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Leprosy

- **Etiology** : Hansen's disease (also known as leprosy) is an infection caused by slow-growing bacteria called *Mycobacterium leprae*.
- It is an obligated Intracellular Bacteria Acid Fast Bacilli



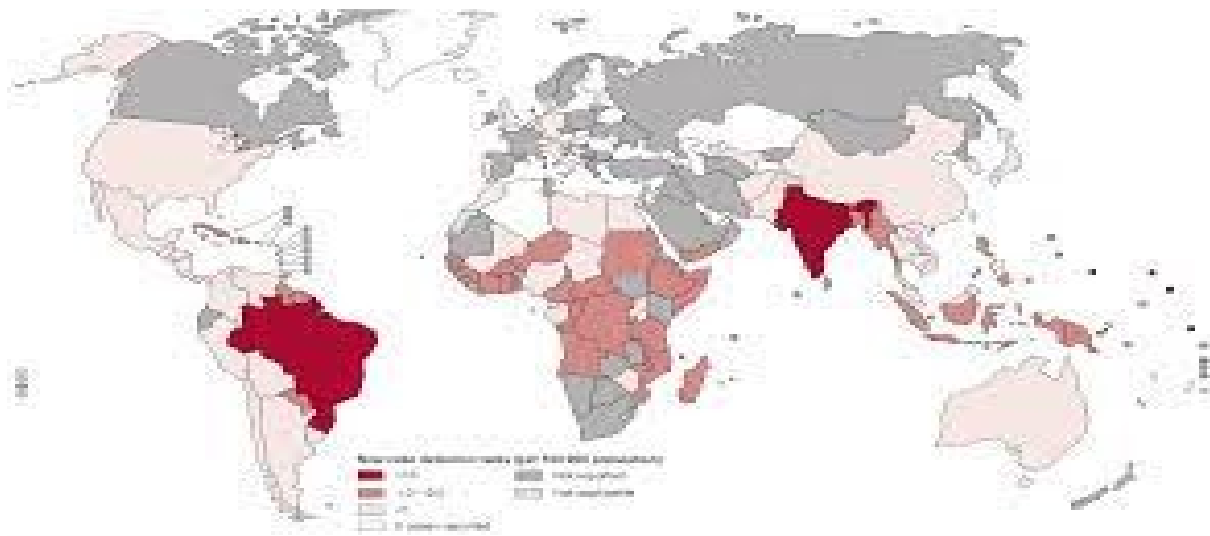
Leprosy

- **Transmission:**
- Infected Patient's Nasal secretion and Skin Lesion.
- Contact with Armadillos

- **Risk Factor :**
- Age : 5-15 Years of Age (Extremes Of Age)
- Contact
- Genetics (NOD2) , (Not inherited but Could increase Risk of Inheritance by Contracting Leprosy)
- Immunosuppression : Chemotherapy , HIV.

Epidemiology

- Worldwide, two to three million people are estimated to be permanently disabled because of leprosy. **India has the greatest number of cases, with Brazil second and Indonesia third.**



Leprosy

- Pathogenesis :
- Invade Epithelium and into peripheral Nerves
- Obligate Intracellular Parasite that lives with in Macrophages
- Slow Growing (Avg 12-15 days)
- Mostly Grow at Temperature of 25°C
- Effect the Skin , Eyes , Nose , Mucous Membrane of Respiratory Tract.
- Cause Granulomatous Disease

Leprosy

Types of Leprosy

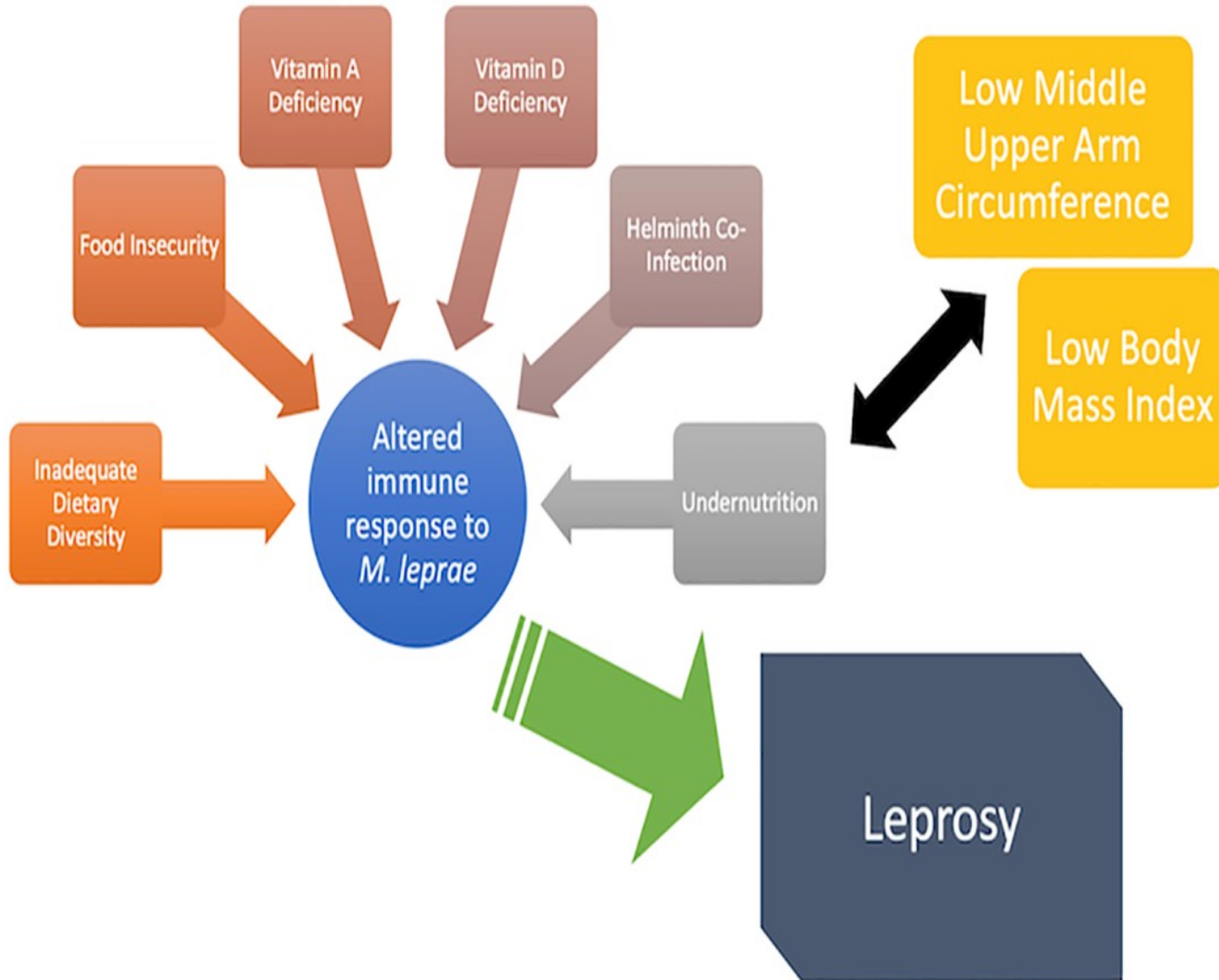
Depending on clinical features, leprosy is classified as:

- Indeterminate Leprosy (IL)
- Paucibacillary Leprosy (PB)
- Borderline Tuberculoid Leprosy (BT)
- Borderline borderline Leprosy (BB)
- Borderline lepromatous Leprosy (BL)
- Multibacillary Leprosy (MB)

Leprosy

- **Organs Effected**
- Brain
- Ophthalmic Injury
- Immunological Reaction
- Diagnosis
- Biopsy
- PCR
- Acid fast Bacilli

Risk Factor



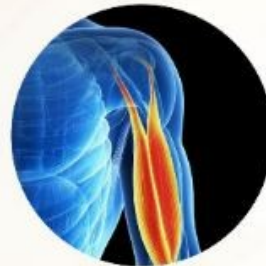
Complication Of Leprosy

WORLD
LEPROSY
DAY

COMPLICATIONS OF LEPROSY



Sensory loss



Permanent
nerve damage



Muscle
weakness



Progressive disfigurement
(for example, eyebrows lost, disfigurement
of the toes, fingers, and nose)

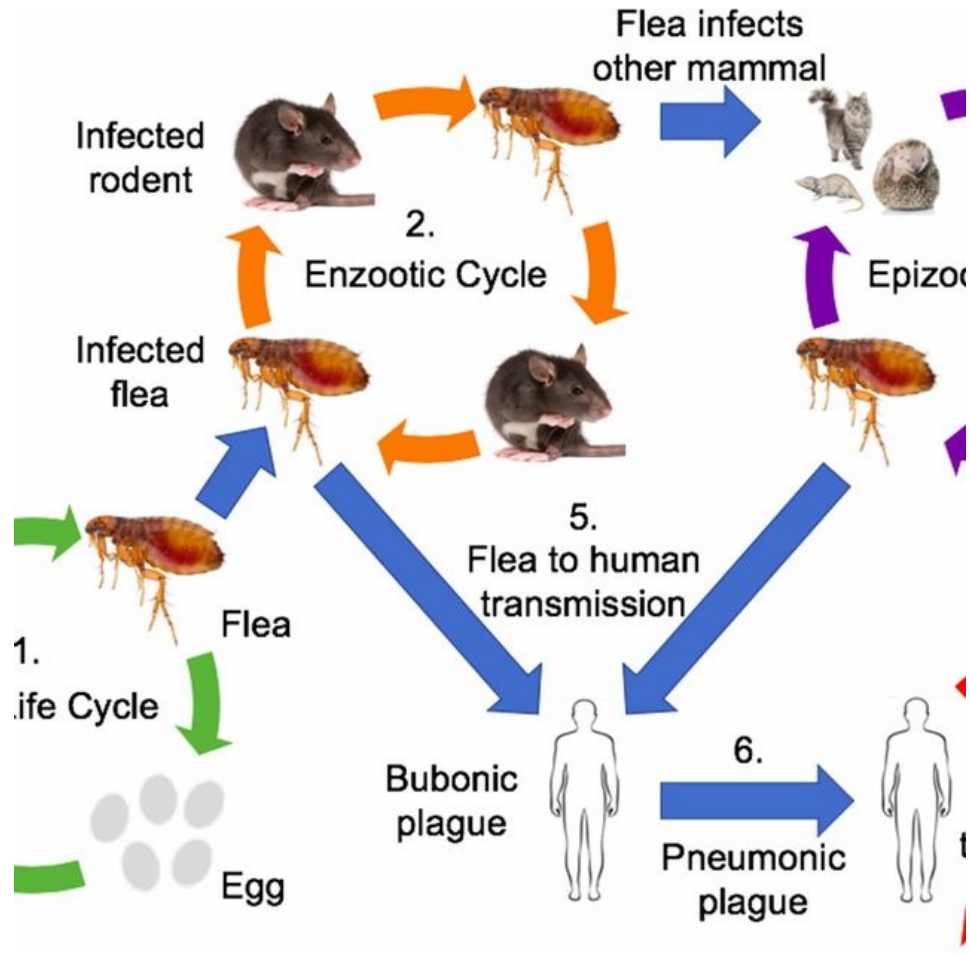
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2019

Plague (Black Death)

- **Biological name** : *Yersinia Pestis*
- **Incubation Period** : 2-6Days



Plague (Transmission)



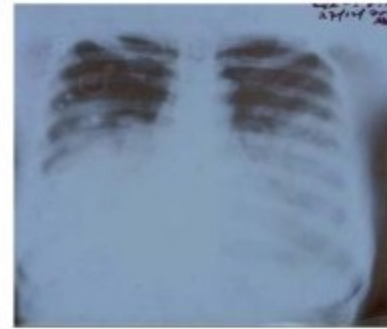
Plague Types



Bubonic plague



Septicemic plague



Pneumonic plague

Bubonic: Lymphatic System






Septicemic: Circulatory System



Pneumonic: Lungs



Disease Symptoms

Bubonic	Pneumonic	Septicemic
<ul style="list-style-type: none">* Buboes (swollen, painful, warm lymph nodes)* Sudden onset of fever and chills* Headache* Fatigue or malaise* Muscle aches	<ul style="list-style-type: none">* High fever* Weakness* Signs of pneumonia, including chest pain, difficulty breathing and a cough with bloody sputum* Nausea and vomiting	<ul style="list-style-type: none">* Fever and chills* Shock* Abdominal pain, diarrhea and vomiting* Bleeding from mouth, nose or rectum, or under your skin* Blackening and death of tissue in your extremities
 <p>www.bbc.com</p>	 <p>www.chestnet.org</p>	 <p>www.cnn.com</p>

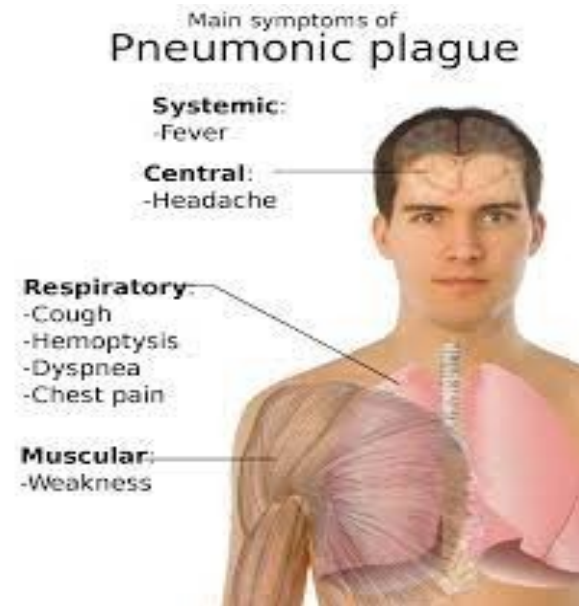
Bulbionic Plague

- **Incubation Period** 2-7 days
- **Bubo** : Painful Groin and Axilla
- Pneumonic / Meningitis
- **Mortality** > 60%



Pneumonic Plague

- **Intubation Period** 1-3 Days
- **Clinical** : Pulmonary Sign and Symptoms
- **Transmission** : Aerosol
- **Mortality** >80%



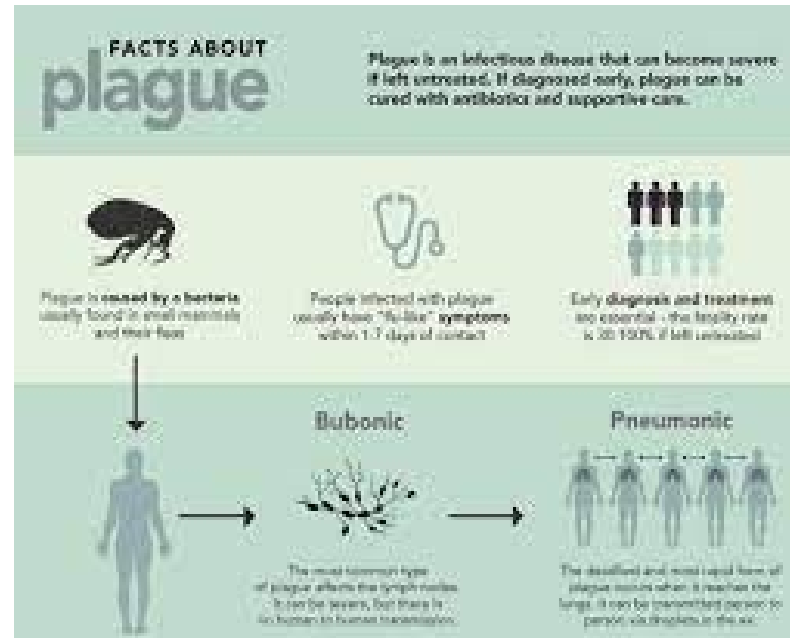
Septicemia Plague

- **Types** : Primary and Secondary
- **Intubation**: 2-7 Days
- **Hemorrhagic** : Black Death



Epidemiology Plague

- **Zoonotic** Disease
- **Vector** : Rat Flea- *Xenopsylla cheopis*
- **Reservoir** : Rodents



Trachoma

Definition : Trachoma is a disease of the eye caused by infection with the bacterium *Chlamydia trachomatis*.



Trachoma

- Meaning : Rough
- Ancient Name : Egyptian Ophthalmia
- Etiology : Causes Chronic Kerato(cornea)-Conjunctivitis (Conjunctiva)
- Note : Leading Cause of Preventable Blindness in World
- Serotype □ A ,B , (B,a) and C.

Trachoma

- Common : Children and Women
- Pathogenesis : Infect Conjunctiva -□ Inflammation □ scarring □ Eyelid Drawn inward -□ Irritation , Pain , Infection.

Diagnosis

Swab scratching

- Treatment :
- Antibiotics
- Surgery
- Eyelid Deformity
- Recovery : Depends upon the Level of Damage

Risk Factors

- **Trachoma** Risk Factors include
- Dry Weather
- Crowded Place
- Water Scarcity
- Poor Sanitation



Prevention

- WHO's "**SAFE**" strategy
- **Surgery** □ Correct Eyelid Deformities
- **Antibiotics** □ Mass Administration (Most Successful Approach)
- **Facial Cleanliness** : Reduce Flies
- **Environmental Changes** : Sanitation , Clean Water , Control Flies
- No Vaccine Yet

Complication

- Trachoma causes more **vision loss and blindness** than any other infection in the world
- Serious complications of eye infection include **damage to the retina and the formation of scars and ulcers in the cornea that can obstruct vision**
- Some infections, like syphilis, can also provoke glaucoma.

**THANK
YOU**

