

COMMUNICABLE DISEASES

Communicable Disease- illness that can be transmitted from one person to another

Four modes of transmission

Contact transmission-

- **Direct-** direct physical contact with the infected person
- **Indirect-** physical contact with an object that has been contaminated by an infected person

Airborne transmission- including droplets of mucus that carry bacteria or other organisms from the infected person (Coughing and sneezing)

Vehicle transmission- the infective organism is introduced directly into the body through a medium (food, water, fluid, blood, etc.)

Vector transmission- the infective organism is transmitted by another animal (mosquitoes, ticks)

Enters the body- bodily fluid from an infected individual enters through:

Cuts	Abrasions
Open Blisters	Puncture wounds- (needle stick)
Certain rashes	Open sores
Bites	Mucous Membranes-covers all body openings

Precautions to take:

Knowing beforehand that the person is infected

Hand washing- **SINGLE MOST IMPORTANT**

- Soap and water
- Alcohol base cleaning solutions

Universal Precautions (BSI)

- Goggles
- Mask
- Gloves
- Gown/apron

Do not recap needles - place in "Sharps Box"

Clean work area with bleach solution (10% solution)

Clean all exposed areas immediately and thoroughly

Vaccinations- Hepatitis B

Document all exposures

Communicable diseases

Hepatitis-infection of the liver caused by a virus

- Can also be caused by alcohol and drugs- not contagious
- Sign that is usually seen with Hepatitis is Jaundice (yellow)

Hepatitis A- usually seen in children

- Can be passed to the parents
- No serious complications
- Patients usually recover without difficulty
- Usually contracted by eating contaminated food

Hepatitis B- also called Serum Hepatitis

- Blood to Blood contact
- Virus can last for a long period of time on surfaces
- Primary symptoms: nausea, vomiting, fatigue, abdominal pain, jaundice (flu like)

Complications- Liver cancer, cirrhosis, chronic hepatitis

-No Cure

Hepatitis C- also known as Non A or Non B

- Two different viruses
- Similar to Hepatitis B

Herpetic Whitlow-herpes viral infection of the finger

- Provider comes into contact with oral secretions from a person infected with herpes
- No cure- Will recur from time to time
- Signs and symptoms: redness, swelling, pain, and nerve impairment

Meningitis- inflammation of the meningeal covering of the brain and the spinal cord caused

By a bacterial infection

-Viral-transmitted through contaminated food or water

-Bacterial-direct contact with oral secretions

- Bacterial Meningitis is usually more serious than viral

-Signs/Symptoms: fever, irritability, poor feeding (infants), stiff sore neck, headaches.

Tuberculosis-Chronic bacterial disease that affects the lungs

- Caused by prolonged exposure to airborne bacteria
- Good precaution is to ventilate the area
- Skin testing

HIV-infection that destroys white blood cells of the immune system

-AIDS

-Virus does not survive a long time outside the body

-Direct exposure to blood, semen, and vaginal secretions

-Can also be transmitted across the placenta

-**Is NOT** transmitted by tears, saliva, sputum, urine, feces, vomitus, or nasal secretions unless they are contaminated with gross blood

******TREAT ALL BODY FLUIDS AS IF THEY WERE BLOOD******

Severe Acute Respiratory Syndrome (SARS)- a respiratory illness that has recently been Reported in Asia, North America and Europe

-Asymptomatic or mild respiratory illness -

-Moderate respiratory illness

-Fever greater than 100.4 F (>38.0 C)

-Chills and other flu like symptoms

-One or more clinical findings of respiratory illness (e.g. cough, shortness of breath, difficulty breathing, hypoxia)

-Radiographic evidence of pneumonia or respiratory distress syndrome

-Autopsy findings consistent with pneumonia or RDS

-International travel within 10 days of onset

******MUST BE REPORTED TO HEALTH DEPARTMENT******

Bacteria-small unicellular organisms, which are capable of living without other organisms. They are responsible for many common infections.

Virus- smaller than bacteria and cannot grow without the assistance of another organism. They invade a cell and take over its function. They are very difficult to treat.

Fungus- fungi are more like plants than animals; they rarely cause humans disease other than skin and some vaginal infections.

Antigen- is a protein on the surface of a virus or bacteria, which identifies it a foreign to the body.

Antibody- proteins which are formed to combine with the antigen and form a larger structure which scavengers cells recognize. The scavenger cells then rid the body of the invading virus or bacteria.

Body's Immune System- the human immune system recognizes foreign antigens and initiates a response to the invading agent. Antibodies are formed and transported to the site of infection, and attach to the antigens, deactivating the agent. White blood cells are also transported to the site and engulf the pathogen.

Toxins- poisonous chemicals released by bacteria

Endotoxins- released by bacteria as cells die as in septic shock and may cause serious consequences such as muscle spasm and tetanus.

Bacterial infections- caused by cells which can support themselves alone. They are common and Relatively easy to combat,

Viral infections- caused by very small organisms which must have another organism to assist their growth. They invade the cells of the organism they infect. Viruses are difficult to treat because the host cell must be killed to kill the virus.

Leukocytes- (white blood cells) assist in disease fighting by engulfing foreign cells and then dying.

Body Substance Isolation (BSI)- should be used when transporting all patients.

Barrier protection:

- Gloves, changed for each patient contact
- Masks and protective eye wear for any contact where blood or body fluids may be Splashed
- Gowns or aprons should be worn where splashing body fluids are expected

Hand washing:

- Hands and other body surfaces in contact with the patient should be thoroughly washed immediately after patient contact

Needle stick prevention:

- Care should be exercised to prevent needle sticks. Needles should not be recapped and care should be observed in the use and disposal of sharp objects such as scalpels and lancelets.

Resuscitation-

- Where possible, resuscitation should be accomplished via mouthpiece, bag valve Mask, or oxygen powered ventilator.