Lecture 3

Aging and Your Health: A Life Long Process
HEAL 101: Health and Lifestyle
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Objectives

- Review the definition of aging
- Explain the impact on society of the growing aging population
- Discuss the biological and psychosocial theories of aging
- Identify major physiological changes during aging
- Discuss the unique health challenges faced by older adults
- Discuss strategies for healthy aging beginning in young adulthood

What Words Do You Use To Describe The Elderly?

- Students Commonly Use The Following
  - Slow
  - Senile
  - Alzheimer's
  - Can't Drive
  - Lonely
  - Sick
  - Cranky

Is It Fair To Describe Aging and the Elderly In This Manner?

- Can you be young and display these characteristics?
- Can you be elderly and display none of these characteristics?
- Ageism describes this negative attitude and resulting discrimination based upon age
- Is Ageism present in other cultures, or are the elderly more respected?
Are We Aging As A Society?

- Median Age Has Steadily Risen in the US:
  - 1790 = 16 years old
  - 1860 = 18 years old
  - 1970 = 28 years old
  - 1990 = 33 years old
  - 2000 = 35.3 years old
  - 2020 = 40 years old

Are We An Aging Nation?

- Are We Turning Into A Nation of:
  - Slow
  - Senile
  - Alzheimer’s
  - Can’t Drive
  - Lonely
  - Sick
  - Cranky . . . People?
- Don’t You Think Our Ageism Is Ironic?

Life Expectancy Has Increased the Number of Older Americans

- Has the World Ever Seen Such an Increase in Life Expectancy?
- Compare Current Life Expectancy with 1900 when it was approx. 40 years old!
- Today, overall it is 77.6 years old

Death Rates Have Dropped For All Americans

Figure 2. Age-adjusted death rates, by race and Hispanic origin: United States, 1980–2007

Figure 5. Life expectancy, by race and sex: United States, 1970–2007
Newborn Mortality Has Dropped Dramatically in the Last 70 Years

The 10 leading causes of infant death in 2007 accounted for 69.0 percent of all infant deaths in the United States (Table E). By rank, the 10 leading causes were:

1. Congenital malformations, deformations and chromosomal abnormalities (congenital malformations)
2. Disorders related to short gestation and low birth weight, not elsewhere classified (low birthweight)
3. Sudden infant death syndrome (SIDS)
4. Newborn affected by maternal complications of pregnancy (maternal complications)
5. Accidents (unintentional injuries)
6. Newborn affected by complications of placenta, cord and membranes (cord and placental complications)
7. Bacterial sepsis of newborn
8. Respiratory distress of newborn
9. Diseases of the circulatory system
10. Neonatal hemorrhage

Housing and Living Arrangements

- Most older people (over 95%) never live in a nursing home
- Who will pay for housing and social services for those who can’t?
- Ethical and moral considerations
  - Will you take care of your parents?
  - Will they live with you?

Issues for an Aging Society

- Financial and medical needs of an aging population
- Problems with Social Security, and Medicare with fewer contributing and prices increasing
- How many of you think Social Security and Medicare will be there for you?

Is The Rest of the World Aging?

- Life Expectancy in Other Countries:
  - Japan = 82 years
  - Monaco = 81 years
  - Switzerland = 81 years
  - Australia = 80 years
  - USA = 77.6 years (24th in the world)
Is The Rest of the World Aging?

- Percent of Population Over 60 in Other Countries:
  - Italy, Sweden & Greece = 22%
  - Japan & UK = 21%
  - US = 16%
- Population of seniors in the US will double over next 30 years to over 70 million by 2030

Compare With These Countries

- Zimbabwe = 37 years
- Angola = 37 years
- Swaziland = 36 years
- Botswana = 34 years

Disparities: Why Do Women Live Longer Than Men?

- Genetics
  - 75% of genetic defects are higher in men
- Smoking and Lung Cancer
  - More men smoke and they smoke more dangerously
  - Men have almost 3x death rate from lung cancer
  - Women still need to stop smoking
- Heart Disease
  - More men die but it is still #1 cause of death in women too
  - Is smoking the reason? Not entirely
  - Among non-smoking men and women, men still die at a higher rate.

Why Do Women Live Longer Than Men?

- Stress
  - More Type A males than females?
  - Men still respond to stress more intensely physiologically (heart rate, blood pressure . . .)
  - Women more likely to seek support from family and physician
- Risk Taking
  - Men tend to have higher risk jobs
  - Men tend to take more risks in driving, recreation, and with guns
Why Do Women Live Longer Than Men?

- Violent Death
  - More men are murdered
  - Suicide - men die at 4x the rate, while women attempt 2x more than men
- Alcoholism
  - More male alcoholics than female alcoholics
  - Society tolerates men heavy drinking more than women?
  - Men may be more likely to inherit genetic predispositions
- Health Behaviors
  - Women see the doctor earlier and more often
- Married Men
  - Better health habits

Men seem to have more self destructive health habits
- Can men increase their life expectancy through lifestyle?
- Are there still things women can do to continue to increase their life expectancy via lifestyle?

Ideas About Age

- Biological age – relative age or condition of the person’s organs
- Chronological age - age in years
- Psychological age – a person’s adaptive capacities
- Legal age – factor used in determining voting rights, driving privileges, drinking age

Theories on Aging

- Biological theories:
  - The wear and tear theory – human body wears out
  - The cellular theory – at birth a certain number of usable cells that are programmed to reproduce a limited number of times - Do we have a biological clock?
  - The autoimmune theory – aging is a decline in immunological system
  - The genetic mutation theory – number of cells exhibiting unusual or different characteristics increases with age (Xerox copy)
  - The waste product theory - harmful materials accumulate over time
What is Successful Aging?

- Avoidance of serious, debilitating diseases and disability
- Maintenance of high level of physical functioning, independence and engagement
- Cognitive functioning maintained, mentally engaged in challenging and stimulating activities
- Remaining socially productive, resilient and able to cope with change

**How much of this is linked to Lifestyle?**

Changes In The Body

- Typical physical changes – certain standard changes occur as a result of the aging process
- The skin – thinner, less elasticity, sags and loses color, age spots
- Bones and joints – mineral loss, porosity, loss of calcium results in osteoporosis
- Head – features enlarge, nose and earlobes, circumference of head enlarges, brain shrinks, skull thickens

Changes In The Body

- The urinary tract – age 70, kidneys filter half as fast as age 30
- Bladder’s capacity is one cup at age 70; two cups at age 30
- Urinary incontinence – affects 13 million Americans

Changes In The Body

- Stroke volume diminishes as heart muscles deteriorate
- Vital capacity, air moving during inhalation/exhalation declines
- Eyesight – age 30, lens begins to harden, pupils shrink, less light
- By age 60, depth perception declines – farsightedness develops
- Cataracts, glaucoma, macular degeneration become more likely
- Hearing – ability to hear high frequency consonants diminishes with age
Sexual Changes in Men
- Notable changes in sexual functioning with age
- Erection is slowed, ability to maintain erection is diminished, length of refractory time increases, angle of erection declines, orgasm is shorter in duration

Changes In The Body

Sexual Changes in Women:
- Menopause occurs between 45-53, walls of vagina become less elastic, vaginal secretions diminish, breasts less firm, fewer curves due to fat deposits, decrease in body contours
- National Council on Aging study indicates nearly half of Americans over 60 engage in sexual activity at least once a month and 4:10 would like to have sex more frequently

Changes In The Body

Mental and Intellectual Changes:
- Intelligence – older people learn and develop skills similarly to younger people
- Memory – short term memory may fluctuate on a daily basis, ability to remember past events remains unchanged
- Is the mind like the body: Use It or Lose It?
- Alzheimer’s Disease - degeneration in brain affects memory, speech, personality in slow, progressive manner

Changes In The Body

Preventive Actions for Healthy Aging
- Develop and maintain healthy relationships
- Enrich spiritual side of life
- Moderate alcohol consumption
- Improve fitness
- Eat for health
- Plan for your advanced years
- How much of this is linked to Lifestyle?