Chapter 13

Physical and Cognitive Development in Early Adulthood
Lecture Overview

- Physical Functioning
- Health and Wellness
- Cognitive Changes
- Post-Secondary Education
Definitions

- Primary aging: gradual and inevitable process of bodily deterioration throughout life
  - Gray hair, changes in visual acuity
- Secondary aging: preventable processes from disease and poor health practices
# Benefits of Lifestyle Changes

## Table 13.1 Benefits of Lifestyle Changes

<table>
<thead>
<tr>
<th>Lifestyle Change</th>
<th>Benefits</th>
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<td>If overweight, lose just 10% of your body weight.</td>
<td>Reduction in triglyceride levels; decrease in total cholesterol; increase in HDL (“good cholesterol”); significant reduction in blood pressure; decreased risk of diabetes, sleep apnea, and osteoarthritis (Fransen, 2004; Wee, Hamel, Dans, &amp; Phillips, 2004).</td>
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<td>Add 20 to 30 grams of fiber to your diet each day.</td>
<td>Improved bowel function; reduced risk of colon cancer and other digestive-system diseases; decrease in total cholesterol; reduced blood pressure; improved insulin function in both diabetics and nondiabetics (Mayo Clinic, 2005).</td>
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<td>Engage in moderate physical activity every day (e.g., walk up and down stairs for 15 minutes; spend 30 minutes washing a car).</td>
<td>Reduced feelings of anxiety and sadness; increased bone density; reduced risk of diabetes, heart disease, high blood pressure, and many other life-shortening diseases (Centers for Disease Control and Prevention [CDC], 2007a).</td>
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| Stop smoking at any age, after any number of years of smoking.                  | **Immediate**: Improved circulation; reduced blood level of carbon monoxide; stabilization of pulse rate and blood pressure; improved sense of smell and taste; improved lung function and endurance; reduced risk of lung infections such as pneumonia and bronchitis.  
**Long-term**: Reduced risk of lung cancer (declines substantially with each year of abstinence); decreased risk of other smoking-related illnesses such as emphysema and heart disease; decreased risk of cancer recurrence in those who have been treated for some form of cancer (National Cancer Institute, 2000). |
| Get recommended annual or 5-year screenings beginning at these ages.            | **Women**: (21) Chlamydia, cervical cancer, screenings if sexually active; (35) cholesterol test; (50) mammogram, colorectal exam; (65) vision, hearing tests  
**Men**: (30) EKG, cholesterol test; (40) PSA test for prostate cancer; (50) colorectal exam; (65) vision, hearing tests |
Health Differences

- Income-related variations in social environments and individual behavior
- Many of the same factors contribute to economic differences and health habits.
- Links between social class and secondary aging are complex.
Nervous System

- Growth spurts in brain
- Response inhibition; cortex control of the limbic system
- New neuronal production
General Physical Skills
Better physical skills on all measures when compared to older adults
- Stronger
- Faster
- Better immune systems
- Better eyesight
- Quicker adaptation
OTHER BODY SYSTEMS
Early Adulthood

- Declines Physical Functioning
  - Changes are balanced between physical demand and physical capacity.
  - Losses that appear later in life start in early adulthood.
OTHER BODY SYSTEMS
Early Adulthood

- **Strength and Speed**
  - Strength peaks in the 20s and early 30s.
  - Active lifestyles affect functioning.

- **Reproductive Capacity**
  - Women’s reproductive capacity begins to drop in their mid-20s.
  - Men’s capacity diminishes, but remains intact.
ASSISTED REPRODUCTIVE TECHNOLOGY

The age at which couples attempt to conceive and the proportion who are treated for infertility has risen in recent years.

- Assistant reproductive techniques (ART)
- In vitro fertilization (IVF) with nondonor fresh eggs has the highest success rate.
  - Drugs stimulate ovaries to produce eggs.
  - Eggs are retrieved, extracted, and exposed to sperm.
  - Transfer of embryos; injected into uterus or fallopian tubes
- Age-related success rate; higher multiple birth rate (even when single embryo transferred)
Decide which of these two statements you most agree with and think about how you would defend your position:

1. The benefits of ART outweigh its risks. If I were faced with fertility problems, I would look into ART.
2. The risks of ART outweigh its benefits. If I were faced with fertility problems, I would prefer to adopt a child rather than to seek help from an ART specialist.
HEALTH AND WELLNESS
Health Habits and Personal Factors

- Getting physical exercise
- Getting regular sleep
- Eating breakfast
- Not smoking
- Not drinking
- No snacking
- Not over- or undereating
Only five habits on the previous slide are independently related to risk of death.

Can you guess which two habits were unrelated to mortality?
Answer

- Snacking and eating breakfast
Poorer health habits lead to higher risk of mortality, disease, and disability

BMI: body mass index (Height to weight ratio)

Additional research links lack of physical exercise and lower risk of death

Higher BMI (Body Mass Index: weight to height ratio) numbers in women associated with lower risks of death
Positive Effects

- Adequate amounts of social support lower the risks of disease, death, and depression.
- Effects found across diverse age groups
- May boost immune system functioning
Perceived Control

**Self-efficacy**: the belief in one’s ability to perform some action or to control one’s behavior or environment to reach some goal.

- Internal locus of control: one attributes the cause of many consequences to oneself rather than external factors.
Bacterial STDs: caused by microorganisms that can be eradicated with antibiotics
Chlamydia: transmitted through intimate genital contact
- Women are three times as likely as men to suffer from it, but can remain symptom-free.
- Unfortunately, undiagnosed chlamydia can lead to pelvic inflammatory disease and infertility.
Gonorrhea
- Declined in recent years, but new strains more resistant to antibiotics
- Causes long-term damage to reproductive systems
Syphilis
- Can lead to serious mental disorders and death
Viral STDs: caused by viruses; considered incurable

Genital herpes
- Acquired through intercourse or oral sex
- 20–30 percent of adults are affected.
- Periodic attacks

Genital warts
- Caused by human papillomavirus
- Visible symptoms are warts.
- New vaccine may be effective.

HIV/AIDS
- Over one million cases in U.S.
- Over 20 million cases in sub-Saharan Africa
- Transmitted through exchange of bodily fluids (Blood, semen, vaginal fluids, breast milk and any other bodily fluid containing blood)
- HIV to AIDS transition less than 200 CD 4 cells
- Male homosexual rates remain high.
AIDS Quiz

True or False

1. AIDS is a single disease.
2. AIDS symptoms vary widely from country to country and even from risk group to risk group.
3. Those at greatest risk for getting AIDS are people who have sex without using condoms, drug users who share needles, and infants born to AIDS-infected mothers.
4. AIDS is one of the most highly contagious diseases.
5. One way to avoid contracting AIDS is to use an oil-based lubricant with a condom.
1. False: AIDS is not a single disease. Rather, a severely impaired immune system leaves a person with AIDS highly susceptible to a whole host of infections and diseases.

2. True: In the United States and Europe, AIDS sufferers may develop Kaposi’s sarcoma (a rare form of skin cancer), pneumonia, and tuberculosis. In Africa, people with AIDS usually waste away with fever, diarrhea, and symptoms caused by tuberculosis.

3. True: These groups are at greatest risk. Screening of blood donors and testing of donated blood have greatly reduced the risk of contracting AIDS through blood transfusions. Today, women make up the fastest-growing group of infected people worldwide, as AIDS spreads among heterosexuals, especially in Africa.

4. False: AIDS is not among the most highly infectious diseases. You cannot get AIDS from kissing, shaking hands, or using objects handled by people who have AIDS.

5. False: Do not use oil-based lubricants, which can eat through condoms. Latex condoms with an effective spermicide are safer. Learn the sexual history of any potential partner, including HIV test results.
Prevention: behavioral changes
- Less risky sexual behavior
- Use of condoms
Sexual violence: episodes of partner abuse in which an individual uses force to coerce another into engaging in sexual acts

- Context
- Victim gender
- Consequences
Causes of Mental Health Problems

- Age
- Expectations and role conflicts
- Biological causes
- Interaction of biology and environment
Most common mental disorders are those associated with fear and anxiety
Second most common types are problems associated with moods

Anxiety
- Phobia: irrational fear of an object, person, place, or situation
- Learned through association
- Therapeutic interventions involve unlearning the association.
- May be “free-floating”

Depression
- Rates higher in early adulthood than in adolescence or middle age
- May result from intimacy issues and loneliness
- Can be a recurrent problem
Personality disorders: inflexible patterns of behavior that lead to difficulties in social, educational, and occupational functioning

- Behaviors start in mid- or late adolescence, but can remain problematic throughout life.
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<th>Disorder Type</th>
<th>Characteristics</th>
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<td>Antisocial</td>
<td>Difficulty forming emotional attachments; lack of empathy; little regard for the</td>
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<td>rights of others; self-centered; willing to violate the law or social rules to</td>
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<td>achieve a desired objective</td>
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<td>Paranoid</td>
<td>Suspicious of others' behavior and motives; emotionally guarded and highly</td>
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<td>sensitive to minor violations of personal space or perceived rights</td>
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<td>Histrionic</td>
<td>Irrational, attention-seeking behavior; inappropriate emotional responses;</td>
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<td>sexually seductive behavior and clothing</td>
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<td>Narcissistic</td>
<td>Exaggerated sense of self-importance; craves attention and approval; exploits</td>
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<td>others; lack of empathy</td>
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<td>Borderline</td>
<td>Unstable moods, relationships; fear of abandonment; tendency to self-injury;</td>
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<td>highly dependent on others; impulsive and reckless behavior</td>
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(Source: APA, 2013.)
Schizophrenia: mental disorder that makes it difficult to tell the difference between real and unreal experiences, to think logically, to have normal emotional responses, and to behave normally in social situations.

- Characterized by false beliefs (delusions) and false sensory experiences (hallucinations)
Quick Facts

- Peaks between 18 and 40
- Gender differences
- Binge drinking is common among college students.
- Physical and psychological dependence and physical tolerance may occur.
SUBSTANCES OFTEN ABUSED

**Stimulants**
- Caffeine
- Nicotine
- Amphetamines
- Cocaine

**Depressants**
- Alcohol
- Barbiturates
- Tranquillizers
- Narcotics

**Hallucinogens**
- Marijuana
- LSD
- MDMA
POST-SECONDARY EDUCATION

Impact

- **Post-secondary education**: any kind of formal schooling following high school
- Developmental impact
  - More promotions
  - Less unemployment
  - Professional field openings
  - Vocational aspiration increases
  - Enhanced internal locus of control
- Social impact
  - More socialization opportunities
  - Advances in moral and social reasoning
  - Increased capacity for empathy
The experience of attending a post-secondary institution varies across males and females.

- Women study twice as much as men; Men party twice as much as women.
- Male behavior may arise from the desire to assert masculine identity.
  - Disengagement from academic pursuits
  - Heightened interest in risky behavior
POST-SECONDARY EDUCATION

Traditional and Nontraditional Students

- Traditional
  - Enroll in school full-time directly after graduation.
  - Now only one-quarter of enrollees
  - Half obtain a degree within six years
  - Traditional students more often pursue bachelor degrees.
- Non-traditional students more often enroll in two-year colleges.
  - Less often complete degrees than traditional students
  - Non-traditional students tend to have less of a social network on campus—support from the institution is critical for successful management of the conflicting demands of school, family, and work.
  - May delay entry into college
  - Independent from parents
  - Employed full time
  - Enrolled part time
  - Have children
  - Possess a GED rather than a high school diploma
GENDER AND THE COLLEGE EXPERIENCE

- Female College Students
  - Higher graduation rates
  - Study more
  - Lower entrance exam scores
  - Lower entrance into prestigious programs
  - Party less; influenced less by peer pressure
    - Sixty percent of college students are now female.
    - Men party more and may be more influenced by peer pressure and behavior.