

University of Misan College of nursing

Fundamental of Nursing Department

Lecture about Asepsis

and Infection Control

Prepared by

Dr. Ghazwan Abdalhussien

MSc. Haider shayea handi

Outlines

- Introduction**
- Type of microorganism causing infection.**
- Types of infection.**
- types of asepsis**
- Chain of infection.**
- Body defenses against infection.**
- Factors increasing susceptibility to infection.**
- Infection control for health care workers.**

Introduction

Nurses are directly involved in providing a biologically safe environment. Microorganisms exist everywhere: in water, in soil, and on body surfaces such as the skin, intestinal tract, and other areas open to the outside (e.g., mouth, upper respiratory tract, vagina, and lower urinary tract).

infection is the growth of microorganisms in body tissue where they are not usually found.

Microorganism is called an **infectious agent** .

If the microorganism produces no clinical evidence of disease, the infection is called **asymptomatic or subclinical**.

Some subclinical infections can cause considerable damage. For example, cytomegalovirus (CMV) infection in a pregnant woman can lead to significant disease in the unborn child.

The infectious agent can be transmitted to an individual by direct or indirect contact or as an airborne infection, the resulting condition is called a **communicable disease**.

Pathogenicity is the ability to produce disease; thus, a pathogen is a microorganism that causes disease.

Infectious diseases are a major cause of death worldwide. The control of the spread of microorganisms and the protection of people from communicable diseases

Asepsis is the freedom from disease-causing microorganisms. To decrease the possibility of transferring microorganisms from one place to another.

The two basic types of asepsis

1 - Medical asepsis includes all practices intended to confine a specific microorganism to a specific area, limiting the number, growth, and transmission of microorganisms. In medical asepsis, objects are referred to as clean, which means the absence of almost all microorganisms, or dirty (soiled, contaminated), which means likely to have microorganisms, some of which may be capable of causing infection.

2 - Surgical asepsis, or sterile technique, refers to those practices that keep an area or object free of all microorganisms; it includes practices that destroy all microorganisms and spores (microscopic dormant structures formed by some pathogens that are very hardy and often survive common cleaning techniques). Surgical asepsis is used for all procedures involving the sterile areas of the body.

Types of Microorganisms that Cause Infections

Four major categories of microorganisms cause infection in humans:

Bacteria: there are two types:

1- **Commensal bacteria:** Found as normal flora of healthy humans. These have a significant protective role by preventing colonization of pathogenic microorganisms.

2- **Pathogenic bacteria:** have greater virulence, and cause infections.

Viruses: such as hepatitis B, C viruses and HIV, influenza viruses.

Fungi: include yeasts and molds.

Parasites: include protozoa.

Types of Infections

Local infection: It is limited to the specific part of the body where the microorganisms remain.

Systemic infection: The microorganisms spread and damage different parts of the body

There are also acute and chronic infections

Acute infections generally appear suddenly or last a short time.

A chronic infection may occur slowly, over a very long period, and last months or years.

Chain of Infection

Six links make up the chain of infection

