Communicable Diseases

- Disease that's spread from one living organism to another or through the environment
- Infection—occurs when pathogens in the body multiply and damage body cells
Main Pathogens

- **Viruses:** piece of genetic material surrounded by a protein coat
  - Cold
  - Influenza
  - Measles
  - West Nile
  - Rabies
  - Chicken pox

- **Bacteria:** single-celled microorganisms
  - Foodborne illnesses
  - Strep throat
  - Pinkeye
How Diseases Spread

- **Direct Contact:**
  - Puncture wounds
  - Childbirth (through the placenta)
  - Through infected animals (bites)

- **Indirect Contact:**
  - Contaminated objects (doorknob)
  - Vectors—organism that transmits the pathogens (mosquitoes, ticks)
  - Contaminated water and food
Prevention

- Wash your hands—when in doubt, wash it off
- Use insect repellent
- Wear long pants/sleeves to avoid insect bites
- Avoid sharing eating utensils
- Handle food properly
- Cover your mouth when you cough or sneeze!!!!!!!!!
Common Communicable Diseases

- Respiratory infections (affects nose, throat, lungs)
  - Colds
  - Influenza
  - Pneumonia
  - Strep throat
  - Tuberculosis
Hepatitis

- Viral infection that causes inflammation of the liver
- 5 different kinds, 3 are the most common
- Symptoms include jaundice (yellowing of the skin and eyes) and cirrhosis (scarring of the liver)
Hepatitis cont.

- **Hepatitis A:**
  - Usually attacks digestive system through contact with feces of an infected person

- **Hepatitis B:**
  - Can cause liver failure and cirrhosis
  - Spread through sexual contact or infected blood (tattoos)

- **Hepatitis C:**
  - Most common blood-borne infection in the U.S.
  - Spread by direct contact with needles that are contaminated with infected blood
Chapter 24
SEXUALLY TRANSMITTED DISEASES
What are STDs?

- STDs—infections spread from person to person through sexual contact
  - Also known as STIs
- Those that are caused by bacterial infections can be cured with medication where those caused by viruses cannot be cured
- Several of the most common STDs are asymptomatic (show no symptoms or symptoms disappear)
STDs in the U.S.

- 9 million young people (ages 15-24) will become infected with an STD each year

<table>
<thead>
<tr>
<th>STD</th>
<th>Estimated Cases</th>
<th>Reported Cases</th>
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</thead>
<tbody>
<tr>
<td>HPV</td>
<td>6.2 million</td>
<td>5.5 million</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>3 million</td>
<td>1,108,374</td>
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<tr>
<td>Herpes</td>
<td>1 million</td>
<td>317,000</td>
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<tr>
<td>Gonorrhea</td>
<td>700,000</td>
<td>355,991</td>
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<tr>
<td>Syphilis</td>
<td>70,000</td>
<td>40,920</td>
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<tr>
<td>Hepatitis B</td>
<td>120,000</td>
<td>46,000</td>
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</tbody>
</table>
HPV

- Human papillomavirus
- Close to 6 million people infected
- Bumps or growths near or on the genitals
- Most do not have symptoms
- Gardasil/vaccine shot is not a cure, however, will reduce the # of cervical cancer cases
Chlamydia

- Bacterial infection—about 2.8 million Americans contract it each year
- Affects young females 3x more often than males
  - Less than half of all cases are reported
- No obvious symptoms
- Most common STD
- Females with chlamydia are up to 5x more likely to become infected with HIV if exposed to the virus
Genital Herpes

- Caused by herpes simplex virus
- Simplex 1 causes cold sores in or near the mouth
- Simplex 2 causes genital sores
- BOTH can infect the mouth or genitals
- About 45 million people ages 12+ have genital herpes
- No cure for herpes, can be medicated to reduce the amount of pain/outbreaks
Gonorrhea

- Bacterial STD that affects mucous membranes
- 2nd most common infectious disease in the U.S.
- Bacteria can spread to the bloodstream and cause permanent damage to the body’s joints
- Females can pass the infection to their babies during childbirth
Syphilis

- Passed from one person to another by direct contact with the sores during sexual activity
- Happens in 3 stages:
  - Sore appears—can be easily treated
    - Goes untreated—sore heals, infection remains
  - Infection produces a skin rash
  - Damages internal organs
HIV/AIDS

- Finds and destroys the white blood cells that fight disease
- Final stage of an HIV infection $\rightarrow$ AIDS (acquired immunodeficiency syndrome)
- More than 25 million people around the world have died from AIDS (more than 500,000 Americans)
- Currently 40 million people worldwide have HIV/AIDS
- About 7,000 young people become infected EACH DAY
Spreading HIV

- 3 ways:
  - During sexual intercourse
    - Enters the bloodstream through microscopic openings
    - People with STDs are more vulnerable to HIV infection
  - By sharing needles
    - Contaminated needles
    - Enters bloodstream
  - From mother to baby
    - Through umbilical cord, during childbirth, through breast-feeding
Activity

- How Crowded Is Your Bed?