**Terms you should know:**

- dental carries
- biofilm
- chronic superficial gastritis
- sucrose
- fluoride
- peptic ulcer disease
- glucan
- gingivitis
- urease
- plaque

**Streptococcus mutans**

Description: Gram-positive cocci in chains

Diseases: Dental carries (cavities)

Virulence factors: Break down sucrose to make glucan (glucose polymer; provides matrix for plaque—really a biofilm) and lactic acid (causes tooth damage)

Treatment: Prevention by dental hygiene; strengthening of tooth enamel with fluoride

Reservoir and spread: Found in all human mouths as part of the normal flora

**Bacteroides gingivalis and Bacteroides intermedius**

Description: Gram-negative rods; obligate anaerobes

Diseases: Periodontal disease (gum disease)

Treatment: Dental hygiene, antibacterial drugs

**Mumps virus**

Description: Enveloped, single-stranded RNA virus, related to influenza virus

Diseases: Mumps

Infected upper respiratory system, spreads to salivary and parotid glands, can enter bloodstream and cause complications elsewhere.

Treatment: Support only; no specific treatment

Vaccine has reduced US cases by 97% in 30 years

Reservoir and spread: Human reservoir only; spreads by respiratory route

**Helicobacter pylori**

Description: Gram-negative, curved or spiral-shaped with multiple flagella

Diseases: Chronic superficial gastritis, ulcers, connection with stomach cancer

Produces inflammation and irritation of stomach lining

Virulence factors: Flagella, ability to colonize mucus layer, urease (neutralizes acid), growth in 5% oxygen, slow growth, tissue-damaging toxins

Treatment: Antibodies produced but ineffective

Combination of bismuth subsalicylate, tetracycline and metronidazole is effective in eliminating infection and preventing recurrence of ulcers

Reservoir and spread: Human reservoir only; exact mechanism of spread unknown