented older people. This theory investigates, for example, things like how dominant social institutions shape dependency and vulnerability in women throughout their life course and particularly in old age.

Research on the social construction of identity represents one of the most extensive areasof contemporary research in aging. The focus of studies from this perspective is on identity management within the context of aging and how various defining contexts, including age, are used to construct identities social situations. A classic example of research examining questions of identity is a 1979 study which looked at how old womendevelop strategies to deal with the stigma of stereotypes of infirmity, senility, and worthlessness.

Theorists working the critical perspective view society as inherently unstable, based on power relationships that privilege the powerful wealthy few while marginalizing everyone else. According to the guiding principle of critical sociology, the imbalance of power and access to resources between groups is an issue of social justice that needs to be addressed. Applied to society's aging population, the principle means that the elderly struggle with other groups—for example, younger society members—to retain a certain share of resources. At some point, this competition may become conflict.

For example, some people complain that the elderly get more than their fair share of society's resources. In hard economic times, there is great concern about the huge costs of social security and health care. They argue that the medical bills of the nation's elderly population are rising dramatically, taking resources away from the needs of other segments of the population like education. For example, while funding for education is cut back, funding for medical research increases. However, while there is more care available to certain segments of the senior community, it must be noted that the financial resources available to the aging can vary tremendously by race, social class, and gender.

There are three classic theories of aging within the critical perspective. **Modernization theory** suggests that the primary cause of the elderly losing power and influence in society are the parallel forces of industrialization and modernization.

As societies modernize, the status of elders decreases, and they are increasingly likely to experience social exclusion. The aged became trapped in a "role-less role" as work moved from home into factories, they lost the economic independence thataccompanies work, and young people moved to cities, isolating older generations.

Before industrialization, strong social norms bound the younger generation to care for the older. Now, as societies industrialize, the nuclear family replaces the extended family. With increasingly precarious employment, the struggle to earn a living means that people often have to move away from family to work and the work itself consumes increasing time and energy that might be spent looking after family members. Societies become increasingly individualistic, and norms regarding the care of older people change. In an individualistic industrial society, caring for an elderly relative is seen as a voluntary obligation that may be ignored without fear of social censure.

The central reasoning of modernization theory is that as long as the extended family is the standard family, as in preindustrial economies, elders will have a place in society and a clearly defined role. As societies modernize, the elderly, unable to work outside of the home, have less to offer economically and are seen as a burden. This model may be applied to both the developed and the developing world, and it suggests that as people age they will be abandoned and lose much of their familial support since they become a nonproductive economic burden.

Although modernization theory received much criticism and was discredited by historical and cross-cultural evidence, concern with the roles occupied in old age and the status of the aged remained.

Another theory in the critical perspective is **age stratification theory**. Though it may seem obvious now, with our awareness of ageism, age stratification theorists were the first to suggest that members of society might be stratified by age, just as they are stratified by race, class, and gender. The value of a person (i.e., their status or prestige in society) is determined by their age, an ascribed rather than an achieved characteristic. Because age serves as a basis of social control, different age groups have varying access to social resources such as political and economic power. In this model, the privileges, independence, and access to social resources of seniors decreases based simply on their position within an age-category hierarchy. The elderly experience an increased dependence as they age and must increasingly submit to the will of others because they have fewer ways of compelling others to submit to them. Moreover, within societies stratified by age, behavioural age norms, including norms about roles and appropriate behaviour, dictate what members of age cohorts may reasonably do. For example, it might be considered deviant for an elderly woman to wear a bikini because it violates norms denying the sexuality of older females. These norms are specific to each age strata, developing from culturally based ideas about how people should "act their age."

Age stratification theory helped move the field away from the view of age as dysfunction by making the distinction between age as a property of individuals and age as a property of social systems.

Age stratification theory has been criticized for its broadness and its inattention to other sources of stratification and how these might intersect with age.

Feminist theory argues that an older white male occupies a more powerful role, and is far less limited in his choices, than an older white female based on his historical access to political and economic power. In other words, gender is a key variable needed to understand the issues of aging. Women's status has traditionally depended much more on youth and physical attractiveness than men's, so the devaluation associated with aging affects them much more powerfully.

In addition, women's earnings do not increase at the same rate as men's in the latter half of their careers, so more women enter retirement age with considerably less financial resources than men.

Finally, many senior women today were socialized in their experience as daughters and wives to grant the decision-making power to men, especially in the area of financial decision making. When they outlive their spouses, they are often suddenly burdened with decisions and tasks with which they have had no experience. This can be profoundly disempowering, particularly when adult children feel they need to step in and take over. As feminist critique is not simply about drawing attention to the injustice of women's position in society, the question then becomes, how can senior women be empowered to develop new roles, recognize their strengths, and see themselves as valuable human beings?

2 – 3.4 Symbolic Interactionism

Generally, theories within the symbolic interactionist perspective focus on how society is created through the day-to-day interaction of individuals, as well as the way people perceive themselves and others based on cultural symbols. This microanalytic perspective assumes that if people develop a sense of identity through their social interactions, their sense of self is dependent on those interactions. A woman whose main interactions with society make her feel old and unattractive may lose her sense of self. But a woman whose interactions make her feel valued and important will have a stronger sense of self and a happier life.

Symbolic interactionists stress that the changes associated with old age, in and of themselves, have no inherent meaning. Nothing in the biological nature of aging creates any particular defined set of attitudes. Rather, attitudes toward the elderly are rooted in society.

One microanalytical theory is Rose's **subculture of aging theory**, which focuses on the shared community created by the elderly when they are excluded (due to age), voluntarily or involuntarily, from participating in other groups. This theory suggests that elders will disengage from society and develop new patterns of interaction with peers who share common backgrounds and interests. For example, a group consciousness may develop within such groups as CARP around issues specific to the elderly including health care, retirement security, continuing care, and elder abuse focused on creating social and political pressure to fix those issues.

Whether brought together by social or political interests, or even geographic regions, elders may find a strong sense of community with their new group.

Another theory within the symbolic interaction perspective is **selective optimization with compensation theory**. This theory is based on the idea that successful personal development throughout the life course and subsequent mastery of the challenges associated with everyday life are based on the components of selection, optimization, and compensation. Though this happens at all stages in the life course, in the field of gerontology, researchers focus attention on balancing the losses associated with aging with the gains stemming from the same. Here, aging is a process and not an outcome, and the goals (compensation) are specific to the individual.

According to this theory, our energy diminishes as we age, and we select (selection) personal goals to get the most (optimize) for the effort we put into activities, in this way making up for (compensation) the loss of a wider range of goals and activities. In this theory, the physical decline postulated by disengagement theory may result in more dependence, but that is not necessarily negative, as it allows aging individuals to save their energy for the most meaningful activities. For example, a professor who values teaching sociology may participate in a phased retirement, never entirely giving up teaching, but acknowledging personal physical limitations that allow teaching only one or two classes per year.

Another symbolic interactionist theory called **gerotranscendence** focuses on the idea that as people age, they transcend the limited views of life they held in earlier times. These researchers believe that throughout the aging process, the elderly become less self-centred and feel more peaceful and connected to the natural world. Wisdom comes to the elderly, and as the elderly tolerate ambiguities and seeming contradictions, they let go of conflict and develop softer views of right and wrong.

Not everyone will achieve wisdom in aging. Some elderly people might still grow bitter and isolated, feel ignored and left out, or become grumpy and judgmental. Symbolic interactionists believe that, just as in other phases of life, individuals must struggle to overcome their own failings and turn them into strengths.

Finally, **exchange theory**, a rational-choice approach, suggests that one's status and role identity within social relationships depend on an ongoing exchange of social resources such as effort, time, money, support, and companionship. There is an implicit cost/benefit analysis that underlies the dynamics of social relationships in which individuals calculate the costs of their contributions to the relationship (in terms of effort, etc.) against the benefits and rewards they receive in return. Inasmuch as relationships are based on mutual exchanges, as the elderly become less able to exchange resources, they see their social circles diminish. There is less benefit for others to exchange with them. In this model, the only means to avoid being discarded is to engage in resource management, such as maintaining a large inheritance or participating in social exchange systems via, for example, childcare.

In fact, the theory may depend too much on the assumption that individuals are calculating. It is often criticized for affording too much credit to material exchange and devaluing nonmaterial assets such as love and friendship.

2 – 3.5 The Life Course Perspective

The life course perspective is currently a dominant approach in the sociology of aging and is an often-cited theoretical framework for examining issues surrounding changes instatuses across time. This approach examines differences in aging across cohorts by emphasizing that individual biography is situated within the context of social structure and historical circumstance.

Recent research from this perspective covers a wide array of topics, examining inequality among women as they age, couples' retirement transitions, caregiving careers and women's health, the role of grandparents in grandchildren's lives, and how life course transitions affect intergenerational relationships.

It has also demonstrated that life transitions have become less tied to age, so that "events in family, education, work, healthand leisure domains occur across the life span at different (and many at increasingly later)ages than previously expected."

With the growing popularity of the life course perspective and its emphasis on old age asa culmination of earlier life experiences research on aging has become a very broad discipline.

A wide array of research has focused on family relationships and social support, investigating topics such as marital satisfaction in later life, parent-adult child relationships, sibling relationships, and grandparent/grandchild relationships. For example, a primary interest is parent-adult child relationship quality, and how relationship quality influences the provision of social support to parents in their old age.Studies in this area have been primarily framed by two approaches: the solidarity perspective, which focuses on the strength of intergenerational family ties and the conflict perspective, which focuses on the conflicts that arise in relationships with olderfamily members who require social support and care.

Related to research on family and social support is a large body of literature that specifically examines caregiving to older family members. One explanation for the interest in this area is the lengthening of life span and the greater potential reliance on family members that accompanies an extended old age. Much research in this area has focused on the consequences of caregiving for caregivers, such as caregiver stress and burden and their effects on health. While this research has documented the negative effects of caregiving, it has also demonstrated that in general women are likely to benefitfrom multiple roles depending on the mix of roles and their contribution to self-identity.

A major concern in the study of aging has been women's economic security in old age, and the resources available from family members and policies such as old age security. Because women tend to marry men who are older than themselves, and because of men'sshorter life expectancy, older women outnumber older men. As noted earlier, high proportions of women are widows and live alone in old age.

As a result, they have a greater chance of being institutionalized and are more likely to live in poverty than men. In addition, because women experience greater discontinuity in the labour force, movingin and out to accommodate family responsibilities, they have shorter and less stable employment histories.

Research investigating the long-term effects of these factors has found that women are less likely than men to be covered by pensions, and across the life course and in later life they have incomes that are far lower than men's, which translates into economic insecurity in old age.

2 – 3.6 Our Approach

Much of this chapter will look at aging from a "life course perspective." As noted above,the life course framework is an approach to the study of aging which focuses on the interaction between historical events, personal decisions, individual opportunities, and later life outcomes.

From this perspective, aging is viewed as a lifelong process rather than somethingparticular to later life.

From a life course perspective, the following are of interest:

- The patterns or trajectories than span across one's life (e.g., patterns ofschooling, child rearing, and work)
- The timing and nature of specific transitions within those patterns (e.g., the transition to parenthood or retirement)
- The variation in these processes across historical periods

This approach looks at both processes and historical context in order to understandindividual and group behaviour.

2 - 4 SOCIAL GERONTOLOGY

Unlike geriatrics, which is a branch of medicine that focuses on the diseases of the elderly, gerontology is the study of the social, psychological, and biological aspects ofaging.

Social gerontology is a sub field of gerontology that studies the social - as opposed to physical or biological - aspects of aging.

It focuses its' attention on:

- The social changes in people as they age
- The effects that the aging of our population has on society.
- Applying the knowledge gathered to policies and programs.

This chapter, as its' name implies, focuses almost exclusively on the social aspects of the aging progress. Topics of interest - on this front - include:

- Population cohorts and their interaction
- Life stages
- Changes in social structures and their impact
- The economics of aging
- The social challenges produced by an aging population.

2 – 4.1 Misconceptions

Think of the movies and television shows you have watched recently. Did any of them feature older actors? What roles did they play? How were these older actors portrayed? Were they cast as main characters in a love story? Grouchy old people? How were older women portrayed? How were older men portrayed?

Many media portrayals of the elderly reflect negative cultural attitudes toward aging. In North America, society tends to glorify youth, associating it with beauty and sexuality. In comedies, the elderly are often associated with grumpiness or hostility. Rarely do the roles of older people convey the fullness of life experienced by seniors—as employees, lovers, or the myriad roles they have in real life. What values does this reflect?

One hindrance to society's fuller understanding of aging is that people rarely understand it until they reach old age themselves. (As opposed to childhood, for instance, which we can all look back on.) Therefore, myths and assumptions about the elderly and aging are common. Many stereotypes exist surrounding the realities of being an older adult. While individuals often encounter stereotypes associated with race and gender and are thus more likely to think critically about them, many people accept age stereotypes without question. Each culture has a certain set of expectations and assumptions about aging, all of which are part of our socialization.

While the landmarks of maturing into adulthood are a source of pride, signs of natural aging can be cause for shame or embarrassment. Some people try to fight off the appearance of aging with cosmetic surgery. Although many seniors report that their lives are more satisfying than ever, and their self-esteem is stronger than when they were young, they are still subject to cultural attitudes that make them feel invisible and devalued.

We have learned that aging reflects not just the physiological process of growing older, but also our attitudes and beliefs about the aging process. You've likely seen online calculators that promise to determine your "real age" as opposed to your chronological age.

These ads target the notion that people may feel a different age than their actual years. Some 60-year-olds feel frail and elderly, while some 80-year-olds feel sprightly.

Equally revealing is that as people grow older they define “old age” in terms of greater years than their current age. Many people want to postpone old age, regarding it as a phase that will never arrive. Some older adults even succumb to stereotyping their own age group.

In North America, the experience of being elderly has changed greatly over the past century. In the late 1800s and early 1900s, many Canadian households were home to multigenerational families, and the experiences and wisdom of elders was respected. They offered wisdom and support to their children and often helped raise their grandchildren.

Today, with most households confined to the nuclear family, attitudes toward the elderly have changed. In 2024, of the roughly 15 million private households in the country, only about 1,000,000 of them (7%) were multigenerational. It is no longer typical for older relatives to live with their children and grandchildren.

Attitudes toward the elderly have also been affected by large societal changes that have happened over the past 100 years. Researchers believe industrialization and modernization have contributed greatly to lowering the power, influence, and prestige the elderly once held.

The elderly have both benefitted and suffered from these rapid social changes. In modern societies, a strong economy created new levels of prosperity for many people. Health care has become more widely accessible, and medicine has advanced, allowing the elderly to live longer. However, older people are not as essential to the economic survival of their families and communities as they were in the past. While the average person now lives 20 years longer than they did 90 years ago, the prestige associated with age has declined.

2 – 4.2 Phases of Aging

In Canada, all people over age 18 are considered adults, but there is a large difference between a person aged 21 and a person who is 45. More specific breakdowns, such as “young adult” and “middle-aged adult,” are helpful. In the same way, groupings are helpful in understanding the elderly. The elderly are often lumped together, grouping everyone over the age of 65. But a 65-year-old’s experience of life is much different than a 90-year-olds.

The older adult population can be divided into three life-stage subgroups: the young-old (approximately 65–74), the middle-old (ages 75–84), and the old-old (over age 85). Today’s young-old age group is generally happier, healthier, and financially better off than the young-old of previous generations. In North America, people are better able to prepare for aging because resources are more widely available.

Also, many people are making proactive quality-of-life decisions about their old age while they are still young. In the past, family members made care decisions when an elderly person reached a health crisis, often leaving the elderly person with little choice about what would happen. The elderly are now able to choose housing, for example, which allows them some independence while still providing care when it is needed. Living wills, retirement planning, and medical powers of attorney are other concerns that are increasingly managed in advance.

However, the gender imbalance in the sex ratio of men to women is increasingly skewed toward women as people age. In 2024, almost two-thirds (63 percent) of Canadians over the age of 85 were women. This imbalance in life expectancy has larger implications because of the economic inequality between men and women. The population of old-old women are the cohort with the greatest needs for care, but because many women did not work outside the household during their working years and those who did earned less on average than men, they receive the least retirement benefits.

2 – 4.3 The Meaning Of Old

What does it mean to be elderly? Some define it as an issue of physical health, while others simply define it by chronological age. The Canadian government, for example, typically classifies people aged 65 years old as elderly, at which point citizens are eligible for federal benefits such as Canada Pension Plan and Old Age Security payments.

The World Health Organization has no standard, other than noting that 65 years old is the commonly accepted definition in most core nations, but it suggests a cut-off somewhere between 50 and 55 years old for semi-peripheral nations, such as those in Africa. CARP (formerly the Canadian Association of Retired Persons, now just known as CARP) no longer has an eligible age of membership because they suggest that people of all ages can begin to plan for their retirement. It is interesting to note CARP's name change; by taking the word "retired" out of its name, the organization can broaden its base to any older Canadians, not just retirees. This is especially important now that many people are working to age 70 and beyond.

There is an element of social construction, both local and global, in the way individuals and nations define who is elderly; that is, the shared meaning of the concept of elderly is created through interactions among people in society. This is exemplified by the truism that you are only as old as you feel.

Demographically, the Canadian population over age 65 increased from 5 percent in 1901 to 18.8 percent in 2024. Statistics Canada estimates that by 2043 the percentage will increase to 23.1 percent. This increase has been called "the greying of Canada," a term that describes the phenomenon of a larger and larger proportion of the population getting older and older.

One of the main factors accounting for the greying of Canada can be attributed to the aging of the baby boomers. Nearly a third of the Canadian population was born in the generation following World War II (between 1946 and 1964) when Canadian families averaged 3.7 children per family (compared to 1.43 today).

Baby boomers began to reach the age of 65 in 2011. Finally, the proportion of old to young can be expected to continue to increase because of the below-replacement fertility rate (i.e., the average number of children per woman). A low birth rate contributes to the higher percentage of older people in the population.

2 – 4.4 The Boomers

Of particular interest to gerontologists right now are the consequences of the aging population of **baby boomers.** Coming of age in the 1960s and early 1970s, the baby boom generation was the first group of children and teenagers with their own spending power and therefore their own marketing power. The youth market for commodities such as music, fashion, movies, and automobiles, was a major factor in creating a youth-oriented culture. As this group has aged, it has redefined what it means to be young, middle-aged, and now, old. People in the boomer generation do not want to grow old the way their grandparents did; the result is a wide range of products designed to ward off the effects—or the signs—of aging. Previous generations of people over 65 were "old." Baby boomers are in "later life" or "the third age."

The baby boom generation is the cohort driving much of the dramatic increase in the over-65 population.

This aging of the baby boom cohort has serious implications for society. Health care is one of the areas most impacted by this trend. For years, hand-wringing has abounded about the additional burden the boomer cohort will place on the publicly funded health care system. The main sources of cost increase to the health care system come from inflation, rising overall population, and advances in medical technologies (new pharmaceutical drugs, surgical techniques, diagnostic and imaging techniques, and end-of-life care).

With respect to end-of-life care, the average Canadian now receives approximately one and a half times more health care services than the average Canadian did in 1975.

It has also been suggested that aging boomers will bring economic growth to the health care industries, particularly in areas like pharmaceutical manufacturing and home health care services. Further, some argue that many of our medical advances of the past few decades are a result of boomers' health requirements. Unlike the elderly of previous generations, boomers do not expect that turning 65 means their active lives are over. They are not willing to abandon work or leisure activities, but they may need more medical support to keep living vigorous lives. This desire of a large group of over-65-year-olds wanting to continue with a high activity level is driving innovation in the medical industry. It is not until the final year of life that health care expenditures undergo a dramatic increase. Approximately one-third to one-half of a typical person's total health care expenditures occur in the final year of life.

The implication is that with people living increasingly longer and healthier lives, the issue of the cost of health care and aging needs to be refocused on end-of-life care options.

The economic impact of aging boomers is also an area of concern for many observers. Although the baby boom generation earned more than previous generations and enjoyed a higher standard of living, they also spent their money lavishly and did not adequately prepare for retirement. According to a recent report, the average baby boomer falls about $500,000 short of adequate savings to maintain their lifestyles in retirement. As a result, seventy-one percent of boomers said they plan to work part time in retirement. This will have a ripple effect on the economy as boomers work and spend less.

Just as some observers are concerned about the possibility of the health care system being overburdened, the Canada and Quebec Pension Plans are also considered to be at risk given the longer life spans of seniors and relatively low interest rates. The Canada and Quebec Pension Plans are government-run retirement programs funded primarily through payroll taxes. Observers acknowledge that the systems are run very well, but their payments do not cover cost-of-living expenses, and in the absence of adequate retirement savings, the economic situation of retirees is threatened. With the aging boomer cohort starting to receive pension benefits, and with fewer workers paying into the pension trust fund, at some point the fund will have to start drawing on its investment income in order to make payments.

2 – 4.5 The Process of Aging

As human beings grow older, they go through different phases or stages of life. It is helpful to understand aging in the context of these phases as aging is not simply a physiological process. A **life course** is the period from birth to death, including a sequence of predictable life events such as physical maturation and the succession of age-related roles: child, adolescent, adult, parent, senior, etc. At each point in life, as an individual sheds previous roles and assumes new ones, new institutions or situations are involved, which require both learning and a revised self-definition. You are no longer a toddler; you are in kindergarten now! You are no longer a child; you are in high school now! You are no longer a student; you have a job now! You are no longer single; you are going to have a child now! You are no longer in mid-life; it is time to retire now! Each phase comes with different responsibilities and expectations, which of course vary by individual and culture.

The fact that age-related roles and identities vary according to social determinations mean that the process of aging is much more significantly a social phenomenon than a biological phenomenon.

Children love to play and learn, looking forward to becoming preteens. As preteens begin to evaluate their independence, they are eager to become teenagers. Teenagers anticipate the promises and challenges of adulthood. Adults become focused on creating families, building careers, and experiencing the world as an independent person. Finally, many adults look forward to old age as a wonderful time to enjoy life without as much pressure from work and family life.

In old age, grandparenthood can provide many of the joys of parenthood without all the hard work that parenthood entails. As work responsibilities abate, old age may be a time to explore hobbies and activities that there was no time for earlier in life.

But for other people, old age is not a phase looked forward to. Some people fear old age and do anything to "avoid" it, seeking medical and cosmetic fixes for the natural effects of age. These differing views on the life course are the result of the cultural values and norms into which people are socialized.

Through the phases of the life course, dependence and independence levels change. At birth, newborns are dependent on caregivers for everything. As babies become toddlers and toddlers become adolescents and then teenagers, they assert their independence more and more. Gradually, children are considered adults, responsible for their own lives, although the point at which this occurs is widely variable among individuals, families, and cultures.

The process of aging is a lifelong process and entails maturation and change on physical, psychological, and social levels. Age, much like race, class, and gender, is a hierarchy in which some categories are more highly valued than others. For example, while many children look forward to gaining independence, even in children, age prejudice leads both society and the young to view aging in a negative light. This, in turn, can lead to a widespread segregation between the old and the young at the institutional, societal, and cultural levels.

2 – 4.6 Biological Changes

Aging can be a visible, public experience. Many people recognize the signs of aging and, because of the meanings that culture assigns to these changes, believe that being older means being in physical decline. Many older people, however, remain healthy, active, and happy. Each person experiences age-related changes based on many factors. Biological factors such as molecular and cellular changes are called **primary aging**, while aging that occurs due to controllable factors such as lack of physical exercise and poor diet is called **secondary aging**.

Most people begin to see signs of aging after age 50 when they notice the physical markers of age. Skin becomes thinner, drier, and less elastic. Wrinkles form. Hair begins to thin and grey. Men prone to balding start losing hair. The difficulty or relative ease with which people adapt to these changes is dependent in part on the meaning given to aging by their particular culture. A culture that values youthfulness and beauty above all else leads to a negative perception of growing old. Conversely, a culture that reveres the elderly for their life experience and wisdom contributes to a more positive perception of what it means to grow old.

The effects of aging can feel daunting, and sometimes the fear of physical changes (like declining energy, food sensitivity, and loss of hearing and vision) is more challenging to deal with than the changes themselves. The way people perceive physical aging is largely dependent on how they were socialized. If people can accept the changes in their bodies as a natural process of aging, the changes will not seem as frightening.

Some impacts of aging are gender specific. Some of the disadvantages that aging women face rise from long-standing social gender roles. For example, the Canada Pension Plan (CPP) favours men over women, inasmuch as women do not earn CPP benefits for the unpaid labour they perform as an extension of their gender roles. In the health care field, elderly female patients are more likely than elderly men to see their health care concerns trivialized and are more like to have the health issues labelled psychosomatic. Another female-specific aspect of aging is that mass-media outlets often depict elderly females in terms of negative stereotypes and as less successful than older men.

For men, the process of aging—and society's response to and support of the experience—may be quite different. The gradual decrease in male sexual performance that occurs as a result of primary aging is medicalized and constructed as needing treatment so that a man may maintain a sense of youthful masculinity. On the other hand, aging men have fewer opportunities to assert the masculine identities in the company of other men (e.g., sports participation). Some social scientists have observed that the aging male body is depicted in the Western world as genderless.

2 – 4.7 Social and Psychological Changes

Male or female, growing older means confronting the psychological issues that come with entering the last phase of life. Young people moving into adulthood take on new roles and responsibilities as their lives expand, but an opposite arc can be observed in old age. What are the hallmarks of social and psychological change?

Retirement—the idea that one may stop working at a certain age—is a relatively recent idea. Up until the late 19th century, people worked about 60 hours a week and did so until they were physically incapable of continuing. In 1889, Germany was the first country to introduce a social insurance program that provided relief from poverty for seniors. At the request of the German chancellor, Otto von Bismarck, the German emperor wrote to the German parliament: "those who are disabled from work by age and invalidity have a well-grounded claim to care from the state."

The retirement age was initially set at age 70.

In the 21st century, most people hope that at some point they will be able to stop working and enjoy the fruits of their labour. But do people look forward to this time or do they fear it? When people retire from familiar work routines, some easily seek new hobbies, interests, and forms of recreation. Many find new groups and explore new activities, but others may find it more difficult to adapt to new routines and loss of social roles, losing their sense of self-worth in the process.

Each phase of life has challenges that come with the potential for fear. According to Erik H. Erikson (1902–1994), social life could be broken into eight phases. Each phase presents a particular challenge that must be overcome. In the final stage, old age, the challenge is to embrace integrity over despair. Some people are unable to successfully overcome the challenge.

They may have to confront regrets, such as being disappointed in their children's lives or perhaps their own. They may have to accept that they will never reach certain career goals. Or they must come to terms with what their career success has cost them, such as time with their family or declining personal health. Others, however, are able to achieve a strong sense of integrity, embracing the new phase in life. When that happens, there is tremendous potential for creativity. They can learn new skills, practise new activities, and peacefully prepare for the end of life.

For some, overcoming despair might entail remarriage after the death of a spouse. A study conducted at the turn of the 21st century, reviewed demographic data that asserted men were more likely to remarry after the death of a spouse, and suggested that widows (the surviving female spouse of a deceased male partner) and widowers (the surviving male spouse of a deceased female partner) experience their post marital lives differently. Many surviving women enjoyed a new sense of freedom, as many were living alone for the first time. On the other hand, for surviving men, there was a greater sense of having lost something, as they were now deprived of a constant source of care as well as the focus on their emotional life.

2 – 4.8 Aging and Sex

It is no secret that Canadians are squeamish about the subject of sex. When the subject is the sexuality of elderly people no one wants to think about it or even talk about it. That fact is part of what makes the 1971 cult classic movie, *Harold and Maude,* so provocative. In this cult favourite film, Harold, an alienated, young man, meets and falls in love with Maude, a 79-year-old woman. What is so telling about the film is the reaction of his family, priest, and psychologist, who exhibit disgust and horror at such a match.

Although it is difficult to have an open, public national dialogue about aging and sexuality, the reality is that our sexual selves do not disappear after age 65. People continue to enjoy sex—and not always safe sex—well into their later years.

In some ways, old age may be a time to enjoy sex more, not less. For women, the elder years can bring a sense of relief as the fear of an unwanted pregnancy is removed and the children are grown and taking care of themselves. However, while we have expanded the number of psycho-pharmaceuticals to address sexual dysfunction in men, it was not until very recently that the medical field acknowledged the existence of female sexual dysfunctions.

2 – 4.9 Death and Dying

For most of human history, the standard of living was significantly lower than it is now. Humans struggled to survive with few amenities and very limited medical technology. The risk of death due to disease or accident was high in any life stage, and life expectancy was low. As people began to live longer, death became associated with old age.

For many teenagers and young adults, losing a grandparent or another older relative can be the first loss of a loved one they experience. It may be their first encounter with **grief**, a psychological, emotional, and social response to the feelings of loss that accompanies death or a similar event.

People tend to perceive death, their own and that of others, based on the values of their culture. While some may look upon death as the natural conclusion to a long, fruitful life, others may find the prospect of dying frightening to contemplate. People tend to have strong resistance to the idea of their own death, and strong emotional reactions of loss to the death of loved ones. Viewing death as a loss, as opposed to a natural or tranquil transition, is often considered normal in North America.

What may be surprising is how few studies were conducted on death and dying prior to the 1960s. Death and dying were fields that had received little attention until psychologist Elisabeth Kübler-Ross began observing people who were in the process of dying. As Kübler-Ross witnessed people's transition toward death, she found some common threads in their experiences. She observed that the process had five distinct stages: denial, anger, bargaining, depression, and acceptance. She published her findings in a 1969 book called *On Death and Dying*. The book remains a classic on the topic today.

Kübler-Ross found that a person's first reaction to the prospect of dying is *denial,* characterized by not wanting to believe that he or she is dying, with common thoughts such as "I feel fine" or "This is not really happening to me." The second stage is *anger*, when loss of life is seen as unfair and unjust. A person then resorts to the third stage, *bargaining*: trying to negotiate with a higher power to postpone the inevitable by reforming or changing the way he or she lives. The fourth stage, psychological *depression*, allows for resignation as the situation begins to seem hopeless. In the final stage, a person adjusts to the idea of death and reaches *acceptance*. At this point, the person can face death honestly, regarding it as a natural and inevitable part of life, and he or she can make the most of their remaining time.

The work of Kübler-Ross was eye-opening when it was introduced. It broke new ground and opened the doors for sociologists, social workers, health practitioners, and therapists to study death and help those who were facing death. Kübler-Ross's work is generally considered a major contribution to **thanatology**: the systematic study of death and dying.

Of special interests to thanatologists is the concept of "dying with dignity." Modern medicine includes advanced medical technology that may prolong life without a parallel improvement to the quality of life one may have. In some cases, people may not want to continue living when they are in constant pain and no longer enjoying life.

The controversy surrounding death with dignity laws is emblematic of the way our society tries to separate itself from death. Health institutions have built facilities to comfortably house those who are terminally ill. This is seen as a compassionate act, helping relieve the surviving family members of the burden of caring for the dying relative. But studies almost universally show that people prefer to die in their own homes.

Is it our social responsibility to care for elderly relatives up until their death? How do we balance the responsibility for caring for an elderly relative with our other responsibilities and obligations? As our society grows older, and as new medical technology can prolong life even further, the answers to these questions will develop and change.

The changing concept of **hospice** is an indicator of our society's changing view of death. As noted already, Hospice is a type of health care that treats terminally ill people when cure-oriented treatments are no longer an option. The focus is not on passing out of this life in comfort and peace. Hospice centres exist as places where people can go to die in comfort, and increasingly, hospice services encourage at-home care so that someone has the comfort of dying in a familiar environment, surrounded by family. While many of us would probably prefer to avoid thinking of the end of our lives, it may be possible to take comfort in the idea that when we do approach death in a hospice setting, it is in a familiar, relatively controlled place.

2 – 4.10 Challenges

Aging comes with many challenges. The loss of independence is one potential part of the process, as are diminished physical ability and age discrimination. The term **senescence** refers to the aging process, including biological, emotional, intellectual, social, and spiritual changes.

As already observed, many older adults remain highly self-sufficient. Others require more care. Because the elderly typically no longer hold jobs, finances can be a challenge. Due to cultural misconceptions, older people can be targets of ridicule and stereotypes. The elderly face many challenges in later life, but they do not have to enter old age without dignity.

Ageism is discrimination (when someone acts on a prejudice) based on age. Dr. Robert Butler coined the term in 1968, noting that ageism exists in all cultures. Ageist attitudes and biases based on stereotypes reduce elderly people to inferior or limited positions.

Ageism can vary in severity. When ageism is reflected in the workplace, in health care, and in assisted-living facilities, the effects of discrimination can be quite severe. Ageism can make older people fear losing a job, feel dismissed by a doctor, or feel a lack of power and control in their daily living situations.

In early societies, the elderly were respected and revered. Many preindustrial societies observed **gerontocracy**, a type of social structure wherein a society's oldest members hold the power. In some countries today, the elderly still have influence and power, and their vast knowledge is respected.

In many modern nations, however, industrialization contributed to the diminished social standing of the elderly. Today wealth, power, and prestige are also held by those in younger age brackets. The average age of corporate executives was 59 in 1980.

Thirty years later it had lowered to 54. Some older members of the workforce felt threatened by this trend and grew concerned that younger employees in higher-level positions would push them out of the job market. Rapid advancements in technology and media have required new skill sets that older members of the workforce are less likely to have.

Changes happened not only in the workplace but also at home. In agrarian societies, a married couple cared for their aging parents. The oldest members of the family contributed to the household by doing chores, cooking, and helping with childcare. As economies shifted from agrarian to industrial, younger generations moved to cities to work in factories. The elderly began to be seen as an expensive burden. They did not have the strength and stamina to work outside the home. What began during industrialization, a trend toward older people living apart from their grown children, has become commonplace.

2 – 4.11 Mistreatment and Abuse

Mistreatment and abuse of the elderly is a major social problem. As expected, with the biology of aging, the elderly sometimes become physically frail. This frailty renders them dependent on others for care—sometimes for small needs like household tasks, and sometimes for assistance with basic functions like eating and toileting. Unlike a child, who also is dependent on another for care, an elder is an adult with a lifetime of experience, knowledge, and opinions—a more fully developed person. This makes the care providing situation more complex.

Elder abuse describes when a caretaker intentionally deprives an older person of care or harms the person in his or her charge. Caregivers may be family members, relatives, friends, health professionals, or employees of senior housing or nursing care. The elderly may be subject to many different types of abuse.

In a study conducted several years ago by Dr. Ron Acierno, a team of researchers identified five major categories of elder abuse: 1) physical abuse, such as hitting or shaking, 2) sexual abuse including rape and coerced nudity, 3) psychological or emotional abuse, such as verbal harassment or humiliation, 4) neglect or failure to provide adequate care, and 5) financial abuse or exploitation.

Other researchers have identified abandonment and self-neglect as types of abuse.

Table 2-1 Some Signs of Abuse

Physical abuse	Bruises, untreated wounds, sprains, broken glasses, lab findings of medication overdosage
Sexual abuse	Bruises around breasts or genitals, torn or bloody underclothing, unexplained venereal disease
Emotional/ psychological abuse	Being upset or withdrawn, unusual dementia-like behaviour (rocking, sucking)
Neglect	Poor hygiene, untreated bed sores, dehydration, soiled bedding
Financial	Sudden changes in banking practices, inclusion of additional names on bank cards, abrupt changes to will
Self-neglect	Untreated medical conditions, unclean living area, lack of medical items like dentures or glasses

The risk of abuse also increases in people with health issues such as dementia. Older women were found to be victims of verbal abuse more often than men. Researchers have also identified factors that increased the likelihood of caregivers perpetrating abuse against those in their care. Those factors include inexperience, having other demands such as jobs (for those who weren't professionally employed as caregivers), caring for children, living full time with the dependent elder, and experiencing high stress, isolation, and lack of support.

A history of depression in the caregiver was also found to increase the likelihood of elder abuse. Neglect was more likely when paid caregivers provided care. Many of the caregivers who physically abused elders were themselves abused—in many cases, when they were children. Family members with some sort of dependency on the elder in their care were more likely to physically abuse that elder. For example, an adult childcaring for an elderly parent while, at the same time, depending on some form of income from that parent, would be considered more likely to perpetrate physical abuse.

A survey found that 60.1 percent of caregivers reported verbal aggression as a style of conflict resolution. Paid caregivers in nursing homes were at a high risk of becoming abusive if they had low job satisfaction, treated the elderly like children, or felt burnt out.

Caregivers who tended to be verbally abusive were found to have had less training, lower education, and higher likelihood of depression or other psychiatric disorders. Based on the results of these studies, many housing facilities for seniors have increased their screening procedures for caregiver applicants.

2 - 5 EVOLVING ELDER ROLES

In this segment we will examine some of the traditional - as well as the new roles - assumed by Canadian elders. It should become readily apparent that the stereotypes of grandpa reading the paper and grandma knitting by the fire are quite inconsistent with therealities of elder life in the 21st century.

In 2005, the world was amazed by the news of a 67-year old writer and part-time university lecturer in Romanian literature, Adriana Iliescu, becoming the world's oldest mother. For her, this role of a mother was a very new role – a new role in her old age. The numbers of children born to older mothers (50 plus) is rising, as of course is the number of older women in general. It is not a massive trend, but it is a trend. Reference to the existence of older mothers can be traced back to the sacred texts of the Old Testament, for example, and the apparent happiness of attaining this new role despite the "impropriate age" seems to be constant.

People living longer, healthier lives in our societies of abundance have more lifetime and possibilities on their hands than any generation before them. This structural framework enables individuals to live more colourful lives, somewhat released from the constraints of age norms and institutional boundaries. This results in wider and more populated role sets. Although the example of role of the mother of a new-born child may seem rather extreme and controversial for a discussion about the social roles of older people, it does serve to underpin the scale of change that later life has undergone and how much the social roles of people at this stage of the life course are affected.

The complexity of later life role sets is increased by its inherent time and context dynamics. In his classical essay "Flexibility and the Social Roles of the Retired" from 1954, Robert Havighurst claims that "great changes in social roles occur between the ages of 50 and 75". He talks about roles that intensify (such a s homemaker), diminish (for example worker, parent, spouse, lover...), intensify with special effort (e.g. active citizen), or emerge for the first time (carer of a grandchild or parent). It is clear that all of these things need to be re-examined in the light of the increasing heterogeneity and individualisation of the life cycle. Life's transition timetables are changing. And this changes the numbers and intensities of the roles played by older adults, as well as ways in which they are played. Indeed, the very definition of "the retired" as those aged 50 and older would not mirror the social reality of old age today.

In the traditional paradigms of social policy and social gerontology, older people have been regarded mainly as receivers of help, as those in need.

However, recent studies have looked more often at older people as a "resource," as those who provide, contribute, and give.

As a result of this "paradigm shift," their contribution is being recognised on different levels: at a societal level as workers and GDP contributors; at a mezzo level as active members of the community; and at a micro level as a pivotal part of intergenerational solidarity, in particular as care providers within families. Being a working grandparent caring for a spouse or even one's own parent and/or grandchild can be challenging, and not at all a marginal role in today's ageing societies. However, only very little attention has been paid to the intersection of these different levels, to how these different roles overlap and how convergence or conflict between them is perceived, understood, and experienced by ageing people themselves. Given the interlocking character and conflicting timetables of social roles in higher age, there is the potential risk of role overload. A lot of stress is generated within a person when he either cannot comply or has difficulty complying with the expectations of a role or a set of roles. According to a recent study from the Czech Republic, people aged between 50 and 70 years have on average seven social roles, and within these role sets, the role of grandparent (and friend in the case of grand-childless) is the one which brings the highest levels of happiness. On the other hand, the role of worker is characterized as the most prevalent source of stress and perceived role overload. As both of these roles are often combined in a single role set, the multiple roles of older people are usually a bitter-sweet experience.

The grandparental role is usually the only role identified as "new." However, there are other new roles becoming prevalent (and/or more visible) in this life period, both inside and outside the family realm, such as active-ager, "learner," on-line dating person, religious person, volunteer, caregiver, entrepreneur, parent-in-law, worker, and others. With increasing average age at first marriage, re-marriage and childbearing, becoming a spouse as well as a parent in one's fifties for the first time, taking on these new roles is no longer as unrealistic as it may have been in the middle of the twentieth century.

2 - 5.1 The Elder as Grandparent

The *Economist* recently announced the arrival of the age of the grandparent. By 2050, the number of grandparents is expected to surpass the number of children.

The moment you become a parent; you automatically give your own parents a new role and position: you make them grandparents. The dynamics of this new relationship havebeen changing significantly over the past number of years.

Elders are becoming dramatically more involved in the lives of their grandchildren. At the heart of increasing grandparental involvement is demographic change. Countries in the developed world have experienced an unprecedented growth in the number of their elderly and this trend is expected to continue for decades. The demographic "Silver Tsunami" is often a cause for concern and framed as an ageing crisis.

Ageing populations do indeed pose huge challenges to social and health care services and the economic foundation on which they sit. However, the Silver Tsunami also means that there are more elderly who live longer and who are healthier and are available to help. Never before have so many elderly people survived old age.

While life expectancy at birth has increased steadily for centuries, life expectancy at age 65 started to increase only in the twentieth century. In parallel with increases in life expectancy, fertility rates are falling so that fewer children are being born into each family.
As the world ages and moves to a low fertility phase, the young become more valuable. They are the future workers and creators of future economic wealth.

Another major issue relating to the increased involvement of grandparents, is that a growing number of women are working. The dual-earner family has rooted itself socially and culturally in most developed countries. With advances in gender equality and in order to maintain the resources to give the child the education and quality of life parents feel important, two salaries have become the norm. Labour force participation rates of women in the prime ages of 25–54 years continued to rise, which raises the question of who will care for the children, especially those in the critical pre-school age and older children after school and in the holidays? In addition, family break-up and divorce impacts on the need for extra help. The increase in the number of lone mothers, whether as a result of never having married or following divorce, places further demands on grandparents' care. Earlier research shows that many of these grandparents are filling the parenting gap: attending school meetings, helping with homework, and advising young people about careers. Changing gender roles also shaping grandparenting itself. When we talk about 'grandparents,' the underlying assumption has for a long time been that we are talking about grandmothers. A study in 2016 found, contrary to assumptions, that many grandfathers were very connected with their grandchildren. Some of them represent the new 'niche' of Western grandfathers, who aim to be more caring and involved grandfathers than what was the norm in previous societies.

There is nonetheless a lot of variation in the amount of involvement grandparents want. Some may have been eagerly anticipating the arrival of grandchildrenand they may genuinely look forward to spending time with "little ones" again. Some parents may welcome a grandparent's willingness to babysit or even provide regular childcare. It may offer them the break they need to either study or work. In some cases, the grandparents may even be too eager to participate, and the parents may have to makethe limits clear.

Other elders, however, may believe the child-rearing period of their lives is over and thatit is now time for someone else to do the heavy lifting. These grandparents will likely keep their distance and vow not to interfere in any way with how the children are raised.

Many of today's grandparents, after all, do not in any way fit the stereotype of grey-haired, stay-at-homes with nothing to do other than babysit.

They may be active retirees with busy lives of their own. They might even still be in the workforce. Health concerns could also restrict the time and energy that they can devoteto the grandkids.

Today's incredibly mobile society can also help to shape the nature of the grandparent-grandchild relationship. Historically grandchildren have tended to live relatively close totheir grandparents - but today, it is common for them to be separated by thousands of miles.

A few suggestions on how to keep a long-distance relationship between grandparents and grandchildren healthy:

- Use the postal service to exchange photos, drawings, and messages.
- Write often, even if the message is only a few sentences long. Postcards are agreat vehicle for delivering short and sweet messages.
- Telephone from time to time (but be forewarned that young children strugglewith telephone conversations)
- Keep your parents informed about your child's interests (school, sports, books, favourite TV programs, etc.) so that they have something to write or talk about
- Send audio and video recordings of your children. Currently technology this iseasy to accomplish using the internet, and our aging society is using the internetmore and more.
- Ask your parents to tape stories about when you were little, or memories of theirown childhood.

The quality of a grandchild's relationship with his or her grandparents will be determinedin large part by the quality of the relationship between their parent and the grandparents. If some friction exists, then a lot of ongoing open communication may be necessary. Thebest interests of the grandchildren should always be kept in mind. If there is friction and disagreement, the grandchildren should be kept well clear of the dispute. The grandkids should be able to establish their own relationship with the grandparents, unburdened by any problems that exist between the adults.

When the relationship with their grandparents is positive, the grandkids benefit from a widening circle of caring adults present in their lives. Contact with grandparents exposes them to different environments, experiences, and points of view. In situations where one parent is absent, a grandparent can also provide a missing gender role model.

There is now a growing body of research that illustrates that grandparent involvement is associated with improved mental health, improved resilience and positive social behaviour in grandchildren.

The elders also gain from getting to know their grandchildren. They build links into the future and continue contributing to their family. Parents too can benefit from supportingand encouraging these enriching intergenerational connections.

Yet the steep rise in the caregiving responsibilities of grandparents raises the question: How does caring for grandchildren affect the health and well-being of grandparents?

Research has found that relative to non-custodial grandparents, custodial grandparents (i.e., those who cared for their grandchildren full-time) scored higher on several dimensions of cognitive tests, such as word recall, letter fluency, and cognitive similarities. Certain cognitive skills like digital ordering skills also decreased at slower rates over time.

The impact of grandparenting on the physical health of grandparents, however, differs significantly depending on the intensity of the caregiving responsibilities. For custodial grandparents, grandparenting is associated with a higher risk of having elevated stress levels, emotional distress, depressive symptoms, limited activities of daily living, and poorer self-reported stress.

For grandparents in multigenerational households who likely share childcare responsibilities with their children's parents, grandparenting appears to be both beneficial and detrimental. By contrast, for non-resident grandparents who care for their children on a part-time basis, grandparenting tended to have a beneficial impact on physical health.

Grandparenting may also have a negative impact on the financial well-being of grandparents. Although there is considerable variation across racial/ethnic and socioeconomic groups, resources generally flow downward from grandparents to adult children and grandchildren. When grandparents "double up" with grandchildren and/or their parents, they end up serving as "hosts" and often become responsible for their own expenses as well as those of their parents. Furthermore, the conflicting demands from the labor market and caregiving for grandchildren may force some custodial grandmothers to withdraw from the labor market.

Grandparenting may also adversely affect grandparents' chances in the dating market. A recent study found that caregiving activities tended to limit their dating life. According to this study, older single adults postponed dating until care work was completed.

Men often found older single women with heavy caregiving responsibilities less desirable. Older single women found men with close ties to their families to be more desirable, but they reported aversion towards partners whose caregiving burden may add to their own caregiving responsibilities.

Overall, these findings suggest that grandparenting has mixed consequences for the well-being and health of grandparents. As a society, we must ensure that grandparents who take care of their grandchildren have adequate financial, emotional, and instrumental support. This ensures that grandparenting is an act of love that fulfills older adults, not a heavy burden that they need to take on during their golden years.

2 - 5.2 The Elder as Active-Ager

Increasing life-expectancy, together with the relatively low age of retirement, raise important questions regarding the role of older people as individuals and their role in society.

The emergence of the concept of active ageing, which belongs to the area of social policy, can be seen as part of a wider change in the way the meanings of ageing are constructed and how the position of old age in an individual biography is interpreted.

Active ageing can be intended as "the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age." In this respect, 'active' means "continuing participation in social, economic, cultural, spiritual and civic affairs, and not just the ability to be physically active or to participate in the labour force." Based on a "comprehensive approach" to ageing, it can be argued that active ageing should be widely preventative and inclusive, involving people's aging throughout their entire lives, and including them whatever may be their physical, psychological and social condition. More specifically, according to the World Health Organization (WHO), a good lifestyle in an active ageing perspective concerns the interaction between the individual and his/her surroundings, involving biological, psychological and social domains. Thus, it should start early in life, including participation in family and community life, healthy and balanced diet, adequate physical activity, avoidance of smoking and excessive alcohol consumption, and active ageing policies should promote the implementation of preventative health treatments to enhance lifestyle, food, and consumption habits at all stages and life situations.

Active aging includes a wide range of pursuits that keep your mind, body, emotions and spirit engaged, regardless of age, health or socioeconomic status, according to the WHO). It also means being diligent about your own health and well-being.

Following the principles of active aging can help extend longevity and quality of life, according to Colin Milner, founder and CEO of the International Council on Active Aging. "Physical activity is just one of the many elements that makes up a person. "It's just as important that we are socially connected and that we are intellectually active.

2-5.3 How To Be An Active Ager

Stay positive

Active aging starts with having a positive attitude about getting older. Research by Yale psychologist Becca Levy and others have found that negative attitudes about aging can trim 7.5 years off your life. Other studies find connections between positive attitudes about aging and better health, including lower risk of heart disease, diabetes, and cancer, as well as improved quality of sleep.

Stay connected

Older people with active social interactions with family and friends — whether in person or virtually — may live longer and reduce their risk of depression, according to The American Geriatrics Society. Conversely, being isolated or lonely increases the odds of poorer health.

Stay involved

Participation in cultural, social, economic, and civic affairs can also help foster wellness and healthier aging regardless of physical or cognitive status, the WHO reports. Activities like volunteering in the community, participating in intergenerational programs (think: tutoring, reading to children, family gatherings), political involvement, or even helping out a neighbor foster a sense of satisfaction and purpose.

Stay healthy at all ages and stages

Your early life behavior—including diet, alcohol and tobacco use—sets the stage for later-life active aging, according to Dr. Susan Friedman, a geriatrician and professor of medicine at the University of Rochester. Friedman points to a growing recognition among medical professionals that lifestyle really does make a difference in healthy aging.

"However, people should know they can live active, healthy, happy, productive lives, even with chronic disease or disability," says Friedman. And it's never too late to adopt healthier behaviors, which can help minimize the effects of disease and extend longevity, she says.

Stay curious

Intellectual engagement is as important as physical and social stimulation, experts say. Efforts that promotes brain health, like taking a class, playing music, reading books about new subjects, or learning new skills, keeps the brain engaged and neurons firing.

Stay calm

Managing stress and anxiety as an older person is different. You may experience new types of stressors, like the loss of a loved one, a change in financial status or less structure in your day due to retirement, as well as physical changes, according to experts at Harvard Health. Exercise, deep breathing techniques, mindfulness or meditation, and increased social and mental health support are just some non-pharmacologic ways to help manage life's ups and downs.

Other factors also play a part in active aging. Biology and genetics, income, education, and access to health care, play important roles in healthy longevity. Everyone can take an active approach towards aging, regardless of their particular circumstances.

While individuals must take the lead, health care systems, governments and policymakers must also create the means to foster healthy older age. A 2020 report from the McKinsey Global Institute, concluded that we should be thinking about health and aging more as an economic and social investment rather than a strain on the economy or safety net.

"Long-term prevention and health promotion cannot simply be left to healthcare providers or healthcare systems. It is quite literally everybody's business," the report said.

At the individual level, people who are more engaged in their own health and aging reduce the burden on the healthcare system and contribute more to the economy.

No matter where you live, or what your specific lifestyle and health situation is, anyone can be an active ager. Even if you are in long term care, you can always squeeze the juice out of life. So that you can live better, longer, in that circumstance.

There are no hard and fast rules for active aging, except to engage your whole self as much as possible. You don't have to climb the mountain. You just have to take that first step.

2 - 5.4 The Elder as Retiree

With retirement comes a potential loss of social status and self-worth. For many elders, retirement also produces the loss of structured activity, the loss of a crucial social network, and a significant reduction in income.

Retiring is a career transition. And considering this, it should be approached the same way one would approach any other job or career change. Lots of planning, reflection and introspection are required. A good retirement plan will cover such matters as: what a person needs and wants to do, as well as how and when they are going to do it. While some flexibility is in order, the more specific a plan is, the easier it will be to implement. Formerly, retirement was thought of as the "beginning of the end." Today, however, it isfar more likely to be a new beginning - a transition into a new and different lifestyle.

From this perspective, retirement closes one door and then opens a whole variety ofothers.

The definition of retirement has, in fact, undergone a dramatic transformation. Under theold definition, it was simply the period immediately preceding death - in which one traded in productivity for sedentary and leisurely pursuits. This description was not far off the mark during the 19th century and early 20th century. As recently as 1950, life expectancy at birth in Canada was only 67 years. Forty years ago, it was common for men to die in their late 60s and women in their early 70s. Anyone who made it to 80 wasconsidered exceptional - 90 was awe-inspiring. The old formula was simple: you retired, and then you died.

Not any more though. Most of us can expect to live for decades after retirement - andwith proper planning, many of these years will be among the best years of our lives!

Unfortunately, many of us still do not "get it." In this new-world order, the biggest riskwe face is not "dying too soon," it is "living too long." Too many of us are stuck in the past. We are living in the 21st century and planning a 20th century retirement. Failing toplan for a very long, engaged, and productive retirement is a precursor to personal disaster.

According to Statistics Canada a substantial number of today's 55-year old's can expect to live to age 90 or even 100. And that is based on current mortality experience. Futuremedical breakthroughs are likely to push the life expectancy envelope even further.

2 - 5.5 The Elder as Employee

Many elders continue to work past age 55 either in a full time or part time position.

With regard to these later life workers, two extreme subgroups should be recognised: one is the group of extremely wealthy older persons, and the second comprises those who are increasingly recognised as the future poor. This second group of workers and entrepreneurs have little or no social and health system coverage and few if any alternative strategies for old age other than prolonged work.

The number of elder workers has been increasing in recent years. The employment rate of individuals 55 or over has grown noticeably. From 1997 to 2016, it rose from 30.5% to 43.5.4% for men and from 15.8% to 32.4% for women. This leads to a combined labour force participation rate of close to 40%.

Inadequate savings, increased life expectancy and the fact that a large segment of the baby boomer cohort has not set aside enough retirement savings suggest that growth inelder labour force participation is a trend with legs.

With respect to the baby boomers a survey conducted by CIBC revealed thefollowing startling results:

- Most Canadian baby boomers surveyed in a new poll say they would work longerto live better throughout their post-work years rather than opt to retire earlier.
- The CIBC survey finds that 57 per cent of Canadians aged 50 to 59 say they would prefer to work longer into their retirement years in order to uphold theircurrent lifestyles.
- However, the poll also suggests that 24 per cent of Canadian respondents intheir 50s plan to carry debt into retirement.
- The findings come on the heels of a previous CIBC poll that suggests Canadiansin the same demographic have fallen short of retirement goals, with nearly half having saved less than $100,000 for retirement.

Current elder workers have indicated that they made the decision to stay in the workforcefor the following reasons:

- To make needed additions to retirement income
- To add some meaning and purpose to their lives
- To keep busy and make valued social contacts.
- To retain status and identity
- To use their special skills and education

Many elders struggle in the "new role" of retiree. This is especially true of men -particularly if their wife is still gainfully employed.

As the number of older workers increases there will likely be a significant amount of friction in the workplace. Many current employers have a rather jaundiced view of olderworkers.

Among their misperceptions:

- Age is a deterrent to productivity.
- Jobs are not important to the older workers.
- Advanced age is correlated with diminishing value on the job.
- Older workers are rigid, inflexible, and unable to compete mentally.
- It is difficult and not worth the expense and effort to train older workers.

Most of these concerns are completely without foundation - they are simply evidence of a persistent ageism in the work environment. The truth of the matter is that older workers offer several crucial advantages compared to their younger counterparts.

Among these advantages:

- Superior attendance
- Low accident record (although they stay out longer after an injury)
- Higher rates of job satisfaction
- Eagerness to learn new skills.
- Reliable work habits
- Loyalty to both the job and the firm
- Invaluable experience
- Stability and low turnover
- Less concern about advancement
- Equal or better productivity rates
- Many standard fringe benefits are not necessarily needed.
- A willingness to work on a part-time, temporary, or even seasonal basis.

Of course, the problems that older workers face are not just a function of ageism in the workplace. *There are also several more difficult structural matters that need to be addressed, including:*

- Financial disincentives to work (i.e., early retirement programs often providehigher benefits - continuing to work is financially disadvantageous)
- Most employers demand fixed work hours and fixed workdays (both of which canrun counter to the freedom and flexibility most elderly people are seeking)
- Retraining opportunities are often withheld from older workers.
- Employers have an incentive to replace higher paid, experienced workers, withlower paid newcomers.
- Office design (most offices are designed for younger workers - older workers need larger characters on computer screens, better lighting and acoustics andequipment that is not dependent on physical strength and/or fine motor skills)

2 - 5.6 The Elder as Entrepreneur

Rather than working for someone else, many elders opt to start their own businesses from scratch - and this is a trend that is likely to explode as the baby boomers enter their retirement years.

While the word startup conjures up images of founders in their twenties making a go of it in their college dorm rooms, entrepreneurship is not just for the young. In fact, the trend for older individuals to create and run a thriving business is accelerating.

The poster child for elder entrepreneurs is, of course, "Colonel" Sanders. At the ripe oldage of 65, he took an old family recipe for fried chicken and a $100 Social Security cheque and created KFC - a multi-billion-dollar fast food empire.

According to James Challenger, "Aging baby boomers will lead to a surge in start-ups." The reasons that they will become entrepreneurs (also called "seniorpreneurs," “boompreneurs,"grey entrepreneurs," and "third age entrepreneurs") are varied. Some have always wanted to start a business but lacked the financial and family flexibility to do so. Some see startinga company as a natural extension of their previous career. Others are forced into self- employment due to a lack of alternatives and insufficient wealth to retire from. And still others are just plain bored … and hungry for a challenge.

Older entrepreneurs also realize that they have several competitive advantages that tendto be under appreciated in most corporate environments. *Among them:*

- A track record and industry credibility
- Confidence, proven abilities, and leadership skills
- An established credit and personal financial resources

There are benefits to having a few grey hairs. Professionals in their 40s and 50s have amassed a set of skills and transferable experience that become a significant advantage when starting their own business. At that age, you tend to know your strengths and weaknesses as well as what you want and don’t want. Even though it might seem riskier to “take the plunge,” older professionals are usually more financially stable. That makes it easier to create a side hustle or go all in and start a business from the ground up. Finally, the more experienced you are, the bigger your network. A robust network of contacts makes launching your business that much easier. Not only is networking a great way to find prospective customers, but it can also help establish connections with potential investors.

According to research, people who start a business later in life (defined as 50 years and above) create the most economic value by introducing radical innovations that disrupt markets. The study, published in the *Research Policy journal*, shows that older founders are more likely to introduce new products and services to the market than younger founders.

In addition, every ten more years of age increases a founder’s likelihood to introduce a market novelty by up to 30%.

That makes late-career entrepreneurs who are highly innovative with managerial experience more than three times as likely to introduce market novelties than the sample average.

Given the evidence of age-related discrimination in the workplace and the advantages of flexibility and autonomy that come with being your own boss, later-life entrepreneurship is an appealing alternative.

2 - 5.7 The Elder as Volunteer

The last large-scale survey on volunteering in Canada is from 2018, before the COVID-19 pandemic. In 2018, around 79% of Canadians aged 15 years or older were taking part in some type of volunteer work. The total number of hours Canadians volunteered reached approximately 2.5 billion. This is equivalent to roughly 2.5 million full-time jobs. On average, Canadian volunteers contribute around 206 hours each, which is almost 26 eight-hour working days.

This figure alone demonstrates the impact of volunteering in Canada. Without their input charities, non-profits, and numerous other organizations would have to spend a lot more money on paying for services rather than using their funds to benefit those in need.

The economic value of the skills and time provided by volunteers in Canada is huge. The economic value is often referred to as" volunteer dollars" and in 2018, was worth approximately $55 billion.

Canadians from all walks of life take part in volunteer work. However, there are differences between age groups, men and women, and socio-economic backgrounds.

In 2018, Canadians born in 1996 or after were the most likely age group to take part in volunteer work. The oldest Canadians, born in 1945 or earlier, were the least likely to volunteer with 32% of the age group having volunteered in 2018 or 2017. However, this age group gave the most hours averaging 222 hours per year compared to 82 hours for the younger group.

The older generations were also more likely to be" top" volunteers, which is a term used to define the 25% of volunteers who give the most hours. In 2018, this meant giving at least 132 hours per year. 40% of Canadians who were born in 1946 or before, 31% of Baby Boomers (people born between 1946 and 1965), were top volunteers in 2018.

These percentages reflect the fact that older Canadians have more free time to dedicate to volunteering since they are no longer part of the active workforce. It also shows that many older Canadians are looking to use their free time to benefit their communities. It can also offer them a way to remain more social, especially if they live on their own.

In Canada, women are more likely than men to work as volunteers. The differences were mainly driven by Baby Boomers and Millennials (people born between 1981 and 1995).

The difference in the number of women/ men volunteering was not noticeable in other age groups.

Canadians who are employed and have higher levels of education take part in volunteer work more frequently.

The key motivations to volunteer differ between age groups. Among younger Canadians, improving job opportunities was an important motivator for 38% of volunteers compared to 22% across all volunteers. Often, the volunteer work was linked to their graduation or job requirements.

While younger Canadians volunteered to improve their chances of finding paid jobs, people from older generations were more likely to cite using their skills, religious or spiritual beliefs, or supporting a social or political cause as reasons to volunteer.

Following the COVID-19 pandemic, many charities in Canada reported getting fewer volunteers than they did before the pandemic. In 2022, 22.4% of charities said they now had significantly fewer people volunteering than they did before the pandemic. 32.7% of charities had noticed a moderate decrease in the number of volunteers.

Volunteering is a great way for elders to enrich their lives: have new experiences; discover new interests or start a new hobby. Volunteering also helps elders to connect with others, meet new people and expand their social network.

Volunteering can also improve an elder's level of happiness. It can work as a psychological enhancer, alleviating boredom and possibly even depression. It is possible that volunteering can even boost an elder's health. Some studies also show that people who volunteer may have a longer life expectancy than those who do not.

In summary, volunteering does not just benefit the organization that the senior supports - it also enhances the image of elders in the broader society and produces several benefits for the volunteer:

- It improves personal self-regard.
- It stimulates mental functioning.
- It creates valuable social interaction (which combats isolation and depression)
- It creates what has been dubbed "helper's high" (a condition that produces health benefits that are like those produced by yoga and meditation)
- It is positively correlated with increased life expectancy.

2 - 6 BOOMER FOCUS

In the coming years, nothing is likely to have a greater impact on the elder market thanthe arrival - by the millions - of the baby boomers. Through sheer numbers they have had a disproportionate influence on society - and they are not done yet.

In every stage of their lives, they have transformed their environment - and things are unlikely to be any different this time around. By the time that they are finished, our viewof "the golden years" will likely never be the same again.

Given that the boomers are about to become the largest, most vocal, most influential group of senior citizens that the world has ever seen - it makes sense to spend a little time looking at who they are, and how they think, in greater detail. The following material should prove helpful in this regard.

2 – 6.1 Boomers Life Experiences

It is easy to forget just how dramatically different the early experiences of the baby boomers were compared to the generations that have followed.

- Homes had only one telephone, in either the kitchen or the front hall. It was black, with a rotary dial.
- Children had to share a room with a sibling and a bathroom with the rest of the family.
- During the early 1950's, they all made room for a new, conversation killing, family member - the television, with a black and white picture with 3 to 12 available stations.
- They enjoyed Sunday drives in the family car because there was little else to doon "the Lord's Day."
- Their parents struggled to put money aside for a rainy day, and only then would they think about buying luxuries - and when they did buy, they paid in cash.
- The family celebrated with mom and dad when they made their final mortgage payment.
- Parents lived with the fear that their children would die, or be disabled or disfigured by smallpox, scarlet fever, or polio.
- Grandma and grandpa quickly visited regularly.
- Jobs lasted a lifetime - dad started a company at a young age and retired from the same company three or four decades later.
- Marriages also lasted a lifetime.
- Couples got married before they had babies.

2 – 6.2 Social Revolution

As young adults the boomers were major participants in a social revolution of significant proportions:

- Thanks to birth control, delayed marriage, an increased emphasis on career and widespread female participation in the workforce, the baby bust followed the baby boom. Family size shrunk to the point where the Boomers were not even having enough children to replace themselves.
- Cohabitation has become an acceptable precursor to marriage.
- The divorce rate increased fivefold.
- The dual-wage-earning family emerged as the norm.

- ❖ Parents became *crunched* for time as they juggled the often-competing obligations of job and family.
- ❖ Couples of the same sex gained increasing recognition and respect.

These and other important social changes have transformed the families of today. Couples have often either lived together before getting married or just do not bother with marriage at all. One in every three women raises children on her own for at least part of her life.

As the children of baby boomers come of age, they are confronted by a bewildering array of choices and responsibilities unimagined by their parents or grandparents.

2 – 6.3 Life Experiences of Today's Children

- ❖ They have their own bedroom.
- ❖ They have their own phone - often mobile - in terms of the colour and style of their choice.
- ❖ The Commodore 64 computer gave way to the Pentium processor, the Internet and massive array of video games, online music, and alternative entertainment.
- ❖ On Sundays, they borrow one of the family cars to drive to the mall.
- ❖ They talk to grandma and grandpa by phone or email.
- ❖ Thanks to their parents own spendthrift methods they have learned that almost anything they want is available on credit.
- ❖ They live in a world of HIV/AIDS and STDs - a world where *safe* sex is a necessity.
- ❖ They have lived through their parents' separation and the break-up of the families of friends.

Given the dramatic differences in the formative years of the boomers and the generations that followed, we can expect to see some significant differences in attitude and outlook, differences that will play out during the first half of the 21st century.

2 – 6.4 The Boomer as Corporate Employee

The levels of education achieved by the baby boomers would have startled our ancestors.In the 1960s, for example, enrolments in secondary schools rose by 8% *per year*, and in post-secondary institutions, by 11%. It was an interesting decade to be in the teaching profession. It was also an interesting decade to be a university graduate.

For the early university educated boomers, opportunities were bountiful, and job-hunting was pleasant - though not quite as pleasant as the job-hunting prospects of the cohort thathad graduated just before them. A university graduate in the early 1960s faced a businessworld in short supply of young managerial talent (particularly degree-owning talent).

The low fertility rates of the 1930s combined with the buoyant economic atmosphere ofthe post-war years ensured that opportunities were plentiful - both in the private and public sectors. Governments were, after all, launching a wide range of social programs.

A popular axiom of the times puts the matter quite bluntly, "if all else failed, you could always get a job in the government." And even if that failed, there was a massive shortage of teachers.

However, the employment picture was not this rosy for every baby boomer. Some had extraordinary opportunities. Others struggled. The dividing line that separated feast from famine, "*in"* from "*out,"* was 1952.

That was the first year in Canadian history when more than 400,000 babies were born. According to John Kettle, a futurist who spends his time studying these things, those born in 1952, or the dozen years that followed it, had a 25% smaller chance of being promoted to middle management than someone born before 1952.

2 – 6.5 The Boomer as Consumer

The baby boomers have not proven to be slouches when it comes to consuming. They have fewer children and lots of discretionary income. And if discretionary income begins to lag, boomers have shown no reluctance to draw on credit to maintain their lifestyle.

Relatively sophisticated - and educated - consumers, they gravitate to the best things thislife has to offer. They are determined to live better than their parents did - even if that requires sacrificing tomorrow's security on the altar of today's perceived needs.

The low savings rate of this cohort, combined with the unsustainability of current government social programs does not make for a pretty picture.

2 – 6.6 The Boomer as Conservative

The first boomers (those born between 1946 and 1952) startled society with their radical nature and openness to change. The real radicals of the generation were a small minority,but they heavily influenced the rest of the cohort.

As a result, when the first wave of boomers arrived at the traditional age of adolescent rebellion, all of society suddenly felt the shock waves. Years later as the boomers entered middle age, society suddenly discovered the perils of middle age spread.

Obesity, diet, physical fitness, anti-aging and health suddenly became the topics ofconcern.

Unlike the early boomers, the late boomers (i.e., those born in 1952 and thereafter) were far from radical in their thinking. They came to maturity in a world whose limits were farmore obvious. Jobs were not plentiful, the days of cheap energy were over, and there

was increasing competition from newly industrialized countries like South Korea and Japan. To make matters worse, the price of many consumer products (houses in particular) had already been driven up thanks to the demand created by the front end ofthe cohort.

The younger boomers tended to be more scared and nervous than their older counterparts and this, in turn, helps to explain this group's profound conservatism. However, the *conservatism* of late Boomers is less a 1950s-style acceptance of societal values, than recognition of the need to work hard in order to survive.

2 – 6.7 The Boomer as Parent

Not surprisingly, the desire to consume tends to work against the desire to conceive. Boomers are great consumers … but not that big on parenthood. The boomers delayed marriage, delayed children, had fewer children, and in many cases - by choice or otherwise - failed to have any children at all.

- In 2008, the average age at first marriage was 31.6 for men and 29.6 for women(up from 27.4 for men and 25.2 for women in 1998)
- The average age at which a woman first gives birth was 29.5 in 2011 (up fromthe mid-20s thirty years earlier)
- Canadian woman in 2015 (between ages 19 and 49) gave birth, on average to 1.60 children. This is substantially below the fertility rate needed for population replacement.
- According to LifeSiteNews.com, the childless (or "childfree") rate among couplesis currently approximately 44.5% - half of which is intentional.

Higher levels of labour force participation among boomer females has likely contributed to delayed marriage and lower birth rates. In 2009 there were 2.8 million couples with at least one child under age 16 at home. While most of these families were dual-earners, one in five (486,000) had one employed parent and one stay-at-home parent.

Of those stay-at-home parents, in 11% of the cases it was the Father who stayed at hometo watch the children.

The employment rate of women with children under 16 living at home, in 2009, was nearly twice the rate of 39.1% recorded in 1976. The employment rate for women with children under 3, in 2009, was more than double the proportion of 27.6% in 1976.

It is safe to say that the children of the boomers likely saw less of their mother and/or father than any generation in Canadian history. Many of them are, in fact, a part of the world's first day-care generation.

Canadian society has also experienced a dramatic increase in the number of single parent families. For the first time, Statistics Canada in 2011 says there are more people living alone in Canada than there are couples with children. One-person households now make up 27.6 percent of all homes, a three-fold increase since 1961 that is especially notable inQuebec.

In 2011, the most typical family was a couple with no children, continuing a pattern spotted in 2006.

Statistics Canada found that 44.5 per cent of families have no children athome, partly reflecting the aging of the baby-boomer bulge, the leading edge of which has started turning 65. Overall, there were 9.4 million families in Canada in 2011, a 5.5 percent increase from 2006.

2 – 6.8 Family Structure

The traditional family, as our parents knew , is a relic of the past. Only one in eight Canadian families today is a traditional family with a father who works and a mother whostays home to keep house and care for the children. The structures that have replaced the traditional family are so diverse that it is safe to say that there is no longer such a thing asa *typical* family.

There are 14 times as many divorced Canadians as there were 30 years ago. As a result,one child in four grows up in a family headed by a single parent - and 90% of the time that parent is the mother. Even if a child is lucky enough to still have two parents, both are likely employed outside the home. After a long, hard day at work many of these parents do not have enough energy or time to nurture their children. The children, as a result, experience "*family time famine"* and “the *parenting crunch*."

The parenting crunch is caused by the shrinking amount of time and energy that parentshave available to spend with their children. A variety of factors contribute to the parenting crunch. Among them: the huge increase in working mothers, longer work weeks, and a considerable increase in the divorce rate.

Most parents who work more than 20 hours a week say they do not have a balance between work and family time. In 1985, an American study indicated that parents wereonly spending half as much time with their children as compared to twenty years earlier.

A Canadian study, meanwhile, found that 41% of all parents said it was difficult to findthe time and energy to "parent" their children.

It should be noted that the parenting crunch is not just a problem for lower income households. The people with the best jobs (professionals, executives, and highly skilled technicians) tend to put in the longest hours - which translates into less time at home withthe children.

2 - 7 STAGES OF AGING

For years we have described people over the age of 65 as *senior citizens* and *the elderly* - terms that far too often are associated with frailty and ill health.

Fortunately, society's concept of what old age is has been changing dramatically in recent years. In both words and numbers, we are starting to describe the later stages of life differently than previous generations have.

With increases in both life span and in the number of older adults, we have come to realize that terms like senior citizen and elderly do not properly describe the diversity of life beyond age 55 or 65. Not all senior citizens feel *senior.* One out of two still has a parent living. Most are in good health and expect to be active for years, perhaps decades, to come. Even the term *retirement* is being retired. As noted, the Canadian Association of Retired Persons has officially dropped the words from its name and become CARP. Its' new slogan is "Canada's association for the fifty- plus."

Historically we have thought of life stages in terms of childhood, adolescence, adulthood, middle age, and finally, old age. The first four of these stages last for approximately 10-15 years. The final stage used to last that long too. However, thanks to dramatic increases in life expectancy, the final stage of our lives can last 30, or 40 or even 50 years. Adults and elderly people often refer to "the kids" - a term that can refer to children, adolescents, young adults, or even middle age adults. There is a world of difference between a child and a middle age adult. The same sort of problem arises when we describe everyone over the age of 55 or 65 as a senior citizen. There is a world of difference between someone who is 60 and someone who is 85 years of age.

How can we expect a single term (e.g., elderly) or a single life stage, or phase, to properly describe the diversity of experience that takes place over so long a period? Put simply: we cannot. Social gerontologists have, in fact, identified two pre-retirement phases, or stages - and up to five distinct "retirement" phases, or stages that a person goes through.

2 - 7.1 Pre-Retirement Stages

The first of two pre-retirement stages begins about three to five years prior to retirement.This phase is usually referred to as "fantasy time" as it consists primarily of dreaming about and planning for retirement - and all the new options and opportunities that it will make available.

The second pre-retirement stage begins about one and a half years prior to retirement. Itis usually called "excitement time." As the actual date of retirement approaches severalpractical - and difficult - decisions must be made (concerning retirement benefits, income, health coverage, etc.). Problems are often encountered that should have been dealt with earlier. Compromises are often required.

As the actual date of retirement gets closer and closer, the individual can be subjected to significant levels of stress. Everyone who deals with the retiree should be aware of this and where possible attempt to compensate.

2 - 7.2 Retirement Stages

Five distinct "retirement" stages have been identified by social gerontologists. Every individual tends to pass through these stages at his or her own pace. An individual's frame of mind, level of social activity and overall health will impact how slowly, or quickly, they pass through the five stages.

2 - 7.3 Stage 1: The Honeymoon (or Transition Period)

"What do I want to do with the rest of my life?"

The honeymoon usually begins when an individual enters retirement. It is a period of newly found freedom. Work has ended, and it is possible to sleep in, lay back and relax.

This is a time of catching up on delayed projects and enjoying the new freedoms of retirement. The elder accepts, at least for the present, the adjustments that have had to be made in switching from his or her work routine to the flexible world of retirement.

After a while, however, restlessness sets in. The retiree often loses some self-esteem and begins to feel a need to become productive again. Because he or she is no longer producing a product or service each day, the haunting question arises - "just who am I?" The elder will often feel lost and ill at ease.

At this point, most retirees are likely to pursue a new outlet for their energies and talents.It might take them as long as three years to work through this transition period.

2 - 7.4 Stage 2: Full Steam Ahead

"Am I pursuing my dream? What am I doing to find fulfilment?"

During this stage, some people become active volunteers while others turn a hobby into a business. Still others may choose to travel or join a variety of different social and athletic clubs. It is time to kick up one's heels, get motivated and pursue dreams - both old ones and new ones. This period of intense engagement might last anywhere from 10 to 15 years.

2 - 7.5 Stage 3: Midcourse Correction (The Sweet Years)

"What must I give up and what new things can I try that fit this stage in my life?"

These are the "Golden Years" when the elderly begin to slow down and simply *take it easy*. It is one of the sweetest stages of one's life. There is time to pause, reflect, and share one's wisdom with others. The goal, during this stage, is to find a balance between *full steam* and the slower pace that advancing age may necessitate.

This is a period when the elder learns to accept and enjoy his or her new role. Physical limitations, such as an illness or disease, are common.

There may also be some financial adjustments that are required.

The challenge during this period is to maintain one's sense of self-worth as old activities must be approached in new ways. Instead of driving across the country, for example, theelder might opt for a tour bus excursion. Instead of dancing the tango, it might be time toenjoy a slower waltz. This stage generally lasts from five to ten years.

2 - 7.6 Stage 4: Automatic Pilot (The Spiritual Stage)

"What is truly important to me at this point in my life?"

During this stage, many elders enjoy travelling back through time, enjoying old memories, and perhaps even visiting the places where they grew up or raised their families. Many may decide to start writing their memoirs, exploring family history, orputting together a scrapbook of their life.

There is a shift in priorities and the standards and expectations of others become less important. Instead of trying to dress to please others, the elder might suddenly choose todress entirely for his or her own comfort. Behaviour may even become somewhat eccentric.

The elder starts to become more of an observer of life - rather than a doer. The body becomes less active, and the mind becomes more active. Simple activities like watching thesunset, visiting with family and grandchildren, lunches, drives, talking about old times, and watching television bring a great deal of enjoyment. This stage can last eight to ten years.

2 - 7.7 Stage 5: Safe Harbour (and Sunset)

"Have I put everything in order? Am I ready?"

It is time to wrap up loose ends. Elders begin to concentrate on unfinished business in the safe harbour stage. They investigate adjusting their wills, planning their estates, andarranging for their funerals. If they have any problem relationships, this is the period inwhich they will attempt to patch things up.

During this stage, people often solicit help from family, friends, and professionals such as lawyers, doctors, and counsellors. If not already in a care facility, many people enter onein this phase.

What elders experience during this phase is like the feeling one gets after returning homefrom a very long trip. There is a sense of satisfaction and relief - a sense of peace. Thisphase often covers the last one to two years of life.

2 - 8 SOCIAL CHALLENGES FOR ELDERS

As we age, we are confronted with a series of difficult social challenges such as the deathof a spouse, family member, or friend and the isolation that it produces, divorce, relocation and other disruptions to the family and family structure. In addition, financial and health challenges and a loss of independence can occur.

2 - 8.1 Loss of Financial Independence

This loss of income or savings can adversely affect an elder's recreation, housing, and health care choices - which can, in turn, have a devastating impact on both their physicaland mental well-being.

Even in situations where the elderly have enough money, many physical limitations (e.g., eyesight, hearing, mobility) may limit their ability to manage their own financial affairs - even though they remain mentally alert.

2 - 8.2 Other Losses

Often elders are less fearful of "the end" itself - and a lot more fearful of the "little endings" that come before it. Giving up the car keys, yielding the cheque book to a trusted child or friend, and not being trusted to be alone in the kitchen, can be troublingindignities.

"Dependence" is the loss of the ability to function independently and autonomously in performing the activities of daily living - and to fulfil, in the process, a meaningful socialrole. Autonomy, on the other hand, is the ability of individuals to engage in self- determined behaviour, to pursue their own goals, and to determine the course of their existence.

Elders face a multitude of frustrations as they become less and less autonomous and moreand more dependent. A common refrain: “I used to do everything for myself, but now I am too weak (or too poor, or too forgetful) and I can't even hold my hand steady to write my name anymore.”

The loss of independence may be due to changes in physical and/or mental health. Chronic conditions, such as diabetes, arthritis, heart disease and hypertension, as well asacute accidents such as falls, are the major causes of disability and dependency among the elderly. But in order to be autonomous, one also needs to be capable of rational thinking.

2 - 8.3 Substance Abuse

Though feelings of anxiety, grief and sorrow are normal reactions to major life changes,the most common medical approach to anxiety and depression in seniors is to prescribe drugs. These carry potential risks from side effects and inappropriate use through dependency.

Older adults are, in fact, at far greater risk - than the rest of the population - for developing drug and alcohol problems. Seniors with depression are at particularly highrisk for problems with alcohol. In fact, they are three to four times more likely to have alcohol related problems than older people who are not depressed.

None of this should be surprising, since elders must routinely adjust to dramatic changesin their lives (e.g., retirement, loss of their spouse, death of friends, disability, terminal illness, etc.). For many older adults, alcohol has become a source of comfort and support. However excessive consumption can lead to depression and isolation.

It is easy to let *cocktail time* start earlier and earlier and to make the drinks stronger. Worse, since mostelders are taking a variety of prescription drugs, the combination can be a recipe for trouble. Combining the two is one of the classic scenarios that lead to dependency.

Complicating matters is the fact that drug and alcohol problems are difficult to identify inthe elder segment of the population. It is a lot easier to identify these problems in younger working age adults (who have jobs, children, and significantly more social obligations). Among the elderly, drug and alcohol problems can easily be hidden.

Friends and family who suspect that an elder is having problems with substance abuse should attempt to have the elder see their personal physician. Take all the prescribed andover-the-counter medications in the medicine cabinet and ask the doctor to discuss dosages. Tell the doctor that the person has been drinking while taking their medicationsand discuss the effects alcohol has on the medications.

Successful treatment for an older person with a substance abuse problem includesflexibility, sensitivity, and patience.

2 - 8.4 Depression

Everyone feels sad sometimes. The source can be any number of things: the stress associated with holidays, or separation from a loved one. Such feelings should be temporary, and they should not interfere with regular daily activities over an extended period. If they do, the person involved is likely suffering from a more serious ailment:clinical depression. Clinical depression is *not* a natural part of aging.

A clinically depressed person suffers from symptoms that interfere with his or her abilityto function in everyday life. These symptoms include much more than just feeling blue. A clinically depressed individual will often have feelings of diminished self-worth and feelings of excessive guilt.

They will often spend an inordinately long period of time (day and night) in bed and notbother with such basics and washing, shaving, and getting dressed in the morning. Theymay even begin to question the value of life and contemplate suicide.

Appetite and sleep may suffer while lethargy sets in. The person may show little interestin his or her own welfare and little interest in doing things that in the past brought pleasure.

It should come as no surprise that many elders are clinically depressed. Deteriorating physical health can quickly change a happy retirement into a period of confusion, fear, and chronic pain. When disabilities occur later in life, individuals who were involved inworking, socializing, and travelling may suddenly face lower incomes, reduced mobilityand dependence on caregivers and medical devices.

These changes can have a dramatic effect on seniors' mental and emotional well-being. And increased stress also has consequences on physical health.

Recent studies validate the link: one Statistics Canada study found that older women who are psychologically distressed such as feeling sad, worthless, and hopeless are far more likelyto die over the next several years as those who are not distressed.

The loss of one's life partner is another major life stress associated with aging. About a third of Canadian seniors are coping with the loss of their life partners, not to mention thegradual loss of their friends, relatives, and social circles.

2 - 8.5 Recognizing Depression

Recognizing depression in older individuals is not always easy. The current population of Canadian elders came of age at a time when depression was stigmatized - it was not understood well, and it was largely considered a sign of mental weakness. Elders may, asa result, attempt to hide their depression for fear of being labelled "unworthy," "difficult" or "weak of character." Surprisingly, it appears that seniors are quite successful in this endeavour. An article in the Canadian Medical Association Journal noted that physicians are unable to detect depression in nearly 90% of depressed seniors in hospital care. As a result, seniors are among the most under-treated populations for mental health.

Another factor that makes depression hard to recognize and treat is that it is oftenconfused with aging itself. Clearly, the key to correctly identifying and treating depression among seniors begins with education.

To further compromise an early diagnosis, the family, and friends of a depressed elder may think that a change in temperament or behaviour is simply "a passing mood," that the elder will "snap out of." Unfortunately, a person suffering from depression cannot just "get over it." Depression is a medical illness that should be diagnosed and treated bytrained professionals.

If left undiagnosed and untreated it can lead to:

- Loss of independence
- Aggravate symptoms of other illnesses.
- Premature death, perhaps even suicide

2 - 8.6 Warning Signs of Elder Depression

The most common symptoms of "late life" depression include:

- Persistent sadness, withdrawal from regular social activities, slowed thinking or response, lack of energy or interest in things that were once enjoyable, excessive worry about finances or health.
- Frequent tearfulness, feelings of worthlessness or helplessness, weight changes.
- Pacing and fidgeting, changes in sleep patterns (inability to sleep or excessivesleep).
- Inability to concentrate, staring off into space (or at the television) for prolonged periods of time.

2 - 8.7 The Triggers of Depression

Chronic or serious illness is the most common cause of depression in the elderly - and often this depression will worsen the symptoms of those other illnesses. The elder mayfall prey to a damaging cycle where depression and chronic illness feed one another.

It is easy to ignore, or discount, depression that is caused by a chronic illness, since theelder and others may attribute the depressive symptoms to the physical illness.

Another leading cause of depression in elders concerns certain bio-chemical changes thattake place in the brain as it ages. These changes put the elder at greater risk of depression, but since they have no apparent trigger (e.g., failing health, loss of a loved one) they are easily dismissed.

2 - 8.8 Elder Suicide

Depression can lead to suicide. Elderly men are at particular risk. More than five times as many men (versus women), over the age of 65, die as a result of intentional self-harm.In fact, men over the age of 85 have the highest rate of successful suicides among all agegroups.

Among the reasons for this high reported rate of suicide among elderly Canadians:

- The frailty of the elderly population—the injuries inflicted tend to cause moreserious harm and the recuperative abilities of the elderly are somewhat diminished.
- The social isolation of many elders leaves less opportunity for rescue.
- Elderly people tend to use more lethal methods - and they often have strongersuicidal intent.
- Causes of death are more rigorously investigated among the elder population.

2 - 8.9 Risk Factors

There are unique risk factors and stressors in the lives of seniors that may lead tothoughts of suicide. *Among these risk factors:*

- Increasing age.
- Being male (especially in the case of Caucasians).
- Being single or divorced or living alone.
- Social isolation / closed family systems, which do not encourage discussion orhelp seeking.
- Poor physical health or the mistaken belief that one is ill or continues to be ill.
- Hopelessness and helplessness.
- Loss of health, status, social roles, independence, significant relationships
- Chronic depression.
- Fear of institutionalization.
- Ageism

Loved ones should monitor the state of mind of elders regularly and keep an eye out forany of the following behaviours:

- Loss of interest in things or activities that used to be enjoyable.
- Cutting back on social interaction
- Poor self-care and grooming
- Breaking medical regimen (e.g., going off diets, prescriptions)
- Stockpiling medication (that can be lethal)
- Experiencing or expecting a significant personal loss (e.g., death of spouse).
- Feeling hopeless and/or worthless
- Putting affairs in order, giving things away, or making changes in wills

Other telltale signs that an elder may be contemplating suicide include a preoccupationwith death, a lack of concern about personal safety, and saying "goodbye" (e.g., "this isthe last time that you'll see me," or "I won't need any more appointments"). The most significant indicator is an expression of suicidal intent.

2 – 8.10 Suicide Prevention

It is sometimes argued that when it comes to elders - suicidal thoughts and behaviourscannot be successfully treated. *The arguments made include:*

- Old people are rigid in their thinking - they do not change their minds easily.
- The elderly do not respond well to intervention.
- Old people are near death anyway - the payback (of intervention) is marginal.
- The suicides of old people are rational, philosophical decisions.

The truth of the matter is, conventional therapies can be, and are, as effective for the elderly as for any other segment of the population. The following societal initiatives canlessen the number of elderly suicides:

- Providing economic support for seniors (including adequate pensions, affordable housing, and health care)
- Encouraging the development of interests and support networks outside of the workplace
- More education concerning the warning signs of depression and suicide(frighteningly, one study found that well over 75% of older people whocommitted suicide had had recent contact with a physician)
- Recognition of the value of elders and greater respect for their experience and knowledge.
- Assisting elders in the pursuit of meaningful activities (which can add purpose to life)

2 - 9 ELDER MYTHS

Contrary to popular belief, elders - overall - are not generally poor, frail, sick, and dependent. Canadian elders represent a very diverse population in terms of life experiences, economic status, health status, and resources for independent living. Increasingly, Canadians are living longer and in better physical and mental health. Elderscontinue to pay taxes, buy goods and services, donate to charity, help family members and friends, and do volunteer work. And yet, several "elder social myths" persist.

2 - 9.1 Men and Women Age the Same Way

Not only do women live substantially longer than men (anywhere from five to eight years longer), but they are also far more likely to suffer from a debilitating chronic disease (e.g., osteoporosis, diabetes, hypertension, incontinence, and arthritis). Men, on the otherhand, are more likely to succumb to an acute illness (e.g., accident, heart disease, stroke, etc.).

The final years of an elder woman's life are, therefore, far more likely to create a varietyof serious social challenges (brought on by frailty, disability, and an inability to managethe activities of daily living).

2 - 9.2 Elders Have Nothing to Contribute

Most elders make a significant contribution to society. Many continue to work. One in five provides unpaid day care (at least once a week) for their grandchildren. A substantial number of elders are caregivers (to a chronically ill spouse or friend). And close to one quarter of elders volunteer a significant amount of their time to a wide variety of different charitable causes. The economic value of the volunteer work done byelders, alone, is worth as much as 2.3 billion dollars annually. Elders also represent a vast repository of knowledge, experience, and advice.

Did Michelangelo, Verdi, Pablo Casals, Ronald Reagan, Warren Buffet, and ColonelSanders - to name but a few - really contribute nothing to society? The notion is preposterous!

2 - 9.3 Most Elders Have Some Form of Dementia

Fewer than 10% of people over the age of 65 have - or have been clinically diagnosedwith - dementia. Most elders have their wits about them.

2 - 9.4 Physical Activity and Elders Don't Mix

Elders are not only capable of exercise but require it to maintain independence and good mental functioning, as well as to reduce the risk of disease. Aerobics (walking, swimming, etc.) is fundamental.

And strength training can help elders in performing the basic activities of daily living, to become independent again.

Stretching and balance exercises such as yoga or Tai chi are particularly beneficial for elders who have arthritis. These types of exercise can also be helpful in preventing falls.

The key is to focus on a non-rigorous - but consistent - exercise regime.

2 - 9.5 Elders Stop Learning

Learning is a lifelong process. Elders are voracious readers, and many are engaged inmore formal educational pursuits (everything from university programs to "current events" discussion groups at the local senior's centres). The 65 plus segment of the population has also embraced technology with a passion. They are, in fact, the fastestgrowing segment of new computer and internet users.

Whoever said "you can't teach an old dog new tricks" was just simply wrong.

2 - 9.6 Elders Are Lonely and Depressed

While loneliness and even depression are linked to old age, most elders do more than just cope - they thrive in their elder years.

Today's elders are increasingly likely to find alternatives to being alone. Remarriage, house sharing and moving into the numerous elder communities that are springing up areall options.

There is nothing to prevent most from maintaining social connections, joining clubs, and pursuing educational opportunities. Many, of course, are still either working or volunteering.

2 - 9.7 Elders Are Economically Disadvantaged

There was a time when elders, overall, struggled to make ends meet. In Canada, thosedays are long gone. Elder households are the wealthiest in the country. They have the highest net worth and the most discretionary income. They also benefit greatly from Canada's generous social programs (e.g., CPP, OAS and Medicare) and an income tax system that offers them numerous age-related deductions and benefits.

2 - 9.8 Elders Are All the Same

Not only is Canada's elder population diverse … it is becoming more and more diversewith each passing year. Elders run the gamut when it comes to ethnic background, religion, socioeconomic class, education, etc.

The fact that our elder years cover such a long period of time (three, four, even five decades) virtually guarantees a substantial degree of diversity. How much in common, after all, does a typical 55-year-old have with a 75-year-old, or a centenarian? It is safe tosay, not much!

2 - 9.9 Summary

Much recent research has smashed the stereotypes of aging. Growing older can be rewarding and fun. Elders who take charge of their health, stay engaged in life, and *use*,rather than *lose*, their physical and mental capabilities, can enjoy later years filled with vitality and quality of life.

No one can avoid aging, but aging productively is possible.

2 - 10 FUTURE ECONOMIC HARDSHIP

As alluded to earlier, the demographic trends described above will create several significant challenges for Canadian society in the immediate future. Declining elementary school populations will precipitate school closings - especially in older neighbourhoods.

On the economic front, Canada is about to experience a significant shortage of both skilled and unskilled labour. The baby boomers are poised to retire en masse in the coming decades and the smaller groups that follow them will not be able to pick up the slack. This will shift power away from corporations and into the hands of workers - something that may be quite beneficial for older workers. Rather than cutting older - often more expensive - workers as soon as they reach age 65, companies will likely become a great deal more flexible. We can expect to see more: phased retirements, flexible pension provisions, and post-retirement contract work.

In addition, there should be a great deal less "ageism" (i.e., stereotyping and prejudice against individuals or groups based strictly on age) in the workplace, as employers are forced to actively retain, recruit, and retrain older workers.

The coming shortage of workers, extended life expectancies and the fact that many current baby boomers have not saved enough for their retirement years should all result in a dramatic greying of the Canadian work force.

We can also expect to see significant changes to Canada's social programs - particularly medicare and old age security - as the country's population ages dramatically. Public pensions, health care, and income tax policy are the three government programs that are most sensitive to population aging.

A report on Canadian indebtedness warns us that the Canada Pension Plan, Old Age Security, and health care have all been put in jeopardy, in part due to the serious change in demographics seen in Canada since the 1960s. Since Canada's system is mostly a pay- as-you-go system, current workers finance the benefits of current retirees. A drop in the size of the future working population, coupled with an increase in retirees spells trouble—big trouble.

When the CPP/QPP, OAS, and health care programs were started, they were based on the assumption that population demographics, economic growth rates, and wage increases prevalent in the 1960s would continue indefinitely. These assumptions have proven to be way off base.

As of 2021, the unfunded liabilities in CPP and OAS alone currently total approximately $2.7 trillion. Canada's health care system, meanwhile, has amassed an unfunded liability of nearly $1.3 trillion. All told, these three programs contain unfunded promises amounting to more than $4.0 trillion.

With the ratio of workers to retirees continuing to drop, this situation is not going to improve anytime soon.

All the above factors (i.e., shortage of workers, pressure on social programs) will also generate a lot of discussion with respect to fertility rates and immigration policy. When it comes to immigration, there will likely be attempts to attract more immigrants - as well as a lot of discussion on the type of immigrant needed (e.g., age, education, skill sets).

Even though the concerns raised by the most recent census were quite alarming, they are not appreciably different from the concerns raised by previous census data. And yet, our governments have made a few changes to immigration policy, public pensions, health care, or labour policy.

2 - 11 CHALLENGES OF AN AGING SOCIETY

Research has demonstrated what most of us already know: people are not aging the waythey used to. Most current elders are in far better physical and mental shape than their predecessors - and their economic circumstances have improved dramatically.

And we have not seen anything yet. The next generation of elders (i.e., the baby boomers) are likely to turn our notion of what it means to be a senior citizen on its' head.

The baby boomers are the most highly educated group in the history of mankind - and tothe degree that high levels of education produce positive social outcomes, this is very good news indeed.

As the boomers enter their elder years, we can expect that tomorrow's elders will have a better knowledge of:

- Community and government programs and services
- Be more open to health promotion messages.
- Be more inclined to participate in educational, political, and volunteer activities.
- Be more likely to demand their rights.

The next generation of elders will undoubtedly keep their work skills up-to-date andremain in the labour market - at its' discretion - for longer periods of time.

Society should focus on providing an environment where elders, who are in good physical and mental health, are able to lead active lives—are able to continue to pursuetheir personal and broader social goals. Policies should support this and even be a catalyst for action.

At the same time, social policy must recognize the needs and concerns of the most vulnerable members of our society - among them, "older" elders who due to failing healthand finances require significant support from others.

In the end, the future crop of elders is likely to live by the following motto:

"Aging won't just happen to us; we will choose how we will age."

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Chapter 3

Successful Aging – Improving Health Span

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3 - 1 KEY OBJECTIVE OF THIS CHAPTER

This chapter is designed to help you become acquainted with the physical, social, and psychological aspects of aging. It will also provide some perspective on the challenges that are created by age-related changes in the human body. In addition, factors related to an increase in health span will be identified.

3 - 1.1 How Will This Objective Be Helpful?

Elders expect the people they meet to both understand the age-related challenges they face and to make accommodations for them. They also have wisdom to share .

3 - 2 INTRODUCTION

Society has both positive and negative views of aging. For some, being elderly is associated with being tired, sick and inflexible (“old dogs can't learn new tricks”). Other people, however, see the elderly in a far more favourable light: to them, elders are worldly and wise, active and engaged.

Canadians are not just living longer - they are living longer with dramatic improvements in quality of life. As a result, aging is becoming less and less synonymous with dependency, misery and inactivity.

Still, most elders will experience a variety of physical changes that can greatly affect their ability to function. These changes create challenges that can limit their ability to manage their affairs independently and this, in turn, may have an impact on the support they require, their finances and their housing needs.

3 - 3 GERONTOLOGY – THE STUDY OF AGING

Gerontology is a discipline that studies aging systematically.

It looks at the subject from two points of view:

- How aging affects the individual
- How an aging population affects society

Gerontology focuses on increasing our knowledge about old age and on enhancing the quality of elder life. It contributes to the advancement of knowledge, and the understanding of aging, through scholarly research and the practical application of research findings.

While most of us tend to lump the elderly into a single group, Gerontologists generally put older adults into three broad categories:

- The Young Old – 55 to 74
- The Old – 75 to 84
- The "Old" Old – 85 and older

3- 4 GERIOSCIENCE

Gerioscience is a subcategory that focuses on research about living longer with good health and quality of life.

It studies the fundamental mechanisms of aging—the microbiology, such as:

- chronic inflammation,
- mitochondrial dysfunction, and
- cellular senescence (old and damaged cells that are unable to divide properly)—to promote health span

3 - 5 WHY WE AGE?

Aging involves the normal changes in body functions that begin after sexual maturity and continue until death. There is a consensus that all animals, including human beings, age as a result of both biological and environmental factors.

- Biological and genetic mechanisms, that are specific for each species of animal, help determine the species' maximum life span and the rate of aging
- Environmental factors (such as nutrition and exercise) also play a part

3 – 5.1 Aging theories

Aging theories fall into two broad groups: programmed theories and error, or damage theories.

The ***programmed theories*** hold that the aging process follows a biological timetable - likely a continuation of the same timetable that regulates childhood growth and development.

Error, or damage, theories hold that aging is caused by environmental assaults on our biological systems that gradually cause our bodies to malfunction.
Scientists continue to study why we age.

Researchers are looking at how the lung, skin, heart and muscle cells may have a limited lifespan. These important cells can only duplicate so many times.

Other researchers question how the environment affects human cells. As we age the body becomes less able to compensate for the effects of certain environmental hazards such air pollution. There is also hard evidence that damaging free radicals affect healthy cell reproduction.

3 - 5.2 NORMAL AGING

All the following characterize the normal aging process. Some of these factors involve physical changes - while others are either social or psychological in nature:

- Gradual sensory loss (diminished hearing, sight, taste, touch, and smell)
- Decreased mobility
- More health problems and less resilience
- A narrowing social network - brought on variously by death, incapacity, or institutionalization
- A growing dependence on others
- Isolation and loneliness

3 - 5.3 Physical and Biological Aspects of Aging

- Physical aging is a gradual lifelong process
- Most living things have life cycles based on patterned biological changes
- Disabilities, sensory loss, and chronic diseases increase with age but are not inevitable aging conditions
- The rate of physical aging among humans varies widely
- Lifestyle choices influence both the quality and length of our lives
- The foundation for healthy aging is developed during youth

3 - 5.4 Psychological Aspects of Aging

- Psychological well-being is interconnected with physical and social health
- Learning can become a lifelong pursuit
- Significant memory loss is not a part of normal aging
- As we age our time perspective changes

3 - 5.5 Social Aspects of Aging

- Most elders are socially engaged
- The roles and status assigned to elders varies from culture to culture
- The structure and dynamics of multigenerational families are changing
- Ageism is rooted in cultural beliefs that are learned

Ageism is defined as age-related prejudice involving systematic stereotyping and discrimination against people solely because of their age. It is based on the misconception that older people cannot work efficiently, are sickly, and are mentally less competent than younger people.

3 - 6 THE AGING PROCESS

The history of the world is replete with tales of individuals trying to stave off aging and death. King David wooed young virgins in search of youthfulness. Wealthy people go to private European medical centers for lamb cell injections. Many individuals take large doses of vitamin E, drink Kombucha tea, and use coenzyme Q10, all in the hope of finding the "fountain of youth."

Researchers know unequivocally that there is no fountain of youth - but it is true that some of the biological hallmarks of old age can, in fact, be postponed.

3 - 6.1 The Outward Signs of Aging

The most common external signs of aging involve the skin, hair, and nails.

Over time, the skin loses underlying fat layers and oil glands, causing wrinkles and reduced elasticity. The skin also develops age spots - which are produced by deposits of melanin pigment.

Bed sores and pressure ulcers are also an unfortunate reality for many elders. Pressure ulcers, a skin problem found in people with limited mobility, are due to impaired circulation.

Areas particularly susceptible to these ulcers are those over bony protrusions such as hips, shoulders, elbows, knees, ankles, and heels.

Not all the changes in the skin are purely cosmetic in nature. Shrinking sweat glands, for example, help make it more difficult for elders to perspire - which, in turn, can make them particularly susceptible to hyperthermia (having a body temperature that is greatly above normal).

The fact that skin becomes thinner with age tends to make elders far more sensitive to cool temperatures and drafts. It also makes it easier for the skin to tear and break, which significantly increases the risk of infection.

While many of these changes in our skin are inevitable, how rapidly our skin ages are based on a variety of factors. Poor nutrition, exposure to the sun, heredity, and hormones all play a part.

As with our skin, both our hair and our nails also change significantly as we age.

We all know about gray hair, which can start in the 30's…or for some people, not at all.

Hair colour is controlled by a pigment called melanin that is produced by the hair follicle. With aging, the hair follicles produce less melanin. Most older adults experience some scalp hair loss as part of the aging process, from either male pattern baldness or female pattern baldness.

Fingernail abnormalities such as pitting, increased ridges, or nails that change shape are a cause for concern and a health care provider should be contacted.

There are also changes to our body shape which are a perfectly normal part of the aging process.

Among these changes:

- **Height loss.** After age 40, the average person loses 1 cm (about 0.4 inches) every 10 years. This height loss speeds up after age 70; in total, the aging process may cause a loss of 1 to 3 inches in height.
- **Bigger in the middle.** Aging increases fat deposits to the body's center, which increases hip width.
- **Narrower shoulders.** As muscles lose mass, shoulder width decreases.
- **Less muscle overall.** The aging process reduces the total amount of muscle in the body.

If this sounds bleak, it may help to know that preventative care and a healthy lifestyle can affect how much the aging process will affect your body.

3 - 7 PHYSIOLOGICAL CHANGES

As we age, we undergo several physiological changes, which affect not only how we look, but also how we function and respond to daily living. These physiological changes involve a general slowing down of all organ systems due to a gradual decline in cellular activity.

Humans reach peak physical efficiency around age 30 - at which point "the slowdown" begins.

On average, by age 55:

- Pumping efficiency of the heart is reduced by approximately 20%
- Kidney function is reduced by roughly 25%
- Maximum breathing capacity declines about 40% (60% by age 75)
- Basal metabolism rate (the amount of energy expended while at rest and after roughly 12 hours of fasting) drops by about 10%

Every person is unique: some may experience a more rapid and dramatic decline in organ function; while for others, the changes may be less pronounced and take longer to develop. The slowdown in organ function leads to a wide variety of chronic conditions in the elder population. Approximately 85% of older adults suffer from at least one chronic condition. Fortunately, only about 20% experience significant impairment in their ability to function.

3 - 8 CHANGES IN THE CARDIOVASCULAR SYSTEM

Reduced blood flow is a major problem for the elderly. It tends to become a serious limitation in a person's eighth decade.

Reductions in blood flow result from several factors:

- Normal atrophy of the heart muscle, especially in the left ventricle which pumps oxygenated blood out to the body
- Calcification of the heart valves
- Loss of elasticity in artery walls (arteriosclerosis or "hardening of the arteries")
- Intra-artery deposits (atherosclerosis)

This reduction in blood flow has a variety of negative impacts. Because the blood vessels, which play an important role in the circulation of blood throughout the body, lose elasticity as we age, blood may tend to pool in the feet and legs. This can cause swelling (edema) to occur in the extremities.

Other negative impacts include:

- Weak oxygen exchange
- Reduced stamina and energy
- A reduction in kidney and liver function
- Less cellular nourishment
- Increased drug toxicity
- Slower healing
- Impaired response to stress

In extreme cases, decreased circulation can lead to:

- Hypertension
- Stroke

In addition, elders may be more susceptible to the development of Transient Ischemic Attacks (sometimes referred to as "mini strokes" or T.I.A.s). These attacks occur when platelets in the blood clump together in the arteries and inhibit blood flow. Symptoms of such episodes include headache, weakness, vision disturbances, difficulty speaking, loss of balance, confusion, and vertigo. Although most symptoms clear up within 10-15 minutes, these mini strokes cannot be taken lightly since they sometimes take place immediately prior to a full-blown stroke.

3 - 8.1 Strategies to Address Poor Circulation

- Prop the feet on a footstool or other appropriate stable object when sitting and avoid the crossing of the ankles or legs
- Change position at least every two hours to prevent pressure ulcers
- Develop an activity routine, which conserves energy and yet includes opportunities for movement
- When sitting rotate feet at the ankles
- When rising from a reclining position, sit on the edge of the bed for a few moments before standing

3 - 9 CHANGES IN THE RESPIRATORY SYSTEM

Reduction in lung capacity combined with a loss of rib cage muscle strength can seriously impact an elder's ability to:

- Breathe deeply
- Cough
- Expel carbon dioxide

As a result, many elders often find themselves short of breath, fatigued and anxious. Elders who smoke or who live in areas where there is significant air pollution are further compromised.

While exercise does not improve pulmonary function, it can increase the amount of oxygen absorbed - which will, in turn, reduce the workload on the heart.

3 - 10 CHANGES IN THE MUSCULATURE SYSTEM

At advantaged ages, muscles wither, and some muscle tissue is replaced with fatty deposits. *Not only does this produce a loss of muscle tone and strength, but it can also lead to:*

- ❖ Reduced ability to breathe deeply
- ❖ Reduced gastrointestinal activity and constipation
- ❖ Bladder incontinence (particularly in women)

Although most people experience these changes, at least to some degree, regular physical exercise - while not a cure - is beneficial.

3 - 11 CHANGES IN THE SKELETAL SYSTEM

Beginning at around age 35, in both men and women, calcium is lost, and bones become less dense. This can result in osteoporosis and a reduction of weight bearing capacity - which can lead to possible spontaneous fracture. The weakening of elder bones make falls a particularly hazardous aspect of elder life.

Aging also produces changes in our vertebrae. Elders experience a reduction in height thanks to a thinning of the vertebrae, while calcification of the vertebrae results in both posture changes and increased rigidity (which makes bending difficult).

Our joints undergo changes, as well. Joints stiffen, and this, combined with a loss of elasticity in the ligaments between bones, results in hand and foot pain.

Arthritis, the degenerative inflammation of the joints, is *the most common* chronic condition in the elderly. The two most common forms of arthritis are:

- ❖ Osteoarthritis (a wearing away of the joint cartilage)
- ❖ Rheumatoid arthritis (a disease of the connective tissue)

3 - 12 CHANGES IN THE NERVOUS SYSTEM

After age 30, everyone loses nerve cells. This impacts the effectiveness of nerve transmissions, which negatively impacts response time, coordination and the speed at which information is processed. A breakdown in the nervous system's ability to modulate overall activity levels can also adversely affect sleeping patterns.

Our brains shrink as we age, losing 5% to 10% of their weight between the ages of 20 and 90. One tenth of all brain cells we have when we are in our 20s will be lost by the age of 65. While we may lose a lot of neurons, the density of synapses—the connections between nerve cells—may increase, offsetting much of the loss.

3 - 13 CHANGES IN THE GASTROINTESTINAL SYSTEM

As we age, we experience a reduction in the production of hydrochloric acid, digestive enzymes, and saliva. *These changes can result in:*

- Gastrointestinal distress
- Impaired swallowing
- Delayed emptying of the stomach

The breakdown and absorption of foods may also be impaired, sometimes resulting in deficiencies of B, C, and K vitamins or - in extreme cases - in malnutrition. *If left untreated, vitamin deficiencies can produce:*

- Capillary weakening
- Easy bruising
- Muscle cramping
- Reduced appetite
- Weaknesses
- Indigestion

Surprisingly, the digestive system is also very sensitive to emotions. Elders may experience an upset stomach or lack of appetite when lonely, depressed, or worried. Regular contact with friends and relatives, through visits and telephone calls, can help mitigate these problems.

It is common for older people to have less frequent bowel movements and to suffer from constipation. Problems of this nature can be addressed through regular exercise and with a well-balanced diet that includes adequate fibre and fluid intake. Both measures help to encourage normal bowel function and minimize the need for laxatives. Laxatives are an expensive substitute for such foods as fruits, vegetables and bran cereals. Worse, the overuse of laxatives can interfere with the absorption of nutrients necessary for healthy body functioning.

Adequate fluid intake is essential to maintain a healthy body temperature and to ensure that the digestive system functions properly. And yet, it is common for many elders to mistakenly limit their fluid intake in order to avoid frequent urination. This in combination with the fact that elder bodies have a reduced capacity to conserve water can result in dehydration (a serious problem for elders).

Laxative abuse, diuretic therapies, infections, immobility and excessive use of alcohol and/or caffeine only compound the problem.

3 - 13.1 Encouraging Proper Gastrointestinal Function

Caregivers and elders should follow the guidelines below to ensure proper gastrointestinal functioning.

Establish a regular exercise regime that is attuned to the elder's level of physical ability. Maintain a well-balanced diet that includes natural sources of fibre such as whole grains, fruits, and vegetables. On a daily basis, drink eight cups of water and other fluids. Watch for signs of dehydration, such as mental confusion, decreased urine output, constipation, nausea, lack of appetite, dryness of lips, and elevated body temperature. Pay special attention to fluid intake during hot weather. Monitor the fluid balance in elders with special medical problems such as congestive heart failure or kidney disease.

3 - 14 CHANGES IN THE GENITOURINARY SYSTEM

As an individual ages, the genitourinary system undergoes several changes, primarily affecting the kidneys, bladder, and reproductive organs. These changes can lead to conditions like urinary incontinence, urinary tract infections, and reduced kidney function. In women, menopause leads to significant hormonal shifts affecting the reproductive tract and urinary system. In men, testicular tissue mass decreases, and prostate enlargement can occur.

Specific Changes in the Urinary System

Kidney Function

Kidney function generally declines with age, impacting the filtering of waste and maintaining fluid balance.

Bladder Capacity and Function

Bladder capacity decreases, and the bladder muscles may weaken, leading to reduced bladder control and increased urinary frequency.

Urinary Tract Infections (UTIs)

Aging can increase the risk of UTIs due to reduced bladder emptying and potential changes in the urinary tract environment.

Urinary Incontinence

Loss of bladder control, including urge incontinence, stress incontinence, and mixed incontinence, is common in older adults.

Urinary Retention

The inability to completely empty the bladder can occur, potentially leading to residual urine and increased UTI risk.

Changes in the Male Reproductive System

Testicular Tissue

Testicular tissue mass decreases with age, and hormone production may decline.

Prostate Enlargement

Benign prostatic hyperplasia (BPH) is a common age-related condition in men, causing urinary symptoms.

Sexual Function

Erectile dysfunction and reduced libido can occur, affecting sexual function.

Changes in the Female Reproductive System:

Menopause

The cessation of menstruation and the decline in estrogen production lead to significant changes in the reproductive tract and urinary system.

Genitourinary Syndrome of Menopause (GSM)

GSM affects the vaginal and urinary tissues, causing dryness, pain, and urinary symptoms.

Vulvar and Vaginal Atrophy

The lining of the vagina and vulva can thin and become more fragile, leading to pain and discomfort.

Urinary Symptoms

Urinary frequency, urgency, and incontinence can occur due to changes in the urinary tract.

3 - 15 CHANGES IN THE ENDOCRINE SYSTEM

The endocrine system is instrumental in regulating metabolism, growth and development, and tissue function. It accomplishes this by releasing chemicals (largely hormones) into the blood stream.

Metabolic rate starts to decrease - by approximately 1% per year - at age 25, and this "slowdown" has consequences: foods are not absorbed as well (which impacts stamina), and we become more susceptible to drug toxicity.

3 - 16 CHANGES IN THE IMMUNE SYSTEM

Your immune system helps protect your body from foreign or harmful substances. Examples are bacteria, viruses, toxins, cancer cells, and blood or tissues from another person. The immune system makes cells and antibodies that destroy these harmful substances.

As you grow older, your immune system does not work as well. The following immune system changes may occur:

- The immune system becomes slower to respond. This increases your risk of getting sick. Flu shots or other vaccines may not work as well or protect you for as long as expected.
- An autoimmune disorder may develop. This is a disease in which the immune system mistakenly attacks and damages or destroys healthy body tissues.
- Your body may heal more slowly. There are fewer immune cells in the body to bring about healing.
- The immune system's ability to detect and correct cell defects also declines. This can result in an increased risk of cancer.

Prevention

To decrease the risks from immune system aging:

- Get vaccines to prevent the flu, COVID-19, shingles, and pneumococcal infections, as well as any other vaccines your health care provider recommends.
- Get plenty of exercise. Exercise helps boost your immune system.
- Eat healthy foods. Good nutrition keeps your immune system strong.
- Do not smoke. Smoking weakens your immune system.
- Limit your intake of alcohol. Ask your provider how much alcohol is safe for you.
- Look into safety measures to prevent falls and injuries. A weak immune system can slow healing from injuries.

3 - 17 SENSORY CHANGES

The neurological system receives and processes information from the environment through hearing, vision, taste, smell, and touch. With aging, these senses are often diminished. Stimuli for the older person may be distorted or difficult to understand. As a result, the elder may find less pleasure in some experiences that were previously enjoyed and may give up enriching pastimes. Elders may also have difficulty communicating with others and thus lose contact with friends and family who are important sources of support.

Some of the problems that elders may experience, along with some suggestions on how they can be addressed, are described in the sections that follow.

3 - 18 TOUCH

The fact that skin becomes less sensitive as we age reduces a person's ability to sense heat and cold, and this exposes elders to potential - often serious - injury. Heating pads, hot water bottles, even pot handles, can do harm before the elder even realizes that damage is being done. *Elders should, as a result:*

- ❖ Take extra precautions in the kitchen and bathroom
- ❖ Turn down the temperature on the water heater
- ❖ Avoid activities that dry out the skin (e.g., daily showers)

Loss of touch can also seriously harm an elder's social and emotional well-being. Because older adults typically have less opportunity to give and receive touch, they also lose some of the medicinal benefits it provides.

Touch helps:

- ❖ Relieve stress
- ❖ Provide comfort
- ❖ Maintain intimacy
- ❖ Establish connection and attachment

3 - 19 TASTE AND SMELL

Aging has an adverse impact on our sensitivity to taste and smell. However, the loss is usually minor, and it does not seem to occur in most people until well after age 70. Nevertheless, elders often complain that their meals are tasteless and that they no longer enjoy their favourite foods.

Often these complaints have nothing to do with sensory loss. They are caused instead by such things as: loneliness at meals, an unwillingness or inability to cook, difficulty chewing due to poorly fitting dentures or dental problems, and a limited budget that restricts the purchase of quality foods.

3 - 19.1 To Help the Elder Enjoy Mealtime

- Offer familiar, well-liked foods
- Invite or encourage the elder to share meals with friends and family
- Experiment with different seasonings and flavourings
- Prepare a variety of foods each day
- Make the table colourful and inviting with bright napkins, mats, and flowers
- Encourage exercise, which stimulates the appetite

3 – 20 VISION

As we age our eyes undergo several significant changes such as:

- Our eye muscles deteriorate (in strength and elasticity) which makes focusing on nearby objects difficult
- Our eyes lose flexibility which impacts the time it takes to adjust to different levels of light
- Clouding and yellowing of our lens impacts our ability to see colours (blue and green become particularly difficult to discern)
- Peripheral vision is reduced

Most of this deterioration and the vision problems associated with it can be effectively treated and managed. Some of the more common, age related, eye complaints and how to deal with them, and are covered below.

3 - 20.1 Presbyopia (prez-bee-OH-pee-uh)

Presbyopia is the slow loss in our ability to see close objects or small print. It is a normal process that occurs with aging - the first symptoms are usually noticed sometime between age 40 and 50.

Signs of Presbyopia include holding reading materials at arm's length or getting headaches or tired eyes when reading or doing other close work. Bright lighting and reading glasses are both beneficial.

3 - 20.2 Floaters

Floaters are tiny spots or specks that seem to float across your eyes. They are particularly noticeable in well-lit rooms or outdoors on a bright day. While floaters tend to be a nuisance, on occasion they can be a warning sign of a more serious eye problem.

A sudden increase in the number of floaters along with light flashes is a warning sign of retinal detachment - a serious condition that should be treated immediately.

3 - 20.3 Tearing

Epiphora or tearing, involves having too many tears. Dry or itchy eyes can cause tearing, as can an extreme sensitivity to light, wind, or temperature change. In some cases, the cause may be slightly more serious (i.e., an infection or a blocked tear duct).

As with floaters, tearing is largely a nuisance that can be addressed easily in most cases. Depending on the source of the problem treatments like eye drops (i.e., artificial tears), topical antihistamines, or antibiotics will be required. Sometimes something as simple as wearing sunglasses will address the problem.

Only in a few extreme cases is surgery required.

3 - 20.4 Eyelid problems

Elders are particularly exposed to a variety of conditions and diseases of the eyelid - to such mechanical eyelid disorders as Entropion (an inward turning of the eyelid margins) and Ectropion (an outward turning of the eyelid margins).

Common elder eyelid complaints include pain, irritation, itching, tearing, and mucoid discharge. None of these problems are of a serious nature and most can be addressed via lubricating ointments, artificial tear drops and other simple methods.

3 - 20.5 Conjunctivitis

Conjunctivitis (also called Pink Eye) occurs when the tissue that lines the eyelids and covers the exposed areas of the sclera (i.e., the white of the eyes) becomes inflamed. It can cause itching, burning, swelling and redness. Conjunctivitis is usually caused by bacterial or viral infection, allergies, or environmental irritants.

It affects Canadians of all ages and is easily spread from one person to another. Fortunately, it tends to be painless, and it generally clears without any need for medical attention. Only in extreme cases is professional intervention required.

3 - 20.6 Dry eye

Dry eye is usually caused by a problem in the quality of the tear film that lubricates the eyes. Dry eye can be quite uncomfortable and can cause itching, burning, or even partial vision loss.

One of the most common reasons for dryness is simply the normal aging process. As we grow older our bodies produce less oil - 60% less between ages 18 and 65. This oil deficiency causes the tear film to evaporate much more rapidly which leaves dry areas on the cornea. Women tend to produce less lubricating oil than men, and they are, as a result, particularly susceptible to dry eye.

Using a home humidifier or special eye drops (artificial tears) can help address this problem. In addition, such simple solutions as: avoiding smoky environments; blinking frequently; and maintaining hydration (i.e., drinking lots of fluids) can help.

3 - 20.7 Night Vision Impairment

Several age-related factors contribute to poor night vision. As we age our pupils shrink and do not dilate as much; our retinas receive significantly less light; our cornea and lens become cloudy; our eyes adapt more slowly to changing light conditions; and we experience reduced contrast sensitivity.

As a result, in the dark elders have difficulty: focusing, are easily blinded by bright lights, experience more glare and have difficulty seeing both stationary and moving objects.

Not surprisingly, many elders may feel uncomfortable about driving at night and, over the long run, they may shy away from evening social functions as a result. This may eventually lead to a degree of social isolation.

3 - 20.8 Driving At Night … Safely

- ❖ Wear sunglasses during long periods in bright light (this helps improve night vision)
- ❖ Allow your eyes to adjust to the darkness
- ❖ Stay on well-lit roads and use high beams whenever possible
- ❖ Stick to familiar routes
- ❖ Drive more slowly
- ❖ Do not smoke in the car
- ❖ Eyeglass wearers should: consider having an anti-reflective coating applied to their lenses to reduce glare; and avoid wearing tinted lens when driving at night
- ❖ Keep your eyeglasses, mirrors, windshields, headlights, and taillights clean

3 - 20.9 Peripheral Vision Impairment

Peripheral vision is the farthest point on either side of the corner of the eye at which a person can detect movement.
Peripheral vision allows us to see things that are not directly in front of us. The size of our peripheral visual field decreases by approximately one to three degrees every decade. Most people in the 70s and 80s have lost a substantial *20-30 degrees* of peripheral vision field. This can create problems - particularly when driving.

It becomes a lot more difficult to change lanes and to park a car, and this difficulty can lead to accidents.

Elders can compensate - at least partially - for peripheral vision impairment through neck exercises (which allow them to turn their head in order to see what they are missing in their peripheral vision field).

3 – 21 EYE DISEASES AND DISORDERS

Vision loss, in the elderly population, is a major health care problem. By the age of 65 roughly one third of adults will have developed some form of vision reducing eye disease. The most common causes of vision loss among the elderly are age-related macular degeneration, glaucoma, cataracts and diabetic retinopathy.

3 - 21.1 Age-related Macular Degeneration (AMD)

Age-related Macular Degeneration is the leading cause of vision loss in people over the age of 65. AMD can start as early as age 40, but it usually only strikes individuals who are age 50 and older. By age 70, roughly 30% of elders have developed the disease.

AMD affects the part of the retina (the macula) that gives you sharp central vision. The macula is the small central portion of the retina containing millions of cells that are sensitive to light. The macula works with the retina to translate this light into impulses that the brain processes.

AMD is characterized by:

- Blurred vision
- Image distortion
- Difficulty reading

Advancing age is not the only risk factor for ADM. Cigarette smoking, family history and cardiovascular factors (e.g., hypertension) also play a part. Some studies have also indicated that women are at greater risk. It is important to note that while ADM does contribute to vision loss, it does not cause blindness. Low vision aids, such as handheld magnifiers, can help AMD sufferers perform activities that require visual acuity.

A variety of foods (specifically those rich in carotenoids) as well as (antioxidant and mineral) dietary supplements may also be helpful in reducing the impact of ADM.

3 - 21.2 Dry Macular Degeneration

This is an eye condition in which the macula, the sensitive area in the retina responsible for central and detailed vision, is damaged, often causing loss of central vision.

The condition usually goes unnoticed until both eyes become affected. This type of degeneration is the most common form of AMD and is usually less severe than "Wet" Macular Degeneration.

3 - 21.3 Wet Macular Degeneration

A few people experience the *wet* form of macular degeneration, which can cause more severe visual loss. With wet macular degeneration, abnormal blood vessels grow beneath the retina and result in bleeding and fluid leakage. Vision, as a result, may suddenly become distorted or blurred. In some cases, laser treatment can be effective at destroying the abnormal vessels, thus preventing or slowing further visual loss. Unfortunately, only a small minority of patients are candidates for this treatment.

3 - 21.4 Glaucoma

Glaucoma, a group of diseases involving the optic nerve, is the second leading cause of blindness. Excess fluid pressure inside the eye is a significant risk factor for developing the disease. Untreated, Glaucoma leads to permanent damage to the optic nerve, which produces a visual field loss, and which can result in blindness. Loss of vision does not occur until there has been a large amount of nerve damage and most people with glaucoma have no early symptoms or pain. The only way to protect yourself is through regular - dilated - eye exams. Treatment may require prescription eye drops, oral medications, or surgery.

People over age 60, certain nationalities and racial groups (e.g., blacks, Mexicans and Asians) and people with a family history of Glaucoma are at elevated risk to develop the disease.

3 - 21.5 Cataracts

Cataracts are a leading cause of visual loss among adults 55 years of age and older. By age 65 almost half of all adults have some level of cataract development.

Normally our eye lenses are clear, and they focus light quite effectively. A Cataract is a clouding of the natural lens that occurs when old cells die and become trapped in the lens capsule. This causes images to become blurred or fuzzy. Cataracts often form slowly without any symptoms. Some cataracts remain small and do not significantly alter eyesight, while others become large or thick and severely impair vision. Cataract surgery can usually restore vision. In addition to being very successful it is one of the most common and safest surgeries performed in Canada today.

3 - 21.6 Diabetic Retinopathy

Diabetic retinopathy is caused by complications of diabetes and it usually strikes people who have had diabetes for a long period of time. It causes changes in the small blood vessels that feed the retina. In the early stages of diabetic retinopathy, blood vessels may leak fluid, causing either blurred vision or no symptoms at all. As the disease advances, floaters, blind spots, or cloudiness of vision may become apparent. In the most serious cases, this condition can lead to significant vision loss or even blindness. Treatment varies from no action whatsoever through to laser surgery. Elders with diabetes should undergo an eye exam with pupil dilation every year.

3 - 21.7 Retinal Disorders

Retinal disorders are among the leading causes of blindness in Canada. The retina is a thin lining on the back of the eye. It is made up of cells that receive visual images and pass them onward through the optic nerve to the brain. There are various retinal disorders that affect aging eyes, the most serious of which is retinal detachment.

Retinal detachment occurs when the inner and outer layers of the retina become separated. Untreated it can lead to significant vision loss and blindness. The middle-aged and elderly are four times more likely to experience a retinal detachment that younger individuals - and elders who have had cataract surgery are at least 100 times more likely to experience this disorder.

Fortunately, with surgery or laser treatment, doctors are often able to reattach the retina and restore all or a part of the patient's eyesight.

3 - 21.8 Low Vision

Many of the problems discussed above can lead to "Low vision" - a loss of vision that cannot be fixed with glasses, contact lenses, medicine, or surgery. *People with low vision:*

- Have trouble seeing well enough to perform everyday tasks like reading, cooking, or sewing
- Can no longer recognize the faces of friends or family
- Have trouble reading street signs
- Find that lights do not seem as bright as usual

A variety of aids are available to assist individuals with low vision, including magnifiers; large readout clocks and telephones; and talking appliances (e.g., watches, elevators, cross walk signals).

In addition, a variety of relatively simple steps can help elders with low vision function normally:

- Write using bold, black felt-tip markers
- Use paper with bold lines (to ensure that writing is straight)
- Put coloured tape on the edge of all indoor and outdoor steps
- Create lots of contrast in room décor (e.g., use contrasting colours between doors/light switches/handrails and walls, dishes, and table coverings, etc.)
- Use blinds or shades to reduce glare
- Keep a night light on in the bedroom, hallway, and bathroom to maintain a consistent level of light
- Increase lighting in stairwells and on steps
- Use concentrated light for activities like sewing and reading
- Leave things where they are unless the person asks you to move something

3 - 21.9 Tips for Communicating with Visually Impaired Elders

- ❖ Provide printed materials with large print and with a high contrast between the background and lettering
- ❖ Always introduce yourself
- ❖ When entering a room (with an elder who is visually impaired), describe the room layout and the other people who are in the room
- ❖ Tell the elder if you are leaving the room. Let him/her know if others will remain in the room or if he/she will be alone
- ❖ When you speak, let the elder know whom you are addressing
- ❖ Explain what you are doing as you are doing it
- ❖ Be concise with your statements and questions
- ❖ Utilize as many other methods of communication as possible to convey your message (i.e., Body language, gestures, etc.)
- ❖ Take your time - avoid rushed interaction
- ❖ Employ touch - it helps lets them know that you are listening

3 – 22 HEARING PROBLEMS

More than 50% of Canadians over the age of 65 will experience some degree of hearing loss. Hearing loss affects an elder's ability to converse easily with others and it can, as a result, play a role in cutting them off from close, loving relationships and social activities.

Although studies show using hearing aids can improve the quality of life for hard-of-hearing adults, two-thirds of seniors who could benefit from hearing help either do not seek it or refuse treatment.

As we age, we lose our ability to hear higher pitched tones. We also tend to have difficulty distinguishing between sounds when there is a lot of background noise. Both can make it difficult to follow conversations. As a result, elders may become frustrated or embarrassed.

Asking people to repeat themselves, straining to hear, and continuously concentrating become tiresome. They may eventually start to hold back from conversation and avoid social activities due to the strain involved and out of a fear of making inappropriate comments. They may even become suspicious of relatives or friends who they believe intentionally mumble or do not speak up. It is a slippery slope than can eventually lead to further withdrawal and even depression.

Hearing loss affects elders in other ways as well. They may miss musical notes at a concert, have difficulty on the telephone, or leave a ringing doorbell unanswered.

Worse, the people they meet may mistakenly assume that elders with some hearing losses are confused, unresponsive and uncooperative.

Elder men are almost twice as likely to experience hearing loss than elder women. Fortunately, there are a variety of steps that can be taken to deal with hearing loss.

Special training, hearing aids, certain medicines, and surgery can help.

3 - 22.1 Common Signs of Hearing Problems

- Words are hard to understand
- Another person's speech sounds slurred or mumbled
- Listening to women and children is particularly difficult
- Following conversations with multiple speakers is difficult
- Certain sounds are overly annoying or loud.
- A hissing or ringing in the background is noticed
- TV shows, concerts, and conversations are difficult to follow and substantially less enjoyable as a result

3 - 22.2 Diagnosis of Hearing Problems

Hearing loss can be caused by a wide variety of factors. Among them: exposure to very loud noises over a long period of time; viral or bacterial infections; heart conditions or stroke; head injuries; tumours; certain medicines, heredity, or changes in the ear that occur with aging.

An audiologist is a health care professional who can identify and measure hearing loss. Audiologists use a device called an audiometer to evaluate your ability to hear sounds at different pitches and loudness. Audiologists do not prescribe drugs or perform surgery. Audiologists often work in conjunction with otolaryngologists. These doctors, often referred to as ENT physicians, diagnose, treat (through medicines and surgery) and manage disorders that affect the Ear, Nose and Throat - as well as the head and neck.

Some of the more common hearing problems, that affect the elder population, are described below.

3 - 22.3 Presbycusis

Presbycusis is the most common hearing problem in older people. Presbycusis is a slow, ongoing loss of hearing linked to changes in the inner ear. People with this kind of hearing loss may have a difficult time hearing what others are saying or may be unable to tolerate loud sounds. Doctors do not know what causes Presbycusis, but it does tend to run in families which suggest a genetic link.

3 - 22.4 Tinnitus

Tinnitus is also common in the elder population. Tinnitus is a symptom associated with a variety of hearing diseases and disorders. People with tinnitus hear ringing, roaring, or other sounds inside their ears. It may be caused by excessive cerumen (ear wax), an ear infection, the use of too much aspirin, certain antibiotics, or a nerve disorder. It is often difficult to determine the exact cause.

3 - 22.5 Conductive hearing loss

Conductive hearing loss occurs in some older people when the sounds that are carried from the eardrums (tympanic membrane) to the inner ear are blocked. Cerumen in the ear canal, fluid in the middle ear, abnormal bone growth, or a middle ear infection are all possible causes.

3 - 22.6 Sensorineural Hearing Loss

Sensorineural hearing loss happens when there is damage to parts of the inner ear or auditory nerve. The degree of hearing loss can vary from person to person.

Possible causes include birth defects, head injury, tumours, illness, certain prescription drugs, poor blood circulation, high blood pressure, or stroke.

3 - 22.7 Hearing Aids

Elders who are experiencing trouble hearing are well advised to consider a hearing aid - a small device that one places in the ear to make sounds louder. Such a purchase should only be made on the recommendation of a professional and after significant testing.

There are various types of hearing aid available. An audiologist will consider the person’s hearing level, ability to understand speech, comfort in using the controls, and concern for how it looks. The audiologist will then suggest a specific design, model, and brand of hearing aid that best suits the elder's needs. The elder should be aware that they are purchasing a product *and* a service. They will require fitting adjustments, directions for use, repairs and ongoing monitoring.

Be sure to buy a hearing aid that has only the features needed. The costliest product may not be the best model for the elder’s needs, while one selling for much less may be perfectly suitable. Be aware that the controls for many hearing aids are tiny and can be difficult to adjust. Find a hearing aid dealer who has the patience and skill to help the elder during the month or so, it takes them to get used to the new device.

3 - 22.8 Tips for Communicating with Hearing Impaired Elders

- Face the person
- Get the elder's attention before speaking
- Stand where there is good lighting
- Speak clearly and at a reasonable speed
- Do not hide your mouth, eat, or chew gum
- Use facial expressions or gestures for emphasis
- Reword your statement when necessary
- Be patient, and stay positive and relaxed
- Eliminate background noise (e.g., radio and television)
- Build breaks into your conversation

3 - 23 PROBLEMS WITH SLEEP

The changes that aging brings tend to come upon us unnoticed at first, much like the passing of the seasons. Slowly, over a period, we may notice that our eyesight is less keen, our hearing less acute and our sleep far less satisfying.

Our need for sleep does not decline with age - research suggests that it remains constant throughout adulthood. Most of us continue to require the same seven to nine hours of sleep a night that we did when we were younger. However, a good night's rest may prove The team, which coined the term "Blue Zones," has shared what they learned about the world's more elusive as we grow older.

Lifestyle changes (e.g., less physical activity, afternoon naps, etc.) may make us less tired at bedtime. Poor sleep habits may have become entrenched (e.g., watching television, or reading, in bed). Stress, depression and bereavement may lead to early awakenings or interrupted sleep. There is even evidence to suggest that minor disturbances (e.g., a barking dog, a passing siren, etc.) become more troublesome as we age.

Medical conditions and the physical changes associated with aging also play a part in compromising sleep. Such common elder ailments as arthritis, heartburn and heart and lung conditions can interrupt, delay or abbreviate sleep. The medications used to control these conditions may also play a role in disturbing sleep. Antidepressants and blood pressure medications (both popular among elders) are a proven source of sleep disruption.

In addition, it has been determined that elders suffer from at least four sleep disorders in numbers far greater than the rest of the population.

Among these disorders: sleep apnea, restless leg syndrome, periodic limb movement disorder, and advanced sleep phase syndrome.

3 - 23.1 Changes in Sleep Architecture

Normal sleep consists of two broad stages: REM, or Rapid Eye Movement, sleep and non-REM sleep. Non-REM sleep is further broken down into four stages - with each stage providing progressively deeper sleep. Sleep begins at stage one. By stages three and four, our bodies experience their deepest, and best, sleep (sometimes called "delta sleep"). Lucid dreaming occurs during REM sleep - which is the fifth stage in the process. REM sleep then gives way to non-REM stage 1 sleep and the cycle continues.

The percentage of time spent in REM sleep remains relatively stable as we age, but the amount of time spent in medicinal deep sleep decreases (particularly for elder men).

3 - 23.2 Medical Problems That Affect Sleep

Elders suffer from a variety of medical disorders that can, and do, disrupt sleep. Among them:

- Arthritis
- Heartburn
- Dementia
- Incontinence
- Gastroesophageal Reflux (GER)
- Cardiovascular disease

All these medical problems can interrupt, delay and/or shorten sleep. Elders who suffer from arthritis, for example, may have difficulty falling asleep - and may awaken frequently - as a result of their painful joints. In fact, studies have indicated that people with night-time pain have difficulty sleeping roughly 33% of the time and they lose approximately 20 hours of sleep on a monthly basis.

Sleeping difficulties are also common among elders with heart problems. In a recent study, almost half of the people who had congestive heart failure, also experienced disturbing sleep apneic (loss of breath) attacks.

Gastroesophageal Reflux (the chief symptoms of which are heartburn and regurgitation), is often accompanied by wheezing and chronic cough when it occurs at night. This condition produces repeated awakenings

Elders with incontinence (a common condition for many elders - particularly women) tend to be up repeatedly through the night.

3 - 23.3 Other Factors that affect Sleep

Interestingly, average total sleep time increases slightly after age 65 - but so do reports of difficulty falling asleep. One study found that after age 65, 13% of men and 36% of women reported requiring more than 30 minutes to fall asleep. What causes this difficulty? Research suggests that both physiological and lifestyle factors are at fault.

The elderly generally secrete lower amounts of the chemicals that regulate the sleep/wake cycle. Both melatonin (a substance produced by the pineal gland, which promotes sleep) and growth hormone production decrease with age.

In addition, a decrease in exposure to natural light and changes in diet may exacerbate sleep difficulties. Some researchers theorize that daytime inactivity (lack of exercise) and decreased mental stimulation may also lead to sleep problems.

Falling asleep is, of course, not the only difficulty older people may face at night. Sleep also becomes more shallow, fragmented, and variable in duration with age. Many older people consider poor sleep not worth complaining about and as inevitable and constant as death and taxes. There are many things they can do about poor sleep.

It is also important to remember that many healthy elders have few or no sleep problems.

3 - 23.4 Ways to Promote Good Sleep

- Maintain a regular rising time
- Minimize light in bedroom. Even small lights such as on the alarm clock can signal the brain to wake up.
- Consider wearing a sleep mask
- Maintain a regular bedtime (but do not go to bed, unless you are sleepy)
- Decrease, or eliminate daytime naps
- Exercise daily, but not immediately before bed
- Do not use a bed for reading or watching television
- Relax mentally before going to sleep (do not use bedtime as worry time)
- Avoid heavy meals or snacks prior to bedtime
- Limit, or eliminate, alcohol, caffeine and nicotine - especially before bedtime
- Wind down before bed and maintain a regular bedtime routine
- Control the nighttime environment (cool temperature, quiet, darkness)
- Employ background noise (e.g., a fan or another "white noise" machine)
- Wear comfortable bed clothing
- If unable to sleep within 30 minutes, get out of bed and partake of a soothing activity
- Get adequate exposure to bright light during the day

3 - 24 BARRIERS TO AGING WELL

Much of this segment has focused on the physical deterioration of the human body that is associated with the aging process. The picture painted is far from pretty. To make matters worse, physical well-being is closely interconnected with social, psychological and spiritual well-being. As noted earlier, a narrowing social network, increased dependence on others, isolation and loneliness are all a part of the "normal aging" process.

3 - 24.1 Physical Isolation (Among Elders) Is A Product Of:

- Geographic isolation
- Lack of transportation
- Poor physical health
- Mobility problems
- Inadequate housing
- longest-lived communities in journal articles, talks and books.

3 - 24.2 Social Isolation (Among Elders) Stems From:

- ❖ A lack of information about programs & services
- ❖ Inadequate home care and home support
- ❖ Weak support networks (family, social, and community)
- ❖ Limited participation in recreational, social & community activities

3 - 24.3 Spiritual Isolation (Among Elders) Flows From:

- ❖ A loss of meaning and purpose
- ❖ A loss of "belonging" and a lack of connection
- ❖ An inability to observe religious and spiritual events

3 - 24.4 Mental & Emotional Isolation (Among Elders) Stems From:

- ❖ Low self-esteem, Depression, Cognitive problems
- ❖ Difficulties accepting aging and Ageism
- ❖ Communication problems

3 - 25 SUCCESSFUL AGING

Successful aging looks at increasing our health span not just our lifespan. Health span is the duration of life spent in good health not just in long years.

3 – 25.1 Blue Zones

The term “blue zones” was first coined by Dan Buettner, a National Geographic Explorer and Fellow and journalist, during an exploratory project he led in 2004.

After an expedition to Okinawa, Japan in 2000 to investigate the longevity there, he set out to explore other regions of the world with reportedly high longevity. With the support of

National Geographic, Buettner, and his team of scientists, demographers and anthropologists traveled the world in search of communities where people not only lived longer but also enjoyed a high quality of life in their old age. After analyzing demographic data and interviewing numerous centenarians, they identified five regions that stood out for their extraordinary longevity and vitality.

Here are his findings - Blue zones are areas of the world where people live the longest lives with few chronic conditions, consistently reaching one hundred years old.

The five Blue Zones *are located in:*

1. Sardinia, Italy – home to the world's longest-lived men
2. Okinawa, Japan – home to the world's longest-lived women

3. Loma Linda, California – Seventh-day Adventist community that outlives the average American by a decade
4. Ikaria, Greece – tiny island community with significantly reduced rates of common chronic illnesses
5. Nicoya, Costa Rica – area where people live longer than average.

We even have a blue zone in Canada. Airdrie, a city located Alberta has been recognized as a promising Blue Zone community.

Despite these communities being scattered across the globe and representing a variety of different cultures, there are characteristics that all blue zones have in common, like minimizing stress, moving regularly throughout the day, having a clear sense of purpose, and sticking to a mostly plant-based diet.

What increasing health span behaviours were noted?

1. Making movement a natural part of the day
2. Knowing a sense of purpose
3. Prioritizing stress relief
4. Eating until you are about 80% full
5. Eating a largely plant-based diet
6. Drinking alcohol in moderation
7. Connecting with community
8. Putting family (whether biological or chosen) first
9. Choosing social circles that support healthy behaviours

3 – 25.2 Goals And Results Of Blue Zones

Living in a Blue Zone as a senior can provide a unique and health-focused lifestyle. These extraordinary regions worldwide are renowned, offering seniors a multitude of advantages. Seniors hope to thrive in a nurturing environment.

Longevity And Life Expectancy

Blue Zones are areas where people have a longer life expectancy and a higher proportion of centenarians. In Canada, seniors can benefit from adopting some of the lifestyle habits observed in Blue Zones. One key aspect of this longevity is well-being, which entails a balanced lifestyle that promotes both physical and mental health.

In Blue Zones, people often stay active throughout their lives, engage in social interactions, and maintain strong connections with their community. This combination of factors contributes to a longer life expectancy and increased health in older adults.

Impact on Health Care Costs

Adopting Blue Zone principles can have a positive impact on health care costs. As seniors follow a lifestyle that prioritizes well-being, they are less likely to develop chronic diseases that require expensive medical treatments. This leads to a decrease in health care services utilization, which in turn reduces the overall cost of health care. Moreover, as seniors maintain a healthier lifestyle, they can remain independent longer, avoiding or delaying the need for long-term care facilities or extensive medical interventions.

Blue Zones And Lifestyle Diseases

In Blue Zones, the prevalence of lifestyle diseases, such as obesity, type 2 diabetes, and heart disease, is much lower than in other regions. This is partly due to the healthy habits practiced by residents, including physical activity, limited smoking, and reduced inflammation through a plant-based diet. Incorporating these habits into the lives of seniors in Canada can result in a decreased risk of developing lifestyle diseases which often lead to disability or premature death.

Plant-Rich Diet In Blue Zones

An essential aspect of the Blue Zones lifestyle is a diet that primarily consists of vegetables, whole grains, and legumes, with a focus on plant-based sources of protein. This way of eating leads to lower levels of inflammation and a decreased risk of chronic diseases. It is also low in processed foods, opting for whole, unprocessed ingredients instead. In some Blue Zones, people also consume small amounts of cookies, coffee, and herbal tea, which can contribute to overall well-being when consumed in moderation. Adopting a similar dietary approach can be beneficial for seniors in Canada as it promotes optimal health and longevity.

Living in a Blue Zone as a senior promises a unique and health-focused lifestyle. These extraordinary regions worldwide are renowned for their exceptional longevity and well-being, offering seniors a multitude of advantages. Expect to thrive in a nurturing environment where strong social connections, a plant-rich diet, and regular physical activity are the norm. Seniors can embrace a sense of purpose and enjoy lower stress levels, thanks to mindful practices and a vibrant cultural heritage. Access to nature and opportunities for active aging enrich their lives, fostering an environment where longevity and vitality are celebrated as integral components of senior living in a Blue Zone.

3 – 25.3 The Wider Impact Of The Blue Zone Concept

Influence on Policy

The Blue Zone concept has had a significant impact on policy, as it highlights small changes that can be made to improve the well-being of seniors in Canada and other countries.

By examining the lifestyle factors prevalent in Blue Zones, such as diet, physical activity, and social connections, policymakers have gained insight into practical strategies for promoting healthier aging communities. This has led to the development of policies that emphasize preventive health care services and improve access to resources for seniors.

Blue Zones and Community Transformation

One notable example of the Blue Zone concept's influence on community transformation is seen in Ikaria, Greece, where residents follow a typical Mediterranean lifestyle marked by an emphasis on social belonging and community involvement.

According to a study, their sense of belonging and strong social bonds contribute to the well-being of elderly residents living in this Blue Zone.

Other communities worldwide, inspired by these findings, are striving to replicate the Blue Zone model to improve their citizens' well-being. This involves fostering social networks, encouraging volunteering, and promoting cooperative activities that enable seniors to remain engaged and connected.

The Role of Resources and Services

Resources and services also play a crucial role in the efficacy of the Blue Zone model. Providing seniors with access to health care services as well as other resources, such as transportation and healthy food options, can significantly impact their quality of life.

In Loma Linda, California, another Blue Zone community, the predominantly vegetarian diet is believed to contribute to the extended health span among older adults. The availability of plant-based food offerings within the community has made it easier for residents to maintain this dietary pattern.

By looking at the success of Blue Zone communities, it becomes evident that a combination of policies, resources, and services tailored to address the specific needs of seniors can lead to significant improvements in their overall well-being. In turn, these positive outcomes inspire further community transformation, ultimately benefiting a wider population of seniors.

The Blue Zones Book

Based on the extensive research conducted on these unique communities, Dan Buettner authored a book titled The Blue Zones: 9 Lessons for Living Longer from the People Who've Lived the Longest. The book delves into the science and stories behind the Power 9 principles, highlighting the lessons that can be applied by individuals and communities worldwide. It serves as a guide for those seeking to enhance their well-being and longevity by adopting the Blue Zones lifestyle. His newest publication The Blue Zones Secrets for Living Longer: Lessons from the Healthiest Places on Earth was just published in August 2023.

Longevity And Well-Being For Seniors

Blue Zone communities, characterized by their exceptional longevity and well-being, can offer valuable insights to seniors in Canada looking to enhance their quality of life. These communities emphasize a sense of belonging, which contributes to a stronger sense of place and well-being among the elderly. By fostering social connections and strengthening community ties, Canadian seniors may be able to experience similar benefits.

Canadian seniors can greatly benefit from adopting elements of the Blue Zone lifestyle to their own lives.

By focusing on building a strong sense of community, engaging in physical activity, and emphasizing resilience, the elderly in Canada can embrace wellness and promote longevity, leading to a happier and healthier aging experience.

3 - 26 NOTEWORTHY FACTORS THAT HELP ELDERS STAY WELL LONGER

- Having Awareness of and access to information
- Easy access to medical, social, and other support services
- Aging in a place (whether in one's own home, a nursing home, or a retirement home), with respect and with dignity, for as long as possible
- A supportive social environment
- Continued community involvement and participation
- Financial security
- Suitable and affordable housing and transportation

The goal should not be just to live a long time (life span) … it should be to live a long time with "quality" of life (health span).

3 - 27 SOME FINAL SUCCESSFUL AGING THOUGHTS

Life expectancy has risen dramatically during the past century - largely thanks to improvements in health care, better hygiene and nutrition, and the conquest of certain infectious diseases through clean water, vaccinations and antibiotics.

Increasing Health span by adopting a healthy lifestyle full of good food, activity and social support can be achieved by more of us.

The aging body does change. Some systems slow down, while others become less *finely tuned*. Generally, slight, gradual changes are common, and most of these are not problematic.

There is no need for most people to fear getting older. Many of the once-disabling problems of aging can be coped with through improved lifestyle choices, health care and the use of assisting devices. Simple but effective changes in the home environment can be made to help elders maintain independence. The person who has had good health habits while younger and who maintains these habits throughout life can expect to age with a sense of well-being and a continued enthusiasm for living.

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Chapter 4

Managing Chronic Conditions & Mental Health Issues

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4 - 1 KEY OBJECTIVES OF THIS CHAPTER

This chapter will be broken down in 2 parts.

Part 1 will look at the most common chronic conditions that affect Canadian elders. Understanding these conditions will offer you a keen perspective on one of the most trying and difficult aspects of elder life.

The news is not all bad. We are learning more and more about factors that influence health and illness: The Social Determinants of Health. This chapter will also provide you with a great deal of information on how chronic conditions can be managed - to ensure that Canadian elders can maintain a 'good quality of life' and increase their 'health span.'

Part 2 will deal with mental health issues and the effect that it has on our aging society. Mental health is important at every stage of life. Effective treatment options are available to help older adults manage their mental health and improve their quality of life. Recognizing the signs and seeing a health care provider are the first steps to getting treatment.

4 - 1.1 How Will These Objective Be Achieved?

You will be introduced to the 'Determinants of Health' and how they factor into aging and chronic conditions. We will look at the Top 10 Chronic Diseases. Other chronic diseases not included in the top ten "Canadian Community Health Survey" are included here for your information. Lastly. we will examine ways of managing chronic conditions.

Mental Health disorders refers to a wide range of mental health conditions that affect mood, thinking and behaviour. Diseases such as schizophrenia and bipolar disorder often appear in the early adult years and require lifetime treatment. While depression is not considered the normal part of aging, there are ongoing changes that elders face. Anxiety and depression can follow after losing a partner. experiencing a health crisis, living with chronic pain; all these changes can influence the elder and increase the risk of anxiety and depression.

The MAO clinic reminds us that we all have mental health concerns from time to time. But a mental health concern becomes a mental illness when ongoing signs and symptoms cause frequent stress and affect one's ability to cope.

4 - 2 INTRODUCTION TO CHRONIC CONDITIONS

As we age, our health issues will become more challenging. Chronic conditions exact a heavy toll on Canadian elders.

Quality of life and the ability to stay independent are challenged. As you will see there are many factors that influence how well we age and manage any chronic conditions that come our way.

An elder who has a serious illness later in life must make numerous adjustments - just to remain comfortably alive. Hobbies and other favourite activities can be jeopardized - and there can be a strain on the elder's finances as well. It becomes necessary to spend disposable income on prescriptions, procedures, hospitalization and quite possibly institutionalization.

Many of these dollars will be stripped away from the elder's savings and retirement income - all the money that was so earnestly saved for "the twilight years."

Most elders with chronic illnesses have the psychological determination, the mental capacity, and the motivation required in being proactive in their own life.. It is also likely that most future elders will be healthier and in better physical condition because of improved health care and education throughout their lifetime. But positive coping skills, emotional maturity and life experience are no defence against a variety of debilitating illnesses.

Communities can help foster elder well-being by providing the elderly with information on how to interact with the medical system, how to describe what they are experiencing and what questions to ask their physicians.

As well, as Canada’s elderly population grows, it is a given that staff in health care facilities, social services and community care programs will need to have better geriatric training - so that they can understand the unique needs of the elder population. All these factors tie into Determinants of Health.

4 – 3 DETERMINANTS OF HEALTH

How well we live and how well we age is determined by many factors. These factors are called 'Determinants of Health'. The Canadian 1974 Mark Lalonde submitted a report. This report was about health, as well as research on health inequalities. Led by the Canadian Institute for Advanced Research in the 1980s, it produced evidence that there are many factors that influence how well we live and how well we age.

Knowing that socioeconomic status affects growth and development of children, it was argued that polices were needed to improve the health of children. Consequently, if children enjoy better health there is a good chance that good health will spill over into older ages. Indeed, if health promotion could help prevent illness then the ever increasing health care costs could be reduced

Determinants of Health then is influenced by many factors, which may generally be organized into six broad categories known as the:

1. Genetics
2. Nutrition
3. Health behaviour and lifestyle
4. Environment [pollution]
5. Medical care and
6. Social support

Research and thinking about the factors that influence health and longevity have expanded over the last number of decades. Social and economic influences on health can also be found on Canada.ca website - Determinants of Health. It states that, 'Many factors have an influence on health.

In addition to our individual genetics and lifestyle choices, where we are born, grow, live, work and age also have an important influence on our health.'

Determinants of health are the broad range of personal, social, economic and environmental factors that determine individual and population health. *Recently it was shown that the main determinants of health include additional factors:*

1. Income and social status
2. Employment and working conditions
3. Education and literacy
4. Childhood experiences
5. Physical environments
6. Social supports and coping skills
7. Healthy behaviours
8. Access to health services
9. Biology and genetic endowment
10. Gender
11. Culture
12. Race / Racism

In considering chronic diseases in Canada further research is needed to make connections between determinants of health and the illnesses that can manifest in elder populations.

4 – 4 CHRONIC CONDITIONS

Chronic disease is defined as a condition that lasts one or more years that requires ongoing medical intervention and or may limit the activities of daily living . In 2023, the World Health Organization (WHO) projected that chronic conditions would account for 74% of all deaths worldwide. It also projected that deaths from chronic conditions would increase by 10% and be responsible for almost three quarters of all deaths.

Data from the Canadian Chronic Disease Surveillance System, ending 2017, the most recent data they collected, identified the *ten most prevalent chronic diseases* that elders are living with today. 73% of individuals aged 65 + have at least one of these common chronic conditions. One in three have two or more. This presentation on Managing Chronic Conditions will follow the order reported from this report.

“Four chronic diseases, namely cancer, cardiovascular diseases, diabetes and chronic respiratory diseases account for over 60% of all deaths in Canada. The onset of these diseases can be delayed or mitigated through changes in behavioural risk factors as well as broader determinants of health.” Dr. Theresa Tam, Chief Public Health Officer, Public Health Agency of Canada. (source: Aging and chronic diseases: A profile of Canadian seniors)

In descending order, the prevalence of these conditions are:

1. Hypertension 65.5%
2. Periodontal disease 52%
3. Osteoarthritis 37.9%
4. Ischemic heart disease 26.9 %
5. Diabetes 26.6 %
6. Osteoporosis 25.1 %
7. COPD 20.2 %
8. Asthma 10.7 %
9. Mood and Anxiety Disorders 10.5 %
10. Stroke 9.6%

4-4.1 Hypertension

Blood pressure is the measure of the force against your artery walls during and between heartbeats. Normal blood pressure is below 120/80. Hypertension is abnormally high blood pressure (i.e., pressure of the blood in the main arteries). This is indicated by sustained blood pressure readings above 130 mm Hg. (Systolic) / 80 mm Hg. (Diastolic) measured while at rest.. High blood pressure often causes no symptoms. The only way to know you have hypertension is to have your blood pressure checked.

This is one main reason seniors are at an elevated risk for hypertension. When arteries are flexible and elastic blood flows freely. As you age and arteries stiffen and thicken, the heart must work harder to circulate oxygenated blood throughout your body, causing blood pressure to rise. Think of this as the blood vessels being 'punched' from the inside.

Persistent high blood pressure affects many body organs that can include the kidneys. the heart, the brain and the eyes. Most of the time, high blood pressure causes no obvious symptom, which is why it is said to be 'silent'. However, headaches, blurred vision and dizziness and nose bleeds may occur with high blood pressure.

It is imperative not to ignore any of these symptoms. However, given that no outward symptoms may be observed having regular check ups are so important. In addition, there are affordable blood pressure devices that can be used in the home for monitoring blood pressure.

The causes of high blood pressure are a bit of a mystery. About 10% of patients requiring hypertension treatment can trace their high blood pressure to a physical cause such as kidney disease, diabetes or another underlying disorder. In some people the system that regulates blood pressure goes awry: arterioles throughout the body stay constricted, driving up the pressure in the larger blood vessels. The incidence of hypertension increases significantly with age. Elder women are at particularly high risk.

According to an October 2022 survey release by Heart and Stroke, about 8 million Canadians are affected by high blood pressure, with the number increasing with an aging population. the annual cost associated with high blood pressure is $13.9 billion. But 90% of patients have "essential" hypertension - which means that the source of their high blood pressure is largely unknown. Diet and stress are suspected as prime contributors to hypertension. As well high cholesterol (which clogs arteries with plaque), being overweight, and drinking too much alcohol may also contribute to increasing blood pressure. But a lot of guesswork is involved. Medical experts are not exactly certain of all the mechanisms and causes involved in elevated blood pressure.

Hypertension is problematic because it forces the heart to work harder, and, as a result, the heart often becomes enlarged and less efficient.

The incidence of hypertension increases significantly with age. Elder women are at particularly high risk. What's more clinical depression often accompanies this condition, compounding the issues that these elder, their families and the public health system face.

Table 4-1 Occurrences of Heart Disease or Condition in Canada

	Both Sexes	**Women**	**Men**
	Number of persons with diagnosed ischemic heart disease		
Ages 20 and over	8.5%	7%	10%
	Number of persons living with diagnosed hypertension		
	25%	Affected equally	
	Incidence of clinical depression		
	With Heart failure	Following heart attack	With ischemic heart disease or stroke
Incidence	2 in 5	1 in 3	1 in 5

Source: Surveillance of heart diseases and conditions, Government of Canada, Date modified: 2022-11-16

Table 4.2 Crude prevalence (%) of common chronic diseases and conditions, 20+ years, by age group, both sexes, Canada

	Prevalence (%)			
Age range	**≤ 65**	**65-74**	**75-84**	**85+**
Condition				
Hypertension	14.3	56.3	74.3	83.4
Ischemic Heart Disease	3.4	20.1	32.6	42.0
Diabetes	6.5	24.2	30.4	28.3
Mental Illness	16.5	14.7	15.2	17.1
Chronic obstructive pulmonary disease	6.2	16.8	23.2	27.3
Osteoporosis	5.4	20.1	28.8	36.9
Mood & anxiety disorders	12.2	10.4	10.7	10.5
Stroke	1.0	5.8	11.7	19.9
Heart failure	1.0	4.7	11.0	22.9
Asthma	11.2	10.3	11.2	11.3

Source - Aging and chronic diseases: A profile of Canadian seniors, Government of Canada, Date modified: 2022-07-14

Management of Hypertension

The best way to address hypertension is to restore balance to your system. Hypertension can often be brought under control by improvement in diet (reduce salt, red meat, fat, and alcohol) and lifestyle (increase aerobic exercise). Stopping smoking and achieving a healthy weight are also thought to significantly decrease the risk of hypertension.

Reducing high blood pressure can also help reduce the risk of stroke, heart attack, and kidney failure.

4-4.2 Periodontal Disease

A milder form of gum disease. gingivitis can occur without any discomfort or noticeable symptoms. While the elder may not see the signs of gum disease, the dentist will. Periodontitis is a more severe form of gum disease that may develop when gingivitis goes untreated.

A staggering 52% of elder Canadians ages 65-79 deal with this painful and debilitating condition: Periodontal Disease. Periodontal disease is an infection of the tissues that hold your teeth in place. A sticky film of bacteria builds up on the teeth and hardens.

This disease starts with swollen, red and bleeding gums. (Aging and chronic diseases: A profile of Canadian seniors, Government of Canada, Date modified: 2022-07-14)

Also. vulnerable elders in Canada are less likely to have dental insurance, more likely to avoid dental treatment due to cost and only consult a dentist in emergencies. They are also more likely to have active dental disease and pain, and more likely to avoid healthy foods due to oral health problems.

Poor oral health has several implications for older adults, including poor nutritional intake, chronic pain and discomfort, decreased quality of life, and an increased risk for other health conditions. Healthy foods, such as fruits, vegetables and nuts, are difficult to chew when there is tooth pain or missing teeth. Accordingly, by avoiding these food choices, essential nutritional deficiencies often result, leading to other health complications. Periodontal disease is a risk factor for diabetes, stroke, lung and heart disease.

Statistics Canada reports that 22.3 % of Canadian men between 60 and 79 and 21.1 % of women in the same age group are *edentulous*, that is having no natural teeth due to periodontal disease. However, things are improving.

A greater portion of older adults are now retaining more of their natural, heavily restored dentition. This means that more preventative and restorative interventions are required for maintenance. One factor that affects oral health in older adults is medications that cause *xerostomia*, which is dry mouth. Other issues include restricted mobility, cognitive impairments and prevalence of other health conditions that complicate matters. For example, dementia is a condition often associated with older adults and can impair the ability to remember to perform oral self care on their own.

<u>The Good News</u>

A new '*Plan for Canadian Seniors: Making Progress Towards a Vision of Oral Health For All'* a new policy plan, has been created. Called the *Canadian Dental Care Plan* should be available May 2024. To qualify for the CDCP the elder must have an adjusted family net income of less than $90,000, not have access to employer/pension-sponsored or private dental insurance and have filed a tax return in the previous year.

Services under the plan include:

1. Preventative services such as cleaning and scaling, sealants and fluoride
2. Diagnostic services including examinations and x-rays
3. Restorative services such as fillings
4. Endodontic services such as root canal treatment
5. Prosthodontic services including dentures
6. Periodontal services including deep scaling
7. Oral surgery including extractions

More information about the new dental plan is available on the Canada.ca website.

4-4.3 Osteoarthritis

Musculoskeletal diseases are among the most common of all human afflictions. The prevalence of these diseases increases with age - with most of the people aged 75 and over having some form of musculoskeletal disease, especially arthritis. Osteoarthritis in fact, affects 38% of Canadian elders.

There are over 100 different forms of arthritis and many different symptoms and treatments. Medical experts do not know what causes the various types of arthritis, though some types are better understood than others.

Arthritis causes pain and loss of movement. It can affect joints in any part of the body. Arthritis is usually chronic, meaning it can occur over a long period. The more serious forms can cause swelling, warmth, redness, and pain.

Another common chronic disease is Osteoarthritis. Osteoarthritis is a progressive disease of the whole joint that leads to the breakdown of joint cartilage and the underlying bone. (Cartilage is the tough elastic material that covers and protects the ends of bones).

The Arthritis Society Canada explains that healthy knee joint and damaged osteoarthritis knee joints require the body to regularly repair and replenish damaged tissues. Damage to joint tissues can occur through the normal function of a joint.

When the body is not able to keep up with the repair process, or if there is too much tissue damage , osteoarthritis may begin to develop. For most people, this damage can occur when otherwise healthy joints are exposed to heavy workloads over a long period of time. However, for some people whose joints are formed differently or who have experienced a previous joint injury, even regular workloads can accelerate joint damage. Being overweight or obese is also a risk factor for developing osteoarthritis since additional body weight can cause significant stress on weight-bearing joints.

The weight bearing joints, *the knees and hips* are most affected. In the past elders were left to deal with this painful 'bone on bone' affliction. While there is no cure for osteoarthritis, there are ways to manage the symptoms and how you function in daily life. More on that later.

<u>The Good News</u>

Joint replacements surgery has come a long way. These replacements are lasting longer that there previous models. Nearly 60% of hip replacements last 25 years, 70% last twenty years and almost 90% lasted 15 %.

Progress in total knee replacement has resulted in the new joints lasting even longer; 82% last 25 years 90%lasted twenty years and 93% last 15 years.

While each individual should listen to advice from their health care team, below is some useful information.

Rheumatoid arthritis

While rheumatoid arthritis did not show up in the top ten chronic conditions that were reported, it can affect Canadians of all ages. Health Canada reports that approximately 374,000 (1.2%) Canadians aged 16 years and older live with diagnosed rheumatoid arthritis and 23,000 (0.8 per 1,000 persons per year) were newly diagnosed in 2016–2017, the most recent data available.

The prevalence and incidence of diagnosed rheumatoid arthritis generally increase with age and are higher among females (1.7% and 1.0 per 1,000 persons per year, respectively) compared to males (0.8% and 0.5 per 1,000 persons per year, respectively).

It can be a disabling form of arthritis. Signs of Rheumatoid arthritis often include morning stiffness, swelling in three or more joints, swelling of the hands and wrists, swelling of the same joints on both sides of the body (e.g., both hands), and bumps (or nodules) under the skin, most commonly found near the elbow.

Scientists do not know what causes Rheumatoid arthritis, but think it has something to do with a breakdown in the immune system—the body's defence against disease. It is also likely that people who get it have certain inherited traits (genes) that cause a disturbance in the immune system.

Gout

Gout is a form of arthritis and occurs most often in older men. It affects the toes, ankles, elbows, wrists, and hands. An acute attack of gout is very painful. Swelling may cause the skin to pull tightly around the joint and make the area red or purple, and very tender. Medicines can stop gout attacks, as well as prevent future attacks and damage to the joints.

4-4.4 A Prepared Patient Is A Calm Patient

Pre-surgery Preparation

We hear a lot about post operative care and indeed it is a real necessity. However, pre-op physiotherapy can help prepare and increase chances of a good post-op outcome.

Preparing ahead of surgery could include*:*

1. Muscle strengthening - By strengthening the muscles around the joint, you are supporting the new joint.

2. Increasing mobility pre-op helps to improve flexibility and movement. The advantage is that mobility reduces post-op stiffness and improves range of motion in the joint.

3. Be prepared - The physiotherapist can educate the patient on what to expect from the surgery and also provide relevant exercises to speed up recovery.

Post Surgery Recovery

Pain management. It cannot be stressed enough that for healing purposes good pain management is critical. Pain medication taken before doing exercise means the patient will hopefully be more successful and he or she will then likely do the exercises leading to recovery.

1. Other techniques such as applying heat and ice on the sore joint can help bring relief.
2. Gentle exercises that improve range of motion are valuable. Under the care of a physio therapist the patient can learn *strengthening* exercises to support the new joint.
3. Functional exercises such as walking, climbing stairs and getting in and out of the car. It is often this functional exercise that makes one feel they are getting their life back.

Having support from health care professionals at every step is invaluable, however support from family, friends and neighbours is invaluable.

4-4.5 An Introduction To Cardiovascular Diseases

Just under one million Canadians over the age of 65 have heart disease. Health care costs for this disease are more than $20.9 billion every year. (Chronic conditions among seniors aged 65 and older, Canadian Health Survey on Seniors, Government of Canada, Oct. 1, 2021)

Cardiovascular diseases are defined as diseases and injuries of the cardiovascular system: the heart, the blood vessels of the heart, and the system of blood vessels (veins and arteries) throughout the body as well as within the brain. Heart disease includes such diseases as coronary artery disease [discussed above](CAD), coronary heart disease (CHD), angina, congestive heart failure, congenital heart disease, and valvular disease.

Heart failure occurs when the heart cannot pump enough blood to meet the needs of the body. The condition usually develops slowly over years, as the heart gradually loses its pumping ability and works less efficiently. Some people may not become aware of their condition until symptoms appear years after the heart begins its decline. The severity of the condition depends on how much pumping action the heart has lost. Almost everyone loses some pumping capacity as they age, but the loss is much more significant for people who have developed heart disease.

While mild heart failure may not significantly influence a person's daily life, severe heart failure can interfere with even simple activities. Fortunately, treatment combined with a healthy lifestyle can often help people with heart disease to lead full lives. There are a variety of things that people can do in order to both avoid and manage the risk of cardiovascular disease. Managing the modifiable risk factors described above is the best way to prevent heart disease.

Over half of all cardiovascular deaths are due to coronary artery disease and 21% are due to stroke. Sixteen percent are due to other forms of heart disease such as problems with the electrical system of the heart, viral heart infections, and heart muscle disease.

The remaining 9% of deaths are due to vascular problems such as high blood pressure and hardening of the arteries.

Note: The chronic disease survey does not include all the diseases affecting the cardiovascular system. What stands out in the survey is Ischemic Heart Disease. Exact statistics for each disease mentioned above are not included.

4-4.6 Ischemic Heart Disease / Coronary Heart Disease

Ischemic heart disease was identified in the survey as affecting 20-42% of Canadians over age 65, with percentages increasing for each 10 years after age 65. Other heart diseases are not identified in the survey but are covered below.

The beating heart needs oxygen and other nutrients to provide energy for its work. Like other muscles, the heart receives oxygen and nutrients from arteries. In the case of the heart, these arteries are called *coronary arteries* - the first vessels to come off the aorta.

Typically, there is one artery on the right side of the heart and one on the left, with the left one generally being the larger.

The Left Main coronary artery divides into two sizable branches, the Left Anterior Descending (supplying the front of the heart) and the Left Circumflex (wrapping around the left side and back of the heart). The Right Coronary Artery also supplies the back of the heart.

Coronary artery disease generally refers to the buildup of cholesterol in the inside layers of the arteries. This build-up slowly narrows the artery and reduces the flow of blood through the vessel. As a result, the heart muscle does not get enough blood. To make matters worse, plaque tends to form as well, and it weakens the artery walls. Blockage in these arteries can cause heart attacks, heart failure, angina, and sudden death.

Blockages in the coronary arteries begin to occur at an early age. *Fatty streaks* can be found in most teenagers - but a little bit of blockage is generally harmless. If 50% of the artery is blocked, however, there can be less blood flow than needed at periods of increased need, such as exercise. If the vessel is narrowed by 90%, there is the potential for lack of blood supply at rest. And when the vessel becomes 100% closed, a heart attack (myocardial infarction) generally results.

Coronary artery disease occurs, to some degree, as a natural result of aging. There is also a genetic component to the disease - it tends to run in some families. There are a variety of risk factors that are within an individual's control.

Risk factors that are within an individual's control:

- Smoking
- Diabetes & High cholesterol

- ❖ High blood pressure
- ❖ Being Overweight
- ❖ Leading a sedentary lifestyle

A Word about Angina

Angina is not a disease but rather it is a symptom. Angina is chest pain that is caused by lack of oxygen to the heart muscle.. The blockage in the coronary arteries creates a squeezing pain or a feeling of pressure on the chest.

Angina can be bothersome even when someone afflicted is doing the most basic of activities (e.g., walking, climbing stairs, exercising, or housecleaning). The pain and pressure associated with angina can produce sweat and make it difficult for a sufferer to catch their breath. In addition to chest pain, angina may produce pain in the arms or neck.

Mild angina will produce pain that subsides quickly after a minute or so of rest. Angina that goes away easily (and which does not worsen over time) is called stable angina.

When the pattern of angina changes significantly, it is called unstable angina. This is a sign of danger. Angina in someone who has not had it before, an increase in the episodes of angina with less exertion, and angina that comes on while resting are also danger signs. Unstable angina may be the first sign of a heart attack. Angina sufferers who have severe pain often take a medicine called nitroglycerin.

Heart Attack

If untreated coronary artery disease can lead to heart attack. The classic symptoms of a heart attack are pain in the chest, neck, jaws, back, shoulders, or arms. The pain may be severe but is most often moderate in intensity. The pain may be described as *crushing*, *heavy* or *pressure-like*. People often say, "It's like an elephant on my chest."

During a heart attack most, people have a distinct sense that something is terribly wrong. Along with the pain, there is often intense sweating - and this is a key sign that a heart attack is occurring. Shortness of breath, nausea, and vomiting also commonly occur.

It is important to note that the common assumption that the pain must involve the left arm is false - and this falsehood has caused a great deal of confusion among the general public.

In fact, the right arm is very frequently involved instead of, or along with, the left arm - and in many cases there may be no pain in the arms at all.

Women may experience a heart attack differently. There may be chest pain, shortness of breath, pain or discomfort in the jaw, neck, back arm or shoulder; feeling nauseous, lightheaded or unusually tired.

A person experiencing a heart attack should not attempt to drive and 911 should be called immediately.

Silent Heart Attack

A silent heart attack may have few symptoms or symptoms not recognized as heart related. A silent heart attack may not cause chest pain or shortness of breath which are usually attributed to a heart attack. Silent heart attack may be more common in women.

Treatment of Heart Disease

A variety of medicines have been developed to help treat heart disease. Medicines called beta-blockers, calcium channel blockers and nitrates are all designed to help treat angina. Aspirin has also proven beneficial. Taking low doses of aspirin, every day reduces the chance of a second heart attack in people who have already had one. Sometimes these medicines produce some side effects. Aspirin may cause upset stomach. Nitrates may cause a flush (redness in the face), and headaches. Beta-blockers cause tiredness and sexual problems in some patients. Calcium channel blockers may cause constipation and leg swelling. Fortunately, only a small number of the people who take these medicines are affected.

Some surgical procedures have also been developed to treat heart disease. Angioplasty, for example, is a surgical treatment that uses a tiny balloon to push open blocked arteries around the heart. The balloon is inserted in an artery in the arm or leg.

Sometimes a stent (a small metal rod) is put into the artery at the site of the blockage in order to hold the artery open. Another surgical treatment for angina is bypass surgery. Pieces of veins or arteries are taken from the legs and sewn into the arteries of the heart to bring blood past a blockage and increase the blood flow to the heart.

Bypass surgery is usually done when angioplasty is not possible or when a doctor feels it is a better choice for the patient. Angioplasty and bypass surgery are not without risk. Both can result in heart attack, stroke, or even death. These are rare, and most patients do well. After angioplasty, most patients can return to their previous activity levels, or even an even better activity level, within a few days. It takes longer (a few weeks or months) to recover from bypass surgery. The proper treatment for heart disease varies from patient to patient. Less serious heart disease may require medicine with or without angioplasty. More serious heart disease may demand that treatment include bypass surgery. Regardless of which type of therapy is used, it is very important to try and control some of the factors, which may lead to the development of heart disease in the first place.

Patients are advised to:

- ❖ Refrain from smoking
- ❖ Monitor and control blood pressure
- ❖ Eat a prudent low fat, low salt diet
- ❖ Exercise regularly - even modest exercise is helpful

- ❖ Have cholesterol levels monitored by a physician
- ❖ If present, work to control diabetes
- ❖ Attain ideal body weight. Shed those extra pounds
- ❖ Following up with a doctor as recommended

Heart disease does not go away. But medicines, surgeries and lifestyle changes can help patients live longer and feel better.

Stroke

Stroke is the result of a blood flow problem in the brain - is also considered a form of cardiovascular disease. Stroke can be described also as 'a sudden loss of brain function' caused by an interruption of blood flow to the brain. 10 % of adults age 65 and older have had a stroke. *The two types of strokes:*

- 80% of strokes are ischemic, interruption of O2 to the brain, caused by a blood clot
- 20% are hemorrhagic caused by uncontrolled bleeding in the brain. The good news is that 73% of elders experiencing a stroke live past one year post stroke.

Transient ischemic attack (TIA)

A transient ischemic attack (TIA) is a short period of symptoms similar to those of a stroke. It's caused by a brief blockage of blood flow to the brain. A TIA usually lasts only a few minutes and doesn't cause long-term damage.

That said, a TIA may be a warning. About 1 in 3 people who has a TIA will eventually have a stroke. Almost half will have a stroke within a year after the TIA.

Warning Signs of a Stroke

For many years, the five standard warning signs of an impending stroke have been identified as: weakness; trouble speaking; vision problems; headache; and dizziness. *In late 2014, the Heart and Stroke Foundation introduced a new approach under the acronym FAST:*

- ❖ **Face** – is it dropping?
- ❖ **Arms** – can you raise both?
- ❖ **Speech** – is it slurred or jumbled?
- ❖ **Time** – to call 9-1-1 right away.

Stroke And Gender

The lifetime risk of having an acute stroke is higher in men, but since women live longer than men, they have more opportunity to experience a stroke. Almost 60% of the 50,000 strokes in Canada each year affect women. Women also suffer stroke at a later age on average (i.e., 70 years of age versus 65 for men).

Having a stroke later in life when other diseases are present also significantly increases a person's risk of dying from a stroke. Not surprisingly, a greater percentage of women than men die from stroke.

Risk Factors

1. *Age* - The older you are, the greater your risk of stroke. Over two thirds of all strokes occur among people over the age of 65. A woman's risk of having a stroke increases significantly after menopause.

2. *Gender* - Men have a higher risk than women of having a stroke. However, because women tend to live longer than men—and the risk of dying from stroke increases with age—more women than men die from stroke each year.

3. *Race* - Canadians of First Nation, Inuit, Hispanic, South Asian, and Black descent have higher rates of high blood pressure and diabetes— conditions that often lead to strokes.

4. *Family History* - An individual's risk of having a stroke is higher if he or she has a parent or sibling who had a stroke before the age of 65.

5. *Prior Stroke* or TIA - A previous history of stroke or TIA will increase substantially the subsequent risk of recurrent stroke or TIA.

6. *High blood cholesterol* - Elevated blood cholesterol contributes to the development of atherosclerotic plaques along the walls of the blood vessels (i.e., "hardening of the arteries"). The presence of this plaque increases the risk of stroke.

7. *Inactivity* - People who are physically inactive are at twice the risk for heart disease and stroke.

8. *Excessive alcohol consumption* - Heavy drinking, especially binge drinking is associated with stroke.

Stroke Treatment

Stroke treatment focuses in three broad areas: prevention, therapy immediately after a stroke, and post-stroke rehabilitation.

Therapy and rehabilitation programs are tailored to the specific needs of the patient and take into consideration any underlying risk factors present (e.g., hypertension, atrial fibrillation, diabetes, and the chances of blood clots developing).

Rehabilitation should begin as soon as possible after a stroke. Frequent turning, proper positioning, and gentle exercise of paralyzed muscles can help prevent stiffness and soreness.

This will help prepare the muscles for more complicated tasks. At first, a nurse or a therapist will provide this care. Later, caregivers will be taught how to help.

Caregivers and family play an important role in rehabilitation. A good way to learn rehabilitation exercises is to practice them while the survivor is still in the hospital where a nurse or therapist can provide support. Caregivers may also find it useful to spend time with the survivor before discharge, becoming more familiar with new routines or special equipment such as braces or wheelchairs.

Once survivors have left the hospital, one or more members of the health care team may continue to monitor their progress. Some health professionals may make home visits; others may arrange for office visits.

This can provide valuable support to the caregivers and survivors. Rehabilitation services may also be available in the community through hospitals, nursing homes, and support groups.

No one can say exactly how long a rehabilitation program should last. Each program is tailored to meet the individual's needs. A program can also change as the survivor's condition improves.

The number of services that survivors will need depends on the degree of disability. Not every person who has a stroke will need rehabilitation therapy. A program usually involves the services of several professionals who are part of the stroke team.

While it is true that the risk factors for stroke, and the effects of stroke, are the same for both men and women - there are some general differences in the recovery and rehabilitation phase.

There is some evidence that women may recover better from language loss after a stroke than men. This is because women tend to use larger portions of both sides of their brain for language than men do.

However, the length of stay in hospital is usually longer for women than for men. The longer hospital stay tends to be due to social and medical factors, as well as concurrent (other) medical problems. As a rule, it is not due to differences in the severity of the strokes or neurological status.

Men usually go home or to rehabilitation. Women tend to be transferred to chronic care facilities, which may often be due to the absence of a spouse or partner to function as a caregiver. In one study, only 39% of the female stroke survivors had a spouse who was able to function as a caregiver, compared to 82% of the men.

Aspirin Therapy

People who have had an ischemic stroke or a Transient Ischemic Attack (TIA) are often prescribed aspirin (ASA) to reduce their risk of another stroke. ASA reduces the tendency of small cells in the blood (called platelets) to clump together and form blood clots.

An Aspirin a day is, however, not for everyone! Some people cannot take ASA regularly. They may need to take other "blood thinning" or anti-coagulant drugs. The decision to take ASA on a long-term basis in order to prevent a first stroke must be made with a doctor or nurse practioner.

If an elder has any of the following conditions, taking ASA regularly could be problematic such as developing:

- Liver or kidney disease
- Peptic ulcer
- Other gastrointestinal diseases
- Bleeding problems (gastrointestinal, or otherwise)
- Allergy to ASA
- Excessive alcohol consumption
- A history of bleeding (hemorrhagic) stroke

4-4.7 Diabetes

Type 1 Diabetes (also called Insulin Dependent Diabetes)

This type of diabetes occurs when the pancreas no longer produces (or produces very little) insulin. People with Type 1 Diabetes need insulin shots to survive. Most cases of Type 1 Diabetes develop in people who are under 30 years of age. Approximately 10% of people with diabetes have Type 1 Diabetes.

Type 2 Diabetes (also called Non-Insulin Dependent Diabetes or adult onset diabetes)

Most people have Type 2 Diabetes Mellitus at 26.8% of those who reported having diabetes. This type of diabetes occurs when the pancreas does not produce enough insulin or when the body does not effectively use the insulin that is produced.

Health experts blame the rapid growth in the incidence of diabetes on the parallel rise in obesity and unhealthy lifestyles. Canadians are eating too much fatty food and getting insufficient exercise. The fact that the North American population is aging rapidly is also a contributing factor.

A feature of diabetes mellitus is that the body fails to keep blood sugar, or glucose, at normal levels due either to a lack of the hormone *insulin*, or the body's inability to use it correctly. The buildup of glucose in the blood produces diabetes.

Insulin helps ensure that the sugar in foods is delivered to the cells of the body. If this delivery fails, blood sugar levels rise too high and the cells themselves die.

Over the long haul, consistently high blood sugar can harm many organs, leading to growth failure in children and adolescents. In the adult population it can lead to hypertension, blood-vessel disorders (especially in the feet), cardiovascular disease, and kidney failure.

Management of Type 2 'Diabetes Mellitus' is attained by eating a healthy diet, staying active through exercise, and maintaining a proper weight. Medications are also available that help the body to make use of the insulin it has. Type 2 DM is a progressive condition. Over time, it may be harder to keep blood glucose levels in a target range. Approximately 90% of people with diabetes have Type 2 diabetes.

The risk factors for developing Type 2 diabetes include all the following:

- Being age 45 or over
- Being overweight (especially if you carry most of your weight around your mid-section)
- Being a member of a high-risk group (Aboriginal peoples, and people of Hispanic, Asian, or African descent)
- Having a parent or sibling with diabetes
- Having given birth to a baby that weighed over 4 kg (9 lbs.) at birth, or having had gestational diabetes (diabetes during pregnancy)
- Having high cholesterol
- Having higher-than-normal blood glucose levels
- Having high blood pressure or heart disease

"Borderline Diabetes"

There is no such thing as borderline diabetes - and use of this term is often a way to minimize the importance of taking constructive action - on diet, on exercise, on high blood pressure, on high cholesterol.

Diabetes *is* diabetes—no matter how high - or low - a person's blood glucose level. Diabetes is not just about high blood glucose - it is closely related to a variety of other dangerous conditions.

Symptoms of Diabetes

- Constant thirst and frequent urination
- Weight loss even when eating enough food
- Excessive tiredness and drowsiness
- Cuts and bruises that do not heal
- Poor eyesight that keeps changing
- Burning, tingling, and numbness in feet, legs, or fingers
- Aching feet and legs

- ❖ Extra dry and itchy skin
- ❖ Vaginal infections that do not go away
- ❖ Problems with gums and teeth]

Diabetes Treatment

Today, more than ever before, people with diabetes can expect to live active, independent, and vital lives—if they make a lifelong commitment to careful management of the disease.

Diabetes is managed in the following ways:

1. Education
2. Diabetes education is an important first step. All people with diabetes need to learn about their condition in order to make healthy lifestyle choices and manage the disease.
3. Meal Planning
4. What, when, and how much you eat all play an important role in regulating how well your body manages blood sugar levels.
5. Exercise
6. Regular exercise helps your body lower blood sugar levels. It also promotes weight loss, reduces stress, and enhances overall fitness.
7. Healthy Weight
8. Maintaining a healthy weight is especially important in attempting to control of Type 2 Diabetes.
9. Lifestyle Management
10. Learning to reduce stress levels in day-to-day life can help people with diabetes better manage their disease.
11. Medication
12. Type 1 Diabetes requires daily injections of insulin. Type 2 diabetes is controlled through exercise and meal planning and may require medications and/or insulin to assist the body in making or using insulin more effectively.
13. When insulin was first discovered and made available to people with diabetes, there was only one type—short-acting insulin. This required several injections each day. As time went on, new forms of insulin were developed which lasted longer, requiring fewer injections. Modern insulin offers more flexibility still in the number and timing of injections, making it easier to maintain target blood glucose levels.
14. Insulin works differently for different people. How effective it is, is dependent on a variety of factors (e.g., the injection site, the amount of insulin, etc.).

The Cost of Diabetes

A person with diabetes has numerous medical and personal costs related to the care and management of the disease. Improving and maintaining glucose levels is critical to prevent or delay long-term complications. Medical costs associated with controlling glucose levels - things like insulin, oral medications, lancets, glucose meters, and glucose meter strips, as well as dietary changes - can be substantial.

A person with diabetes incurs medical costs that are two to three times higher than that of a person without diabetes - the cost of medications alone can range from $1,000 to $15,000 a year.

Other costs for medical treatment can include transportation to health facilities, lodging, and childcare. When looking at total out-of-pocket costs for people living with type 1 diabetes, figures can be as high as $18,306 per year in certain areas of Canada. Out-of-pocket costs for people living with type 2 diabetes can be as high as $10,014 per year in certain areas of Canada.

Indirect costs include decreases in productivity due to absence from work, decreased earning potential because of possible complications and disabilities, lost earnings due to premature death or retirement, and increased insurance costs.

There are also significant "public" costs associated with diabetes. Diabetes and its complications cost the Canadian healthcare system an estimated $28 billion in 2019. . And there are additional costs. It has been estimated that another $9 billion - of public funds - is spent annually on disability, work loss, and premature death costs that are related to diabetes

With the anticipated increase in the number of people developing diabetes, Canada is expected to have an increasingly heavy economic burden related to the treatment of diabetes and its complications.

Long-Term Complications of Diabetes

Heart Disease

Cardiovascular problems are two to six times more likely to occur in people with diabetes than in people without the disease. Twenty one percent of people with diabetes - but only 4% without diabetes - will develop heart disease or have a stroke.

High blood glucose is associated with narrowing of arteries, high blood pressure, increased blood levels of fats, and decreased levels of good cholesterol—all risk factors for cardiovascular disease.

Eye Disease

Retinopathy (damage to the retina of the eye) is a major cause of adult blindness in North America. High blood glucose, especially coupled with high blood pressure, damages the small blood vessels in the retina of the eye.

Fifty percent of all blindness occurs among people with diabetes - and a person with diabetes is four times more likely to become blind than a person without diabetes. People with diabetes are also at increased risk of developing cataracts and glaucoma.

Nerve Disease

Neuropathy (damage to the vessels supplying blood to the nervous system) affects sensation, especially in the hands and feet. Approximately 60% of people with diabetes are affected by this condition.

They may experience numbness or tingling sensation, pain, increased sensitivity, weakness, muscle wasting, gastrointestinal problems, and impotence.

People with diabetes have an increased risk for foot ulcers and amputation of toes, feet, and legs.

Lower limb amputations generally result from a foot infection that has not healed and has developed gangrene. The initial wound often results from a lack of protective sensory function in the foot, while an inability of the wound to heal properly is associated with the decrease in blood and nutrient flow to the lower limbs. Approximately 50% of all amputations occur in people with diabetes.

Kidney Disease

Nephropathy (kidney disease) is a major cause of illness and early death for people with diabetes. This disease results from chronic high blood glucose levels that damage small vessels in the kidney, which filters waste from the blood. Diabetes often results in a need for dialysis and kidney transplants.

Studies indicate that 26-28% of kidney dialysis is performed on people with diabetes. A person with diabetes is 20 times more likely to develop kidney failure than a person without diabetes.

Dental Disease

Dental disease occurs with greater frequency and severity among people with diabetes.

Sexual Problems

Impotence occurs in 50–60% of men with diabetes (some of which is the result of medications prescribed to control diabetes).

Illness and infection

Illnesses and infections are also common among people with diabetes. They are susceptible to infections of the mouth and gums, urinary tract, lower extremities, and in any incisions following surgery.

People with diabetes are more likely to die of pneumonia or influenza than people who do not have the disease.

4-4.8 Osteoporosis

The sixth most common chronic condition is osteoporosis. The risk of an elder developing an osteoporosis fracture is actually greater than the risk of heart disease, stroke, or breast cancer.

An estimated 2 million Canadian women are currently affected by osteoporosis and approximately 40% of all women over 50 will experience a bone fracture that is related to osteoporosis. The prevalence of this disease among those ages 65+ ranges from 20-37% as measured in 10 year blocks from age 65 onwards

The first sign of osteoporosis may be a broken bone or fracture, but this condition takes decades to develop. Bones strengthen through to about the age of 35, and then start to deteriorate. When we reach our elder years, we start to pay for the poor dietary and lifestyle habits we developed much earlier. Nonetheless, there is much we can do to address the ill effects of osteoporosis at any age.

Osteoporosis is what is known as a deficiency disease. It is associated with poor nutrition and lack of exercise throughout life. Osteoporosis develops, in part, because of insufficient calcium intake and/or absorption. Due to missing minerals and protein, our bones become porous and fragile.

Osteoporosis Canada

The new 2023 guideline for management of osteoporosis and fracture prevention update is available at https:osteoporosis.ca.

Some recommendations to try and control osteoporosis:

1. At age 65 consider having a bone density test to check for osteoporosis
2. Fall prevention is key especially for those diagnosed with osteoporosis
3. Discuss medications with the doctor that might cause dizziness or balance issues which could increases risk of falls.
4. Developing exercise routine that includes strengthening and weight bearing exercises
5. Getting calcium into the diet via food and supplements,
6. Discuss taking supplements such as vitamin D with physician
7. Avoid smoking and manage alcohol intake

To speak with a trained volunteer about osteoporosis contact The Osteoporosis Canada at 1-800-463-6842.

4-4.9 Cancer

Cancer is the 7th most common chronic condition experienced by elder Canadians, though it is not listed as a common chronic condition. Of the aged 65 plus Canadians, 21.5% reported experiencing cancer.

It should also be noted that while historically cancer has often been an acute, rather than chronic, condition - this is no longer the case. People can live for decades with cancer.

This is particularly true for elders. Cancer tends to progress much more slowly in people who are at an advanced age.

Cancer is a disease that starts in our cells. Our bodies are made up of millions of cells, grouped together to form tissues and organs such as the lungs, the liver, muscles, and bones. Genes inside each cell order the cell to grow, work, reproduce, and then die. Normally these orders are clear, and our cells obey, and we remain healthy. Sometimes a cell's instructions get *mixed up* and it grows abnormally. Eventually, groups of abnormal cells form lumps or tumours.

Tumours can be either benign (non-cancerous) or malignant (cancerous). Benign tumour cells stay in one place in the body and are not usually life-threatening.

Malignant tumour cells, however, can invade the tissues around them and spread to other parts of the body. For example, cancer that starts in the colon but spreads to the liver is called *colon cancer* with *liver metastases*.

There are many different types of cancers - all of which are characterized by uncontrolled growth and spread of abnormal cells in the body.

The survival rate past the five year mark continues to improve.

Chronic Cancer Conditions

The Canadian Cancer Society reports that as treatments for cancer improve, more people are living longer with cancer. Many cancers can now be controlled or managed for long periods of time. This means that some types of cancer are now thought of as chronic diseases. Some chronic cancers can even go into remission.

Some cancers, like chronic lymphocytic leukemia or slow growing non-Hodgkin lymphoma, are named 'slow-growing, chronic cancers'. Treatment isn't started until you have symptoms of the disease.

The types of cancers below have had a real improvement in living past the five year survivor post treatment mark:

- Breast cancer
- Prostate cancer
- Testicular cancer
- Thyroid cancer
- Melanoma
- Cervical cancer
- Hodgkin lymphoma.

Other Chronic Forms of Cancer

The CCS describes Chronic lymphocytic leukemia (CLL) as a cancer that starts in blood stem cells. Stem cells are basic cells that develop into different types of cells that have different jobs.

As the stem cells of the blood develop, they become blast cells (blasts), which are immature blood cells. In leukemia, there is an overproduction of blast cells. These blast cells develop abnormally and don't develop into mature blood cells. Over time, the blast cells crowd out normal blood cells so that they can't do their jobs. When leukemia is diagnosed, these blast cells may be called leukemia cells.

There are many different types of leukemia. They are grouped based on the type of blood stem cell they developed from. Blood stem cells develop into either lymphoid stem cells or myeloid stem cells.

Lymphocytic leukemias (also known as lymphoblastic leukemias) develop from abnormal lymphoid stem cells. Lymphoid stem cells normally develop into lymphocytes, a type of white blood cell. Lymphocytes are found in blood and different parts of the lymphatic system such as the lymph nodes and spleen. The 3 types of lymphocytes are B cells, T cells and natural killer (NK) cells. Lymphocytes help fight infection and destroy abnormal cells.

Treatment

Active surveillance is initiated once diagnosis is made. Later a stem cell transplant can sometimes be used. Treatment such as CAR T-cell therapy and bispecific T-cell engagers (BiTEs) may be offered which are being studied in the treatment of CLL in clinical trials.

For more information contact The Canadian Cancer Society.

Non Hodgkin Lymphoma

This cancer is a disease in which malignant cancer cells form in the lymph system. Non Hodgkin lymphoma may be aggressive or slow growing.73% of people with this condition are alive five years after their diagnosis.

Treatment

Chemotherapy or radiotherapy is usually used with this type of cancer. Some people diagnosed with this disease do not need treatment straight away. In some cases, if the initial cancer is small it can be removed with no further treatment needed.

Living with Chronic Cancer

Living with cancer often means that the individual is living with the unknown. This can make it hard for those who are 'future focused'. There are many things about life that are unknown.

It is important not to let cancer control life. Ideas that may help:

1. Having a safe place to talk about concerns such as a counsellor, friend or family member.
2. Find a support group to learn how others are coping.
3. Learn more about what you can do to stay healthy and what symptoms you need to watch for.
4. Be as active as you can. It can help reduce stress and anxiety. Talk to your healthcare team about what type of activity is best for you.
5. Live in the present moment rather than focusing on the uncertain future.
6. Embrace the positive relationships in life and avoid stress filled ones.
7. Take time to do things that you really want to do, especially things that you haven't done for a while. It's OK to have fun and enjoy life as fully as you can**.**

<u>Prevention</u>

It is vitally important for people not to wait until they are sick in order to get well.

Among the steps that all of us can take to prevent cancer:

- ❖ Eat cancer-fighting foods, such as: soybeans, green tea, broccoli, cabbage, tomatoes, sea vegetables, dark green and brightly coloured fruits and vegetables, flax seeds, beans, garlic, spinach, sprouts, blueberries, cherries, grapes, plums, almonds, and onions.
- ❖ Limit meat and sugar consumption.
- ❖ Avoid processed foods.
- ❖ Drink lots of water in between meals.
- ❖ Maintain ideal weight and get plenty of exercise.
- ❖ Investigate emotional issues that may be affecting your outlook on life.
- ❖ Connect with The Canadian Cancer Society for more information and support

It is certainly easier to prevent a disease then treat it.

What To Avoid When It Comes To Cancer

1. **Smoking -** Tobacco use is the cause of an estimated 30% of fatal cancers in Canada and the overwhelming cause of lung cancer.

2. **Poor diet -** At least 20% of cancer deaths are linked to a poor diet—including consumption of alcohol. Fruit and vegetable consumption is protective for a variety of cancers, whereas a diet high in red meat, processed meat, and saturated fats has been linked to an increased risk of cancer.

3. **Sunlight -** Skin cancer is the most common cancer. One of the main causes of skin cancer is exposure to the sun's ultraviolet (UV) rays. Additional risk factors for cancer include exposure to the workplace or environmental carcinogens.

4-4.10 An Introduction To Respiratory Disease

Many Canadian elders suffer from respiratory diseases. Asthma affects 10.7% of elders and chronic obstructive pulmonary disease affects 20. 2% of elders.

Bacterial pneumonia is far more common than viral pneumonia - and it is the leading cause of pneumonia in all age groups.

Viral pneumonia is commonly caused by the influenza virus. Influenza and pneumococcal vaccination are cost-saving medical interventions for elders. Unfortunately, often fewer than 10% of Canadian elders receive pneumococcal vaccination.

It can produce fevers, chills, fatigue - and, of course, impaired oxygen transportation. If the bacterium in the lungs makes its way into the blood stream it can produce septic shock and damage to such organs as the kidney, brain and heart. Antibiotics are the treatment of choice

Respiratory diseases are also the second leading cause of elder hospitalization and the third leading cause of elder death. Respiratory disease is an umbrella term that covers all the diseases of the respiratory system. These include diseases of the lung, bronchial tubes, trachea and pharynx.

Respiratory disease ranges from the mild and self-limiting (e.g., the common cold) to life threatening (e.g., bacterial pneumonia and pulmonary embolism).

Respiratory diseases are commonly characterized by shortness of breath, cough, pleuritic chest pain (i.e., chest pain that worsens with breathing), noisy breathing, fatigue, somnolence, anorexia and altered voice.

A variety of factors are responsible for respiratory disease - among them:

- Infection
- Smoking or inhalation of smoke and other irritants
- Autoimmune, genetic, and congenital disorders
- Trauma or burns (to head, neck, or airway)
- Cancer
- Obesity
- Adverse reactions to medications

Respiratory diseases are often classified as either obstructive or restrictive. Obstructive conditions impede the flow of air into and out of the lungs (e.g., asthma), while restrictive conditions cause a reduction in the lung's functional capacity (e.g., pulmonary fibrosis).

As we follow the elder survey, COPD is followed by asthma as discussed next.

4-4.11 Chronic Obstructive Pulmonary Disease, COPD

Chronic obstructive pulmonary disease is a combination of the two most common conditions:: *emphysema and chronic bronchitis*. The condition is closely associated with heavy cigarette smoking. 20.2% of elders on average, are affected by COPD ranging in 10 year blocks from 16.8 for those ages 65-74 to 27.3% for elders ages 85 and over.

Treatment of chronic obstructive pulmonary disease usually involves the use of inhaled bronchodilators and inhaled corticosteroids. Many patients also need oxygen supplementation. The disease is generally irreversible - although some function can be restored if the patient stops smoking. Smoking cessation is, in fact, a major aspect of treatment.

4-4.12 Asthma

Asthma is a chronic condition in which the airway occasionally restricts, becomes inflamed, and becomes lined with excessive amounts of mucus. Episodes of this nature may be triggered by environmental stimulants or allergens, exercise or exertion, or emotional stress. About 11% of elders report having asthma. Asthma can develop at any age.

The narrowing of the airway causes such symptoms as: wheezing, shortness of breath, chest tightness, and coughing. These symptoms can range from mild to life threatening.

Asthma is caused by a complex interaction of genetic and environmental factors that are not fully understood. Hospitalization for asthma suffers in the past was not unusual. Thankfully, treatment of asthma has improved, Treatment of asthma involves both medications and the avoidance of any environmental triggers.

4-4.13 Mood And Anxiety Disorders

Mood disorders and anxiety disorders are both significant categories within mental health. Mood Disorders: impact a person's emotional state. 10.5% of elder Canadians are living with a mood or anxiety disorder.

Common mood disorders include:

1. Depression in not a normal part of aging. Individuals with depression often experience persistent feelings of sadness, hopelessness, and a lack of interest or pleasure in daily activities.

2. Bipolar Disorder: This disorder involves extreme mood swings, ranging from deep depression to periods of intense euphoria (mania).

Mood disorders can significantly affect a person's quality of life and may vary from short-lived episodes to chronic conditions.

Anxiety Disorders

Anxiety disorders are characterized by excessive and persistent feelings of apprehension, worry, and fear. They interfere with daily life and can range from occasional episodes to chronic conditions.

Common anxiety disorders include:

1. Generalized Anxiety Disorder (GAD): Individuals with GAD experience excessive worry and anxiety about various aspects of life.

2. Panic Disorder: This involves sudden and intense panic attacks, often accompanied by physical symptoms like rapid heartbeat and shortness of breath.

3. Social Anxiety Disorder: People with social anxiety fear judgment or embarrassment in social situations.

4. Obsessive-Compulsive Disorder (OCD): OCD leads to intrusive thoughts (obsessions) and repetitive behaviors (compulsions).

5. Post-Traumatic Stress Disorder (PTSD): PTSD occurs after a traumatic event and involves flashbacks, nightmares, and hypervigilance.

Anxiety disorders also significantly impact daily functioning and well-being

Note: Remember that seeking professional help and support is crucial for managing these conditions. If someone you know is experiencing symptoms related to mood or anxiety disorders, consider reaching out to a healthcare provider or mental health specialist.

4-4.14 Other Chronic Conditions

While the following chronic conditions were not identified in the survey, they are nevertheless significant to those living with them.

Hyper Or Hypo Thyroid Disease

The thyroid is a butterfly-shaped gland in the neck, just above the collarbone, which helps to manage the body's metabolism. Thyroid conditions have no age limit. although it is seen more commonly in elders. Hundreds of thousands of Canadians - mostly women - have thyroid disease.

There are **two basic types** of thyroid disease:

1. **Hypothyroidism**

   Hypothyroidism is the most common type of thyroid disease. With hypothyroidism the thyroid gland is not active enough and this can cause the sufferer to gain weight, feel fatigued and have difficulty dealing with cold temperatures.

2. **Hyperthyroidism**

   With hyperthyroidism the thyroid is too active - and it is producing more hormones that the body needs. This can lead to weight loss, a rapid heart rate and extreme sensitivity to heat. Thyroid problems are usually treated with medications that either supplement - or control - hormone production. On occasion hyperthyroidism is treated surgically (with the removal of the thyroid gland).

Diseases of the Digestive System

Diseases of the digestive system cover the digestive system from one end to the other - from the esophagus to the stomach, to the intestine, to the colon.

The digestive system is one of the main life systems of the body that contributes to either overall wellbeing or overall inability to function. When the digestive system fails, the rest of the body suffers dramatically.

Nearly everyone has had a digestive problem at one time or another. Some conditions such as indigestion or mild diarrhea create some discomfort and either become better on their own or are treated quite easily. Other conditions (e.g., inflammatory bowel disease) can last a very long time and be quite troublesome.

Digestive diseases range from temporary to permanent and mild to life threatening. Though it is rare, diarrhea can not only dehydrate, but there is a deadly form of the disease that forces the patient to excrete all fluids.

Some digestive diseases, like Crohn's diseases and Lupus, are autoimmune in nature. These diseases are caused by the body's inability to recognize what is good and bad for itself. Other digestive diseases (e.g., Irritable Bowel Syndrome) have no known cause.

Digestive diseases often bring on complications. Many lead to anemia and malnutrition since the nutrients in food are not properly absorbed. Treating some digestive problems requires the use of steroids - which can lead to weight gain, a compromised immune system and other problems. The effective treatment of nearly all digestive diseases requires dietary changes.

Medications are also used with regularity. Among them: corticosteroids, anti-inflammatory medications, immune system suppressants and antibiotics. Surgical procedures are a last resort.

Digestive disorders can be quite embarrassing, and they make public outings quite difficult. Often counseling is required.

Urinary Incontinence

Urinary Incontinence is simply loss of bladder control. Symptoms can range from mild leaking to uncontrollable wetting. It can happen to anyone, but it becomes quite common among the elderly.

Most bladder control problems happen when the muscles are too weak or too active. If the muscles are too weak, a person can have an accident when he or she sneezes.

People with overactive bladder (the muscles are too active) may feel that they must go the bathroom continually - even though there is very little urine in the bladder.

Treatment of urinary incontinence depends on the condition a patient has. It may include simple exercises and or medications.. In extreme cases surgery may be recommended.

Stomach or Intestinal Ulcers

Also known as peptic ulcers, stomach ulcers were once thought to be caused by stress and spicy food. New research has identified a specific bacterium (helicobacter pylon) as the cause of almost all stomach ulcers. Stress and diet are aggravating factors, but not causes.

The second leading cause of stomach ulcers is the chronic use of NSAID (nonsteroidal anti-inflammatory drugs) pain relievers. Think about common over-the-counter NSAIDs like aspirin, ibuprofen and naproxen sodium.

Pain is the most common symptom for people with stomach ulcers. The pain can last for hours, is at its' worst when the stomach is empty, and it often flares up at night. Eating specific foods often brings temporary relief.

Some additional, more serious symptoms include vomiting of blood, dark and bloody stool, chest pain and unexplained weight loss.

In most cases, stomach ulcers can be easily identified and cured.

Colitis

Colitis is a chronic digestive disease that is characterized by inflammation of the colon. It is classified as an Inflammatory Bowel Disease (not to be confused with "Irritable Bowel Syndrome").

General signs and symptoms of colitis include pain, tenderness in the abdomen, depression, rapid weight loss, aches and pains within the joints, fatigue, fever, swelling of the colon tissue, and changes in bowel habits.

Diarrhea may also be present, but some forms of colitis can make the patient constipated.

Other symptoms may include gas, bloating, indigestion, heartburn, cramps, and reflux.

Treatment of colitis usually involves the administration of antibiotics and general non-steroidal anti-inflammatory medications. Surgery is only employed in extreme cases.

Crohn's Disease

Crohn's disease is an inflammatory disease of the digestive tract. It is like ulcerative colitis - but unlike ulcerative colitis, Crohn's disease can inflame tissue anywhere on the digestive tract.

This inflammation can cause severe pain and in extreme cases even death. Symptoms of the disease include diarrhea, bloody stool, abdominal pain, abdominal cramps, loss of appetite, loss of weight, fever, fatigue, and ulcers.

Risk factors for Crohn's disease include race and ethnicity (Jews and people of European decent are up 5 times more likely to develop the disease), family history and environment (people living in industrialized cites are particularly susceptible).

4-5 THE "GERIATRIC" TEAM

Chronic conditions experienced by elders often demand the expertise of a Geriatric Team. Geriatric assessment programs pool the expertise of those on multidisciplinary teams, in order to fully address the multidimensional health problems that Elders often experience. Information about the geriatric team is added here for you.

Geriatrician

A Geriatrician is usually a medical doctor (MD) or Osteopath who has completed the required fellowship-training program in geriatrics. Approximately 376 geriatricians are practicing in Canada.

Geriatricians will work hand in hand with the family physician or specialist who is looking after the elder.

Ailments that a geriatrician will address include Alzheimer Disease (and other dementias), arthritis, chronic heart and lung disease, general decline, impaired overall function, incontinence, osteoporosis, Parkinson’s disease, sensory problems (especially vision and hearing), and stroke.

The geriatrician will also scrutinize the often large number of medications older adults take to ensure that the medications are appropriate and are not causing serious adverse side effects. Many times, medications can be adjusted with significant improvement in the well-being of the patient.

Pain and mood disorders such as depression are common in older adults. The geriatrician checks for these as well.

Nurse

The scope of nursing practice includes promotion of health, maintenance, and restoration of health, prevention of illness and disability, alleviation of suffering, and ensuring a peaceful death when life can no longer be sustained. As a specialty, gerontological nursing is concerned with the inter-relatedness of health and the environment in relation to older people.

An essential skill of gerontological nurses is the ability to develop sustaining interpersonal relationships with older persons that assists them to cope with physical, psychosocial, sensory, cognitive, and spiritual losses.

Nurse Practitioner

A nurse practitioner (NP) is a nurse who has advanced post graduate clinical education and training. NPs practice similar duties as physicians. They perform physical exams, diagnose and treat diseases and can prescribe medications.

Physiotherapist

Physiotherapy has been defined as "the use of physical means to reduce pain and to maintain or improve physical function" (Ernst & Glazer-Waldman, 1983) or as "the prevention or alleviation of movement dysfunction" (Canadian Physiotherapy Association 1988). Depending on the setting and the patient situation, the physiotherapist may be involved in the prevention of functional decline or disability, or the maintenance or restoration of function and mobility.

Assessment is conducted by the physiotherapist in order to classify clients into diagnostic or problem groups, so that treatment goals and interventions can be identified.

The techniques employed by the physiotherapist include:

- Electrotherapeutic modalities such as ultrasound, helium, neon, and infrared laser
- Interferential current and electromagnetic fields
- Exercise options, both passive and active
- Simple and advanced joint mobilization techniques
- Neurofacilitation and motor control methods of muscle re-education
- Massage and relaxation techniques
- Hydrotherapy
- Movement facilitation in areas such as gait re-education, provision of ambulation aids, or training as to how to assist a patient to move or transfer.

Occupational Therapist

The role of the occupational therapist is centered on the provision of evaluation and intervention strategies for the elderly patient related to functional capacity in self-care, work, and leisure. Priorities for treatment goals are established in collaboration with the individual and are based on the patient's goals and feasibility of her/his objectives.

The patient's daily living, personal and social performance expectations, and actual performance capacity are evaluated. Goal-directed activity is the vehicle by which the patient's capacity to cope and to maintain his/her independence in familiar and safe environments is enhanced.

Intervention may focus upon the gradual development of new skills for a task in order to restore function. Sustaining residual capacities preserves functional performance. There is an element of prevention in most of the intervention strategies with the elderly.

Consideration is given to architectural barriers, home safety, environmental needs, physical comfort (positioning and seating), the patient's interests, and measures of emotional, physical, and cognitive status.

Social Worker

The focus of social work is on the psychosocial aspect of analysis and treatment. They view elders as individuals interacting within their social environments.

Social environments can include such areas as: the family network, social support system (neighbours, friends, ethnic associations, religious groups, and organized services), socio-economic status, vulnerability to abuse, as well as the nature, quality and security of the physical environment available to the individual.

In assessing the psychological, social and emotional functioning of elders and their families, the social worker reviews the individuals' coping skills and social network resources.

Other aspects of the social worker's role include:

- Linking elders and their families to facility and community resources
- Counselling of the elder and family members
- Advocacy on the part of the elder and mediating between elders and key players to facilitate clarification and relieve tensions
- To provide social context for assessing the elder's own resources and those of the family

Pharmacist

The pharmacist contributes knowledge and skills in the careful examination of past, current, and planned drug therapy for elders. It is his or her role to identify, prevent, and resolve drug-related problems with the goal of optimum drug therapy, which in turn improves or maintains an elderly patient's quality of life.

The pharmacist is qualified to develop drug-related therapeutic goals, select and individualize medication treatment, monitor and evaluate that treatment, and provide drug information and counselling. Recent legislation in Ontario now permits a pharmacist to prescribe up to 13 medications directly to deal with minor ailments. Minor ailments are described as health conditions that can be managed with minimal treatment and/or self-care strategies. There are other criteria.

To help with dispensing medications at home, the pharmacist can assemble medications in blister packs labelled with name of medication and time it should be taken,

Dietician

The primary role of the dietician in geriatric assessment is to determine the nutritional status and develop a nutrition care plan that meets the defined needs of the individual. In addition, the dietician offers education and counseling for both the prevention and treatment of the nutritional concerns common to the elderly.

An initial nutritional screening is often done by someone other than a dietician, such as a physician or nurse practitioner, during a routine physical exam or by a pre-admission assessor or primary care nurse.

If the individual is identified as being at nutritional risk, the dietician conducts a comprehensive nutritional assessment. This is done by the collection of dietary, clinical, anthropometric, and laboratory data. These data are assessed in view of other information on functional, social, and environmental factors that may affect nutrition.
Since many elders are often malnourished this service is invaluable. In addition, the dietitian can be very helpful to those living with heart disease, cancer or diabetes.

Note: The title nutritionist and dietician are not the same thing. A nutritionist provides one on one counselling to help individuals reach their health related goals. Dietitians can also work with individuals or groups to help individuals with meal planning. Dieticians also collaborate with physicians to help with an individual’s goals. The title 'Dietician' is a protected and registered title.

4-6 PAIN MANAGEMENT

Pain and the control of pain are very important issues - particularly when it comes to elders. Chronic diseases produce chronic pain and there is evidence that much of this pain is not being adequately controlled.

For example, pain is a major symptom for 70% of cancer patients, but 50–80% of cancer patients receive inadequate pain control. Advances in pharmacology have made many new drugs and technologies available that makes more than 90% of cancer pain controllable - so why aren't they being used?

The problem is under-treatment. Under-treatment of pain can lead to depression, non-compliance, anger, fear, loss of control, and sometimes suicide.

Several groups are at great risk for under-treatment.

Among them:

- Minorities (they are three times more likely to be under-treated)
- Patients receiving a poor pain assessment from an inexperienced health care provider
- People with non-cancer pain
- People with "good" performance status, such as someone who appears to be coping well and performing activities adequately
- Females and people over the age of 70

Pain evokes numerous physical and emotional responses such as a racing pulse, a rise in blood pressure, rapid respiration, sweating, and dilation of the pupils. A person may become frightened, anxious, or annoyed. Chronic pain can take over the life of the affected person and dominate every thought.

4-6.1 Current Pain Treatments

Non-Steroidal Anti-inflammatory Medicines

These drugs, which include ibuprofen and aspirin, have been very effective in treating pain that is caused by inflammation such as rheumatoid arthritis. The main side effects are stomach irritation and interference with the clotting mechanisms of the blood. The risk of problems with these medications increases with age.

Acetaminophen (Tylenol®)

This drug is gentle on the stomach but does little or nothing for inflammation. It is recommended for osteoarthritis. It can cause liver and kidney damage with high doses or long-term use.

Narcotics

These are the most effective pain relievers and work by blocking the pain signals that travel to the brain.

Side effects can include drowsiness, constipation, slowed breathing, and mood changes. While used cautiously, due to fears about addiction and abuse, research has found little cause for concern.

Antidepressant and Anti-Anxiety Drugs

These drugs can be used along with analgesics and often enhance the effects of those drugs. They are used cautiously as they can be addictive.

Disease Specific Drugs

Several new drugs have been introduced in the last few years that were designed to treat specific disorders.

Non-Drug Treatments

Numerous other treatments have all proven effective for some people. These include acupuncture, therapeutic touch. massage, EFT {Emotional freedom technique] meditation, and relaxation therapy. Emotional support for those in pain is also very helpful.

4-6.2 Steps for Ensuring Adequate Pain Treatment

An elder should establish open and honest communication with his or her physician. He or she should simply describe the pain and ask for treatment. If a physician brushes the elder off or dismisses the pain - it may be time to find a new physician. Any medications prescribed should be discussed with both a physician and a pharmacist. Elders should also understand the side effects and signs of problems.

Elders also need to put aside their fears of addiction or dependence. Most people once they have achieved pain control will be able to cut back on their medications.

4-6.3 Canadian Law and Pain Management

Many of the Provincial Colleges of Physicians and Surgeons recognize that inadequate pain control may result from physicians' lack of knowledge about pain management or an inadequate understanding of addiction.

Fears of investigation or sanction by federal, provincial, and professional regulatory agencies may also result in inappropriate or inadequate treatment of patients with chronic pain.

Physicians should not fear disciplinary action from the College for prescribing, dispensing, or administering controlled substances, including opioid analgesics, for a legitimate medical purpose and within the boundaries of professional practice.

The College considers prescribing, ordering, administering, or dispensing controlled substances for pain to be for a legitimate medical purpose if based on accepted scientific knowledge of the treatment of pain or if based on sound clinical grounds.

The College has adopted the following administrative guidelines when evaluating the use of controlled substances for chronic pain control.

Similar guidelines exist for Nurse Practitioners under the College of Nursing in Ontario.

Evaluation of the Patient

The medical record should reflect a detailed knowledge of the patient's medical history and physical status.

The medical record should document the nature and intensity of the pain, current and past treatments for pain, underlying or coexisting diseases or conditions, the effect of the pain on physical and psychological function, and history of substance abuse.

The medical record also should document the presence of one or more recognized medical indications for the use of a controlled substance.

Informed Consent and Agreement for Treatment

The physician should discuss the risks and benefits of the use of controlled substances with the patient, persons designated by the patient, or, if the patient is incompetent, with the patient's surrogate or guardian. The patient should receive prescriptions from one physician and one pharmacy where possible - particularly if the physician determines the patient is at high risk for medication abuse or has a history of substance abuse.

Periodic Review

At reasonable intervals based on the individual circumstances of the patient, the physician should review the course of treatment and any new information about the etiology of the pain. The physician should recognize the entity of so-called pseudo addiction. The pharmacist can also do a medication review. .

4-6.4 Medication Misuse

As people age, some physiological changes occur that may alter the effects of various medications. Among them:

- The digestive system slows down, and drugs are broken down more slowly
- Drugs are absorbed at a slower rate
- The body's ability to rid itself of medication is slowed up to 50% due to decreased functioning of the liver and kidneys. This increases the risk of side effects and toxicity
- The percentage of water and muscle in the body decreases, while fat tissue increases. This affects the length of time a drug stays in the body and the amount absorbed by body tissues
- The heart pumps more slowly and delays the removal of drugs

- There are fewer filters in the aging body. This may allow drugs to remain in the bloodstream longer
- Improper use of medications can cause such problems as disorientation, dizziness, and poisoning, all of which put elders at risk of injury and illness. This can also lead to permanent disability, loss of independence, hospitalization, and long-term institutionalization

Preventing Medication Misuse

Here are some things to remember:

- Medical history is important to both the elder, the physician/nurse practitioner or pharmacist. To avoid problems, all parties need to know about current drugs being taken, any allergies, drug side effects, or other problems with medication.
- The elder and medical professional or pharmacist should discuss over- and behind-the-counter drugs.
- Everyone should also be alerted to the dangers of addiction. Some of the most widely prescribed medications for seniors are known to be highly addictive and may cause numerous side-effects. For example, benzodiazepine medications—*Ativan, Valium, Serax and Xanax*, among others—are commonly prescribed for treating acute anxiety and insomnia.
- If used for more than a few weeks or months, benzodiazepines can be addictive and may cause side-effects ranging from confusion, poor muscle coordination, drowsiness, impaired performance and decreased ability to learn new things.

- One review of seniors' benzodiazepine use noted that about 23% are taking the drug on a long-term basis. Use is more prevalent among women than men, and the rate increases with age.
- Though medications are often helpful, elderly people may also benefit from information about alternative methods of dealing with emotional and stress-related illnesses as well as exploring the services mentioned above such as massage.

4-7 MANAGING CHRONIC CONDITIONS EFFECTIVELY

A chronic illness - unlike an acute illness that tends to start suddenly, and which is short lived - is defined as any disease that develops slowly and lasts a long time.

Taking an active role in managing a chronic illness can help an elder to maintain a good quality of life, despite the illness.

Here are a few tips to help you take an active role with chronic conditions:

1. Be an effective self-manager. Know and understand your condition.
2. Understand your medications including possible side effects. The pharmacist is expert in pharmacology.

3. Find helpful resources. Know whose information you trust i.e. Heart and Stroke Foundation
4. Include close friends in your life.... support goes a long way,
5. Investigate support groups
6. Be as active as is possible for you.
7. Enjoy healthy food that nourish the body
8. Stay on top of current information but again know the source.
9. Learn to Pace Yourself. Some chronic illnesses result in low energy and lack of stamina. It is okay to work at a slower to moderate pace and rest when needed.
10. Maintain a hopeful attitude. New treatments are being developed.
11. Set reasonable goals that are within your reach.
12. Be kind to yourself. Remind yourself that you are doing your best in a less than ideal situation.

4-8 CHRONIC CONDITIONS CONCLUSION

Chronic illness is a fact of life for Canadian elders. Millions of elder Canadians suffer with at least one - and often multiple - chronic conditions. Another fact of life is that many common chronic diseases are preventable or manageable according to extensive research.

As our population ages dramatically in the coming years the problem will become more serious still. Not only will many more people be impacted, but the sheer number of those afflicted will tax our health care system, long term care facilities, and social programs.

Fortunately, there is much that can be done to help manage chronic conditions in an appropriate and cost-effective fashion.

4-9 Part 2: INTRODUCTION TO MENTAL HEALTH & AGING ISSUES

As people age, they may experience certain life changes that impact their mental health, such as coping with a serious illness or losing a loved one. Although many people will adjust to these life changes, some may experience feelings of grief, social isolation, or loneliness. When these feelings persist, they can lead to mental illnesses, such as depression and anxiety.

4-9.1 WHO Definition of Mental Health

The World Health Organization (WHO) defines mental health as ‘a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to her or his community.’

Some Key Facts

- By 2030, one in six people in the world will be aged 60 years or over.
- Loneliness and social isolation are key risk factors for mental health conditions in later life.
- One in six older adults experience abuse, often by their own carers.
- Approximately 14% of adults aged 60 and over live with a mental disorder.
- Mental disorders among older adults account for 10.6% of the total years lived with disability for this age group.

The purpose of this topic is to examine what it means to be mentally healthy, what can lead to a chronic mental illness, the stigma surrounding this condition and how to be an advocate for those living with mental illness and their families. For many, this issue is taboo and steeped in 'us' versus 'them' mentality. Our role is to shine a light on mental illness and society's attitudes to it.

4-9.2 What Are Symptoms Of Mental Disorders In Older Adults?

- Noticeable changes in mood, energy level, or appetite
- Feeling flat or having trouble feeling positive emotions
- Difficulty sleeping or sleeping too much
- Difficulty concentrating, feeling restless, or on edge
- Increased worry or feeling stressed
- Anger, irritability, or aggressiveness
- Ongoing headaches, digestive issues, or pain
- Misuse of alcohol or drugs
- Sadness or hopelessness
- Thoughts of death or suicide or suicide attempts
- Engaging in high-risk activities
- Obsessive thinking or compulsive behavior
- Thoughts or behaviors that interfere with work, family, or social life
- Engaging in thinking or behavior that concerns others
- Seeing, hearing, and feeling things, that other people do not see, hear, or feel

4-9.3 Mental Disorders Can Be Treated

A primary care provider is a good place to start if you are looking for help. They can refer you to a qualified mental health professional, such as a psychologist, psychiatrist, or clinical social worker, who can help you figure out the next steps.

4-10 POSSIBLE MENTAL HEALTH CAUSES

Mental illnesses, in general, are thought to be caused by a variety of genetic and environmental factors:

1. **Inherited traits.** Mental illness is more common in people whose blood relatives also have a mental illness. Certain genes may increase your risk of developing a mental illness, and your life situation may trigger it.

2. **Environmental exposures before birth.** Exposure to environmental stressors, inflammatory conditions, toxins, alcohol or drugs while in the womb can sometimes be linked to mental illness.

3. **Brain chemistry.** Neurotransmitters are naturally occurring brain chemicals that carry signals to other parts of your brain and body. When the neural networks involving these chemicals are impaired, the function of nerve receptors and nerve systems change, leading to depression and other emotional disorders.

4-10.1 Biological Factors

Ongoing research is looking at the role that genetics plays in mental illness. Susceptibility can be passed on through genes. Life triggers can cause a shift in one's wellbeing and ability to cope with life stressors.

4-10.2 What Causes Mental Health Problems?

- Childhood abuse, trauma, or neglect.
- Social isolation or loneliness.
- Experiencing discrimination and stigma, including racism.
- Social disadvantages, poverty or debt.
- Bereavement (losing someone close to you)
- Severe or long-term stress.
- Having a long-term physical health condition.

4-10.3 Infections

Infections can cause a broad spectrum of psychiatric symptoms, e.g. delirium. Psychotic disorder or mood disorder

Streptococcus bacteria has been linked to the development of obsessive – compulsive disorder.

Substances such as alcohol while meant to calm and sooth the person can sometimes exacerbate the condition. Long term substance abuse has been linked to anxiety, depression and paranoia.

Other Factors

Poor nutrition and exposure to substances like lead can be harmful.

There are however stigmas against mental illness that can interfere with getting help to manage the condition.

4-10.4 Descartes

In our society there is a disconnect between the body, mind and spirit. At one time the body and spirit were treated as one. However along came Rene Descartes, a scientist, mathematician and philosopher in the 17th century. According to Descartes, human beings consist of two different substances. The mind was viewed as an immaterial but thinking substance, whereas the body is a material unthinking substance. This in effect is his dogma of dualism.

It is important because it lead to the study of cognition, or thought processes, and the eventual creation of the field of psychology.

This dualism has created boundaries between the body and mind whereas we now know they are *interlinked and influence* one another. Descartes did a disservice to mental health treatment and caring for the whole person. In the world of dualism, the church took over the 'soul' and mind whereas science took over the body.

4-10.5 Body, Mind Connections

It is hard to know who is living with a mental illness and who is not. So many physical illnesses have an emotional component. Living with a disorder such as Crohn's disease can affect coping skills. If the thyroid is overactive it can lead to feeling nervous, having a racing heart or trembling. Oxygen deprivation and head injuries can also have an effect of mental health.

There is still so much to learn about the mind and mental health.

4-10.6 Canadians with Mental Health Illness

Mental illness is a global phenomenon. In any given year, one in five Canadians experience a mental illness or addiction problem. By the time Canadians reach forty years of age, 1 in 2 have had a mental illness. The Canadian Mental Health Association reports that mental illness costs $50 billion dollars and affects 5 million Canadians.

Some of the mental health issues affecting elders are:

- Memory issues
- Dementia
- Parkinson's Disease

- Depression/Anxiety
- Bipolar disorder

4-10.7 Memory Issues

It is perfectly normal to develop some memory issues. Where are my keys? What did I come into the kitchen for? This is different from issues like getting lost in your well-known neighbourhood, no longer having interest in hygiene, not being able to follow directions or forgetting how to feed yourself.

4-10.8 Dementia

Dementia is not considered a normal aspect of aging. 8.4% of Canadians over 65 have some form of dementia. It is thought that this percentage will increase in the future. Dementia is well covered in another chapter.

4-10.9 Parkinsonism

Parkinsonism and Parkinson's Disease describe a chronic and progressive, degenerative neurological disease. It is a movement disorder. Symptoms include slowness of movement, rigidity, tremor and lack of balance and coordination. Body movements such as walking and talking are affected as the disease progresses. The condition generally targets individuals between ages 40 and 85. The average age of onset is 65. Parkinsonism, including Parkinson's Disease affects almost 100,000 Canadians and about 20 more are diagnosed every day. (Parkinson Canada, accessed July 2024 https://www.parkinson.ca/about-parkinsons/ ; Parkinson Disease, Government of Canada Apr. 26, 2022)

Adjusting for age, parkinsonism, including Parkinson disease, is over 1.5 times more common in men than in women. [CCDSS, 2021]. According to the most recent stats available from the Government of Canada, almost a quarter of Canadians with Parkinson disease also report living with a mood disorder. [Mapping Connections, 2014]

4-10.10 Anxiety

Anxiety is a normal reaction to stress. One may 'break into a sweat', feel restless, tense and their heart 'racing.' Anxiety becomes problematic when it disrupts how we function. Various factors can contribute to the development of an anxiety disorder, including a family history of the condition or a traumatic life experience.

Older adults may develop an anxiety disorder due to worries about health, living alone, losing loved ones, or becoming dependent on others.

Types of Anxiety Disorders

According to the National Council on Aging, the most common anxiety disorders affecting older adults include:

- Generalized anxiety disorder – persistent and excessive worry about a number of different matters
- Phobia – an intense, debilitating fear about a specific object (for example, spiders), experience (for example, flying), or place (for example, the ocean)

The symptoms of anxiety can totally interfere with functioning. It can cause fears such as leaving the house, feeling irritable, exhausted and restless. Anxiety can become a constant unwelcome companion. Solutions to manage anxiety can lead the individual to alcohol, marijuana or other substances.

Anxiety is treatable with medication, therapies like cognitive behavioural therapy, or a combination of the two, support groups and exercise are all helpful.

4-10.11 Depression

Depression is characterized by a general listlessness, sadness, and disinterest in activities that used to bring joy, and it can come in different forms.

Major depressive disorder involves depression symptoms that last for at least two weeks, while persistent depressive disorder symptoms last more than two years. In severe cases, depression can cause a loss of the will to live. It's also important to know the signs and symptoms.

While depression is not considered a normal part of aging, elders have often endured many difficult situations. Dealing with loss of family members, dear friends, of a healthy body and mind as well as change in community can trigger depression.

It can lead to withdrawal from activities and family, eating more or less, sleeping too much or too little, difficulty concentrating and loss of interest in life.

Depression can be helped by someone taking notice that the elder is 'not themselves' and listening to the elder. Medication and counselling can be, effective in helping as well. Other supports included under 'anxiety' can also be very helpful with depression

4-10.12 Bipolar Disorder

Formerly called manic-depressive disorder, bipolar disorder is a condition in which the person experiences alternating episodes of mania (high energy) and depression (low energy).

While it usually starts at a younger age, it is possible for bipolar disorder to go unrecognized for years or to be diagnosed later in life.

Bipolar disorder is equally common in men and women of all ages, ethnicities, and social classes. Currently 0.5 to 1% of older adults are affected by bipolar disorder however account for 6 to 10 percent of psychiatric visits.

A combination of factors, including genes, background, brain chemistry, and the environment may trigger this disease. Mood swings may occur daily, weekly or monthly.

Treatment for bipolar disorder involves medication and therapy. Look for signs of depression in the section above. Manic episodes usually present with the following symptoms.

- Jumpiness, jitteriness, or extreme cheerfulness
- Increased activity and ideas
- Faster talking and increased socializing
- Racing thoughts and distractibility
- Changes in sleeping patterns or reduced sleep
- Poor decision-making and unusual patterns of sexual activity, purchasing, eating, or other types of activity (though this may be less common in older adults)

Treatment involves both therapy and medication. With care an elder living with bipolar disorder can live a full life with meaningful relationships.

The list above shows the mental illness conditions that are most common in elders

The WHO has determined that the two most common neurological disorders among people aged 60 and older are dementia and depression.

4-11 Stigma Against Mental Illness

Mental illness still carries with it a fear of violence. Yet those with mental illness are more likely to receive violence than to perpetrate violence.

The labelling that is given to those living with a Menal illness can be hurtful and unhelpful. Just as one rarely hears ‘ the big C’ when referring to cancer perhaps we can let go of phrases like ‘looney’ or ‘crazy’ when referring to someone with mental illness.

In 1963 author Erving Goffman wrote ‘ Stigma: Notes on the Management of Spoiled Identity.” If one is not considered ‘normal’ then one can expect to be labelled as different or wrong somehow. Society can rethink what is considered ‘normal ‘and make space for those that may present differently than others.

Further. the social stigma that surrounds those with mental illness stems from lack of understanding of mental disorders as a physical illness. Brian K. Ahmedani PhD described the dimensions of stigma related to mental illness. He talks about mental illness causing fear in others, putting others ‘in peril,’ and that those that ‘try harder ‘ in life will not develop a mental illness. In this book ‘Mental Health Stigma: Society, Individuals’ Professor Ahmedani also adds that people with mental illness feel pressured to hide their disorder.

It is not well understood that mental illness may be episodic and with help the person can resume a good quality of life.

Indeed, social stigma can come from the societal belief that persons with mental illness are less equal or a part of an inferior group. These long held beliefs transfers to the individual resulting in an assault to self esteem and self -efficacy. Health Care Professionals are not immune to this negative attitude and may not look for help when experiencing their own personal issues.

Stigma is a barrier to treatment even though treatment can be the answer to better quality of life. Education and advocacy is the way forward and an important part of the solution.

4-12 PREVENTION

There is no sure way to prevent mental illness. However, if you have a mental illness, taking steps to control stress, to increase your resilience and to boost low self-esteem may help keep your symptoms under control.

Follow these steps:

1. **Pay attention to warning signs.** Work with your doctor or therapist to learn what might trigger your symptoms. Make a plan so that you know what to do if symptoms return. Contact your doctor or therapist if you notice any changes in symptoms or how you feel. Consider involving family members or friends to watch for warning signs.

2. **Get routine medical care.** Do not neglect checkups or skip visits to your primary care provider, especially if you are not feeling well. You may have a new health problem that needs to be treated, or you may be experiencing side effects of medication.

3. **Get help when you need it.** Mental health conditions can be harder to treat if you wait until symptoms get bad. Long-term maintenance treatment also may help prevent a relapse of symptoms.

4. **Take good care of yourself.** Sufficient sleep, healthy eating and regular physical activity are important. Try to maintain a regular schedule. Talk to your primary care provider if you have trouble sleeping or if you have questions about diet and physical activity.

4-13 HELPING A LOVED ONE

If your loved one shows signs of mental illness, have an open and honest discussion with him or her about your concerns. You may not be able to force someone to get professional care, but you can offer encouragement and support.

You can also help your loved one find a qualified mental health professional and make an appointment. You may even be able to go along to the appointment.

If your loved one has done a self-harm or is considering doing so, take the person to the hospital or call for emergency help.

4-14 BECOMING A MENTAL HEALTH ADVOCATE

The Canadian Mental Health Association offers this 'big picture thinking' to help pave the way forward:

1. In the workplace, advocate for an employee fact sheet that describes steps to take if the employee or family member becomes ill
2. Encourage mental health in-services to address the topic and answer questions [the local Public Health Department can help with this]
3. Invite a mental health speaker to your church or club
4. Communicate in an open manner about mental health issues
5. Support programs that reduce poverty in your community
6. Support programs that promote 'early years' programs for children
7. Be aware of credible online recourses and support groups
8. Be prepared to listen when a person is experiencing mental health challenges and wants to talk with you.

By really giving your time and attention to those around you, are being a mental health helper. By continuing to educate yourself on mental health and mental illness issues, you are being a mental health advocate. By sharing your life and an authentic manner you encourage others. By not participating in mental health stigma, you are an advocate for mental health. By sharing what you have learned about mental illness you advocate for others.

4-15 FUTURE GOVERNMENT CHANGES PERTAINING TO MENTAL HEALTH ISSUES

1. Create integrated and responsive health-care systems and services:
2. Integrating and coordinating mental health services and support across the care continuum helps fill service delivery gaps, improve access to quality care, and enhance overall health outcomes for older adults.
3. Ways to optimize integrated care:
4. Tailor mental health care to older adults' distinct values, goals, capacities, and lived and living experiences.
5. Implement services and supports that address inter– connected physical, mental, and social health concerns.
6. Develop training and education that expands knowledge of person-centered mental health care strategies for older adults to transform how such care is accessed, administered, and received by older people and caregivers in all health settings.
7. Ensure access to quality mental health care during transitions (e.g., into long-term care or out of acute care) to decrease psychological distress and improve quality of life for older adults and caregivers.
8. Offer cultural competency training for mental health professionals to help them provide effective and respectful care to older adults from diverse backgrounds.

9. Ensure continuous access to long-term care.

4-16 MENTAL HEALTH CONCLUSIONS

Aging Canadians represent a greater proportion of the population than ever before. The mental health needs and challenges faced by this ever-evolving group is shaped by myriad factors unique to Canada, ranging from the political to geographic landscape.

Over the course of Canadian history, the way the mental health of older adults has been addressed in the eyes of the law has shifted dramatically, having considerable impacts on the ways in which Canadians have lived with mental illness. Moving from paternalistic models to those in which equity and diversity are prioritised, the way the law has viewed the mental health of older adults has come a long way, but there is still much work to be done.

To address the issues older adults face in Canada, longitudinal studies have been put in place to empirically investigate the ageing process. With world-leading ongoing longitudinal studies, such as the Canadian Longitudinal Study on Ageing, researchers in Canada are making long-term investments in the future of ageing Canadians.

Although Canada is a relatively young country, it has a strong history of progression and innovation in working towards fostering the best mental health trajectories for ageing Canadians.

Working to enact change in the laws and policies that govern mental health as well as developing better evidence as to the ways in which we can identify and treat mental illness it is hoped that positive change can be enacted in the lived experience of mental health in Canada for older adults.

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Chapter 5

Dementia & Our Aging Society

5-1 KEY OBJECTIVE OF THIS CHAPTER

"Dementia is arguably one of the greatest threats to the sustainability of our health and social services systems with over 650,000 Canadians living with dementia today and nearly 1.5 million expected within 10 years."
Adalsteinn D. Brown

According to the Alzheimer Society of Canada, the number of Canadians living with dementia now stands at over 750,000 (2024). Clearly, anyone interested in working with older Canadians needs to have a solid understanding of dementia This chapter is designed to provide you with a basic grounding in the most significant types of dementia and the impact they have on elders and their families.

5-1.1 How Will This Objective Be Achieved?

We will look, in detail, at the various forms of elder dementia, their causes, their symptoms and how they are most effectively managed. We will also touch on a variety of related subjects - among them, caregiving issues, coping strategies, and the need - once a diagnosis has been made - for early and effective planning.

5-2 INTRODUCTION

Although many people use the term dementia and Alzheimer's interchangeably, dementia is the medical term used to describe more than 25 different diseases and conditions characterized by the gradual loss of intellectual functions. Alzheimer's disease is one of those conditions and is the most common cause of dementia.

Alzheimer's has a combination of risk factors. The most critical risk factor is age itself given that, as a person ages, the brain's ability to repair itself decreases. Canadian seniors are also at greater risk for other factors associated with Alzheimer's disease such as high blood pressure, elevated cholesterol and being overweight. Type 2 diabetes, stroke and chronic inflammatory conditions such as some forms of arthritis are also known to be risk factors for Alzheimer's disease and associated dementias.

Genetics can also contribute to the risk of developing both inherited familial Alzheimer's disease and the more common sporadic form of the disease.

Those with an immediate family member with the disease have a greater chance of developing the disease than those who do not have a direct relative with the disease. Women are at greater risk for Alzheimer's disease and associated dementias than men, in part since they generally live longer. Hormonal changes at menopause are also thought to contribute to women's increased risk.

While research or pharmaceuticals are not yet able to cure dementia in the near future, by reducing lifetime exposure to modifiable risk factors the possibility exists to delay or even prevent dementia from occurring in many people.

Memory problems are one of the earliest and well known symptoms of Alzheimer's disease. The disease is progressive and, depending on the stage, can range in severity from mild to severe. We shall review the stages in a following section.

The rate of dementia tends to increase dramatically with advanced age. The risk for dementia doubles every 5 years after age 65. Currently about 8% or 1 out of 13 of the people over age 65 have some form of dementia, and one in four over the age of 85 has symptoms.

In the case of Canadians 100 years of age and older, an astonishing 85% have dementia. Because dementia rates increase exponentially with age, it should come as no surprise that women are twice as likely (versus men) to have dementia.

By the year 2031, it is estimated that more than 1.4 million Canadians will be suffering from some form of dementia. With the rapid aging of our population, mental disorders of all types will become a major medical and social problem.

However, it’s important to note that dementia is not just 'an old person's disease'

A growing number of Canadians are developing dementia in their 60s, 50s, 40s and even earlier, and experts are not sure exactly what is behind the worrisome rise.

5-3 DEMENTIA - AN OVERVIEW

Dementia describes a group of symptoms relating to progressive mental deterioration. In non-professional terms, it is an acquired loss of intellectual ability that occurs over a long period and affects many areas of cognitive functioning.

It results from changes in the normal activity of certain sensitive cells in the brain. In many people, memory loss is the most common, but not the only change associated with dementia.

A decline in memory often goes hand in hand with other changes that inhibit the individual's ability to conduct the normal activities of daily living.

Among these changes:

- A decline in problem solving skills
- A loss of verbal ability
- Impaired judgment
- Compromised learning

Loss of intellectual ability may also lead to:

- Confusion and disorientation
- Suspicion of others
- Strange behaviour
- An inability to complete simple, routine tasks

5 - 3.1 Changes in Cognition

When it comes to memory loss, dementia sufferers tend to lose recent memory first. But as the disease progresses, remote memories and over-learned tasks are also lost. As cognition declines, abnormalities in language and visual-spatial functions arise. The ability to calculate, to perform skilled tasks, and to comprehend stimuli also deteriorates.

Language skills, including both expression and comprehension, become increasingly impaired. Speech tends to become increasingly non-fluent, eventually resulting in near mutism.

Problems arise in managing money, comprehending written material, and recognizing people. Driving, operating appliances, and dressing all become difficult. Overall, the capacity to reason, to learn new information, and to solve problems that arise is progressively lost.

5 - 3.2 Changes in Personality and Behaviour

Personality and behavioural changes are among the most disturbing consequences of dementia - and they often appear quite early on.

Common personality changes include marked indifference or apathy, regression, impulsiveness, and withdrawal.

Problem behaviours include agitation, aggression, a lack of inhibition, restlessness, wandering, delusions, paranoia, hallucinations, and sleep cycle disturbances.

5 - 3.3 Functional loss

Recent work suggests that functional losses in dementia may occur in stages that appear to reverse normal early human development.

Functional deterioration tends to follow a sequential pattern, starting with loss of speech and language skills, followed by ambulatory skills. In the later stages of dementia, impaired hygiene and incontinence manifest themselves - and in the final stages, the ability to sit upright and the ability to feed oneself become compromised.

5 - 3.4 The Most Common Forms of Dementia

Identifying a specific type of dementia is far from easy, given that there tends to be a lot of cross over when it comes to symptoms.

Nevertheless, it is safe to say that Alzheimer's disease, vascular dementia, Lewy body disease and Parkinson's disease account for somewhere in the area of 90 - 95% of all dementia.

Alzheimer's disease alone accounts for 60 to 80% of all cases of dementia. Unfortunately, arriving at a more precise figure is extremely difficult. Pick's disease or frontotemporal dementia Lewy body disease - and even vascular dementia - are often misdiagnosed as Alzheimer's disease - and to further complicate matters, many elders often experience several forms of dementia at the same time. During autopsies, almost half of all dementia sufferers have signs of both Alzheimer's disease and vascular dementia - and close to 40% of all elders with Alzheimer's disease, also have Lewy bodies in the neo-cortex area of their brains.

One important note: While many people use Alzheimer's and dementia interchangeably, these don't mean the same thing. Dementia is a word used to describe many diseases that lead to memory loss, problems with language, changes in behaviors, and difficulties with thinking or planning. Alzheimer's is a neurodegenerative disease that causes dementia — and it's the most common cause of dementia out there, accounting for as many as seven in 10 cases of dementia. It's estimated that 733,040 people in Canada are living with dementia. These figures are being increased by the fact that more than 350 people in Canada develop dementia every day. (Dementia numbers in Canada, Alzheimer Society of Canada, accessed July 2024)

The following table provides a very rough estimate of the number of Canadians suffering from a variety of common forms of dementia.

Table 5-1 Dementia by the Numbers

Form of Dementia	Elder Canadians Affected
Alzheimer's disease	400,000
Vascular Dementia	165,000
Lewy Body Disease	65,000
Parkinson's Disease	20,000*

Frontotemporal Dementia	13,000
Other	6,500

* Roughly one quarter of the estimated 80,000 Canadian elders with Parkinson's disease have developed dementia.

Sources – The Dementia Statistics Hub, 2024 and the Alzheimer's Society (Canada), 2024.

5 - 3.5 Root Causes

Dementia has a variety of causes: degenerative disorders, vascular problems, infections, hormone or vitamin imbalances … even tumors, trauma and substance abuse can lead to dementia. The following table looks at the root causes of some of the more common forms of dementia.

Table 5- 2 Dementia - Root Causes

Cause	Type of Dementia
Degenerative Disorders	Alzheimer's disease, Lewy Body Disease, Pick's disease and other frontal temporal lobe dementia, Parkinson's Disease, Huntington's Disease
Vascular Diseases	Vascular (Multi-infarct) dementia, Binswanger's Disease
Toxic or Metabolic Diseases	Alcoholism, B12 deficiency, Folate deficiency
Immunologic Diseases or Infection	Creutzfeldt-Jakob Disease, Multiple Sclerosis, Chronic Fatigue Syndrome
Systemic Diseases	Liver Disease, Kidney Disease, Lung Disease, Diabetes, Wilson's Disease
Trauma	Subdural Hematoma, Dementia Pugilistica (boxer's syndrome)
Cancer	Brain Tumours, Metastatic Tumours
Ventricular Disorders	Hydrocephalus
Convulsive Disorders	Epilepsy
White Matter Diseases	Leukodystrophies

5 - 3.6 Risk Factors

The risk factors for dementia are as individual as the various forms of dementia themselves. In some cases, the connections are reasonably clear.

- Head trauma can lead to subdural hematoma and dementia pugilistica (boxer's syndrome). Substance abuse can create hormone and vitamin deficiencies that lead to dementia
- A defective protein - which can be inherited, transmitted, or appear spontaneously - produces Creutzfeldt-Jakob Disease
- Leukodystrophies are the direct result of genetic defects
- Hypertension, smoking, diabetes, high cholesterol and cardiovascular disease are closely linked to vascular dementia

Unfortunately, in many cases, the connections are far from clear:

- There are no known causes of Pick's disease
- The only identifiable risk factor for Lewy body disease is advanced age
- Genetics, toxins and head trauma may be linked to Parkinson's disease, but nothing is conclusive

The risk factors for Alzheimer's disease are a diffuse laundry list of possibilities (genetics, diabetes, Down syndrome. head injury, menopause, low levels of formal education, etc.).

Amid the entire confusion one thing does stand out. When it comes to the most popular forms of dementia … advanced age is almost always a major - or the major - risk factor.

5 - 4 ALZHEIMER'S DISEASE (AD) - OVERVIEW

What do former President Ronald Regan, Rita Hayward, Charlton Heston, Henry Ford, Sir Winston Churchill and Sugar Ray Robinson all have in common? All of them suffered the effects of Alzheimer 's disease.

It does not matter who you are. Alzheimer's disease does not distinguish … it is equally devastating to both rich and poor. Even with all their resources - both financial and social - the rich, the famous and the powerful have been unable to beat this dreadful disease.

Alzheimer's disease was first identified in 1906 by German neurologist Alois Alzheimer. He described the two hallmarks of the disease: the presence of "plaques" and "tangles" in the brain.

Neuritic or amyloid plaques are chemical deposits consisting of degenerating nerve cells combined with a form of protein referred to as beta amyloid. These plaques tend to be scattered throughout the brain. When present – at excessive levels – they are toxic to brain cells.

Neurofibrillary tangles or tau are malformations of the nerve cells that are found mainly in the cerebral cortex of those with Alzheimer's disease. These tangles interfere with the vital processing functions of the brain.

The disease affects a person's ability to understand, think, remember, and communicate. Eventually, Alzheimer's disease sufferers are unable to learn new things or make decisions. They will forget how to do simple tasks, have trouble remembering names, and struggle to find the right word to express a thought.
They may become worried, suspicious and emotional.

In some cases, they may simply become withdrawn. The disease usually progresses from the first symptoms to complete dependence, over a 10-year span. It ends with death, often caused by pneumonia.

There is no known cause or cure for this devastating disease. Doctors do not know how to stop or repair the damage being done, but researchers around the world are working to find the answers. In the meantime, medications can help treat some of the symptoms – and support services and education can help enhance quality of life for both Alzheimer sufferers and their families.

5 – 4.1 Distinguishing Features

The factors that distinguish Alzheimer's disease from many other forms of dementia include:

- The types of changes that occur in the brain
- The characteristic patterns of progressive degeneration

Alzheimer's disease is not a normal part of aging, despite the once common belief that senility naturally accompanies old age.

5 - 4.2 Alzheimer's Disease Stages

Alzheimer's disease is a progressive and degenerative disease - it begins slowly. Initially the only symptom may be mild forgetfulness. People with Alzheimer's disease may have trouble remembering recent events, activities, or the names of familiar people or things and simple math problems may become more difficult to solve. And while these difficulties may be bothersome, they are usually not serious enough to cause alarm.

However, as the disease advances the symptoms become more noticeable and serious. People in the middle stages of Alzheimer's disease may forget how to do simple tasks, like brushing their teeth or combing their hair. They may have difficulty thinking clearly, and begin to have problems speaking, understanding, reading and writing. They may also become anxious or aggressive and start to wander.

Eventually, Alzheimer patients require total care.

The actual progression of Alzheimer's disease varies from person to person and can span anywhere from three to 20 years (although the average length of the disease is between eight and 12 years). On its own, Alzheimer's doesn't cause death. But as the condition progresses, it's possible for a person living with dementia to become more vulnerable to other comorbidities. Although pneumonia is cited as the most common cause of death for people living with dementia, individuals can also die from complications of dehydration, malnutrition or infection.

The following table summarizes what happens to an Alzheimer's disease sufferer during the three major stages of the disease.

Table 5-3 The Stages of Alzheimer's disease At a Glance

	Mental Abilities	Moods & Emotions	Behaviours	Physical Behaviours
Stage 1	- Mild forgetfulness - Difficulty processing new information - Problems with orientation - Communication difficulties	- Mood shifts - Depression	- Passiveness - Withdrawal from usual activities - Restlessness - Anxiety	- Mild coordination problems
Stage 2	- Continued memory lapse - Forgetfulness about personal history - Inability to recognize family and friends - Disorientation about time and place	- Personality changes - Confusion - Suspicious - Mood shifts - Sadness / depression - Hostility / Anger - Anxiety / apprehension	- Declining concentration abilities - Restlessness (pacing, wandering) - Repetition - Delusions - Aggression - Uninhibited behaviour - Passiveness	- Assistance required for daily tasks - Disrupted sleep patterns - Appetite fluctuations - Language difficulties - Visual spatial problems

Stage 3	- Loss of ability to remember, communicate or function - Inability to process information - Severe reading, writing and speaking difficulties - Severe disorientation about time, place, people	- Range of emotions and feelings remain - Possible withdrawal	- Nonverbal methods of communicating (eye contact, crying, groaning) - Responds to music and/or touch	- Sleeps long & more often - Becomes immobile - Loses ability to speak - Loses control of bowel & bladder - Difficulty eating and/or swallowing - Unable to dress or bathe - May lose weight

5 – 4.3 Early Warning Signs

The following list describes some of the early warning signs of Alzheimer's disease. Having several - or even all - of these symptoms *does not* mean the person in question has the disease.

It does mean, however, that a thorough examination should be initiated. It should be conducted by a medical specialist trained in evaluating memory disorders, such as a geriatrician, neurologist or a geriatric psychiatrist, or by a comprehensive memory disorder clinic, with an entire team of experts.

The 10 early warning signs of Alzheimer's disease are:

1. Memory loss affecting day-to-day function
2. Difficulty performing familiar tasks
3. Problems with language
4. Disorientation to time and place
5. Poor or decreased judgment
6. Problems with abstract thinking
7. Misplacing things
8. Changes in mood or behaviour
9. Changes in personality
10. Loss of initiative

5 - 4.4 Diagnosis

The only way to confirm a definite diagnosis of Alzheimer's is through an autopsy. If a post-mortem examination of the brain reveals protein deposits (plaques), and knotted tangles (tau) inside the cerebral cortex (the part of the brain associated with memory and learning), then the patient had Alzheimer's disease.

During the past 20 years, however, a lot of progress has been made in identifying "possible" or "probable" Alzheimer's *in living patients*. There is no single test that can readily identify the disease.. Instead, the diagnosis is made through a systematic assessment that eliminates other possible causes.

The process can involve all of the following:

1. **Medical History** - focusing on past illnesses and family medical and psychiatric history.

2. **Mental Status Exam** - a series of simple questions that test a patient's sense of time and place, as well as their ability to remember; to express themselves and to do simple calculations.

3. **Physical Exam** - to rule out other possible causes (e.g., nervous system disorders as well as heart, lung, liver, and kidney problems).

4. **Blood Work** - to help detect such problems as: anemia, diabetes, thyroid issues or infections). Urine and spinal fluid tests may also be done.

5. **Other Tests and Scans** - including: X-ray, electroencephalogram (EEG), computerized tomography (CT scans), magnetic resonance imaging (MRI), Electrocardiogram (ECG or EKG), single proton emission computed tomography (SPECT), positive Electron tomography (PET).

6. **Neuro-Psychological Testing** - designed to rule out other possible causes (e.g., depression).

With the proper battery of tests, doctors can correctly diagnose Alzheimer's disease - in living patients - roughly 90% of the time.

Elaborate testing may also reveal that the symptoms experienced are the product of other conditions. It is estimated that 5-10% of all people with memory loss, confusion and other signs of dementia have treatable - possibly reversible - illnesses. Strokes, tumours, drug intoxication, vitamin deficiencies, thyroid problems - even depression - can produce dementia-like symptoms.

That is why an early diagnosis is so important. Not only can it rule out Alzheimer's, but it may allow for the successful treatment of other conditions.

Extensive and expensive research continues to try and find more effective diagnostic tools; there may be a powerful new tool to enable earlier, more accurate diagnoses with the emergence of blood tests (BBMs) that can help identify biomarkers of proteins associated with Alzheimer's. Along with blood tests, researchers are working on retinal tests and AI apps to flag the early signs of cognitive decline.

5-5 ALZHEIMER'S DISEASE - RISK FACTORS

For many diseases, particularly infectious ones, it is easy to identify the cause. Measles, for example, are the product of a virus. When it comes to chronic disorders (long-lasting conditions), however, there is still much that is entirely unknown.

Scientists believe that a variety of factors are at play. In attempting to find the root causes, scientists start by looking for factors that are more common in people who develop a chronic disease. The presence of these "risk factors" is associated with an increased chance that the disease will develop.

Two types of studies are used to determine risk factors. One approach is to monitor a group of healthy people over a long period and compare those who develop a disease with those who do not.

Lifestyle factors (such as diet, smoking, etc.) as well as family and work histories are examined and analyzed in both the diseased and non-diseased groups.

In the second approach, people who already have the condition or disease are compared with people who do not have the disease but are otherwise similar. Researchers then look for differences between the two groups (in such areas as personal and family characteristics, lifestyle, occupation, etc.).

It is important to remember that risk factors are not causes. No single study can verify a link between a disease and a specific factor - repeated investigations are necessary before any direct links can be established.

The following are some of the major "risk factors" associated with Alzheimer's disease.

5 - 5.1 Age

Age is the most significant risk factor for the disease. According to work done by the Canadian Study of Health and Aging, your chances of developing Alzheimer's disease - at various ages - are as follows:

- Between age 65 and 74 - 1 in 100
- Between age 75 and 84 - 1 in 14
- Age 85 and over - 1 in 4

The risk of Alzheimer disease roughly doubles every five years after the age of 65. As we age, it appears that our body's ability to self-repair becomes dramatically less efficient.

5 - 5.2 Genetics

The most important genetic risk factor for Alzheimer's is the presence of the ApoE4 gene. The ApoE4 gene can be passed on from one or both parents.

If an individual has one ApoE4 gene, they are three times more likely to develop Alzheimer's disease than someone without the gene. If an individual has two ApoE4 genes, they are 10 times more likely to develop the disease

While there is a genetic component to the disease, inherited factors alone do not explain why some people develop it while others do not. Some people with the ApoE4 gene will develop Alzheimer's disease - many more will not.

5 - 5.3 Diabetes

It has been known for some time that type 2 - or adult - diabetes is a significant risk factor for Alzheimer's.

It was initially assumed that this was because the blood vessel and heart disorders associated with diabetes were also risk factors for Alzheimer's disease. New research, however, has demonstrated that the utilization of glucose is impaired in the brains of people with Alzheimer's - even though they may not have diabetes, their brains appear to be in a "diabetic state."

5 - 5.4 Down Syndrome

Almost every person with Down syndrome, who is over age 40, experiences changes to their brain cells which are typical of Alzheimer's disease. The actual disease usually develops when they are in their 50s and 60s.

5 - 5.5 Mild Cognitive Impairment (MCI)

Mild cognitive impairment involves a level of cognitive and memory impairment beyond what is expected during normal aging.

This impairment is not, however, enough to be deemed dementia - the results of formal cognitive evaluations, such as the Mini Mental Status Examination, remain within the normal range. Patients with mild cognitive impairment only demonstrate impairment on specific memory components of cognitive tests.

Some individuals with MCI will remain stable - and free of dementia - for many years. The majority (80% by some estimates), however, will develop Alzheimer's disease within 10 years.

5 - 5.6 Low Levels of Formal Education

Several studies have demonstrated that people who have less than six years of formal education are at higher risk of developing Alzheimer's. However, additional study is required to determine whether education makes the difference - or whether other related factors (such as low income, poor nutrition, substandard housing) are responsible.

5 - 5.7 Other Risk Factors

A variety of other factors have been linked to Alzheimer's disease. Among them: head injury, menopause, arthritis, clinical depression, strokes and "mini" strokes, high cholesterol, high blood pressure, stress, obesity and inadequate "exercising" of the brain.

Less firmly established risk factors include smoking, drug abuse and excessive alcohol consumption. Aluminum, it should be noted, is no longer considered to be a risk factor.

5-6 ALZHEIMER'S DISEASE - TREATMENT

In this section, you will learn how Alzheimer's disease is treated. Because there is no cure, managing the disease often involves medications to control symptoms.

There has been much interest in using drugs to treat Alzheimer's disease since the 1970s, when it was discovered that people with Alzheimer's disease have less of the chemical acetylcholine in their brains. Acetylcholine relays messages between nerve cells in the brain. Its role is closely tied to memory, learning, and reasoning, and it is found in the parts of the brain most often affected by Alzheimer's. Scientists are also studying the lack of acetylcholine in the brains of people with conditions such as Lewy body disease, vascular dementia, and Parkinson's disease.

A series of drugs, called "cholinesterase inhibitors," help to reduce the breakdown of acetylcholine - and this increases the amount of this chemical remaining in the brain. Aricept™, Exelon™, and Reminyl™ are all cholinesterase inhibitors that can be used to treat mild to moderate Alzheimer's disease.

All three drugs help to improve cognition, which includes memory, language, and orientation (e.g., knowing things like the date, the time, and where one is). Not only do they slow down overall cognitive loss, but they can also make people less apathetic and indifferent.

Unfortunately, the benefits provided by these drugs are temporary - the improvements peak after about three months of usage. Thereafter the patient slowly regresses - returning to where he started within nine to twelve months. After that time, however, a slower decline is observed (as compared to people who have not received the drug).

Cholinesterase inhibitors are not without side effects. Among them: problems with digestion, nausea, vomiting, and loss of appetite. Fortunately, these side effects tend to be short lived - often only occurring initially and when there is an increase in the amount of medication.

In a few people, these drugs can slow the heart rate, causing dizziness and sometimes fainting. Muscle cramps in the legs are also an infrequent side effect.

Another important drug, Ebixa™ has been approved by Health Canada. It is used to treat moderate to severe Alzheimer's disease. Unlike the cholinesterase inhibitors described above, it works to help normalize the transmission of nerve signals.

None of the above drugs should be considered cures for Alzheimer's disease, as they do not affect the underlying degenerative process of the disease.

5-7 VASCULAR DEMENTIA

The second most common cause of dementia in older people is vascular dementia, which occurs when cells in the brain are deprived of oxygen. This can happen if there is blockage in the vascular system - or if it is damaged or diseased. Oxygen deprivation causes brain cells to die, which produces the symptoms of dementia.

Stroke is a common cause of vascular dementia. A stroke occurs when a blood clot or fatty deposits (called plaques) block the vessels that supply blood to the brain, or when a blood vessel in the brain bursts.

Vascular dementia can also occur as a result of a series of very small strokes (often referred to as "infarcts" or "Transient Ischemic Attacks"). Individually these small strokes do not cause any major symptoms, but over time, they become problematic. This form of vascular dementia used to be called "multi-infarct dementia."

The symptoms associated with vascular dementia include confusion, difficulty concentrating, communicating and following instructions, and a reduced ability to perform basic daily activities. Memory problems may, or may not, be present. And personality is usually unaffected.

Vascular dementia and Alzheimer's disease often co-exist. When a patient has both, the condition is referred to as "mixed dementia."

5 - 7.1 Distinguishing Features

The symptoms of vascular dementia can vary significantly - since they are dependent on the specific area of the brain that was deprived of blood (and oxygen). As a result, the level of cognitive decline, when it comes to such areas as language skills and memory, can vary significantly.

As well, unlike Alzheimer's disease which is characterized by a slow, steady decline, vascular dementia often progresses in "steps" marked by sudden, noticeable changes in function. Functional ability can deteriorate, stabilize for a time, and then deteriorate again.

The possible symptoms of vascular dementia include all the following:

- Memory problems
- Slurred speech
- Language difficulties
- Lack of concentration
- Difficulty following instructions
- Loss of money management skills
- Abnormal behaviour (e.g., laughing or crying inappropriately)
- Wandering

5 - 7.2 Risk factors

It should come as no surprise that the risk factors for vascular dementia are almost identical to the risk factors for stroke … among them:

- High blood pressure (hypertension)
- High blood cholesterol
- Narrowing of the arteries
- A family history of heart problems
- Smoking
- Being overweight
- Diabetes
- Heart disease

Most of the risk factors associated with vascular dementia are highly controllable. Adopting a healthy lifestyle that includes regular exercise, eating well, not smoking, and eliminating stress dramatically reduces the risk of both stroke and this form of dementia.

Even if some of the above risk factors do develop, most can be treated. Medications are available to control high blood pressure, diabetes, and heart disease. Blood thinners are also beneficial as are certain surgical procedures designed to unblock arteries to the brain.

5 - 7.3 Treatment

There are currently no approved drugs specifically designed to treat vascular dementia. Many of the drugs used to treat Alzheimer patients have, however, have proven effective in those who suffer from both Alzheimer's and vascular dementia, also known as mixed dementia.

There is also evidence to suggest that the active management of the risk factors associated with this dementia helps to prevent any further decline in cognitive function.

5-8 LEWY BODY DISEASE/DEMENTIA

Lewy body disease, the third leading cause of dementia, is a form of progressive dementia characterized by abnormal structures in the brain - called "Lewy Bodies". These structures - largely microscopic protein deposits - appear in both the mid-brain and the cortex, and their presence disrupts the brain's normal functioning.

Lewy body disease can occur by itself, or together with Alzheimer or Parkinson's disease.

Lewy body disease is remarkably like Alzheimer's in a variety of ways: there is progressive loss of memory, language, reasoning, and other higher mental functions, such as calculation. People with this disease also struggle to find the right word, have difficulty sustaining a train of thought and tend to experience depression and anxiety.

When it comes to physical symptoms, Lewy body disease is very similar to Parkinson's disease. The physical symptoms of Lewy body include:

- ❖ Rigidity (stiffness of muscles)
- ❖ Tremors (shaking)
- ❖ Stooped posture
- ❖ Slow shuffling movements

5 - 8.1 Distinguishing Features

As noted, the dementia associated with Lewy Body Disease is like that of Alzheimer's disease, while many of its' physical symptoms tend to mimic Parkinson's disease.

Lewy Body Disease does, however, have several distinguishing features, including:

- ❖ Strong psychotic symptoms (i.e., hallucinations)
- ❖ Extreme sensitivity to anti-psychotic medications
- ❖ A high degree of variability in day-to-day symptoms
- ❖ Low blood pressure (hypotension)
- ❖ Lewy body disease also tends to progress more rapidly than Alzheimer's disease - and unlike Alzheimer's and Parkinson's disease - it is twice as common in men as in women.

5 - 8.2 Risk Factors

At present, there is no known cause of Lewy body disease. The only risk factor is advancing age.

As with Alzheimer's disease, the only sure way to confirm a Lewy Body Diagnosis is through an autopsy.

5 - 8.3 Treatment

There is no cure for Lewy Body disease. All that can be done is to manage the symptoms of the disease. Symptoms like low blood pressure (which can lead to falls) can be managed through improvements in diet and exercise. Other symptoms may require medication.

Unfortunately, many of the medications used to address Lewy body disease have unpleasant side effects. Medications used to address hallucinations, for example, tend to worsen the Parkinson's-like symptoms. And the medications used to address the Parkinson's-like symptoms worsen the hallucinations.

The sleep disorders and depression associated with Lewy body can, fortunately, be treated with medications that do not produce significant side effects.

5-9 PARKINSON'S DISEASE/DEMENTIA

Parkinson's disease (PD) is a progressive neuro-degenerative disease that involves the loss of cells in a part of the brain called the substantia nigra. These cells are responsible for producing a chemical called dopamine, which acts as a messenger between the brain cells that control movement. It is estimated that by the time the diagnosis is made, approximately 80% of dopamine producing cells have already stopped functioning.

The resulting significant decrease in dopamine produces the symptoms of Parkinson's disease.

Approximately 80% of an estimated 100,000 Canadians with Parkinson's disease are age 65 or older, and roughly one quarter of this group has developed dementia.

The number of cases of Parkinson's disease increases with age. One percent of elders age 65 and over has the disease … and this percentage doubles (to 2%) in the case of elders aged 70 and over.

Parkinson's disease progresses from diagnosis to major disability over a 10 to 20-year period. Younger sufferers (i.e., under age 40) experience more dystonia (involuntary muscle contraction), while their older counterparts are far more likely to experience both trembling and serious cognitive disorders (e.g., memory impairment, concentration difficulties).

5 - 9.1 Distinguishing Features

The following are the hallmarks of Parkinson's disease:

- Tremor (or trembling) at rest
- Bradykinesia (a slowing of physical movement)
- Akinesia (a loss of physical movement)
- Rigidity
- Postural instability

5 - 9.2 Risk Factors

Parkinson's disease is primarily a disease of the elderly, with the first symptoms usually appearing at around age 60. Other risk factors (in addition to age) include ancestry and sex. The disease is more common in people of European decent and men are slightly more likely to develop Parkinson's disease than women (55% versus 45%).

While most forms of Parkinson's disease are *idiopathic* (i.e., there is no known cause), some connections have been established in isolated cases.

In the case of some forms of Parkinson's disease there appears to be a genetic link. Individuals who have one parent with Parkinson's are at higher risk of having the disease, and this link is particularly significant for people who develop Parkinson's disease at an early age.

In other isolated cases, symptoms have been linked to toxicity, drugs, genetic mutation and head trauma. Some recent research also suggests that there is a link between Parkinson's disease and well water, pesticides and rural living.

Up to 80% of people with PD eventually develop dementia. The average time from onset of movement problems to the development of dementia is about 10 years.

5 - 9.3 Treatment

As with Alzheimer's disease and Lewy body disease, there is no cure for Parkinson's disease.

Most of the medications that are used to treat Parkinson's disease are designed to address the shortage of dopamine in the brain. Levodopa is a popular and effective drug that is converted into dopamine when it enters the body. Unfortunately, it also produces some unpleasant side effects - motor complications that are very difficult to manage.

5 - 10 PICK'S DISEASE/FRONTOTEMPORAL DEMENTIA

Unlike Alzheimer's disease, which generally affects most areas of the brain, Pick's disease is a progressive dementia that affects the frontal and temporal lobes. In some cases, brain cells in these areas can shrink or die, while in other cases, they become larger and contain round, silver "Pick's bodies."

Early symptoms include changes in behaviour (e.g., withdrawal or, at the other extreme, a lack of inhibition), a deterioration of linguistic ability and, on occasion, incontinence. The Pick's disease sufferer may lose interest in personal hygiene, become easily distracted, or repeat the same action repeatedly. Overeating or compulsively putting objects in the mouth may also occur.

Problems with speech (i.e. linguistic abilities) can range from reduction of speech to total loss (i.e., becoming mute). Echoing what others have said and stuttering are common symptoms, as well. The person may have difficulty sustaining a train of thought or maintaining a conversation for any length of time. Writing and reading also affected. Unlike Alzheimer's, a person with Pick's disease often remains oriented to time and does not lose memory during the early stages of the disease. It is not until later in the process that confusion and forgetfulness take hold. Eventually motor skills are lost, and swallowing difficulties occur.

Pick's disease tends to strike individuals who are between 40 and 60 years of age. People with the disease typically die within 8 - 10 years.

5 – 10.1 Treatment

Little is known about the cause of Pick's disease and risk factors have yet to be identified. At present, there is no known cure for the disease and the progression cannot be slowed down.

5 – 11 MIXED DEMENTIA

It is possible for a person to have more than one type of dementia; when this happens, the individual has mixed dementia. They usually show symptoms of both Alzheimer's and vascular dementia. Because many symptoms overlap between different types of dementia, it can be hard to figure out if someone has mixed dementia. Researchers don't know exactly how many people currently diagnosed with a specific type of dementia actually have mixed dementia. However, autopsy studies indicate that mixed dementia may be much more common than previously realized.

5-11.1 Treatment

There is no specific treatment for mixed dementia; a brain-healthy lifestyle is highly recommended, as it is for all types of dementia. Depending on the symptoms experienced, someone living with mixed dementia may find relief with medications approved to treat Alzheimer's disease as well as certain alternative treatments. Before starting any treatment, however, it's strongly recommended checking with a doctor or a qualified healthcare provider first.

5 - 12 FAMILIAL ALZHEIMER'S DISEASE

Familial or early onset Alzheimer's disease is a rare form of this disease affecting less than 10% of all Alzheimer patients. It is passed directly from one generation to another through a dominant inheritance pattern … if a parent has familial Alzheimer's disease then each child has a 50% chance of inheriting it. Familial Alzheimer's disease strikes at relatively young ages (usually between ages 30 and 60) and it tends to progress more rapidly than the more common form of the disease.

5 - 13 YOUNG (EARLY ONSET) ALZHEIMER'S

Alzheimer disease most commonly affects older adults, but it can also affect people in their 30s or 40s. When Alzheimer disease occurs in someone under age 65, it is known as early-onset Alzheimer's disease.

A very small number of people with Alzheimer disease have the early-onset form. Family history of the disease is the only known risk factor at this time.

5 – 14 REVERSIBLE DEMENTIA

It is estimated that 20% of people who exhibit the symptoms of dementia have a reversible, or treatable, condition. For this reason, it is essential to obtain an early and clear diagnosis. Psychiatrists, psychologists, and neurologists may be involved in this process. Elders who present with a cognitive impairment may actually be suffering from polypharmacy, dehydration or a urinary tract infection – all of which can be easily treated.

5 – 15 ALCOHOL ASSOCIATED DEMENTIA

Excessive drinking over a period of years may lead to problems that affect memory, learning, and other cognitive functions. Alcohol can have a direct impact on brain cells, particularly those at the front of the brain - and this can lead to poor judgment, difficulty making decisions, and a lack of insight.

Nutrition problems, which accompany chronic, heavy use of alcohol, are thought to be responsible for some of the problems with respect to cognition. Key parts of the brain may suffer damage through vitamin , B12 and vitamin D in particular - which can lead to both personality changes and intellectual impairment.

The cognitive problems associated with heavy alcohol use may be reversed if the person involved abstains from alcohol, improves diet and finds other sources of the vitamins lost.

5 – 16 NORMAL PRESSURE HYDROCEPHALUS (NPH)

Normal pressure hydrocephalus involves a buildup of cerebrospinal fluid in the brain's ventricles, which leads to such symptoms as dementia, gait disturbance, and urinary incontinence. This build up in fluid can be caused by subarachnoid hemorrhage, head trauma, infection, tumour, or surgical complications.

Because normal pressure hydrocephalus is most common in people over the age of 60, it's symptoms may be confused with Alzheimer's or Parkinson's disease. Although NPH causes deficiencies in short term memory and the gradual diminishing of the thought process, it is not as encompassing as the memory loss that is associated with Alzheimer's disease.

Treatment of NPH involves surgically implanting a shunt in the brain to drain excess fluid. The success of this procedure varies from person to person, but many people recover almost completely.

It is important to diagnose this disease early since this improves the chances of a full recovery.

5 - 17 DEPRESSION - "PSEUDODEMENTIA"

In some cases, simple depression may produce cognitive problems. Depressed people often withdraw, become agitated, show a lack of attention, and have difficulty concentrating. In some severe cases, depression can also slow down, or retard, the thinking process and adversely impact memory.

As a result, it is often difficult to distinguish between depression and dementia. The former is often misdiagnosed as the latter, and this has spawned the term "pseudodementia" - a condition that is highly treatable. In most cases, treating the depression also addresses the cognitive problems.

It is also important to remember that dementia and depression often go hand in hand. People with dementia often become depressed and this can significantly worsen their symptoms. Here too, identifying and treating the depression can be quite beneficial.

5 - 18 DEMENTIA MANAGEMENT PRINCIPLES

5 - 18.1 Dementia Is Not Global - Until Late in The Disease

While dementia does involve a progressive deterioration of memory, intellect, and personality, this does not mean that all aspects of mental functioning are impaired to the same degree. In the early and middle stages of dementia, there may be very little deterioration in some areas. As a result, it is very important to try and maximize the affected person's assets. If auditory memory is extremely limited, then an emphasis should be placed on visual memory (e.g., signs, written directions, pictures, etc.).

If memory and language skills are affected, but the ability to enjoy (or even to play) music, or complete simple repetitive tasks are preserved, then these activities should be encouraged.

5 - 18.2 Enjoyment Does Not Require Memory

Collectively we tend to think that only activities that can be remembered are worthwhile. So, if we go on an outing, watch a movie, or share a good joke, this is only regarded as worthwhile if it can be remembered. This kind of thinking can lead us to conclude that there is no point in organizing activities and events for dementia sufferers.

But most activities are enjoyable whether they are remembered or not … and even if they are not remembered, often the good feelings generated by the event will linger after the memory has faded. We should, as a result, try to keep dementia sufferers active and engaged … it will improve the quality of their lives and the lives of their families and caregivers.

5 - 18.3 First In, Last out - Last In, First Out

Dementia sufferers tend to retain long term memory - even though they often forget recent events quite rapidly. Words that were said minutes ago, events that happened yesterday are soon forgotten, but things that took place 20 or 40 years ago are often recalled with great clarity.

Hence, when it comes to memory, it is a matter of "first in, last out - last in, first out."

This can be frustrating for the person affected, but there are simple ways to capitalize on the situation. Dementia sufferers should be stimulated with activities or conversations that rely on old - rather than new - memories.

This approach can even be applied to reading - an activity that is extremely difficult for dementia sufferers. Most are unable to read new material because they are unable to remember what has happened from page to page. However, many can derive considerable pleasure from re-reading the books that they enjoyed in their youth.

In addition, certain types of memory—music, dancing, playing games—are more resistant to decay. Considerable focus should be placed here as well.

5 - 18.4 Reminiscing Is Beneficial

Reminiscing is one of the most popular and enjoyable activities for people with dementia. It draws on long-term memory, one of the few things that remain intact even during the middle stages of dementia. Many sufferers can recall events from the distant past with surprising clarity, even though they struggle to remember their last meal.

Reminiscing on a one-to-one basis is most appropriate, since group activities tend to be too taxing for most dementia sufferers. Here are some of the guidelines to employ.

Always use a focus for the conversation. People with dementia have difficulty remembering information for more than a few seconds. A relevant memory prop such as a photo or a souvenir will help them to stay connected with the activity. Use clear language. "What did you do during the thirties?" may be too general. Say instead, “What work did you do during the thirties?" Give one or two relevant clues when the person is having difficulty answering.

Focus on skills and past achievements. “It sounds like you were a really good artist in high school” or “Did you find it exciting to be working with such a high-profile company?”

Pick up on non-verbal cues. If the person's eyes show a memory is too painful, drop it and move on to another subject.

Provide stimuli to promote silent reminiscing. Many people with dementia who find it difficult to communicate with others will engage in private reflection. The availability of items such as wall posters, photos, and old music can facilitate private reminiscing.

Offer activities at a level within the person's grasp. It is easy to over-stimulate or place excessive demands on the person's abilities. Something as simple as asking too many questions at one time or demanding a response that the person cannot give can bring about an angry response.

Going slowly gives the person time to absorb the questions, or the stimulus provided by other materials. Make sure the person with dementia has time to respond in whatever way he is able.

Do not expect dramatic responses or improvements. Encourage all responses. Never stop trying - what works today may not work tomorrow, but it may work once again the next day.

5 - 18.5 Stimulate But Do Not Overwhelm

The aim is to get the most enjoyment out of each day. It is important for those affected to take one day at a time, do one activity at a time, and to stimulate them without being overwhelming. For some, 10 minutes may be enough for an activity, and for others, an hour or two is appreciated.

The aim of the activity is to try and stimulate parts of the brain not affected by the illness and to derive enjoyment from the activity. Board games, such as Trivial Pursuit (using the questions on old knowledge and simplifying the rules), dominos, and checkers are quite easy to play and very useful for stimulation.

Other possible activities include physical exercise, going for a walk, listening to music, dancing, and constructing a "This is Your Life" book. (i.e., a scrap book converted into a biography of the affected person's life using photographs, mementos, etc.). This memory book can bring comfort and a feeling of security to the individual.

5 - 18.6 Treatment Varies as Dementia Progresses

As a person with dementia deteriorates, different problems may arise while others may vanish. Early on, a dementia sufferer may become aggressive, suspicious, and paranoid. At this stage anti-psychotic medications, such as haloperidol in low doses for a short period of time (1-3 days) could assist crisis management.

However, it is common for these symptoms to vanish later, and the medications prescribed will no longer be required. Some delusions or hallucinations may be present for a time, but they too often vanish - or lose their intensity and their ability to distress the affected person.

Problems need to be continually reassessed. Treatment that is appropriate at one stage may be inappropriate at a later stage. A day centre for example may be rejected early in the illness by staff as the person may require too much attention and may not benefit from attendance. However, there may be a middle phase where attendance may be stimulating for the patient and helpful for the caregiver.

5 - 18.7 Sequential Regression Occurs With Dementia

Many of the skills that people acquire are lost sequentially with dementia. Think of an infant developing the skills to feed, walk, talk, use the toilet, and dress. In the later stages of the illness, there is regression - and the person with dementia tends to lose these skills in reverse order (starting with dressing).

Even though the dementia sufferer is becoming more and more dependent, it is important never to treat him like a child - or to patronize him. He may be more dependent, but he is still an adult and should be treated as such.

5 - 18.8 Many Factors Affect How Dementia Manifests Itself

Manifestations of dementia are dependent not just on the illness but also on the environment, the family and the person (i.e., what were they like before dementia). Dementia often leads to a caricaturing or an exaggeration of the personality traits that were present before the onset of the disease. Somebody who was dominating becomes obnoxiously so. Someone who was suspicious may become paranoid. Someone who was tidy becomes a perfectionist and obsesses to a fault. Others who were gentle and amiable become even more so.

Frequently there is a flattening of personality and a "loss of self." In some cases, entirely new character traits may become apparent. One of these is disinhibition. Out-of-character behaviour may become quite distressing to family and friends.

Families also influence how dementia manifests itself. In one clinical case, the presence of a spouse was the triggering factor. The wife, in this case, kept insisting that her husband was anxious and uncomfortable in his new environment (a nursing home). Curiously, when he was on his own, he was quiet, gentle, and a pleasure to be with. It was only when he was with his wife that he became anxious and irritable.

It soon became clear that the wife's anxiety was being transferred to her husband. Her presence was influencing how the illness manifested itself.

The environment affects how dementia manifests itself too. If a dementia sufferer tends to wander and lives in a nursing home at the intersection of two busy highways, with a steep ravine out back, clearly extreme measures will have to be taken to ensure the resident remains safe inside.

5 - 18.9 Dementia Affects More Than One Person

Dementia is not just one person's illness—it is the whole family's illness. The burden of care rests squarely on the shoulders of the family in most cases. Many studies now confirm high rates of depression, anxiety, social isolation, and even physical illness in the families of dementia sufferers.

For caregivers to be able to provide high-quality care, they must ensure that they remain healthy. They need to address their own physical and psychological health, and make sure they have some social outlets.

All too often caregivers become totally preoccupied with their role as caregivers and put aside their other roles in life—those of friend, parent, and individual. Caregivers need to look after themselves as well as their charges.

Friends and relatives of caregivers should provide as much support as possible. For some this might mean regular and frequent telephone calls, for others it might mean looking after the affected person while the caregiver does the shopping, goes to the hairdresser, or has a game of cards with friends. Sometimes professional help is required to give the caregiver a break. This may mean the use of a day centre or residential care for a weekend or a week while the caregiver has some respite.

5 - 18.10 Solve Problems Creatively

If a problem occurs, find out why. Analyze the activity by breaking it down into steps. Is the activity appropriate or relevant for the person? Is the person unable to do the activity because of physical constraints, or because of sensory problems or loss?

Is the block a result of cognitive or intellectual impairment such as inability to comprehend spoken words? Is the person motivated? How safe is the activity? These and other questions are necessary to identify problems and arrive at the best possible solutions.

5 - 18.11 Adapt the Environment, Not the Person

Once the problem has been isolated, consider whether the environment can be adapted (e.g., different bathing fixtures or a double lock on the door), or whether the activity can be changed or simplified. Change the rules of the game. At meals, for example, present only one utensil. Or if an activity is too complex, consider doing one part of the activity, so that the affected person can then complete it.

Often very small changes can have a significant impact. For example, if the dementia sufferer becomes confused looking for appropriate clothes to wear, narrowing the range of options available can work wonders. This can be accomplished in a variety of ways (e.g., removing out-of-season clothing, labeling drawers).

5 - 18.12 Create a Sense of Importance

We all need to feel we have something useful to contribute. Activities should be structured so that the affected person feels useful. Optimize their assets. Avoid using childish motivators, such as sweets. Compliments are more effective when given immediately. Avoid communicating failure; instead of saying "that's wrong", say "try another way" and, if appropriate, demonstrate.

5 - 19 CREATING A SAFE ENVIRONMENT

Providing a safe, secure home environment is a challenge for caregivers who are responsible for dementia sufferers. The bathroom and the kitchen are the two major "danger zones" and require special attention, as most accidents happen in these rooms.

The kitchen is the physical and emotional heart of many homes and an especially attractive place for people with dementia. They may want to continue to prepare meals, make a cup of tea, and even clean up afterward. However, the individual may no longer be able to perform these tasks safely or properly.

Fortunately, a variety of "safety related" modifications are possible. This will cut down on the amount of supervision that needs to be done. Latches may have to be put on cabinets and drawers to keep confused loved ones away from dangerous utensils. If there is a concern about breakage, consider buying plastic plates and cups.

If the dementia sufferer deteriorates further and still insists on helping, install a gate or door to make the kitchen off limits - unless another adult is present. As the person becomes more confused, limits will have to be placed on their role in helping prepare food and cleaning up. Use of the kitchen will become more and more restrictive over time. The affected individual may continue doing kitchen tasks safely and independently at first, with supervision later, and eventually not at all.

5 - 19.1 Other Tips to Reduce Home Hazards

In the later stages of dementia several seemingly drastic steps may be warranted - the following material covers some of them.

Making the stove safe:

- ❖ Install an automatic stove motion shut off system that will shut the stove off after 5 minutes of no motion
- ❖ Remove the burner knobs and tape the stem with masking tape
- ❖ Install stove knob covers
- ❖ Place an aluminum cover over the top of the stove completely hiding both the burners and the burner knobs
- ❖ Replace a gas stove with an electric one
- ❖ Turn off the stove's circuit breaker or remove the fuse

- ❖ Replace the pilot on a gas stove with an electric starter
- ❖ Lock the oven door
- ❖ Use a microwave instead

Making the refrigerator safe:

- ❖ Put a lock on the refrigerator door
- ❖ Prop up the front of the refrigerator so that the door closes automatically
- ❖ Remove the door handle of the freezer, use a string pull to open the door and place the string on the top of the refrigerator, out of sight.

Making sinks and showers safe:

- ❖ Reduce the temperature in the water heater to below the scalding point (approximately 120 degrees.)
- ❖ Install automatic temperature mixers to regulate temperature safely
- ❖ Install automatic shut-off mechanisms that turn off the hot water when it reaches a predetermined temperature
- ❖ If flooding is a danger when the patient is unsupervised, turn off the water supply valves
- ❖ Remove and hide stoppers to prevent flooding

Miscellaneous safety tips:

- ❖ Unplug or remove knobs from other appliances such as the coffee maker, toaster, or can opener
- ❖ Cover sharp counter edges with plastic padding
- ❖ Install childproof latches for cabinets and drawers
- ❖ Remove poisonous cleaning agents, insecticides, etc., from accessible cabinets
- ❖ Disconnect or camouflage the garbage disposal
- ❖ Clear out the refrigerator of old food and things that might be harmful if consumed in large quantities

5 - 20 REASONS FOR WANDERING

Many dementia sufferers - especially those with Alzheimer's disease - wander. They feel compelled to keep on the move. This behaviour may appear to be aimless and confused, or it may be highly focused (e.g., getting to a destination or pursuing a goal). Wandering may occur at any time of the day or night and may result in the affected person leaving the safety of their home. This can expose them to several serious hazards (traffic, weather, water, etc.).

5 – 20.1 Types of Wandering

- Aimless wandering; non-focused walking with little or no direction and no apparent destination
- Wandering to relieve boredom
- Wandering to relieve feelings of stress or physical discomfort
- Purposeful or goal-oriented wandering
- Wandering in search of something or in order to return to familiar surroundings from the past; many express a desire to go home
- Wandering in search of security and reassurance
- Wandering to address a physical need, such as hunger or the need to use the washroom
- Wandering due to broken sleep patterns, restlessness, and disorientation at night
- Wandering that results from confusion about time
- Industrious wandering or repetitive behaviour wandering (i.e., the need to keep on the move)

5 – 20.2 Managing Wandering

The following strategies may help caregivers reduce wandering, and ensure that their loved ones are not at risk when wandering.

Reduce the triggers

If a caregiver notices that wandering happens consistently in reaction to the person's immediate environment, then changing those surrounding conditions (e.g., heat or cold, noise, fear of the dark, etc.) may help to reduce the wandering.

It may also be helpful to remove items that trigger a desire to go outside. Hiding car keys or items of clothing associated with outdoors, such as jackets, may help in discouraging outdoor wandering. Consider disguising doors to the outside by covering them or decorating them so that they do not appear to be doors.

Develop meaningful activities

A person with dementia may be able to participate in day-to-day activities, such as doing simple chores or helping with household duties. Consider past skills and interests when considering activities. Switch to another activity if they show signs of becoming bored.

Exercise

Try to get the person with dementia into a regular exercise program. If possible, go for walks outside together, or go to the shopping mall. Regular exercise can use up extra energy and may help the person to sleep more soundly.

Provide visual cues

Even in familiar places, a person with dementia can become confused or lost. Familiar objects, furniture, and pictures can give the person a sense of comfort and belonging. Consider placing labels on doors and in rooms so that he or she can easily find their way through the house. For example, a picture of a bed may help to locate the bedroom. Leaving a light on in the hallway or providing an illuminated clock by the bed may reduce disorientation at night.

Promote safe wandering

Wandering is not to be entirely discouraged, since for much dementia sufferers it is a useful coping mechanism. A safe and secure environment in which the individual may wander freely can often provide a healthy outlet for feelings and reduce anxiety. If there are doors to the outside that you do not want opened, place locks where they cannot be seen or reached. If they are still able to get past the locks, a bell or alarm which signals when the door is opened is a good safety precaution. A safety gate across doors or stairs may help keep the wandering person in a limited area where exploring can be done freely and without risk. A sound-sensitive monitor placed where the individual is, can be used to keep track of his or her location and movements. With very little effort the outdoors can also become a safe place for people who have dementia. A fenced backyard, for example, can offer them a safe environment in which to enjoy everything that nature has to offer.

Some long term care facilities that cater to clients with this condition, design units where individuals can walk around a long hallway that goes around the unit. Resident rooms are on the outside. Activity rooms, offices, storage and showers are on the inside.

Keep records

A diary or log may be helpful in trying to understand the nature of the wandering behaviour. It will help identify such things as: wandering times, patterns and wandering cues. Notes should be made on why the incident occurred, how long it lasted, and what seemed to help address it. It is also a good idea to record any peculiarities that are noticed.

5 – 20.3 Wandering From Home

It is not easy to remain calm and think clearly when a loved one has wandered from home, but the following strategies may prove helpful.

Check common areas

Try to establish a sense of how long the person has been gone. Look inside the house, including the basement, before expanding your search to the outdoors. Check to see if any items such as luggage, car keys, or credit cards are missing. These may provide clues to the individual's whereabouts. If you live in a rural area, do not search on your own. You may endanger yourself and complicate the search for the police.

Contact the police

When contacting the police, share any records you have which may assist in their search. Let the police know about any medical conditions or medications the person is taking. Provide them with a recent photograph and if you know of any areas that the person may have wandered, share this information with them.

Mobilize support

If the family will be involved in the search for the person, ensure that someone stays at home in case the individual returns. As well, alert friends and neighbours that the person has wandered away.

5 – 21 TIPS FOR REUNITING

A person with dementia who has been found wandering will often be anxious and confused. Using the following communication strategies may prove beneficial.

Approach calmly

Approach the person in a casual manner, making sure that they see you coming. If the person does not wish to return home immediately, walk a short distance with them while speaking in a calm, normal tone of voice.

Provide reassurance

Reassure the person about where they are and why. Let them know that the family has been worried about them and will be happy to see them return home. Talk to them about familiar things that may trigger a desire to return home. An invitation to have a cup of tea or feed the dog may be enough to prompt the person to return home with you.

Keeping perspective

The whole experience of wandering can be extremely stressful. Remember that the behaviour is a part of dementia - especially among Alzheimer's disease sufferers. Neither the family, nor the person is to blame.

After any incident, steps should be taken to prevent a recurrence. Keep in mind that physical and chemical restraints should be discouraged since they can have serious effects on the emotional and physical well-being of the person affected.

5 - 22 MEDICALERT

The Alzheimer Society of Canada has partnered with Canadian MedicAlert Foundation, a non-profit organization with more than 50 years of experience in providing a voice to Canadians in an emergency, to enhance the safety of people with dementia.

The MedicAlert ID and service were originally created to help emergency responders treat people quickly and effectively who could not speak for themselves. Today, the service can also help people living with dementia who go missing.

People with dementia can become lost even in familiar places. If you care for someone with Alzheimer's disease or another dementia, the scenario you likely fear most involves that person getting lost and coming to harm. Now, with MedicAlert protection, there is an effective way to identify the person who is lost and bring the family back together.

The program offers:

1. **24/7 Emergency Hotline** Medically trained specialists are available to answer within 5 seconds and immediately supply police and emergency responders with the member's physical description, emergency contacts and critical health information.

2. **MedicAlert Identification** Critical medical information and the Hotline Number are engraved on the ID bearing the MedicAlert symbol recognized by emergency responders.

3. **Family Notification** When called, the 24-hour Emergency Hotline specialists immediately notify caregivers or family to let them know the situation and location of the member, reducing anxiety for everyone.

The protection of a MedicAlert membership includes:

- An exclusive MedicAlert ID
- A comprehensive electronic medical profile with unlimited updates
- A 24-hour Emergency Hotline staffed with trained specialists available in 140+ languages – ready to speak for the member
- Family/emergency contact notification immediately after the hotline is called
- Follow-up with the caregiver after the Emergency Hotline is contacted
- A wallet card with health information and emergency contacts
- Access to an online electronic medical profile anytime, anywhere

The MedicAlert Safe & Found Program annual membership of $129.99 includes the cost of MedicAlert membership for 1 year, a complimentary stainless steel MedicAlert ID bracelet exclusive to people living with dementia, applicable taxes and shipping & handling.

5 - 23 WHEN HOME IS NO LONGER AN OPTION

Eventually many elders with dementia will be unable to remain in their homes especially in situations where they are at severe risk of falling, wandering, or if they have serious behavioral issues. The decision to place an individual with dementia in long-term care is dependent on a variety of factors.

Patients, who are unmarried, or who have increased functional impairments (as measured by "Activities of Daily Living," - or ADL - scales), or who have lower cognitive status at baseline, all have an increased risk for subsequent long-term placement.

According to one community-based prospective study, one-half of patients with dementia are institutionalized within 2.5 years of diagnosis - and the median time from estimated onset of disease to nursing home placement was 5.6 years.

Interestingly, the death of a spouse or hospitalization preceded institutionalization in one-third of cases.

5 - 24 DEMENTIA AND DRIVING

In looking out for the safety of elders with dementia, "driving" also must be put on the table for discussion.

Think back to when you first earned the right to drive a car. Think of the independence, convenience and satisfaction that driving provided. Now, imagine how devastating it would be to learn that your driving privileges are being removed. Think of the loss of dignity and self-esteem.

For many elders, especially those with dementia, the decision to stop driving is often made for them.

Taking the keys away can evoke high levels of emotion for both the caregiver and the person with dementia. Often the entire family grapples with the decision. As unpleasant as it can be, we cannot forget that most forms of dementia involve a progressive degeneration of the brain. As dementia advances, memory, judgment, response time and physical agility are all compromised.

Driving a motor vehicle is a complex activity that requires quick reactions, good judgment, an understanding and recall of the rules of the road, an ability to find a destination, and good eyesight and hearing.

A diagnosis of dementia does not automatically mean that the person is incapable of driving. In fact, individuals with dementia are often able to drive for several years after diagnosis. However, eventually the loss of orientation, judgment and the visual-spatial difficulties associated with dementia may place the affected person—and the public—at risk. Unfortunately, there is, at present, no test to determine the precise moment at which a person with dementia should stop driving a motor vehicle. And when the decision is made it may be strongly resisted. Attempting to remove driving privileges is a veritable minefield for family caregivers and physicians. It is one that must be traversed for the safety of all.

5 – 24.1 Warning Signs

When driving is recognized as dangerous, automobile access must be removed immediately. Signs that a person's driving abilities are declining include traffic violations, accidents, slow response time, taking too much time to reach a destination, or not reaching the destination at all. The driving ability of a person with dementia needs to be monitored in conjunction with family members and health care professionals. It is vital that all involved in this process remain aware and involved. How and when to insist that driving stops is far from an easy decision. But a shared concern for the well-being of the individual and the public - along with open dialogue - should facilitate the decision-making process.

Caregivers can often achieve the best results by seeking support from professionals outside the family. Some of the key warning signs to look for are covered in the chart below, which has been prepared by The Hartford Insurance Company.

Table 5-4 Driving and Dementia - Warning Signs

Warnings	Date(s)	Notes
Incorrect signaling		
Trouble navigating turns		
Moving into a wrong lane		
Confusion at exits		
Parking inappropriately		
Hitting curbs		
Driving at inappropriate speeds		
Delayed responses to unexpected situations		
Not anticipating potentially dangerous situations		
Increased agitation or irritation when driving		
Scrapes or dents on the car, garage, or mailbox		
Getting lost in familiar places		
Near misses		
Ticketed moving violations or warnings		
Car accident		
Confusing the brake and gas pedals		
Stopping in traffic for no apparent reason		
Other signs		

5 – 24.2 Help From Health Care Professionals

Health care professionals will be more likely to discuss driving issues with a dementia sufferer if a caregiver has already consulted with them (and shared their observations about driving behaviour) privately. This input can help because physicians do not have tests to determine definitively when a person in the early stages of dementia should not drive.

In addition, some doctors may hesitate to bring up a topic that is this emotionally charged for fear of jeopardizing their relationship with the patient. In most jurisdictions, physicians must report patients with a medical condition that may make it dangerous to drive.

5 – 24.3 Other Sources of Support

Lawyers, financial planners and care managers may be able to raise questions about driving safety. Caregivers can enlist their assistance by asking them to mention the subject as part of the planning process. Alzheimer support groups also offer caregivers and persons with dementia opportunities to share their concerns and explore options.

5 - 24.4 Easing the Transition

The following tips can help people with dementia manage the transition from driver to passenger. The person with dementia should:

Be encouraged to talk to a friend or family member about what driving means to them. Work with their family to create a transportation plan that meets their needs. Consider this agreement about driving to balance independence with safety.

Volunteer to be a passenger, allowing others to do the driving.

5 - 24.5 Tips to Help With the Decision

The following tips can help caregivers who are struggling to decide when to limit or cease the driving privileges of a person with dementia:

- Keep a written record of observable driving behaviour over time.
- Share observations of unsafe driving with the person with dementia, other family members and healthcare providers. Allow the person with dementia to express how he or she feels about not driving.
- Create opportunities for you or others to drive the person with dementia.
- Ask professionals outside the family to raise questions about driving safety.
- Initiate conversations about driving and transportation needs early and often.

The following agreement (from The Hartford Insurance Company) may prove useful:

Agreement with My Family about Driving

To my family:

The time may come when I can no longer make the best decisions for the safety of others and myself. Therefore, in order to help my family, make necessary decisions, this statement is an expression of my wishes and directions while I am still able to make these decisions.

I have discussed with my family my desire to drive if it is safe for me to do so. When it is not reasonable for me to drive, I desire _____ (person's name) to tell me I can no longer drive.

I trust my family will take the necessary steps to prohibit my driving in order to ensure my safety and the safety of others while protecting my dignity.

Signed: _____Date _____

5-25 RESPONSIVE BEHAVIOURS

Anyone who deals with elders with dementia must learn to distinguish and cope with a variety of changes in mood and behaviour. People with dementia suffer from depression, anxiety, and may sometimes demonstrate very aggressive behaviour as a result. Much of this stems from their inability to remember, reason, and communicate.

Some of the major problem behaviors exhibited include wandering (covered earlier), paranoia, suspicion, aggression and not looking after personal hygiene in some cases. All can be overwhelming for caregivers and others.

A variety of measures can be taken to help reduce the incidence and impact of problematic behaviors.

Among them:

- Modifying the person's environment in order to reduce confusion caused by over stimulation, such as reducing noise and glare from windows.
- Explaining a task before you do it, such as saying, "I am going to help you put on your shirt."
- Providing a predictable routine at home with structured times for meals, bathing, exercise, and bedtime.
- Providing reassurance to the confused patient without challenging their misperceptions.

If these strategies are not helpful in managing the affected person's behaviour, it may be necessary to have a physician prescribe medications to manage the symptoms (e.g., depression, restlessness, hallucinations, hostility, and agitation).

Before resorting to medication, the physician will want information regarding the problem. (i.e., it's triggers, frequency, the time of day it occurs, and the strategies already tried).

5 - 25.1 Depression

There is a complex relationship between depression and dementia. The symptoms of dementia and depression are often similar (e.g., withdrawal from social activities and general apathy). The symptoms can be so similar that it is not uncommon for an elder with severe depression to be misdiagnosed as having dementia.

The situation is further complicated by the fact that the person with dementia may also be depressed. Dealing with the consequences of a diagnosis of dementia, a major life event, may trigger the onset of depression. There may be a sense of loss and a period of coming to terms with the diagnosis.

Depression is four times more likely to strike people over age 65 than under. Sadly, most people never get the help they need.

Symptoms of depression

The presence of at least four of the following symptoms over a two-week period may indicate depression:

- Depressed or irritable mood
- Feelings of worthlessness, self-reproach, or excessive guilt
- Suicidal thinking or attempts
- Motor retardation or agitation
- Disturbed sleep
- Fatigue and loss of energy
- Loss of interest or pleasure in usual activities
- Difficulty thinking or concentrating
- Changes in appetite and weight

Medicines

Antidepressant medicines can be very helpful for people who have both dementia and depression. These medicines can address such symptoms as sadness and apathy, and they may improve appetite and sleep problems as well. None of the medicines prescribed are habit-forming. Other medicines are available if the symptoms of depression include such problems as hallucinations and anxiety.

What else can help?

Try to maintain a daily routine for the person who has dementia. Avoid loud noises and over stimulation. A pleasant environment with familiar faces and mementos helps soothe fear and anxiety.

Have a realistic expectation of what you can accomplish. Expecting too much can make everyone feel frustrated and upset. Let the dementia sufferer help with simple, enjoyable tasks, such as preparing meals, gardening, doing crafts, and sorting photos. Be positive and offer frequent praise.

5 – 25.2 Mood Swings

Everyone has a bad day occasionally or may become sad or moody from time to time. But someone with dementia can exhibit rapid mood swings for no apparent reason, (e.g., from calm to tears to anger to calm in a few minutes) - and the changes can be drastic. Dementia sufferers often become extremely irritable, suspicious, or fearful.

At the other extreme, the dementia sufferer may demonstrate a complete lack of initiative. They may become very passive and require cues and prompting to get them involved in the most basic of activities.

Remember that the behaviour is not deliberate - and it is likely out of the control of the dementia sufferer. What they often need is reassurance, even though it may not appear to be the case. For them, trying to make sense of the environment around them becomes a difficult task.

Simple tasks such as bathing, dressing, and eating are all major hurdles to overcome. People with dementia are frequently confronted by failure, so maintaining their dignity is very difficult.

Three common worries which caregivers express:

1. Is the person for whom I am caring brooding about past tensions and misunderstandings, which have occurred between us?
2. Does he (or she) hate me now?
3. Have I done something unintentionally to upset him (or her)?

These are all normal reactions—it is important to realize that most of the anger and aggression are directed against the caregiver, because they are available. However, it is not a calculated personal attack.

5 – 25.3 Violence and Aggression

Aggressive behaviour may come on without warning and make the caregiver feel very apprehensive. However, if it is possible to determine what situations trigger catastrophic behaviour (perhaps by keeping a diary), it may be possible to manage it effectively.

Sometimes the person with dementia may become very violent for a short time. They may become verbally abusive, cause damage to property or become aggressive physically (this often occurs when someone else initiates physical contact).

This could, for example, be caused by someone suddenly walking into the person's bedroom, awakening them and beginning to get them ready for bath time. Try to stay calm and do not show fear or alarm. Try to understand that even if the aggression is directed at you, it is not a personal attack. It could be from the person not recognizing you. It could be an act of protection as well.

Violence could be caused by:

- **Defensive behaviour** - people with dementia may feel humiliated and frustrated when they are placed in a situation where they must accept assistance, especially with intimate tasks such as bathing and toileting. When their independence and privacy are disrupted, they may react angrily.

- **Failure of competence** - the person is not able to cope with certain tasks and may feel a failure.

- **Misunderstanding and bewilderment about what is going on** - as the illness progresses, the person may be bewildered by events. For example, accusations of stealing may be an attempt to make sense of their inability to locate something and an unwillingness to accept that they have forgotten where they put it.

- **Fear** - if the person is unable to recognize people or places, this may be very frightening. The person may be convinced they should be somewhere else (e.g., childhood home) or may believe the person with them is a stranger. Sudden noise or people approaching from behind may cause a hostile reaction. Changes in routine such as the presence of a lot of people, a special event, distracting noise or activity may cause the person to feel unable to cope.

Coping with aggressive behaviour in the elder:

- Institute preventive measures
- Attempt tasks, which cause outbursts at the time of day when the person is at his best
- Try not to rush the person—reduce stress by minimizing distractions such as loud noise or excessive activity
- Be aware of the person's limitations and do not expect too much
- Encourage independence by allowing the person to do as much for himself as possible even if it takes longer and is not as efficient
- Avoid confrontation wherever possible—try distraction or suggesting alternatives
- Praise things that are done well and try not to criticize
- Think about how to offer help tactfully without taking over
- A simple suggestion such as having a cup of tea may defuse the situation—or you may need to withdraw until things have calmed down
- It may be helpful to explain the situation to other people
- Be aware of warning signs such as anxiety or agitation (flushing or restlessness, or refusal to comply with requests)
- Exercise may be a helpful preventive measure

If you suspect the person is ill or in pain, particularly if the aggression is uncharacteristic, it would be wise to consult a physician. The outburst may have been caused by an infection or discomfort, which can be remedied

Remember that preventive measures may not always work; do not blame yourself if aggression does occur but concentrate on handling it as calmly as possible.

Coping Strategies

- Do not attempt to restrain the person, lead them away, corner them, approach them from behind or initiate any form of physical contact; it may be better to leave them alone until they have recovered, or you may wish to call in a friend or neighbour for support
- Try not to take it personally
- Try not to raise your voice
- Do not provoke by teasing or laughing
- Avoid punishment—the person will probably not remember the event and is therefore not able to learn from it
- Try not to show fear or alarm
- Try to provide alternatives to the behaviour
- Speak in a calm, reassuring voice and attempt to distract
- Try to remain detached and do not allow yourself to be provoked or drawn into an argument; try taking a deep breath and counting to ten
- Try to tell yourself that you are dealing with the illness rather than the person
- If you do lose your temper, do not feel guilty—but do try to talk it over with a friend or professional worker who can offer you support
- If aggressive incidents are very frequent, consult a physician and, if necessary, a geriatrician or psychiatrist—it may be necessary to consider using some form of medication and this will need to be done with careful monitoring since some tranquilizing medications can increase confusion

5 - 26 OTHER BEHAVIOURS

5 – 26.1 "Sundowning" or Sundown Syndrome

People with diseases such as Alzheimer's often have behavioural problems in the late afternoon and evening. They may become demanding, suspicious, upset or disoriented, see or hear things that are not actually present, and believe things that are not true. Alternatively, they may pace or wander around the home when others are sleeping. This late afternoon/evening behaviour is called "sundowning."

While experts are unsure how or why this behaviour occurs, they suspect that the problem may be a result of a combination of the following:

- The person with dementia cannot see well in dim light and becomes confused
- The impaired person may have a hormone imbalance or a disturbance in his/her biological clock
- The person with dementia gets tired at the end of the day and is less able to cope with stress
- The person is involved in activities all day long and grows restless if there is nothing to do in the late afternoon or evening
- The caregiver communicates fatigue and stress to the person with dementia and the impaired person becomes anxious.

In care homes sundowning can occur because of the chaos or confusion around shift changes in late afternoon.

Addressing Sundowning

1. Make afternoon and evening hours less hectic. Schedule appointments, trips, and activities such as baths or showers early in the day.

2. Help the person to use up extra energy through exercise. For the person who tends to pace or wander in the evening, you may want to arrange at least one or two brisk walks during the day.

3. Control the person's diet. Reduce foods and beverages with caffeine (chocolate, coffee, tea, and soda) or restrict them to the morning hours to reduce agitation and sleeplessness. An early dinner or late afternoon snack may also help.

It is important to provide regular activities and you may want to discourage napping during the day if nighttime sleeplessness is a problem. You may want to reduce the level of noise from radios, televisions, or stereos, control the number of people who visit in the evening hours, or confine noisier family activities to another area of the house.

Consult with your physician who may be able to prescribe medication to encourage sleep. At the same time, your physician can check for signs of depression, or physical problems, such as prostate difficulties that might lead to frequent urination. This condition can cause pain and make sleep uncomfortable.

Make it easy for the person to use the bathroom. Consider a bedside urinal or commode. Alternatively, encourage the person to use the bathroom before going to bed. Keep rooms adequately lit. Good lighting may reduce the person's confusion. A night light may prevent the person from becoming agitated in unfamiliar surroundings.

5 – 26.2 Shadowing

Sundowning is often accompanied by "shadowing," where the person with dementia either follows or mimics the caregiver, often talking, interrupting, and asking questions repeatedly. At times, the person may become upset if the caregiver wants to be alone.

While shadowing and other forms of agitation vary from person to person, the caregiver may be able to manage the behaviour by asking herself the following questions:

1. How long does the behaviour last?
2. At what time of day does it occur?
3. Do certain people or surroundings trigger the behaviour?
4. What seems to calm the impaired person?

Once you establish answers to these questions, you may be able to avoid the situations that bring about shadowing and instead introduce activities that help calm the affected person. Some medications may also be helpful.

5 - 27 DEMENTIA AND COMMUNICATION

Communication involves getting across what you mean and having another person really understand it. This is not always easy, even under the best circumstances, when you are dealing with someone with dementia. Communication can be quite difficult. The disease impairs the person's ability to understand words, to find words to use, and to put ideas together and hold them in place. Loss of the ability to communicate with others may frustrate the dementia sufferer. The person may feel cut off from others. He or she may feel a loss of control over things. This, in turn, may make the person feel less secure and more anxious. Challenges in communication may pose special problems for the caregiver.

A caregiver is concerned with providing companionship, ensuring the patient's safety, and managing the daily routine. Communicating as well as possible with the impaired person is very important in meeting these caregiving goals.

It may well be necessary to set up new ways of communicating with the person. The caregiver will have to be mindful of safety as well. A person who cannot understand or remember safety warnings runs an increased risk of self-injury and even of injuring others. The caregiver must be alert to any problems such as vision or hearing loss, which might further impede communication. Finally, as the person becomes less able to use good judgment, a caregiver will need to make all decisions for him or her.

5 - 28 IMPROVING COMMUNICATION

Good communication involves the following:

- Active listening
- Watching and listening. These activities play a big part in good communication. The goal of active listening is to understand not just the words a person says but the meaning the person is trying to get across
- The timing and the setting where communication takes place
- Some settings make communicating easier while certain times seem to be better than others. Be sensitive to potential problems and eliminate distractions
- Effective self-expression

Think ahead about what you will say as you speak with an affected loved one. Know what information you want to share or find out and break this information down into individual parts. You will want to simplify everything as much as possible. For example, give just one direction or piece of information at a time. Just ask one question at a time. Try to think of brief, easy-to-understand words and sentences to explain what you mean but speak as you would to an adult. Do not talk down or use 'baby talk.'

Be sensitive to your own style of communicating. Take note of how you say things. Are you saying what you really intend? Are you saying it clearly and simply? Do you give other messages through your tone of voice, facial expression, or your body language? Listen to yourself. Is your voice louder than usual? If so, you may be perceived as angry or upset. Even if the impaired person has a hearing problem, try to speak in a clear, pleasant voice. Speaking slowly and clearly will help. (Remember to always speak in an adult-to-adult manner.)

Watch your "body language." Are you smiling or frowning as you speak? Are you at ease or tense? If your words and the way you say them do not agree with how you feel and what you really mean, you may very well give a mixed message. Impaired people do not necessarily lose the ability to "read" such non-verbal cues. This process is completed at a subconscious level.

5 – 28.1 Improving Listening Skills

Stop talking. You cannot listen if you are doing all the talking. Be patient. If a thought is difficult or complex, it may take longer for an impaired person to understand or respond. Two or three minutes may be needed before the person can even begin to answer your question.

Keep in mind that you can repeat the question or idea after waiting a few minutes for a response. Keep things simple. Use short sentences and plain words. Avoid complicated questions or directions.

Anticipate problems. Be prepared, for example, to repeat yourself many times without losing your temper. Do not interrupt. The impaired person may need extra time to express what he or she wishes to say.

Show interest. Let the person know that you care what he or she is trying to say. Maintain eye contact and stay near the person. Try to sit if the impaired person is sitting or lying down, so you are both at the same level. Sometimes a gentle touch on the hand can be a way of making sure you have the person's attention before you begin speaking.
Be gentle and make allowances for poor behaviour. Outbursts are not unusual with this disease, but these are not deliberate. Try to be calm and to use tact, even if the impaired person is loud or abusive. Try to respond to any negative statements with understanding comments until the angry outburst ends.

Sometimes the person will say things that hurt you very much, will use language that offends you, or will speak in a way you do not like. At these times, it is important to remember that while these things do hurt, they are not meant personally. It is the disease speaking, not the individual.

5 – 29 IMPROVE THE SETTING AND TIMING

Make sure the impaired person can see you well. Sit or stand directly in front of the person and look at him or her when you speak. Avoid glaringly bright or too dark settings.

Avoid distractions. Communication will be hard, if not impossible, under several circumstances:

- When the impaired person is involved in some other activity that requires concentration.
- When the background is noisy (loud street noise, or the sound of the television or stereo).
- When other things or people can attract the impaired person's attention (at shopping centres or restaurants, for example).

Steps to Take:

- Set aside a quiet place. You may even want to set aside a certain area in your home just for communicating. Try to find a quiet, simple place where you can go when you want to get something across to the impaired person. This could be a separate room or perhaps just a corner.
- Plan and take extra time. Try to observe the impaired person's daily patterns.
- Does he or she seem better able to communicate at certain times of day? If so, you can take advantage of good times for important activities and communications. You will also be able to anticipate problems during the bad times and be prepared to allow extra time for explanations.

5 - 30 PLANNING AFTER THE DIAGNOSIS

A diagnosis of dementia can be devastating to the person affected and to family and friends. Eventually people with dementia become unable to care for themselves. This raises a variety of issues with respect to financial matters, legal guardianship, wills powers of attorney and estate planning.
The following provides a brief overview of what to expect in the days, weeks, months, and years after a diagnosis of dementia.

5 - 31 CAREGIVING CHALLENGES

Dementia caregiving presents its own unique challenges. Please review the chapter on caregiving for more information on coping with these challenges and incorporating tips to make life easier for everyone.

5 - 31.1 Basic Tips For Caregivers

In the early stages, when there are relatively few symptoms, caregiver responsibilities include being attentive to the dementia sufferers needs, mitigating memory or communication problems, and staying alert to changes in the person's condition. Regular visits with the person's physician should also be scheduled.

This is also the time to commence financial planning, which includes the execution of a living will or trust, and assignment of durable power of attorney for property. Any benefits that the caregiver or dementia sufferer may be entitled to (among them certain tax deductions) should also be applied for. A power of attorney for personal care should also be completed, to ensure the individual’s care wishes are known and followed.

In the middle stages of the disease, depending on the degree of impairment, there may be a need make some home adaptations to accommodate the dementia sufferer and ensure their safety. There will also be a need to carefully manage and monitor a medication schedule.

At this time, it may also be necessary to commence nursing and custodial care (personal hygiene, use of the commode, etc.). As well, caregivers will likely be actively participating in legal and financial decision-making at this point.

During the final stages of the disease, caregiver responsibilities may include being as attentive as possible to needs that can no longer be expressed; maintaining the medication schedule; arranging for an alternative living situation and preparing for the eventual death of the sufferer.

5 - 31.2 Money Matters

If the bank account is in joint names, the partner of the person with dementia can continue to operate it without any change in arrangements. However, problems can occur if the person with dementia uses the account inappropriately or has accounts in their name only.

Measures must be taken to ensure that the responsibility for managing financial matters is removed from the person with dementia.

Early planning allows the person affected both to participate in the process and make sure that their wishes are carried out. It also ensures that any documents (e.g., trusts, living wills, powers of attorney) that may be necessary are processed while they are still legally competent.

5 - 31.3 Family Meeting

Many experts suggest that a family meeting should be held as soon as possible after a diagnosis of dementia. All key family members (including the person with dementia) should be in attendance.

Among the topics that should be covered:

- Location of a will; drafting of a will if necessary
- Estate property and asset distribution
- Powers of attorney
- Funding for long term care
- Life insurance policies
- Funeral plans and burial plots
- Location of bank accounts/numbers, and investments
- Location of tax records
- Location/names for lawyers, accountant, financial planners, and brokers
- Location and information about any pension plans, RRSPs, TFSAs, securities, etc.
- List of any bills due and due dates

A contingency plan should also be put into place - especially in situations where the primary caregiver is also elderly or in poor health.

5 - 32 CONCLUSION

Although there is no known cure for dementia, there is much that can be done to improve the lives of individuals who suffer. To begin with, we must continue to focus money and resources on research. The Canadian Institutes of Health Research (CIHR), the Government of Canada's premier agency for health research, currently invests tens of millions of dollars in dementia research. As a society we need to provide ongoing support to efforts of this nature.

We also need to work on strengthening Canada's health care system … particularly as the number of elders - and elders with dementia will increase dramatically during the coming years.

In addition, we need to focus on removing many of the barriers that limit access to the services available to dementia sufferers. The experts who collaborate with communities and care providers have identified eight barriers, including: the stigma of dementia, lack of

privacy and anonymity, lack of awareness and lack of access to services because of distance. Several proposals directed at overcoming these barriers include making caregivers more aware of available services and how they can help, and better public education designed to break down the stigma that is associated with dementia.

Dementia is all about communication; communicating with the affected individual, medical staff, family, support staff, and caregivers. After the initial diagnosis, a lot of coordination is necessary to ensure the best possible quality of life for the dementia sufferer.

As a society, we must listen with our ears, our eyes, and our hearts. We must focus on the individual we are helping. We must focus on their needs and make their lives as fulfilling as we possibly can.

Danny Thomas said it best years ago, “Success is not built on what we accomplish for ourselves. It’ foundation lies in what we do for others.”

5 - 33 RESOURCES

- Alzheimer Society of Canada Landmark Study Report #1
- https://alzheimer.ca/en/research/reports-dementia/landmark-study-report-1-path-forward
- Alzheimer Society of Canada Landmark Study Report #2
- https://alzheimer.ca/en/the-many-faces-of-dementia-in-canada-landmark-study-volume-2
- Alzheimer Society of Canada National Resource Library
- https://alzheimer.ca/en/help-support/dementia-resources/national-resource-library

- Alzheimer’s Foundation of America: The Apartment-A Guide to Creating a Dementia-Friendly Home https://alzfdn.org/theapartment/
- Research Institute for Aging: By Us For Us Guides
- https://the-ria.ca/resources/by-us-for-us-guides/
- World Alzheimer Report 2023
- https://www.alzint.org/resource/world-alzheimer-report-2023/
- Defy Dementia https://www.baycrest.org/podcast/episode-7
- Mc Master Optimal Aging Portal: Dementia Risk Reduction
- https://www.mcmasteroptimalaging.org/e-learning/dementia-risk
- BrainFacts.org: Alzheimer’s & Dementia
- https://www.brainfacts.org/diseases-and-disorders/topic-center-alzheimers-and-dementia?active=Alzheimers%20Disease&Dementia
- Alzheimer driving - The Hartford Insurance Company
- https://www.thehartford.com/resources/mature-market-excellence/dementia-driving
- Mace, M.A., The 36-Hour Day (Baltimore: Johns Hopkins University Press, 1991).
- The Forgetting by David Shenk – Book and DVDs

- Parkinson Society of Canada www.parkinson.ca
- MedicAlert Outreach Programs: Safe and Found https://www.medicalert.ca/programs
- Cogniciti-Brain Health Assessment
- https://cogniciti.com/Test-Your-Brain-Health/Brain-Health-Assessment
- Dementia numbers in Canada, Alzheimer Society of Canada Landmark Study, 2022, 2024

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Chapter 6

Nutrition, Malnutrition & Elders On the Move

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6 - 1 KEY OBJECTIVES OF THIS CHAPTER

Part one looks at the role that food plays in our lives. We will look at what are good nutrition and malnutrition outcomes? The common barriers to healthy eating will be discussed and ideas for improving nutritional status in elder years. The material that follows is designed to help you support your clients and the people you care about.

Part two looks at the benefits of exercise and how exercise can improve health span.

6 - 1.1 How Will This Objective Be Achieved?

We will examine a variety of "keys" to longevity - lessons from the Blue Zones with attention paid to nutrition, digestive health, and exercise. Ideas for increasing elder activity will be discussed.

We will also look at such elder specific topics as:

- Causes of poor elder nutrition/malnutrition
- Common barriers to healthy nutritional status
- Healthy small meals
- Community supports for meal delivery
- The role of supplements in elder diets
- The importance of exercise - at any age

A healthy lifestyle - combining quality food with exercise - can both prevent and improve the impact of many age-related conditions. We now know that our health span, which is the number of years we remain healthy in old age can be lengthened. As discussed in Chapter 2, successful populations where people live the longest lives consistently reaching 100 years, with few chronic conditions can be found in The Blue Zone. Researchers found that good nutrition and having an active life has a huge impact on health span.

Understanding the role nutrition and fitness play in preventing such conditions as Alzheimer disease, osteoporosis, diabetes, heart disease, and other chronic and debilitating conditions is the first step towards a long, productive and satisfying old age.

6 - 2 INTRODUCTION

Aging - of course - cannot be avoided. It is an ongoing, progressive and predictable process that affects the growth, development and ultimate decline of all living organisms. It is not an illness … it is a natural process that unfolds over time.

And yet, while it is expected that bodily functions will decline over time, much of what we have come to view as a normal part of aging - such as disease and disability - is largely preventable. How we live can have a dramatic impact on how we age.

An increasing number of studies, in fact, have demonstrated that our health is in our own hands—determined by the many choices we make each day in relation to nutrition, fitness, and lifestyle.

Many of the debilitating conditions that we associate with aging can be effectively managed and even prevented. Cancer statistics are a case in point. The number of cancer cases directly related to genetic factors is, in fact, quite small. Most cases of cancer are directly linked to environmental factors (e.g., lifestyle) and up to 80% of these cases are entirely preventable.

However, taking the necessary health-promoting steps, designed to reduce the risk of disease, requires both awareness and action - education and commitment.

All of this is not to say that aging itself does not present us with some unique problems and issues. Clearly it does. But the way to properly address these challenges is not through surgery, cosmetics and elixirs. The best way to try and retain our youth is via a healthy lifestyle. Proper nutrition, regular exercise, and a satisfying and fulfilling life are the best ways to "turn back time."

6 - 3 KEYS TO A LONG HEALTH SPAN

According to many health experts, the human body was designed to last for roughly 120 years. Surprisingly, even the Bible lends some support. Genesis 6:3 reads: “And God said: My spirit shall not always dwell in a man since he is of the flesh; yet the number of his days shall be 120 years.”

Most of us, however, will not live nearly this long. A variety of factors prevent us from reaching our life and health span potential. Which raises an interesting question: "what do Blue Zone’ communities know that they can teach others?

Fortunately, there is much that we can learn from the individuals and cultural groups that have pushed the envelope and come within reach of their full potential. As stated in other chapters there is more focus today on increasing the number of years an elder can remain in good health and enjoying a healthy lifestyle.

As we have read earlier in the Blue Zone section, the explorers identified a range of commonalities in these Blue Zone communities. In brief, lifestyle choices including movement every day, having a purpose driven life , eating until you are 80% full and enjoy a largely plant based diet. Connections with family members and the community were deemed important. A fuller discussion on Blue Zones can be found in Chapter Two, Successful Aging: Improving Health Span.

6-3.1 Plant Based Foods

'Plant based' is a newer term. A plant-based eater may follow a vegetarian diet. Eating more plants: dark green vegetables , tofu, edamame, whole grains. nuts, seeds, soy and quinoa are all foods we can incorporate into our lives even if we wish to also include meat, fish. eggs and cheese.

To learn more, go to:nutrikaur.ca/blog/comminly-asked-questions-about-plant-based-eating.

6-3.2 Food is More than Nutrition

It is noteworthy that food is not just about consuming calories Food is connected to culture and provides nourishment to body and soul. Food is used to express love, entertainment, celebration and comfort. We give and receive food as gifts especially around holidays and special occasions.

Food too affects our mood. Mood enhancers such as complex carbohydrates, lean protein and colourful produce such as red, yellow and green peppers are recommended.

However. celebrations often include alcohol, cake, ice cream, donuts, muffins, etc which may temporarily taste wonderful but lead to feeling lethargic and having a low mood. The goal is not to eliminate favourite foods completely but to enjoy them just on occasion.

6-3.3 What is nutrition?

Nutrition has been described in many ways. Nutrition is the biochemical and physiological Process by which an organism uses food to support life.

Good nutrition means that your body receives all the nutrients, vitamins and minerals it needs to function at its best. Sadly 34% of Canadians over the age of 65 are at risk of malnutrition.

6-3.4 Malnutrition

Malnutrition is a condition whereby the body is deprived of vitamins, minerals and other nutrients.

Some elders are ‘failing to thrive’ leaving them as risk for falls, slower recovery from illness and surgery and many lead to hospitalization. Deprived of needed nutrients, balance and muscle loss (sarcopenia) may be implicated.

There is also a great deal of evidence to suggest that nutritional deficiencies also have an impact on the aging process. With age, our biological systems become slower and less efficient - and we also lose much of our supply of enzymes. These developments severely hamper our body's ability to assimilate nutrients. To the extent that our bodies rely on these nutrients for the support, repair, and regeneration of the body’s cells - this slowdown in assimilation is highly problematic.

6-3.5 Roadblocks to Good Nutrition

The circumstances surrounding every elder are individual . Their social support system and overall health can have an impact on eating well. Those elders living with chronic conditions such as osteoarthritis may experience difficulty managing pain. Others may have moved closer to their families only to find busy families have little time for them.

A decrease in appetite may be related to poorly fitted dentures, difficulty swallowing or problems with the gastrointestinal tract. No longer getting the “thirst cues” can lead to dehydration. Having a finite amount of energy may mean the life long favourite recipes seem labour intensive.

6-6 ENVIRONMENTAL FACTORS

As indicated in an earlier chapter, environmental factors like injury, pollution, radiation, chemicals, pesticides, over-exposure to the sun, and food - much of it in the form of damaged fats from frying, hydrogenating, and processing - all help to accelerate the aging process.

Many of these environmental factors contribute to the breakdown of nucleic acids, proteins, and cell structures - a breakdown that helps to facilitate the production of "free radicals" - highly reactive, unpaired oxygen molecules that cause havoc within our system

Poverty also exacts a toll. It can lead to loneliness, low self-confidence and esteem, limited community involvement, and isolation. As well, elders on a limited budget may find it difficult to afford proper shelter, recreation, health care - and the nutritious foods they need to stay fit.

And, of course, attitude plays a part. Depression, despair and cynicism are antithetical to long life.

6 - 7 YOU ARE WHAT YOU EAT

There is abundant evidence to show that an optimal level of nutrition can extend life span and improve quality of life. We also know that eating fewer calories is beneficial as is eating until you are 80 % full.

The food we eat is what fuels us and sustains us. The nutrients in food are used by the body to promote normal growth, maintenance, and repair.

We literally are what we eat. And yet many of us make very bad choices when it comes to the food we consume.

There are seven essential nutrients: carbohydrates, proteins, lipids, water, vitamins, minerals, and enzymes. We need all these substances to maintain a healthy, properly functioning body. When some of these nutrients are missing, or their intake is unbalanced - then disease will tend to develop.

The lion's share of our nutrient intake should be in the form of "macro-nutrients." These include carbohydrates, lipids, proteins, and water - the four basic compounds that the body is literally composed of. They are termed *macro* because we need them in fairly large quantities, and their daily requirements are measured in grams.

Micro-nutrients include vitamins, minerals, and enzymes. These nutrients are the catalysts that prompt the macro-nutrients to interact. While micro-nutrients are needed in smaller amounts, with daily requirements being measured in milligrams or micrograms, they are equally important in terms of overall health and proper bodily function.

Enough intake of fibre has been shown to enhance both elimination and detoxification. It also helps to lower blood fats, balance sugar levels, boost energy, improve immunity, and minimize the risk of digestive and bowel disorders.

6 – 7.1 Protein

Protein is the primary cellular build block and the largest substance in our bodies after water. It is essential to produce hormones, enzymes, and the antibodies that protect us from disease.

When elders do not eat enough protein it can affect their health and develop sarcopenia, muscle loss.

While meat is the best-known source of protein, there are a variety of other foods that supply protein without also supplying saturated fat and the many diseases linked to it. Alternative sources of protein include whole food legumes, nuts, seeds, and even vegetables. Almonds, sunflower seeds, lentils, soybeans, black beans, green beans, and mushrooms are all excellent sources of protein.

6 – 7.2 Water

Legend has it that the fountain of youth, for which Ponce de León earnestly searched, is a spring of water located on a Bahamian island. In a remarkable twist, it turns out that water can, in fact, help to keep us young. . Drinking lots of pure water each day from a spring, a filtered water source, or even a tap can help to keep our cells hydrated. Our bodies are 70% water and need constant hydration. Dr. Alexis Carrel, a French-born American surgeon and biologist who won the 1912 Nobel Prize, once said, "The cell is immortal. It is merely the fluid in which it floats that degenerate."

Water has other benefits as well. It helps eliminate toxins from the body; it expands blood circulation and increases the effectiveness of the immune system; and it may even help prevent disease. Women who drink enough water reduce their risk of developing breast cancer by 79% - and men reduce their risk of developing prostate and testicle cancers by 32% (from a study completed by The University of Sheffield, England in 1996)

Enough water intact also has some elder specific benefits. According to Steve Meyerowitz, author of *Water, The Ultimate Cure,* the stooping of older people, their dry wrinkled skin and brittle bones are all largely a function of dehydration.

Drinking water regularly is clearly one of the simplest ways to improve health and prevent some of the effects of aging.

Most experts agree that if you feel thirsty, you are already dehydrated. The only time we should not drink water is with meals, as it dilutes our digestive enzymes making them less effective.

Elders may lose the cue that says, 'I am thirsty and need water.' Having a water bottle or thermos at the ready will act to remind elders to drink water more often,

6 – 7.3 Vitamins and Minerals

Naturally packaged in perfect amounts in the whole food we eat, vitamins and minerals are vital for life. A well-balanced diet made up of whole food will provide more than the recommended daily allowances for vitamins and minerals.

Whole foods include whole grains, vegetables, fruits, nuts and seeds, as well as high-quality animal products (which can be safely consumed in moderation). Meals designed to provide enough vitamins and minerals should offer a variety of colours, flavours and textures. The more variety the better. A diet that includes some sea vegetables will further ensure you are getting nutrients rich in vitamins and minerals. A combination of raw and cooked vegetables is also beneficial.

As an added benefit vitamin and minerals have been studied and discovered to be effective in preventing disease.

6 – 7.4 Enzymes

Enzymes are powerful catalysts that are capable of kick-starting millions of biological reactions each minute. Every chemical reaction that goes on within our bodies requires an enzyme - and there are literally hundreds of them, each one designed to conduct very specific activities. Many of these enzymes help with digestion.

While the body manufactures a supply of enzymes, they can also be obtained from food - and different types of food require different enzymes for digestion. Whole foods, for example, come with their own natural supply of the enzymes needed to help facilitate digestion.

As we age, we use up our enzymes and this can result in slower - and poorer - digestive functioning. When digestion is not optimal, we do not obtain the macro- and micro-nutrients needed to maintain good health.

One solution to this problem is to eat more vegetables and fruits - both of which are *teeming* with enzymes. Raw food is also a potent source of enzymes. It is, as a result, good practice to eat some raw food with every meal. Eating a variety of foods is also helpful, since eating the same foods repeatedly fails to provide us with a variety of different enzymes.

6 - 8 WHAT VITAMINS ARE ELDERS COMMONLY LOW IN?

1. **Vitamin D Deficiency:** Vitamin D is essential for bone health, but many seniors are deficient in this nutrient due to limited sun exposure and decreased ability to absorb it from food. Seniors can address this concern by consuming vitamin D-rich foods such as fatty fish, egg yolks, and fortified dairy products. Seniors can also consider taking a vitamin D supplement but should consult with their healthcare provider first.

2. **Calcium Deficiency:** Calcium is important for maintaining bone health and preventing osteoporosis. Seniors can address this concern by consuming calcium-rich foods such as dairy products, leafy greens, and fortified foods. Seniors can also consider taking a calcium supplement but should consult with their healthcare provider first.

3. **Iron Deficiency:** Sources of iron include poultry, beans, leafy green vegetables some cereals. Read the label for iron content.

4. **Vitamin B6:** This vitamin improves immune function. Sources of B6 are potatoes, beans, meat, chicken and fish.

5. **Vitamin B 12** This vitamin helps the body's blood and nerve cells remain healthy while helping to make DNA the genic material in the cells. Sources of B 12 are meat, chicken and fish plus milk products.

6 - 9 GUT HEALTH

Understanding your gut health. There is a lot of discussion about gut health these days and the microbiome. Your gut is another term for your digestive tract.

In the small intestine, enzymes previously discussed are released by the pancreas and bile comes from the liver.

One healthy natural response in our bodies happens in the large intestine. It absorbs large quantities of water and electrolytes and helps remove waste matter and other substances your body does not need.

6-9.1 Microflora or "Gut" Flora

There is a complex ecosystem of bacteria (also referred to as microflora or flora) that lives in the intestinal tract. This bacterial ecosystem is called the gut microbiota (or your microbiome).

The microbiome, the gut bacteria, are an integral part of the digestive system. When your diet and health change, so does the composition of your gut flora.

The body has about 100 trillion good gut bacteria cells in the intestinal tract. This bacterium helps protect against the bad or infectious bacteria.

6-9.2 What influences Gut Bacteria

Stress, overuse of antibiotics, illness, aging, and diet can affect the natural protection in the gut.

6-10 MIND BODY CONNECTION

The sensitive digestive system communicates emotions to the brain. When healthy gut bacteria is out of balance, mood can be affected. Once again food can make a difference. Lean meats such as chicken, turkey and pork, salmon and other fish, avocado and olives, yogurt, kefir, kimchi, bananas, whole grain breads, fruits, vegetables, legumes and grains.

Exercise regularly. See next section on exercise. Water also helps the effectiveness of microbiome.

6-11 PROBIOTICS

Good or healthful bacteria help keep the gut in good working order. .

Making probiotics a part of your wellness plan contributes to the health of your gut flora Foods such as whole grains, bananas, sauerkraut, olives, yogurt with ‘live active cultures' on the label, gouda or cheddar cheese.

6-12 DIGESTIVE ISSUES

Digestive issues such as constipation and diarrhea can be common among the elderly. Elders can address this concern by consuming high-fiber foods such as fruits, vegetables, whole grains, and beans. Drinking plenty of water and engaging in regular physical activity promotes digestive health.

6-12.1 Heartburn

Many elders suffer from heartburn - and they tend to blame stomach acid for the uncomfortable symptoms they feel after eating a meal. Low stomach - or hydrochloric (HCI) - acid is a common problem with many elders because the production of HCI decreases with age.

HCI is necessary for proper digestion, activation of digestive enzymes, and to keep the stomach and its contents sterile. A stomach low in HCI is referred to as an "underactive" stomach. Underactive stomach can lead to poor absorption of vitamins and minerals - calcium, iron, zinc, and protein require enough HCI to metabolize. It can also lead to poor colon function, and this can produce constipation.

The symptoms of an underactive stomach are like those of an overactive (acidic) stomach. Elders, as a result, are likely to assume they have too much acid - and it is quite common for them to take antacids with regularity. Unfortunately, this merely compounds the problem since it further decreases the acid in the stomach.

To further complicate matters, many elders have a malfunctioning valve between the esophagus and stomach - and this produces acid reflux). Elders with this condition often overuse antacids. It is best to report this symptom to the general practitioner for advice.

Still another possible cause of heartburn (that is not at all related to excess stomach acid) is a structural abnormality - common in elders - called hiatal hernia.

There are many common symptoms that are associated with an underactive stomach. Among them:

- ❖ Bloating, belching, or a burning sensation immediately after meals
- ❖ Feeling of fullness after only small amounts of food
- ❖ A feeling that food is just sitting in the stomach
- ❖ Papery thin fingernails, due to protein deficiency
- ❖ Nausea after taking supplements.

There are several things that elders can do to avoid the pain and discomfort associated with under active stomach. First, they need to realize that taking antacids is likely a mistake - and it may even make matters worse.

They should focus on things like:

- ❖ Chewing foods thoroughly
- ❖ Eating only when relaxed
- ❖ Consuming lemon juice or apple cider vinegar prior to eating
- ❖ Avoiding nicotine and caffeine
- ❖ Reducing intake of heavy animal protein and dairy products until functioning improves
- ❖ Tune into your body and notice when the hunger pains leave, and you begin to feel full

An elder may also consider temporarily taking digestive enzymes and HCI capsules to help improve digestion and absorption.

6-12.2 Constipation

Some causes of constipation are low fibre intake, eating too much processed food, microbial imbalance, low fluid intake, low calcium and magnesium intake, lack of exercise, irritable bowel syndrome, hypothyroid condition, and laxative abuse. Hidden food allergies and sensitivities may also be a factor. And finally, some people are just too busy, anxious or stressed to take the time to go!

If you would like to know what your transit time is, simply eat a cup of beets. Watch for beet coloured stool, which ideally will appear 12 to 18 hours later.

Some suggestions to avoid constipation include:

- ❖ Eat fibre-rich foods, such as fresh fruit, green leafy vegetables, raw and cooked vegetables, brown rice, beans, and whole grains. Food high in pectin, such as apples, carrots, beets, and bananas, is especially good
- ❖ Drink 8–10 glasses of pure water daily. The colon works best when there is more than enough water to work with
- ❖ Eat nutrient rich foods and consider taking a multi-vitamin and mineral supplement
- ❖ One tablespoon of flaxseed oil daily will help lubricate the hard stool
- ❖ Probiotic supplements will help address microbial imbalances that contributes to constipation and autointoxication
- ❖ Aloe Vera softens the stool, and heals and cleanses the colon lining
- ❖ Talk to your pharmacist if extra assistance is needed in the form of a fiber supplement

6-12.3 Compromised Chewing

Some older people may avoid foods important to good health because of chewing difficulties. Missing teeth or poorly fitting dentures, for example, may cause elders to forgo fresh fruits and vegetables, which are important sources of vitamins, minerals, and fibre.

Alternatively, elders who have difficulty chewing may eat too many cooked foods, which may lead to enzyme-deficiency and lack of nutrient absorption. A loss of nutrients and required calories may, in turn, lead to fatigue, malnutrition, and disease.

Eating too many soft, processed foods may also lead to fatigue and malnutrition - with the added problem of weight gain.

Some tips that may be of value for elders whose chewing is compromised include:

- ❖ If teeth are causing eating difficulties or dentures are poorly fitted, consult a professional
- ❖ Chew slowly. Count to at least 30 chewing motions
- ❖ Cut foods into small pieces
- ❖ Some foods, such as fruit and vegetables, are easier to chew if they've been steamed or lightly cooked

Other tips:

- ❖ Supplementing the diet with probiotics (healthy bacteria) to promote healthy digestion and overall health through boosted immunity
- ❖ Eating rawer, or lightly steamed or cooked fruits and vegetables, which are rich in enzymes.
- ❖ Eating only while relaxed
- ❖ Anticipate healthy meals and prepare food that smells, looks, and tastes good
- ❖ Asking a dietician to recommend a good quality digestive enzyme/HCl supplement to take with each meal

6-13 ECONOMIC HARDSHIP

With a little planning even, the poor can afford to eat a healthy, well balanced diet. It is a misconception that healthier foods are more expensive than unhealthy alternatives.

Homemade stews, soups, casseroles, salads, and even deserts are healthier and cheaper that packaged and processed options. Cooking meals from scratch, in short, saves money and improves nutrition.

Other tips to help the financially disadvantaged eat well are:

- ❖ Buy whole foods such as bulk grains, fruits and vegetables, beans, and nuts. They are less expensive, and they last longer than packaged foods
- ❖ Pass on meat, ready-made meals, and junk food - all of it is expensive and not necessarily healthy
- ❖ Share a dish at a potluck supper, or with friends, in order to multiply nutrition and variety on a cost-effective basis

6-14 REDUCED SOCIAL CONTACT

Daily social contact has a positive effect on morale, well-being and, yes, nutritional status. One third of all elders live alone and social isolation of this nature is a common cause of poor nutrition.

Meals were meant to be shared. Traditionally meals were social affairs - a time for sharing not only food, but also news, ideas, feelings, fun, and conversation. Elders who find themselves single after many years of living with another person will find it difficult to be alone, especially at mealtimes. They may become depressed and lose interest in preparing or eating regular meals, or they may eat only sparingly.

To address these issues isolated elders should:

- ❖ Eat with friends, family, and neighbours whenever possible
- ❖ Find good quality and friendly restaurants in which to eat once a week
- ❖ Reach out to people at community centres, churches, and social groups
- ❖ Seek guidance from a nutritional consultant or physician
- ❖ Write down a list of healthy and attractive food choices to choose from daily
- ❖ Access health books and recipes at the library

6-15 DEPRESSION

Approximately one in eight elders experience feelings of sadness or depression. Feelings of this nature can cause significant changes in appetite, digestion, energy level, weight, and well-being.

A variety of factors come into play: being widowed, missing family who have moved away, unfulfilled expectations, disease, and the side effects of drugs can all play a part. The result can be serious dietary changes, obesity, weight loss, and malnutrition.

To deal with depression, elders should:

- ❖ Eat plenty of fruits, vegetables, and whole grains. A diet too low in complex carbohydrates can cause serotonin (the "feel good" hormone) depletion and increase depression
- ❖ Avoid artificial sweeteners, which have been shown to block the formation of serotonin. All forms of sugar, in excess, will result in an energy crash that contributes to depression
- ❖ Avoid food high in animal (saturated) fats, as they interfere with blood flow resulting in poor circulation, especially to the brain
- ❖ Take a walk in the sunshine, which helps to regulate the hormones that control our moods

6-16 EXERCISE: ELDERS ON THE MOVE PART TWO

Senior fitness refers to good health in all categories of physical fitness including the heart, lungs, muscles plus flexibility and balance.

Exercise is one the best ways to improve quality of life and increase health span. Exercise helps with metabolism, can reduce pain and stiffness and have a positive effect on mood.

It turns out humans have always needed to live an active life. A phenomenon called the '**Active Grandparenting Hypothesis'** looks at the longevity of elders during the hunter and gatherer phase of evolution, 12,000 years ago. The hypothesis states that evolution favoured those who engaged in lifelong physical activity as it reduces vulnerability to chronic diseases. This research was published in the Journal National Academy of Sciences that states that active lifestyle has always been good for humans.

It looks like humans were selected to live several decades after their reproductive years and also to be moderately physically active during those post reproductive years.

There is also an accompanying perspective that may surprise people. Thinking again of our ancestors, it was necessary to 'work hard' to gather food, hunt, and to rear children. Energy was conserved and used for these intense survival activities. Once work had ended, spending additional energy on being 'active' was not a part of life. 'Be active then rest' , might have been our ancestry's montre. Performing formalized activities apart from survival is not part of our DNA and not wanting to join a gym is not laziness.

Lessons from the Blue Zones incorporate an active lifestyle as a natural aspect of living that pays off handsomely.

Elder activity is founded on the principle that age is not a barrier to physical activity. It is an invitation to move with wisdom and intention.

Exercise can help prevent muscle loss, increase bone density and keep joints lubricated. By improving balance and flexibility, elders are less likely to fall . The exercising body of any age feels more energetic and sleeps better.

Even the very old can benefit. In one study (dealing with frail elders who were, on average, 90 years old) muscle strength was improved by 160% with eight weeks of weight training.

6-16.1 Functional Fitness

Functional fitness is the term used to describe the practical applications of physical exercise. It focuses on the ability to more easily perform the activities of daily living, enhanced quality of life, and greater independence.

Improved functional fitness is associated with decreased blood pressure, body fat, and cholesterol, plus increased bone density and joint range of motion. Active elders have a better quality of life and have a longer health span.

Despite all the information available about the benefits of exercise 60% of adults do not achieve the recommended amount of regular physical activity. Sadly 25% are not active at all. What can be done to support elder activity.

Before embarking on a new exercise plan or activity it is wise to consult with a physician.

The two driving forces in humans are to avoid pain and to seek pleasure. It makes sense to find an activity that is enjoyable and to go slow.

There are more opportunities today to enjoy and active life than ever before. More and more elders use a computer and can find an activity online that is fun and beneficial. Activities can be done on one's own or in a group.

Before we approach activities and tips, here are common myths that may prevent elders from starting a program.

6-17 MYTHS AROUND ELDERS AND EXERCISE

1. **I have too many aches and pains to exercise.**

   Being in pain is no fun. If in severe pain an elder need to first have a discussion with their physician. Starting a new program with simple stretches and or using stretch bands can feel wonderful and reduce pain in stiff tissues. Safety and choosing the right activity is important. Starting slow and building on current activity can be really helpful.

2. **It doesn't matter if I exercise. I am already old.**

   We all age, no question. Having a better quality to our days can be helped with exercise. Even if an elder has never been regularly active, a small amount of exercise can improve health. Listening to favourite tunes while doing some simple activity such as walking the halls while listening to music on headphones can ignite a new activity.

3. **Exercising increases the risk of falling.**

   Fear of falling is a real thing. Elders have known people who fell, broke a hip and were never able to live alone again. However, the exact opposite of this myth is true. Balance and flexibility exercise can reduce the risk of falling. Squat exercise alone helps strengthen legs and back. Squats such as sitting on the toilet, easing oneself into a chair are used daily!

4. **I won't be able to exercise as I am disabled.**

   Even wheelchair bound elders and do exercise. Chair exercises are surprisingly effective. Some chair exercise programs incorporate a ball into the program. Sitting with others and listening to music while exercising is a real motivator.

5. I used to ski, swim and jog at different times of my life. I can't do anything now.

Our bodies do change as we age. Thinking about what we can't do versus what we can do can be debilitating and not at all helpful. Everyone can do something. Chair yoga is one such achievable activity.

Elders who were fitness leaders in the past can offer to support those who are new to exercise. Some not for profit organizations still offer volunteer training programs. Retired fitness leaders can still lead a class. Keep in mind that we all need to be needed and to use our skills and abilities to help others

6-18 ACTIVITIES AND TIPS

- walking
- condominium and apartment dwellers can walk the halls. A modification of walking the halls is to climb just one flight of stairs and slowly increase climbing flights as strength and endurance increases.
- winter wall walking programs are a great way to meet people and reduce risk of slipping on ice
- dancing to favourite music or classes in person or online
- using stretch bands
- warm water exercise at the community pool. You do not have to be a swimmer to enjoy exercising in the water
- chair exercise
- functional exercise for dementia [trainers take course from Western University Canadian Centre for Activity and Aging]
- chair yoga
- senior inline dancing through community and or senior centers
- peer led programs
- mix it up i.e. one day do stair climbing and another day warm water exercise
- recruit a friend or neighbour to walk or exercise with.

6-18.1 It Is Never Too Late to Become Active

Regular physical activity is related to improved mental and physical well-being. Recent research indicates that:

- Active, physically fit individuals do not react to difficult situations with as much stress as inactive people
- Regular exercise programs have been found to prevent, and reduce, symptoms of disease. These include reduced risk of heart disease, low back pain, depression, and osteoporosis, to mention only a few.

- ❖ An active lifestyle improves sleep, mood, sexual activity, and self-esteem by increasing energy, facilitating weight loss, and providing for greater social contact
- ❖ Aerobic exercise improves endurance and cardiovascular health, while non-aerobic activities enhance flexibility and strength

Physical activity need not be strenuous to be of benefit. Indeed, most people have many opportunities to become more active in their daily routine. Climb the stairs instead of taking the elevator. Walk to the store instead of driving. Use a push lawn mower instead of a power lawn mower (or hiring a neighbour's child). It is never too late to become active.

6-18.2 The Benefits of Regular Physical Activity

Physical activity that is performed most days of the week reduces the risk of developing or dying from some of the leading causes of illness and death in Canada.

Regular physical activity:

- ❖ Reduces the risk of dying prematurely
- ❖ Reduces the risk of dying from heart disease
- ❖ Reduces the risk of developing diabetes
- ❖ Reduces the risk of developing high blood pressure
- ❖ Helps reduce blood pressure in people who already have high blood pressure
- ❖ Reduces the risk of developing colon cancer
- ❖ Reduces feelings of depression and anxiety
- ❖ Helps control weight
- ❖ Helps build and maintain healthy bones, muscles, and joints
- ❖ Helps older adults become stronger and better able to move about without falling
- ❖ Promotes psychological well being

An effective exercise program for elders should emphasize:

- ❖ Endurance exercises, which increase stamina and may help delay or prevent diabetes, colon cancer, heart disease, and stroke
- ❖ Strength exercises, which increase metabolism, help to control weight and regulate blood sugar. Studies show, they also may help prevent osteoporosis
- ❖ Flexibility exercises, which may help prevent and aid recovery from injuries
- ❖ Balance exercises, which help prevent falls—a major cause of broken hips and other injuries that lead to disability and loss of independence

According to the medical profession, physical activity should be made an integral part of every elder's daily routine. They should be doing exercise that is enjoyable - daily walks, riding a bicycle, and dancing all qualify. Not only are these activities enjoyable, but they will help enhance the elder's health as well. Some care, however, should be taken when it comes to activities that evaluate the elder's balance, agility, or strength.

Elders, for example, should take extra care when climbing ladders or even changing the porch light bulb, since activities of this nature could cause falls that might result in life changing - or threatening - injuries.

6 – 18.3 Exercise Motivation

Below are some strategies to help us all - but especially elders - to get motivated when it comes to exercise:

- Pick activities that are fun and appeal to you. There are plenty of activities out there — try swing dancing, bowling, yoga, ice skating or hiking. Combine exercise with other activities you enjoy.
- For instance, if you like the beach, what better way to enjoy its sights and sounds than to take a long walk? Having a partner can help motivate you to exercise. Develop a buddy system either face-to-face, by phone, or e-mail contact.

- Keep an activity journal where you write down your fitness goals for the week. Then at the end of the week, see how close you came to meeting your goals. If you faltered at any time, figure out why you did. If, for instance, you said you were going to walk when you got home from work, maybe you found that preparing dinner or your daily commute got in the way.

- Once you know what prevented you from exercising, you can refine your goals to better suit your lifestyle. In addition to recording what you did, chart how your body felt after you exercised: What thoughts helped spur you, when you wanted to cut your session short? How did it feel to accomplish your goals? Your journal can be a powerful tool in helping you to get and stay motivated. Use it!

- Make a no-excuses pact with yourself. Each one of us could probably produce a whole list of excuses as to why we cannot exercise. Try to nip this excuse reflex in the bud by confronting it in the beginning. Have a firm conversation with that little voice inside you that has prevented you from keeping promises to yourself in the past. Tell the voice that you are going to exercise for your health and because you enjoy it. When it tries to speak up, sing a song, change your thoughts or, better yet, start exercising to shut it up. The most common reasons given for not continuing an exercise program are lack of time and boredom.

- Think of ways to try to combat these excuses before you begin your program. For instance, to fit in exercise, try scheduling exercise in a daily appointment book. Seeing your exercise plan in black and white may help you to stay motivated.

- ❖ Get into a positive mindset or as Nike says, "just do it!" Think good thoughts about the prospect of exercise, such as how refreshing it will feel to move about freely. Once you start exercising, focus on increased feelings of self-esteem, a sense of accomplishment and the increased energy levels that exercise brings. If you slack off for a few days or several weeks, wipe the slate clean and start again. Do not use messing up as an excuse for giving up.

- ❖ Set realistic goals. Trying to exercise at an overly vigorous pace can set the stage for dropping out. If you have not exercised in a while, keep your initial goals modest.

For instance:

- ❖ I will walk three times a week for 20 minutes.
- ❖ I will stretch for five minutes three times a week.
- ❖ I will exercise with 2 ½ pound-weights for 15 minutes twice a week.

In a few weeks, after you achieve these goals, you can set new goals. For example, you can increase the length of time you spend exercising. Eventually, you should exercise at least 30 minutes most days of the week.

And finally:

- ❖ Eat a high-fibre, whole foods diet
- ❖ Avoid processed foods
- ❖ Maintain weight
- ❖ Enjoy life and exercise

Seniors can be fit and fabulous.

Goals can start small as any activity is better than no activity. Aiming for 2.5 hours a week of moderate activity is a longer range goal. Chunking activity into 10 minute sessions can make goals more achievable. Through these activities elders can improve endurance, flexibility. balance and strength.

6-19 CONCLUSION

In the last decade, hundreds of studies have shown that a healthy diet and a little exercise go a long way toward increasing health span. Having enjoyable healthy meals and enjoyable activities are worthy goals for elders.

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We hope that the EPC Designation program is just the beginning of your aging education, as you continue to interact with Canada’s aging society.

Congratulations on wanting to becoming an Elder Planning Counselor!

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