CHAPTER 21
INFECTIONS OF THE
RESPIRATORY SYSTEM

RESPIRATORY SYSTEM

- The respiratory system is the most accessible system in the body and is therefore a major portal of entry for pathogens
- The upper respiratory tract is continuously exposed to pathogens, whereas the lower respiratory tract is essentially sterile
- Many infections of the lower respiratory tract result in pneumonia

RESPIRATORY SYSTEM

- The respiratory system is also a good portal of exit, and so it is easy for a pathogen to use this system to spread infections from person to person
- Fungal infections of the respiratory system are usually restricted to individuals who are immunocompromised
INFECTIONS OF THE UPPER RESPIRATORY TRACT

- Bacterial infections of the upper respiratory tract can involve otitis media, mastoiditis, sinusitis, and pharyngitis
- Viral infections of the upper respiratory tract include the common cold (rhinovirus) and parainfluenza
- There are no specific treatments for viral infections of the upper respiratory tract

BACTERIAL INFECTIONS OF THE LOWER RESPIRATORY TRACT

- Bacterial infections of the lower respiratory tract include both nosocomial and community-acquired bacterial pneumonia
- Chlamydophila and Mycoplasma can also cause pneumonia

BACTERIAL INFECTIONS OF THE LOWER RESPIRATORY TRACT

- Tuberculosis is a serious lower respiratory tract infection caused by Mycobacterium tuberculosis, an organism that is becoming more resistant to antibiotic treatment
- Pertussis (whooping cough), inhalation anthrax, legionellosis, Q fever, and psittacosis are serious infections of the lower respiratory tract
Influenza and RSV cause the most common viral infections of the lower respiratory tract. They are serious infections in themselves and also make the patient more susceptible to secondary bacterial infections.

There are vaccines and antiviral therapies for influenza though they are of limited effectiveness. There is no vaccine or specific treatment for RSV. HPS is an emerging infectious disease.

The adaptive immune response usually keeps fungal infections under control. Fungal infections of the respiratory tract are usually opportunistic infections seen in immunocompromised individuals.
FUNGAL INFECTIONS OF THE RESPIRATORY SYSTEM

- Once developed, fungal infections of the respiratory tract can be serious and treatment options are limited.
- Fungal infections of the respiratory tract include *Pneumocystis* pneumonia, histoplasmosis, coccidioidomycosis, and aspergillosis.