Terms you should know:

- rhinovirus
- influenza
- hemagglutinin
- neuraminidase
- swine flu
- hantavirus
- dimorphic fungus
- coccidiomycosis
- histoplasmosis

**Rhinoviruses**

Description: Small, simple viruses with a single-stranded RNA genome
Diseases: Common cold (also caused by several other types of virus)
Treatment: Symptomatic only
100s of strains and short-term immunity are problems for vaccination
Reservoir and spread: Human viruses; spread mostly by person-to-person contact and fomites

**Influenza virus**

Description: Enveloped, single-stranded RNA virus
Diseases: Influenza (particularly virulent strains progress to pneumonia)
Virulence factors:
- Hemagglutinin (used in attachment of virus to cells)
- Neuraminidase (used in release of progeny viruses from cell membrane)
Treatment: Vaccination, but new vaccines needed for each year’s dominant strains
- Some antiviral drugs (e.g., Relenza, neuraminidase inhibitor) available
Reservoir and spread: Animal reservoir (birds and pigs); new strains can emerge from animals

**Hantavirus**

Description: Enveloped, single-stranded RNA viruses
Diseases: Hantavirus pulmonary syndrome (HPS)
Treatment: Support only; no specific treatment or vaccine
Reservoir and spread: Carried by long-tailed deer mouse; spread through feces and urine

**Histoplasma capsulatum**

Description: Dimorphic fungus (mold in environment, yeast in body)
Diseases: Histoplasmosis (at most a very mild disease unless immunocompromised)
Treatment: Amphotericin
Reservoir and spread: Environmental reservoir; found in nitrogen-rich soils (Midwest and South)
- Spores enter lungs by respiratory route