

### Chain in Infection

#### Infection Agent

This infectious agent is any microorganism that is capable of producing an infection.

- Autoclaving instruments destroys an infectious agent

#### Reservoir Host

This is the place where the microorganism resides. it can be a food, water, or human source

- Eliminating water and refrigeration of food

#### Route of Transmission

can be direct or indirect transmission which involves an intermediate

- washing of hands helps prevent transmission.

#### Susceptible Host

This is the person who is susceptible to an infection. A compromised host is a person at increased risk.

#### Portal of Entry

This is the place where the infectious agent enters the body

- A needle stick entry allows agent to enter host.

#### Portal of Exit

In order for an etiologic agent to establish an infection, the microorganism must leave the reservoir.

### Viral Infection | Parotitis

**Parotitis** Mumps

**Agent** Mumps virus

**Incubation** 14-21 days

**Per. of com.** Shortly before & after onset of parotitis

**Transmission** Direct & indirect contact.

**Symptoms** fever, headache, anorexia, malaise

**Treatment** Analgesic for pain and antipyretic

### Bacterial Infection | Helminthic

Helminths are pathogenic or parasitic worms

- Nematodes Roundworms
- Trematodes Flukes
- Cestodes Tapeworms

**Reservoir** eggs of feces or urine

**Transmission** oral cavity by food or hands

### Bacterial Infection | Parasitic

Organisms that live on and obtain their food supply. Frequently seen parasites in children are lice and scabies

#### Pediculosis capitis (Head lice)

**Sx** Small, white flecks on hair shaft, Extreme pruritus

**Treatment** Wash with shampoo, fine toothed comb

#### Pediculosis (Public lice)

**Sx** Same as for head lice except on pubic hair

**Treatment** same as head lice

#### Scabies (Female mite)

**Sx** Black burrow filled w/ mite feces 1-2 in.

**Treatment** wash area with lindane or permethrin

### The Infectious Process

**Pathogen** any organism that causes disease:

Viruses, bacteria rickettsiae

Helminths Fungi

#### 4 Phases or Periods

**Incubation:** time between entry and onset of symptoms

**Prodromal:** time when person feels abnormal or weak

**Illness:** person feels typical symptoms.

**Convalescent:** person recovers from the infection

### Viral Infection | Exanthem Subitum

**Exanthem Subitum** Roseola infantum

viral infection of very young children that causes high fever followed by a rash. ages 6 mos to 3 yrs.

**Agent** Human Herpesvirus-6 (HHV-6)

**Incubation** Approx. 10 days

**Per. of com.** During febrile period

**Transmission** Unknown

**Symptoms** high fever, rash develops

**Treatment** measures to reduce discomfort

### Viral Infection | Rubella

**Rubella** German Measles

Affects older school age and adolescent

**Agent** Rubella virus

**Incubation** 14 to 21 days

**Per. of com.** approx 7-5 days after rashes appear

**Transmission** Direct and indirect contact w/ droplets

**Symptoms** fever, malaise, anorexia, conjunctivitis.

**Treatments** reduce discomfort of rash & fever

### Viral Infection | Rubeola

**Rubeola** Measles (koplik's spot)

Sometimes called brown or black, regular or 7day measles to differentiate it from rubella. (german 3days)

**Agent** Measles virus

**Incubation** 10-12 days

**Per. of com.** 5th day till the first few days of rashes

**Transmission** Direct & indirect contact w/ droplets

### Viral Infection | Rubeola (cont)

<b>Symptoms</b>	fever, malaise, coryza, conjunctivitis.
<b>Treatment</b>	reduce discomfort of rash and fever

### Viral Infection | Varicella

**Varicella** Chicken Pox

It causes an itchy rash with small, fluid-filled blisters.

**Agent** Varicella zoster virus

**Incubation** 10-12 days

**Per. of com.** day before rash to 5-6 days after

**Transmission** Direct & indirect contact.

**Symptoms** fever, malaise, lesions, vesicle to crust

**Treatment** antihistamine, antipyretic, acyclovir

### Viral Infection | Herpes Zoster

**Herpes Zoster** Shingles

Once you have had chickenpox, varicella-zoster virus remains in your body's nerve tissues and never really goes away. Herpes zoster could be activated

**Agent** Varicella zoster virus

**Incubation** 2-12 days

**Per. of com.** day before rash to 5-6 days after

**Transmission** Direct & indirect contact.

**Symptoms** pruritus, cutaneous vesicular lesions

**Treatment** acyclovir, analgesia for pain

### Viral Infection | Variola

**Variola** Smallpox

**Agent** Smallpox virus

**Incubation** 7-17 days

**Per. of com.** from onset of rash till crust shed

**Transmission** Direct & indirect contact.

**Prodromal** 3-4 days of chills, fever, vomiting

**Symptoms** macules, papules, vesicles & pustules

**Treatment** VIG to suppress symptoms & antibiotics

### Viral Infection | Poliovirus

**Poliovirus** Poliomyelitis (infantile paralysis)

**Agent** Polio virus

**Incubation** 7-17 days

**Per. of com.** 1-6 weeks. before onset of Sx

**Transmission** Direct & indirect contact.

**Symptoms** Fever, nausea, body pain, vomiting

**Treatment** bed rest, analgesia, moist hot packs

### Viral Infection | Rabies

**Agent** Rabies virus

**Incubation** 2-6 weeks as long as 12 months

**Per. of com.** 3-2 days before onset of Sx

**Transmission** Bite of rabid animals, saliva

**Symptoms** hyperexcitability, twitching, seizure

**Treatment** Rabies vaccine and anti-rabies serum

### Bacterial Infection | Rickettsia

- A genus of small, rod-shaped, round to pleomorphic

- True bacteria, gram neg, cultivable in living tissues

**Pathogenesis** Replicate in endothelial cells, skin rash

**Transmission** Transmitted by lice, fleas, ticks, mites

### Bacterial Infection | Fungal

**Children fungi** can cause superficial infection on skin, nails and hair like oral thrush

**Superficial** on the skin

**Subcutaneous** Tissues under the skin

**Systemic** in deeper tissues