

HSS1101D: Determinants of Health

Life Course Approach to Healthy Aging

April 4, 2012

***NOTE:** Original lecture developed by Prof Thy Dinh.
Current lecture modified++ by Prof Sonia Gulati.
Information is taken from sources as indicated at
the bottom of or within the slides.

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Topics to be Covered

- What is aging, including biologic, psychological, social, legal, and functional age
- The biologic and psychosocial theories of aging and the major physiological and psychological changes that occur with age
- Death and dying
- Ethical concerns – “the right to die” and “rational suicide”



Talking about death and dying



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Why are we afraid of talking about death?

ERIN ANDERSEN

From Monday's Globe and Mail

Published Sunday, Nov. 27, 2011 4:00PM EST

Last updated Monday, Nov. 28, 2011 10:48AM EST

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This is part of the Globe's in-depth series on the agonizing decisions surrounding end-of-life care in the 21st century. For the complete series, click [here](#)

This is a scenario Canadian doctors see too often: An elderly mother is dying in hospital, unable to clearly communicate; the family, in their grief, must make an emotional decision. Do they ask for a feeding tube? Do they want a ventilator to help her breathe? Or morphine to control the pain, even if it hastens her death?

MORE RELATED TO THIS STORY

- A template for your End of Life plan
- End of Life: Ask the experts, share your stories
- Critical care: Spending 10 weeks with patients facing death



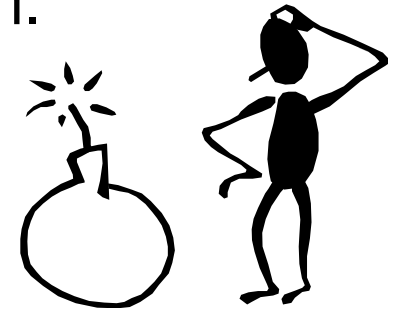
She never talked about her wishes, and her kids can't agree. Whatever their decision, they may live with doubts long afterward: Did they give their mom the death

Source:

<http://www.theglobeandmail.com/life/health/end-of-life/why-are-we-afraid-of-talking-about-death/article2250394/>

POP QUIZ !?!?!

1. The older you get, the less sleep you need.
2. Heart disease affects women as much as men.
3. People take more medications as they age.
4. Intelligence declines with age.
5. Physical strength declines with age.
6. Older adults have the lowest income of all adult groups.
7. People tend to change their driving habits as they age.
8. Older people are more likely to commit suicide than younger people.
9. Many older people are preoccupied with death.
10. Most older people new to Canada speak neither English nor French.



Age: Adult & Older Adult

- In Canada, the age of majority reflects when a person is considered to be an adult under the law (i.e., in Ontario it is 18 years of age).
- The working-age population is aged 15 to 64 years AND seniors are those 65 years and older (approximately 4,335,255 persons are aged 65 years and over).
- According to the 2006 Census, the very elderly group – 80 years or older – experienced the largest increase (approximately 1,167,310 aged 80 years and over).
 - Creates a significant demand for health care services
- **Young-old (65-74), middle-old (75-84), old-old (over 85)*

TABLE 16.1**Canada's Elderly**

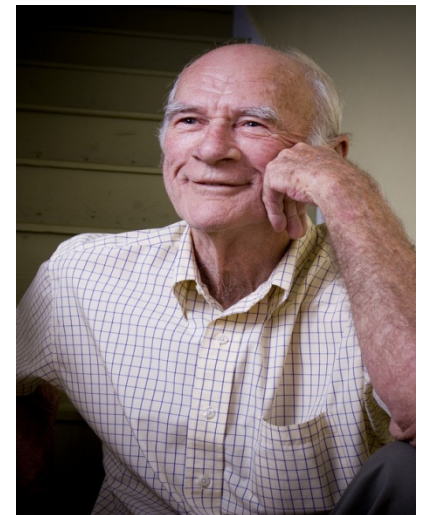
Age	Total	Men	Women
65–69	1 193 500	574 400	619 100
70–74	1 042 600	488 600	554 000
75–79	864 300	377 700	486 500
80–84	625 300	241 700	383 600
85–89	322 500	107 100	215 400
90 and over	169 500	44 600	125 000

Source: Statistics Canada, "Population by Sex and Age Group." Retrieved on May 16, 2006, from www40.statcan.ca/101/cst01/demo10a.htm.



What is Aging?

- **Aging:** the patterns of life changes that occur in a species as they grow older
- **Ageism:** discrimination based on age
- **Age-related characteristics:**
 - Biological age
 - Psychological age
 - Social age
 - Legal age or chronological age
 - Functional age



Age-related characteristics

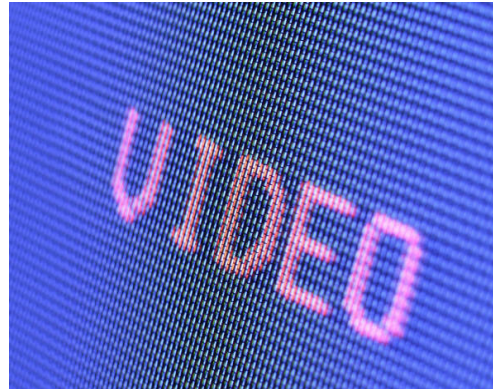
- **Biological age**
 - Relative age or condition of the person's organs and body systems. Chronic conditions tend to accelerate biological age.
- **Psychological age**
 - Person's adaptive capacities (e.g., coping abilities and intelligence) and awareness of individual capabilities, self-efficacy, and general ability to adapt to a given situation.
- **Social age**
 - Person's habits and roles relative to society's expectations. People in a specific life stage often share similar tastes in music, TV shows, etc.

- **Legal age or chronological age**
 - Most common definition of age. Legal age is based on chronological years and is used to determine e.g. voting rights, driving rights, drinking age, other social benefits, etc.
- **Functional age**
 - The ways in which people compare to others of a similar age. Difficult to separate from other types of aging, particularly chronologic or biologic age. View as what the “norm” should be for a particular age group in terms of abilities to engage in certain activities.
 - E.g. Benchmarks in childhood development (by the age of 1 a child should already know how to crawl and some may be able to walk), or functional deterioration in advanced age (around age 80 individual may experience difficulties in walking)

Defining Old

- The aging process is a biological reality that has its own dynamic, which is largely beyond human control.
- In the developed world, chronological time may play a paramount role in defining old age (e.g., age of 60 or 65, which reflects retirement age, may be considered to be the beginning of old age).
- Influenced by how society defines old age (i.e., roles assigned to individuals OR loss of roles accompanying physical and/or cognitive decline in function).
- Reactions to aging differ considerably depending on the person's financial, physical, emotional and social resources, and location (e.g., living independently or in a facility).

Video: Seniors in the Community



- **What would you do? Elderly Harassed by Young People (5:33)**

<http://www.youtube.com/watch?v=yIZHJG1tt-U>

What is normal aging?



Theories of Aging – Biologic

- **Wear-and-tear theory**

- Like everything else in the universe, the human body wears out. The more you abuse your body and/or the more you do not treat it well, the faster it will wear out.

- **Cellular theory**

- At birth we have only a certain number of usable cells that are genetically programmed to divide or reproduce only a limited number of times. Once cells reach end of their reproductive cycle, they begin to die and organs show signs of deterioration which varies from person to person.

- **Autoimmune theory**

- Decline of the body's immune system. As we age our immune systems become less effective in fighting disease. Lifestyle can negatively affect this process (e.g., too much stress, lack of sleep, poor diet and physical activity). Autoimmune diseases occur in all age groups but the risk and severity tends to increase with age.

- **Genetic mutation theory**

- The number of cells exhibiting unusual or different characteristics increases with age. Aging relates to the amount of mutational damage within genes. The greater the mutation, the greater the chance cells will not function properly leading to dysfunction of body organs and systems.

Theories of Aging – Psychosocial

- People need to receive adequate stimulation and develop effective methods of coping earlier in life
- Maladjustments in old age result from problems at earlier stages e.g. problems with coping and adapting in early life
- Successful aging involves maintaining emotional and physical well-being



Changes in the Mind and Body – Physical

- **Skin** - becomes thinner and loses elasticity
- **Bones & Joints** - bone mineral loss
- **Head** - features of head enlarge and become more noticeable
- **Urinary Tract** - common problem is incontinence
- **Heart & Lungs** - amount of blood the muscle pumps per beat & amount of air that moves when you inhale/exhale at max effort declines
- **Eyesight** - by 30, lens of eye begins to harden causing problems by early 40s; by 60, depth perception declines resulting in farsightedness
- **Hearing** - presbycusis (age-related hearing loss and hearing problems)
- **Taste & Smell** - mouth gets drier, ability to distinguish between sweet, sour, bitter and salty declines; sense of smell diminishes
- **Mobility** - may have disability related to mobility and carrying out ADLs
- **Sexual Changes** - changes to sexual function (e.g., hormones, orgasms)
- **Body Comfort** - changes to ability to tolerate extremes in temperature

Changes in the Mind and Body – Mental

- **Intelligence** - elderly persons may learn and develop skills in a similar manner to younger people but they may lack in speed of learning
- **Memory** - short-term memory fluctuates, long-term memory remains
- **Depression** - some research indicates that depression may be the most common psychological problem as we age
- **Dementia** - mental deterioration, loss of memory, and judgment and orientation problems (e.g., most common form of dementia is Alzheimer's disease)

Health Challenges of Older Canadians

- Polypharmacy
- Alcohol use/abuse
- Physical inactivity
- Dietary concerns
- Gender issues and caregiving

Death and Dying

- **Death** - the final cessation of the vital functions; these functions are incapable of being restored
- **Dying** - is the process of decline in body functions resulting in death; is a complex process that includes physical, intellectual, social, spiritual, and emotional dimensions
- **Social Death** - loss of value or of appreciation by others; persons who are dying are not treated as active members of society or are treated differently
- **Denying Death** - attitudes towards death fall on continuum: from enemy of humankind to acceptance and welcoming; high level of discomfort associated with dying for many Canadians

Process of Dying

Summary of Kubler-Ross's five stages:

1. **Denial** "Not me, there must be a mistake."
2. **Anger** "Why is this happening to me?"
3. **Bargaining** "If I am allowed to live, I promise..."
4. **Depression** "It is really going to happen to me and I cannot do anything about it."
5. **Acceptance** "I am ready to let go."

* *Several theories on the process of dying. Stages may not occur in a linear manner.*

Life and Death Decision-Making

- Right-to-die and euthanasia are controversial topics
- “Options” for people who are terminally ill:
 - Pain and symptom management, extended palliative care, active and passive forms of euthanasia, and suicide
- **Dyathanasia**: passive ‘mercy killing;’ life prolonging treatments are withheld allowing the person to die
- **Euthanasia**: active ‘assisted suicide;’ death of a terminally ill person is hastened knowingly

Video: Palliative Care



- **Palliative Care in Action (3:09)**

<http://www.getpalliativecare.org/videos/38C0067840721DCE>

Video: The “Right to Die” Debate



- **Should Canadians Have a "Right To Die" - Euthanasia Bill C-384 (10:25)**

<http://www.youtube.com/watch?v=HXcRwILYyXY>