

Asepsis & infection control

A major concern for health partitions is the danger of spreading microorganisms from person to person and from place to place . Microorganisms are naturally present in almost all environments . Some are beneficial ;some are not. Some are harmless to most people, and others are harmful to many people . Still others are harmless except in certain circumstances.

Systematic approach to the control of infections include

- **1. Mass immunization programs**
- **2. Laws concerning safe sewage disposal**
- **3. Regulations for the control of communicable disease**
- **4. Hospital infection-surveillance programs**

Prevention of infection is a major focus for nurses.as primary caregivers, nurse are involved in

- **1. Identifying**
- **2. Preventing**
- **3. Controlling**
- **4. Teaching patient about infection control**

Terminologies

- **Asepsis: Is the absence of organism causing disease.**
- **Medical asepsis(clean): Refers to practices which help reduce the number and hinder the transfer of disease-producing microorganism from one person or place to another.**

- **Surgical asepsis (sterile)**: Practices that render and keep objects and areas free from organisms.
- **Microorganism**: A tiny living animal or plant that can cause disease ,most are visible only with a microscope.
- **Pathogen**: A microorganism that causes disease.

- **Contamination** :Means to make something unclean, such as area equipment ,if it contain microorganisms that cause disease.
- **Disinfectant** :A substance used to destroy pathogens but not necessarily their spores, in general not intended for use on persons.

- **Antiseptic** :A substance used to destroy pathogens on living object such as skin and mucous membrane .
- **Disinfection** :A process by which pathogens, but not spores, are destroyed.
- **Infection** :The invasion of the body by disease-producing microorganism and the body's reaction to their presence .

- **Cross –infection** :Is an infection transmitted from an infected person or an object to other persons or objects.
- **Inflammation** :is a response of a tissue to injury, often injury caused by invading pathogens. It is characterized by.
 -
 - increased blood flow to the tissue causing
 - increased temperature,

- **redness,**
- **swelling, and**
- **pain.**
- **Sterilization :**
- **A process by which all microorganisms including spores are destroyed.**

Nosocomial infection

- **also known as a hospital-acquired infection or HAI, is an infection whose development is favored by a hospital environment, such as one acquired by a patient during a hospital visit.**

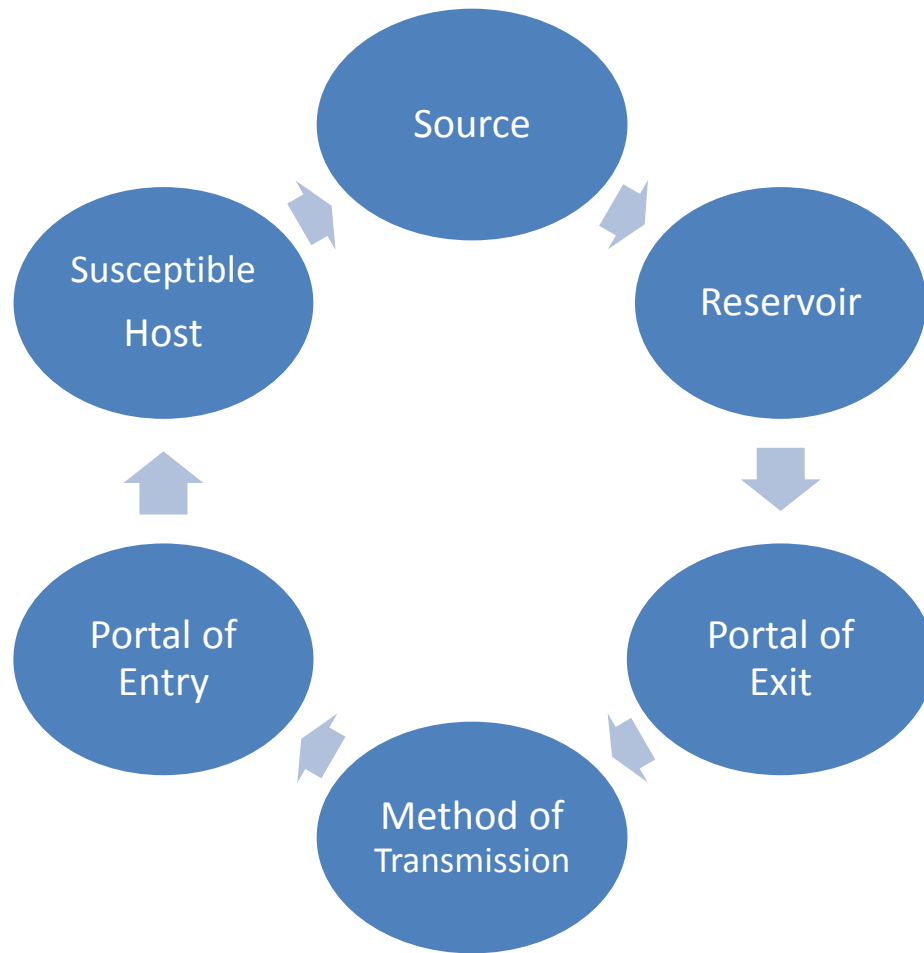
Isolation technique

- **refers to the precautions that are taken in the hospital to prevent the spread of an infectious agent from an infected or colonized patient to susceptible persons.**

- **Endemic :The occurrence of certain diseases as they relate to a population or geographic area.**
- **Chain of infection**
- **If any part of the chain is broken, the spread of the disease or infection will stop**

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Infectious agent □ Causative agent

- **1. Bacteria**
- **2. Viruses**
- **3. Fungi**
- **4. Protozoans – single celled found in soil
(most do not cause disease)**
- **5. Parasites – cause disease**

Bacteria

- **The most significant and most commonly observed infection-causing agents in health care institutions**
- **Can be categorized according to :**
 - **1. Shape**
 - **-spherical (cocci)**
 - **-rod shaped (bacilli)**
 - **-corkscrew shaped (spirochetes)**

- **2. Reaction to Gram stain**
- **-Gram positive bacteria**
- **-Gram negative bacteria**
- **3. Bacterial is their need for oxygen**
- **-aerobic :require O₂ to live and grow**
- **-anaerobic : can live without O₂**

2. Virus

- **Is the smallest of all microorganisms, visible only with an electronic microscope ,such as virus cause common cold and AIDS**
- **3. Fungi**
- **Plant-like organism (molds and yeasts) that also can cause infection ,are present in the air ,soil, and water .**
- **Example of disease cause by fungi include athlete's foot ,ringworm, and yeast infections.**