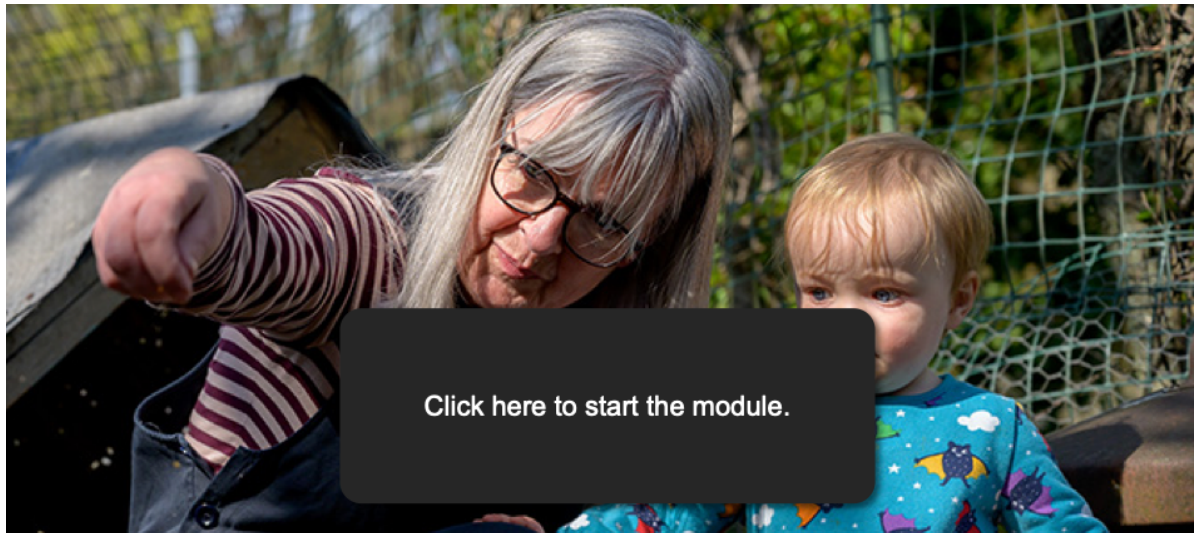


Slide 1




Click here to start the module.

Aging and Adult Development, Part 1

*At any time, feel free to select the **CC** button to see captions text or the **Exit** button to leave the module.*

Use the forward arrow to continue.


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Aging and Adult Development, Part 1

*At any time, feel free to select the **CC** button to see captions text or the **Exit** button to leave the module.*

Use the forward arrow to continue.






Learning Objectives


After completing this module, learners will be able to:

- Describe the demographics of aging
- Identify theories of research regarding adult development and aging
- Discuss changes associated with normal physical aging and functional ability in later life
- Define the effect of chronic conditions on the older adult

Use the forward arrow to continue.

2





Aging Basics

Discuss the history of aging, aging demographics, and general aging terminology

Use the forward arrow to continue.

3

▶

Who is Old?

- In the 19th century, Germany designated old age as beginning at 65 years for the first old age pension program
- In 1882, the United States initiated the Civil War Pension Program which provided benefits to injured soldiers
- Pension Program expanded to include soldiers of “old age” in 1906



Use the forward arrow to continue.

4



Who is Old?

- Business community introduced the first formal company pension plan in 1882
- States introduced old-age pensions at the time of the Great Depression during a dramatic growth in poverty among older adults



Use the forward arrow to continue.

5



Social Security Act

- Established a worker retirement benefit
- Set age 65 as the age of retirement
- Each decade, or cohort, share statistical and demographic traits, as well as values and attitudes



Use the forward arrow to continue.

6



Life Expectancy

- Life expectancy of a person born in the US
 - 1950: 67 years
 - 2020: 78 years
- Life expectancy can vary by country, region of the country, sex, racial and ethnic groups
- Social determinants of health play a significant role in life expectancy



Use the forward arrow to continue.

7



Increasing Number of Older Adults

- Population swell following World War II contributes to the increase in number of older adults over time
 - In 1900, about 3% of the population was 65 and older
 - In 2050, that will reach 25%
- Regional variations in the percentage of older adults in different states



Use the forward arrow to continue.

8



Slide 10

Grisel Rodriguez, MSW, LCSW



Aging Diversity

- Demographic and racial make-up of the U.S. population is increasingly diverse
- U.S. census data from 2010 to 2018 report a 6.6% to 28.2% increase in all groups except non-Hispanic Whites
- Future of the U.S. is one of increasing diversity across all age groups



Use the forward arrow to continue.

9



A Multidisciplinary Experience

- Study of human development is multidisciplinary by nature
 - Biology
 - Psychology
 - History
 - Health behavior
- All health professions must become educated about aging to meet the needs of this growing population



Use the forward arrow to continue.

10



Geriatric Specialties

- Disciplines have created geriatric specialty competencies
 - Psychology
 - Psychiatry
 - Social work
 - Medicine
 - Physical therapy
 - Pharmacy
 - Nursing
- There will never be enough specialists to meet the needs of the growing number of older adults



Use the forward arrow to continue.



Take Home Message


- With modern technological and medical advancements, the average life expectancy of Americans is increasing
- There has never been a more critical time in our history to devote attention and resources to the study and care of older adults



Use the forward arrow to continue.

12






Biological Theories of Aging

Discuss the theories and hypotheses of aging

13



Why We Age?

- Antagonistic Pleiotropy
 - Most widely accepted evolutionary explanation for aging
- When genes that may have harmful effects in late life are favored by natural selection if they have beneficial effects earlier in life



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How We Age

Please select each button below to learn more about how we age

Replicative Senescence

Cross-linking or Glycation


Genome Maintenance

Neuroendocrine Mechanisms

Oxidative Damage/Free Radicals

Immunologic Mechanisms




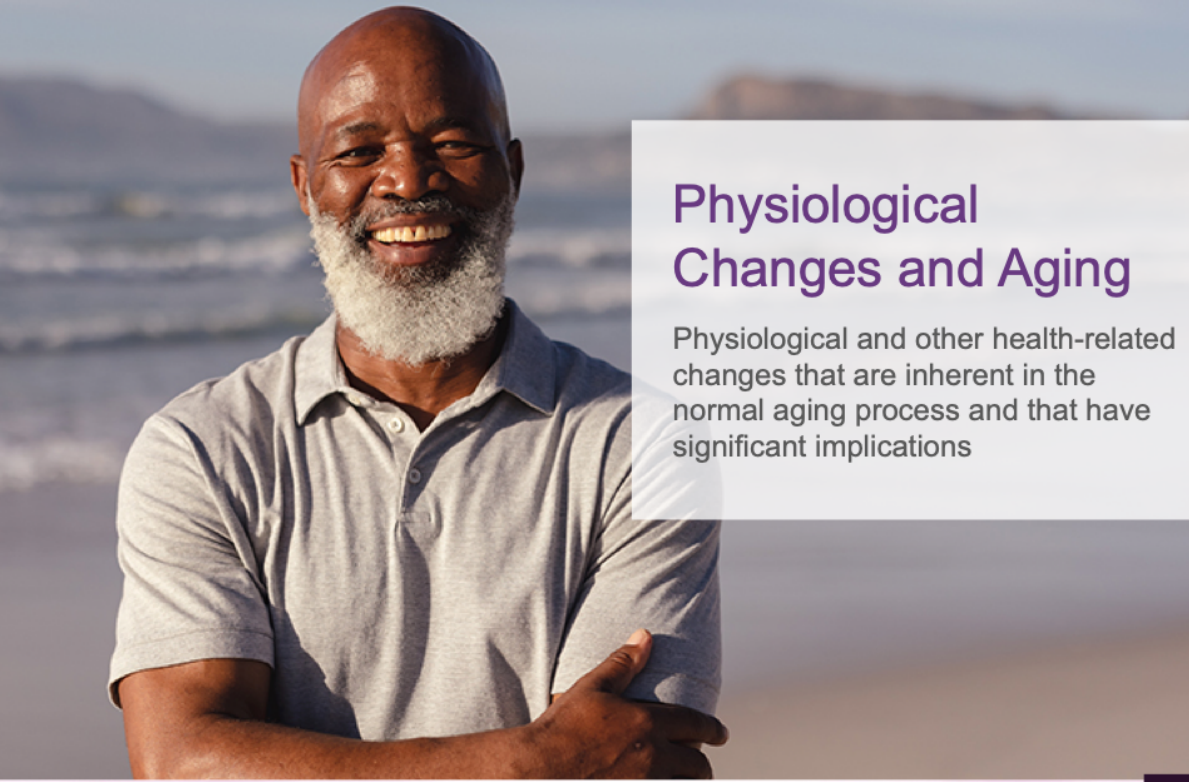


Take Home Message

- Multiple mechanisms have been proposed to examine how and why we age
- Continue to be examined in modern research

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Physiological Changes and Aging

Physiological and other health-related changes that are inherent in the normal aging process and that have significant implications

17





Metabolism and Elimination

- Metabolism
 - Breakdown of food or medication and its transformation into energy used for maintaining human activity and health
- Elimination
 - Discharge from the body of indigestible material and waste products of metabolism
- Aging produces changes in these processes
 - Blood flow and mass of liver and kidneys decrease with age
 - Cardiovascular disease and reduced cardiac output can affect the processing of medications
 - Heart is more vulnerable to medications with the potential for affecting heart rhythm or rate



Absorption and Distribution of Medication

- Loss of skin thickness decreases the absorption of topical medications
- Change in stomach emptying and gastric pH can decrease gastric acid secretion and affect oral drug absorption
- Lean body mass decreases and body fat increases
 - Can cause fat-soluble drugs to be distributed widely and have prolonged action



Erin E. Emery-Tiburcio, PhD, ABPP



Pulmonary Function

- Respiratory system undergoes anatomical and physiological changes with age
 - Structural changes result in increased work of breathing
 - Increased vulnerability to respiratory failure during illness
 - Airway receptors become less likely to respond to medications for respiratory disease
 - When an older adult experiences low oxygen or excessive carbon dioxide in the blood stream, they will be less aware of difficulty breathing and less likely to respond



Mobility and Strength

- Muscle mass and strength naturally decline with age
- Bone mineral density declines after age 40
- Cartilage thins and lubricating synovial fluid decreases
- Appropriate and regular exercise, particularly weight-bearing exercise, is especially important to help maintain muscle, bone strength, and balance

**Bone mineral density
declines after age 40**

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Senses

- Ability to hear higher frequencies declines
- Contrast vision declines
 - Making driving at night a greater challenge
 - Need for high-contrast signs and print materials
- Numbers and mass of taste buds decline in adulthood
- Sense of smell begins to decline
- Decline of taste and smell may have a significant effect on appetite and nutritional balance

**Driving at night is a
greater challenge**

23



Sleep

- Common misconception that people need less sleep with age
- Many factors contribute to sleep difficulties with age
 - Changes in the hypothalamus where the superchiasmatic nucleus (SCN) regulates circadian rhythm
 - Decreased production of certain hormones
 - Hormonal changes associated with menopause
- These changes, in addition to the higher prevalence of medical conditions, make it difficult for older adults to get consolidated sleep



Mental Health

- Older adults are collectively happier than younger adults
 - Contrary to stereotype of older people as depressed and grumpy
 - Older adults have lower rates of anxiety and depressive disorders
- Paradox of well-being
 - As number of older adults grows number of older adults with mental and behavioral health problems will almost quadruple



Self-rated Health

- Self-rated health is a reliable indicator of “objective” health
- Most older adults rate their health as “good to excellent” well into later life
- Ethnic and racial disparities are evident in self-rated health
 - Hispanic and non-Hispanic Black older adults rate their health as significantly poorer than non-Hispanic White people throughout later life





Take Home Message

- Structural and functional changes across organ systems that occur in normal aging
- Most older adults view themselves as in good health



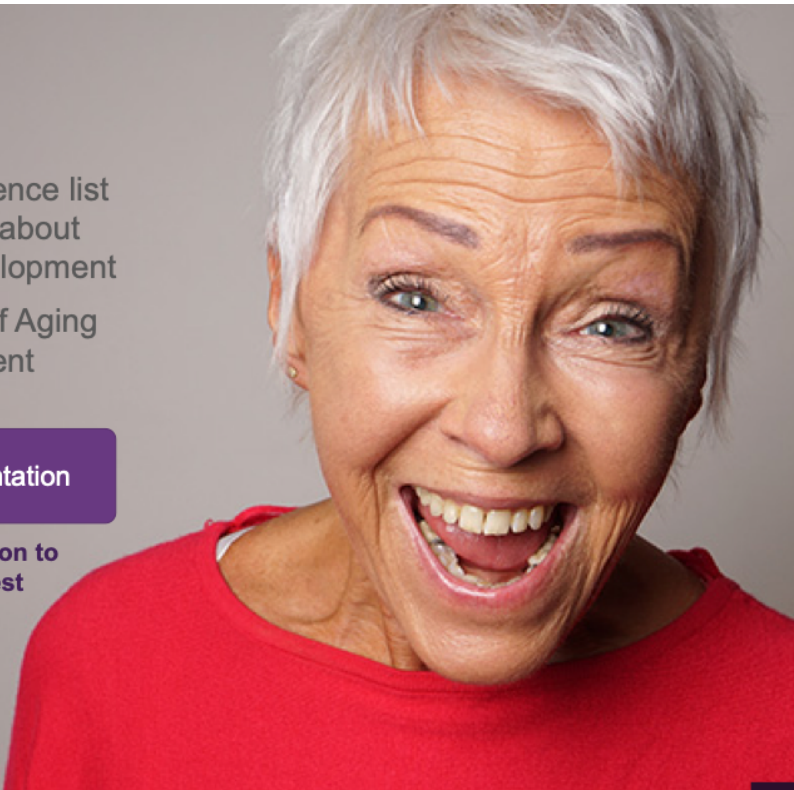
In Summary

In this module, we discussed aging and adult development

- ✓ Demographics of aging
- ✓ Theories and hypotheses about the aging process
- ✓ Structural and functional changes that are inherent in the aging process

To learn more about other important issues related to this topic, please watch Part 2 of aging and adult development





Next Steps

- Please see the reference list for more information about aging and adult development
- Then, watch Part 2 of Aging and Adult Development

[Click here to end presentation](#)

Then click the close button to proceed to the post test

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