• Reminder: Final and Make-Up Exams next Thursday!

• Development and Aging (Chapter 15)
  - Homework Assignment
  - Life Expectancy Activity
  - Why do we age? (Activity)
  - What happens as we age?
  - Alzheimer’s Disease
From Birth to Adulthood

• First 2 weeks: infant called neonate
• Infancy lasts until about 15 months
• Time of rapid growth and development – body proportions are changed!
• Puberty marks sexual maturity, secondary sexual characteristics develop

• Cartilage hardens and bones stop growing in early adulthood
• After about age 40, senescence (aging) begins
What determines longevity?
What causes aging? (Group exploration of hypotheses)

• Summarize, in 1-2 sentences, this hypothesis on aging.

• What types of observations have been made or experiments have been done to test this hypothesis?

• In your group’s opinion, how much does this particular mechanism have to do with aging? Why? What other factors might be involved?
What happens to our bodies and minds as we age?

- **Hair and nails**: Hair often turns gray and thins out. Men may go bald. Fingernails can thicken.
- **Brain**: The brain shrinks, but it is not known if that affects mental functions.
- **The senses**: The sensitivity of hearing, sight, taste, and smell can all decline with age.
- **Skin**: Wrinkles occur as the skin thins and the underlying fat shrinks, and age spots often develop.
- **Glands and hormones**: Levels of many hormones drop, or the body becomes less responsive to them.
- **Muscles**: Strength usually peaks in the twenties, then declines.
- **Immune system**: The body becomes less able to resist some pathogens.
- **Heart and blood vessels**: Cardiovascular problems become more common. The heart grows less efficient; buildup within arteries decreases oxygen and nutrients to cells.
- **Breasts**: Tissue degenerates after menopause, and breasts sag.
- **Lungs**: Lung capacity drops; risk of bronchitis and pneumonia grows.
- **Kidneys and urinary tract**: The kidneys become less efficient. The bladder can't hold as much, so urination is more frequent.
- **Digestive system**: Digestion slows down as the secretion of digestive enzymes decreases.
- **Reproductive system**: Women go through menopause, and testosterone levels drop for men.
- **Bones and joints**: Wear and tear can lead to arthritic joints, and osteoporosis is common, especially in women.

Fig 15.2, pg 424
The brain: Use it or lose it!

• 20-year old brain

• 80-year old brain
Dementia & Alzheimer’s Disease

• ~15% of older Americans will develop dementia
• 60% of those suffer from an extreme form called Alzheimer’s Disease