**Functional Age**

- Actual competence and performance
- May not match chronological age

**Life Expectancy**

- Increasing in North America
  - Lower infant mortality
  - Lower adult deaths
- Group differences
  - Women live longer
  - SES
  - Ethnicity
  - Nationality

**Factors in a Long Life**

- Heredity
- Environment/Lifestyle
  - Healthy diet, normal weight
  - Exercise
  - Low substance use
  - Optimism
  - Low stress
  - Social support
  - Community involvement
  - Learning

**Life Expectancy Crossover**

- Charts showing differences in average life expectancy between men and women aged 75 and between men and women aged 85 and older.
Adapting to Physical Changes of Aging

- Multidimensional
- Appearance versus functioning
- Effective coping strategies
  - Prevention, compensation
  - Problem-centered coping
- Assistive technology
  - Devices that allow people with disabilities to improve their functioning.
  - I.e. voice-activated phones, "smart cap" on prescription bottles with reminder beeps, etc.

Stereotypes of Aging (cont.)

- Many assume deterioration is inevitable
  - Assumptions affected by culture
    - Older people do best when they retain social status and community participation.
    - Exclusion from important social roles increases separation from the community and leads to reduced psychological well-being.
- Stereotype threat
  - Fear of confirming stereotype reduces functioning
  - Negative stereotypes of aging ("decrepit," "confused") have a stressful, disorganizing impact on elders' functioning whereas positive stereotypes ("sage," "enlightened") reduce stress and foster competence.
- May be changing
  - Positive media portrayals

Sexuality in Late Adulthood

- Still important
  - Less desire and frequency; fewer male partners for women
  - Married couples: regular, enjoyable sex
- Continue patterns from earlier years
  - Good sex in the past predicts good sex in the future.
- Enjoy activities other than intercourse
  - Men sometimes stop all activities if erection problems
- Cultural influences
  - Disapproval in West

Primary and Secondary Aging

**Primary**
- Genetically influenced declines
- Affects all members of species
- Even happens if health is good

**Secondary**
- Declines due to heredity and environment
- Effects individualized
  - Major contributor to frailty
  - Illnesses and disabilities
    - Arthritis
    - Diabetes
    - Mental disabilities
Mental Disabilities in Late Adulthood

- Dementia
- Parkinson’s disease
- Alzheimer’s disease
- Cerebrovascular dementia
  - Strokes—hemorrhage or block of blood flow
  - Result of genetic and environmental forces
  - Indirect hereditary influences through high blood pressure, cardiovascular disease, and diabetes
  - Cigarette smoking, heavy alcohol use, high salt intake, low dietary protein, obesity, inactivity, and stress are environmental causes.
- Women are at greater risk after 75.

Misdiagnosis and reversible dementia
- Depression is often misdiagnosed as dementia.
- A depressed older adult is likely to exaggerate mental difficulties; demented person minimizes and is not fully aware of cognitive declines.
- Depression rises with age, often related to illness and pain.
- Elderly are unlikely to seek mental health services.
- Diseases and drug side effects can resemble dementia.
- Environmental changes and social isolation can trigger mental declines.
- Medication side effects

Dementia

- A set of disorders in old age in which many aspects of thought and behavior are so impaired that everyday activities (ADLs) are disrupted.
- Rises sharply with age, affects both sexes, most ethnic groups (African-Am. higher risk), and all SES groups equally.
  - 1 percent of people in sixties; rate increases steadily with age, rising sharply after 75, and about 50% after 85.
- Most types are irreversible and incurable.
- Progressive damage to cerebral cortex.
- Two varieties of cortical dementia.
  - Alzheimer’s disease
  - Cerebrovascular dementia (from strokes)

Alzheimer’s Disease

- Most common form of dementia, accounting for 50-60% of all cases.
- Structural and chemical brain deterioration with gradual loss of aspects of thought and behavior.
  - 6-10% of people over 65
  - Close to 50% over 80 affected
  - Each year in US, about 63,000 people die of Alzheimer’s, a leading cause of death in late adulthood.
- Symptoms of AD
  - Severe memory problems
    - Recent memory is impaired first; recall of distant events eventually fades.
    - I.e. forgetting names, dates, familiar routes of travel, turning off the stove
  - Faulty judgment
  - Driving or cooking when no longer able to do so safely.
  - Personality changes appear.
    - Loss of spontaneity, anxiety to uncertainties, angry outbursts, reduced initiative, and social withdrawal
  - Depression
  - Skilled and purposeful movements disintegrate.

Alzheimer’s: Brain Deterioration

- Diagnosis is made by ruling out other causes of dementia. Can only be confirmed by autopsy at death.
- Inside neuron
  - Collapsed neural structures.
- Outside neurons
  - Plaques
    - Contain amyloid, a protein deposited in tissue with reduced immunity which may destroy surrounding cells and lead to shrinking of the brain.
  - Chemical changes
    - Lowered levels of neurotransmitters leads to lessened communication between neurons.
    - Deficit of acetylcholine (transports messages between distant parts of the brain) and destruction of network of neurons disrupt perception, memory, reasoning, and judgment.
    - A drop in serotonin (regulates arousal and mood) may contribute to sleep disturbances, aggressive outbursts, and depression.
Alzheimer's: Interventions

- Family interventions help adjustment.
- Education is vital.
  - Helps caregivers respond to the victim's repetitive questions, stories, and inappropriate behavior with patience and compassion.
- Communicating with patient is challenging.
  - Avoiding dramatic changes in living conditions (moving to new location, rearranging furniture, modifying daily routines) is important to help patient feel secure.

Help for Caregivers of Elders with Dementia

- Knowledge
  - About the diseases, available resources
- Coping Strategies
- Caregiving Skills
- Respite
  - At least twice a week
  - Video Respite

Associative Memory

- Associative memory deficit
  - Difficulty creating and retrieving links between pieces of information.
    - I.e. two items or an item and its context.
  - Goes beyond recognition of single pieces of information and thus is more difficult.
  - Providing cues for remembering in any situation that requires linking pieces of information enhances memory performance.

Associative Memory Declines in Late Adulthood

- Difficulty in creating or retrieving links between pieces of information
- Using memory cues, enhancing meaningfulness of information, can help
Remote and Prospective Memory

Remote
- Very long-term recall
- Autobiographical memory

Prospective
- Remembering to engage in planned actions
- Event-based easier than time-based
- Use reminders, repetition to help

Selective Optimization with Compensation

- Select
  - Choose personally valued activities, avoid others
- Optimize
  - Devote diminishing resources to valued activities
- Compensate
  - Find creative ways to overcome limitations

Deliberate (Explicit) versus Automatic (Implicit) Memory

Deliberate (Explicit)
- Recall more difficult
  - Context helps retrieval, but slower processing, smaller working memory make context harder to encode
- Age-related memory declines are for tasks that require deliberate processing.
  - I.e. people’s names, places where they put important objects, directions to get from one place to another, appts. and medication schedules.

Automatic (Implicit)
- Recognition easier than recall
- More environmental support
- Implicit memory better than deliberate
  - Without conscious awareness
  - I.e. filling in a word fragment: t__k
  - Depends on familiarity