

Chapter 7

Asepsis and



Lesson 7.1

(Slide 1 of 2)

1. Explain the difference between medical and surgical asepsis.
2. Explain how each element of the chain of infection contributes to infection.
3. List five major classifications of pathogens.
4. Identify the body's normal defenses against infections.

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Lesson 7.1

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5. Discuss nursing interventions used to interrupt the chain of infection.
6. Describe the signs and symptoms of a localized infection and those of a systemic infection.
7. Discuss the events in the inflammatory response.
8. Discuss standard precautions.

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Asepsis

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- Microorganisms
 - Tiny microscopic entities capable of carrying on living processes
 - Nonpathogenic – harmless, do not produce disease
 - Pathogenic – cause specific diseases or infections
- Infection control and prevention
 - Minimizing spread of health care-associated (nosocomial) infections or community-acquired infections to patients or staff

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Asepsis

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- Asepsis
- Medical asepsis
- Surgical asepsis



Infection


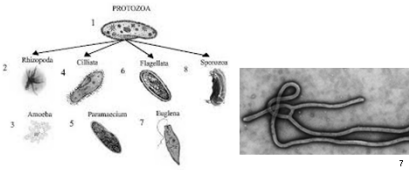



- Chain of events take place for infection to develop
 - Infectious agent – pathogen
 - Reservoir – where pathogen grows
 - Portal of exit – exit route from reservoir
 - Mode of transportation – method or vehicle of transportation
 - Portal of entry – entrance through skin, mucous lining, or mouth
 - Host – person or animal susceptible to the pathogen

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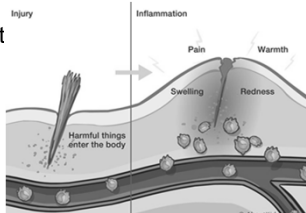
Infectious Agents

- Bacteria
- Viruses
- Fungi
- Protozoa




Body's Normal Defenses

- Skin
- Mouth
- Respiratory tract
- Urinary tract
- Gastrointestinal tract
- Vagina



Nursing Interventions

- With each patient care activity, the nurse should ensure that infection prevention and control are routine



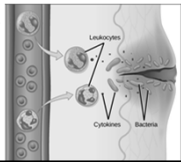
Infectious Process

- Progressive stages
 - > Incubation
 - > Prodromal
 - > Acute
- Localized (superficial wound infection)
- Systemic (infection affects entire body instead of single organ or part)



Inflammatory Response

- Body's response to injury or infection
- Protective vascular reaction delivering fluid, blood, and nutrients to interstitial tissues in injured area
- Neutralizes and eliminates pathogens or necrotic tissues and establishes a means of repairing body cells and tissues



Health Care–Associated Infections

- Nosocomial infections
 - > Infection acquired while in the hospital or other health care agency
 - > Develops at least 48 hours after hospitalization
 - > Hospital setting harbors some virulent organisms, making it easier to acquire an infection



Infection Prevention and Control Team

- Infection control nurse
 - > Specialty professional in infection control and prevention
 - > Duties
- Occupational health service
 - > Important in prevention or control of infection in health care by taking measures to protect health care workers and patients from certain infections.
 - > Federal law requires making available hepatitis B vaccine and vaccination series to all employees

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Standard Precautions

- Centers for Disease Control and Prevention (CDC) provides guidelines to interrupt the chain of infection and transmission of blood-borne pathogens and other potentially infectious materials



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Lesson 7.2

9. Demonstrate the proper procedure for hand hygiene.
10. Demonstrate technique for gowning and gloving.
11. Identify principles of surgical asepsis.
12. Describe the accepted techniques of preparation for disinfection and sterilization.
13. Discuss patient teaching for infection prevention and control as an element of health promotion.
14. Discuss infection prevention and control measures in the home.

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Hand Hygiene

- Single most important and basic preventive technique used to interrupt the infectious process
- Wash hands before and after patient care; touching body fluids, secretions, excretions, and contaminated equipment; between patient contact; and immediately after removing gloves



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Gowning and Gloving

- Gloving
 - Latex allergy
- Gowning
- Mask and protective eyewear



Isolation Technique

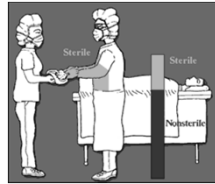
- Standard precautions
 - First tier of CDC's isolation guidelines
 - Second-tier is disease-specific isolation
 - Transmission categories: airborne, droplet, and contact precautions
- Isolation considerations
 - Psychosocial/emotional deprivation
- Specific diseases
 - Pulmonary tuberculosis (TB)

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Surgical Asepsis

- Complete removal of all microorganisms including spores
- Technique and use
- Teaching patients
- Principle of sterile technique
- Purpose of surgical hand scrub
- Opening sterile packaging
- Sterile field
- Pouring sterile solutions
- Donning sterile gown and gloves



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Cleaning, Disinfection, & Sterilization

- Aseptic and bacteriostatic
- Cleaning
 - Removing foreign materials
- Disinfection
 - Used to destroy microorganisms
- Sterilization
 - Method of killing all microorganisms including spores
 - Two types: physical and chemical



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Patient Teaching for Infection Prevention and Control

- Patients and families have to learn to use infection prevention and control practices at home
- Need to be aware of how infection is spread and ways to prevent transmission
- Educate about techniques used to control spread of infection



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Infection Prevention and Control for Home and Hospice Settings

- Home settings
 - Basic principles of hygiene
 - Educate about hand hygiene, food preparation, tube feedings, linens, waste containers, body fluid spills

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