

General Microbiology & Infectious Disease Topics

- Microbial classification and its basis
 - Bacteria: structure, metabolism, genetics, virulence factors, pathogenesis
 - Viruses: replication, genetics, latent/persistent infections, oncogenic viruses
 - Fungi: structure, physiology, pathogenesis, epidemiology
 - Parasites: structure, laboratory diagnosis, pathogenesis
 - Principles of sterilization and pure culture techniques
 - Mechanisms of action and resistance of antimicrobials (antibacterials, antivirals, antifungals, antiparasitic)
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System-Specific Microbiology & Infectious Diseases

System	Infectious Diseases
Hematopoietic & Lymphoreticular	Infections of the blood, lymphatics, and reticuloendothelial system (HIV, EBV, malaria)
Central & Peripheral Nervous	Meningitis (bacterial, viral, fungal, parasitic), encephalitis, abscess, prion diseases
Skin & Connective Tissue	Bacterial (impetigo, cellulitis, necrotizing fasciitis), viral (herpes, varicella, rubella), fungal (tinea, candidiasis), parasitic (scabies, lice)
Musculoskeletal	Osteomyelitis (Staphylococcus aureus, TB), septic arthritis (gonococcal, non-gonococcal), Lyme disease
Respiratory	Upper respiratory infections (sinusitis, pharyngitis), lower respiratory infections (pneumonia, bronchiectasis, TB, endemic fungal infections)
Cardiovascular	Endocarditis (bacterial, fungal), myocarditis (viral, parasitic, bacterial), pericarditis
Gastrointestinal	Hepatitis (A, B, C, D, E), Helicobacter pylori (peptic ulcer), food poisoning (Salmonella, Shigella, E. coli), parasitic infections
Renal/Urinary	Urinary tract infections (E. coli, Proteus, Klebsiella), pyelonephritis, schistosomiasis
Reproductive	Sexually transmitted infections (syphilis, gonorrhea, chlamydia, HPV, herpes, trichomoniasis)
Endocrine	Infectious endocrinopathies (mumps → orchitis, TB of adrenal glands)
