Rewards And Challenges:
Development in Late Adulthood
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THE SECRET OF GENIUS IS TO CARRY THE SPIRIT OF THE CHILD INTO OLD AGE, WHICH MEANS NEVER LOSING YOUR ENTHUSIASM.

ALDOUS HUXLEY
Research Tells Us That

although there are many physical changes that happen in later adulthood, most physical decline does not happen until people are quite advanced in age.
Age Divisions Of Late Adulthood

Late adulthood is usually divided into three periods:
• the young old, ages 65 to 74
• the old, ages 75 to 90
• the very old, ages 90 and older
Physical And Cognitive Development
On Your Handout, Write What You Know About

• Physical Development in Late Adulthood
• Cognitive Development in Late Adulthood
Biological Theories Of Aging

Why do we age?
Wear And Tear Theory

• Aging is due to the cumulative effects of hard work and lifelong stress.

• Cells and tissues have vital parts that wear out, resulting in aging.

• First introduced by Dr. August Weismann, a German biologist, in 1882.
Mitochondrial Theory

• As we age, mitochondria become less efficient: less ATP production

• Mitochondria are subject to free--radical damage

• Anti--oxidants “protect” mitochondria
Cellular Clock Theory

• We die because our cells are programmed to do so.

• Perhaps aging follows a biological timetable, maybe even a continuation of the one that regulates growth and development in our early years.
Free-Radical Theory

- Highly unstable molecules produced by metabolism react with our cells and cause mutations.
- These mutations cause cells to break down.
- Recent research has lead us to believe that genes do play a part in how long we live.
- How it actually works is still a scientific mystery.
Cell Replication

• Every species in the animal kingdom has a maximum lifespan.

• Maximum lifespan is determined by genetically programmed limit on the number of times a cell can replicate itself.

• For humans, it appears to be about 110 – 120 years.
Hormonal Stress Theory

Long, elevated levels of stress-related hormones have been connected to increased risks of certain diseases:

• Cardiovascular
• Cancer
• Diabetes
• Hypertension
Other Effects On Lifespan

• Gender

• Environment, such as water quality in some parts of the world

• Disease

• Accidents
Centenarians

Centenarians are people 100 years of age or older.
Physical Development
Physical Skills

• Some skills decline as we grow older, particularly manual dexterity.
• While reaction time does decrease, sometimes this may be impacted by ageism.
• These abilities can be improved.
Sensory Abilities

Tips to protect your hearing:

• Stay away from loud or prolonged noises when you can.
• Turn down the music volume.
• Buy power tools that have sound controls.
• When you must be around noise, either at work or at play, use something to protect your hearing.
Sensory Abilities

Eye health

• Remember the value of regular checkups to ensure eye health.

• Any out-of-the-ordinary events should be immediately checked out.
Other Body Systems Undergo Change

- Skeletal system
- Skin
- Teeth
- Hair
- Gastric system
- Movement
Some Physical Things We Can Control

Eating for Health

Exercise for Enjoyment

(click on links)
Theories Of Cognitive Development
Fluid Intelligence

• Depends on the proper functioning of the nervous system
• Measured by tasks that show age-related declines (speeded tasks, tests of reaction time)
• On-the-spot reasoning ability
Crystalized Intelligence

- Demonstrates the cumulative effect of culture and learning of tasks
- Is a store of knowledge from the surrounding culture
- Remains very stable throughout life
- Older adults are better at such things as defining words, doing tasks that they have done in adulthood, grammar, and things that rely on general knowledge
Most Common Forms Of Dementia

Alzheimer’s
• Discovered by German neurologist Alois Alzheimer in 1906, but did not gain attention until the 1970s
  • Researchers now believe a gene is involved
  • Difficult to diagnose and treat

Vascular Dementia
• Decreased blood flow to the brain
Cognitive Development

Diagnosing Alzheimer's Disease
(click on link)
Cognitive Rehabilitation

• Cognitive rehabilitation teaches people to recall important information and improve daily tasks

• The learning does not appear to be transient; abilities were maintained for three months following the rehabilitation
Preventing Memory Loss

Harvard Health Publications

Preventing Memory Loss
(click on link)
Societal And Cultural Changes
Did You Know?

• In 1900, the over-65 population was 3 million, only 3% of the total U.S. population.

• Today, 23 million men and women over 65 constitute 12% of our population.

• By the year 2040, it will have reached 20% of the population.
Societal And Cultural Changes

• Age Discrimination Act
• Increasing retirement age
• Effect of a mobile society on caring for elderly family members
• Technology
• Others?
Age Discrimination Act

“The Age Discrimination in Employment Act of 1967 (ADEA) protects individuals who are 40 years of age or older from employment discrimination based on age.”
Increasing Retirement Age

• What do you think? Should the full retirement age be raised to 70?
  • Over the last 20 years, personal savings have decreased in the United States.
  • 79% of baby boomers have plans to work during retirement.
Effects Of Mobile Society

• Families are more mobile.
• Often this means they are not physically close.
• How can ties be strong under these circumstances?
• What does this mean for the elderly?
Technology

• Computers
• Cell phones
• Alarm systems
• Digital televisions
• Satellite radio
• Convection cooking
• Self-parking cars
Our Responses To The Elderly

- Gratitude
- Respect
- Neglect
- Elder abuse
Elder Abuse

According to the World Health Organization:

“Elder abuse is a violation of human rights and a significant cause of illness, injury, loss of productivity, isolation and despair.”
What Are The Warning Signs Of Elder Abuse?

• Bruises, abrasion, burns
• Unexplained withdrawal from activities or unusual depression
• Sudden changes in financial situations from exploitation
• Bedsores, unattended medical needs, poor hygiene, unusual weight loss
• Belittling, threats, and other uses of power and control by spouses are indicators of verbal or emotional abuse.
• Tense relationships and frequent arguments between caregiver and elderly person are also signs.
Family And Other Relationships
How Do Family Relationships Impact Our Later Years?

• Gender role changes; both men and women; move toward androgyny.

• How does widowhood impact the family?
How Do Relationships With Others Impact Our Later Years?

• It appears that the number and extent of friendships that a person has does not directly affect lifespan.

• These relationships are related to quality of life.
Think About The Discussion On Elder Abuse

• How do positive relationships with family and friends impact the risk factor for abuse?

• Do you know of any elderly people who are alone in their homes or who are in some type of care facilities and never receive visitors?
Socializing With Others

Senior Centers
(click on link)
To Summarize

- Our senior years really can be our golden years
- Much of our health and well-being is in our own hands
Questions?
References And Resources

Images:
Microsoft Clip Art: Used with permission from Microsoft.

Journals:
• Kunlin, J. Modern Biological Theories of Aging. Aging and Disease. v.1(2); October, 2010. PMC2995895

Textbooks:
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Websites:

- American Association of Retired Persons (AARP) Public Policy Institute
  Raise the full retirement age.

- Harvard Health
  Preventing memory loss: Seven preventative steps.
  [www.health.harvard.edu/newsweek/Preventing_memory_loss.htm](http://www.health.harvard.edu/newsweek/Preventing_memory_loss.htm)

- National Center on Elder Abuse (NCEA)
  The NCEA is the place to turn to for up-to-date information regarding
  research, training, best practices, news and resources on elder abuse,
  neglect and exploitation.

- National Institute on Aging (NIH)
  NIH SeniorHealth features authoritative and up-to-date health information
  from Institutes and Centers at NIH
  [http://nihseniorhealth.gov/videolist.html](http://nihseniorhealth.gov/videolist.html)

- National Library of Medicine
  Aging changes in the senses.
References And Resources

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  http://www.ag.ndsu.edu/pubs/yf/famsci/fs1378.pdf

• Ohio State University Extension Service
  Sensory Changes.
  http://ohioline.osu.edu/ss-fact/pdf/0174.pdf

• Society for Human Resources Management
  The future of retirement.

Videos:

• NIH Senior Health
  It can help seniors find answers to their medical questions from the comfort of their own homes.
  http://nihseniorhealth.gov/ videolist.html