

# Tuberculosis

- **Tuberculosis (TB)** is a potentially fatal contagious disease that can affect almost any part of the body but is mainly an infection of the lungs.

## Causative Organisms

Mycobacterium tuberculosis



Human

Mycobacterium Bovis



Animals

**Obligate aerobic , rod shaped, acid fast bacteria**  
**Facultative intra cellular pathogen, infect mononuclear Phagocytes i.e. macrophages**

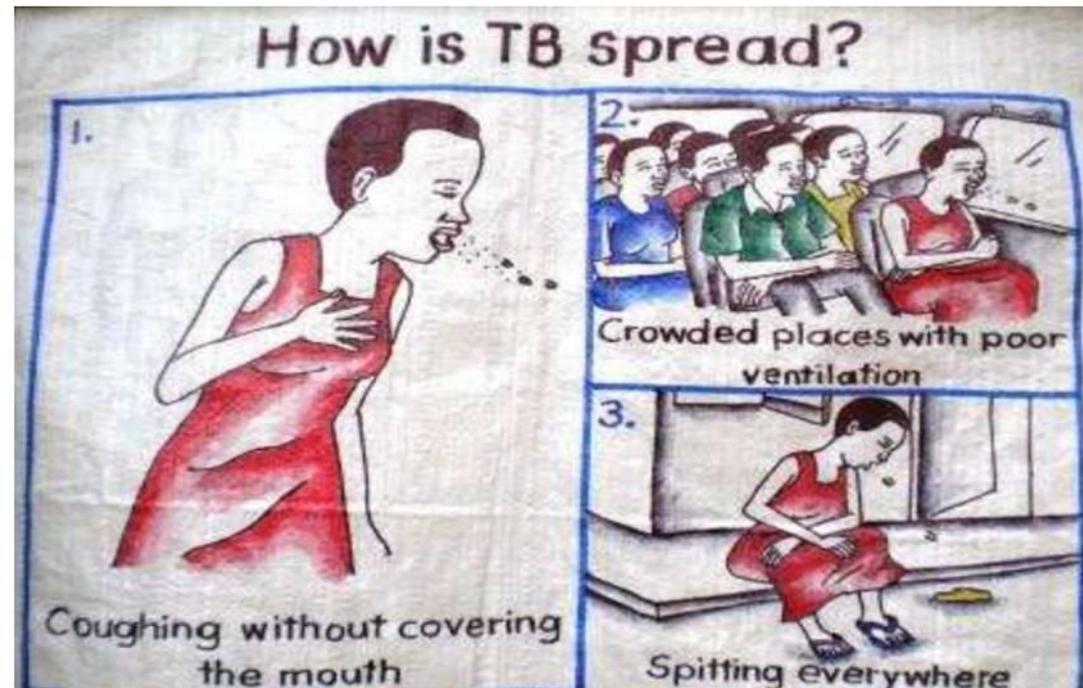
# Symptoms of Tuberculosis

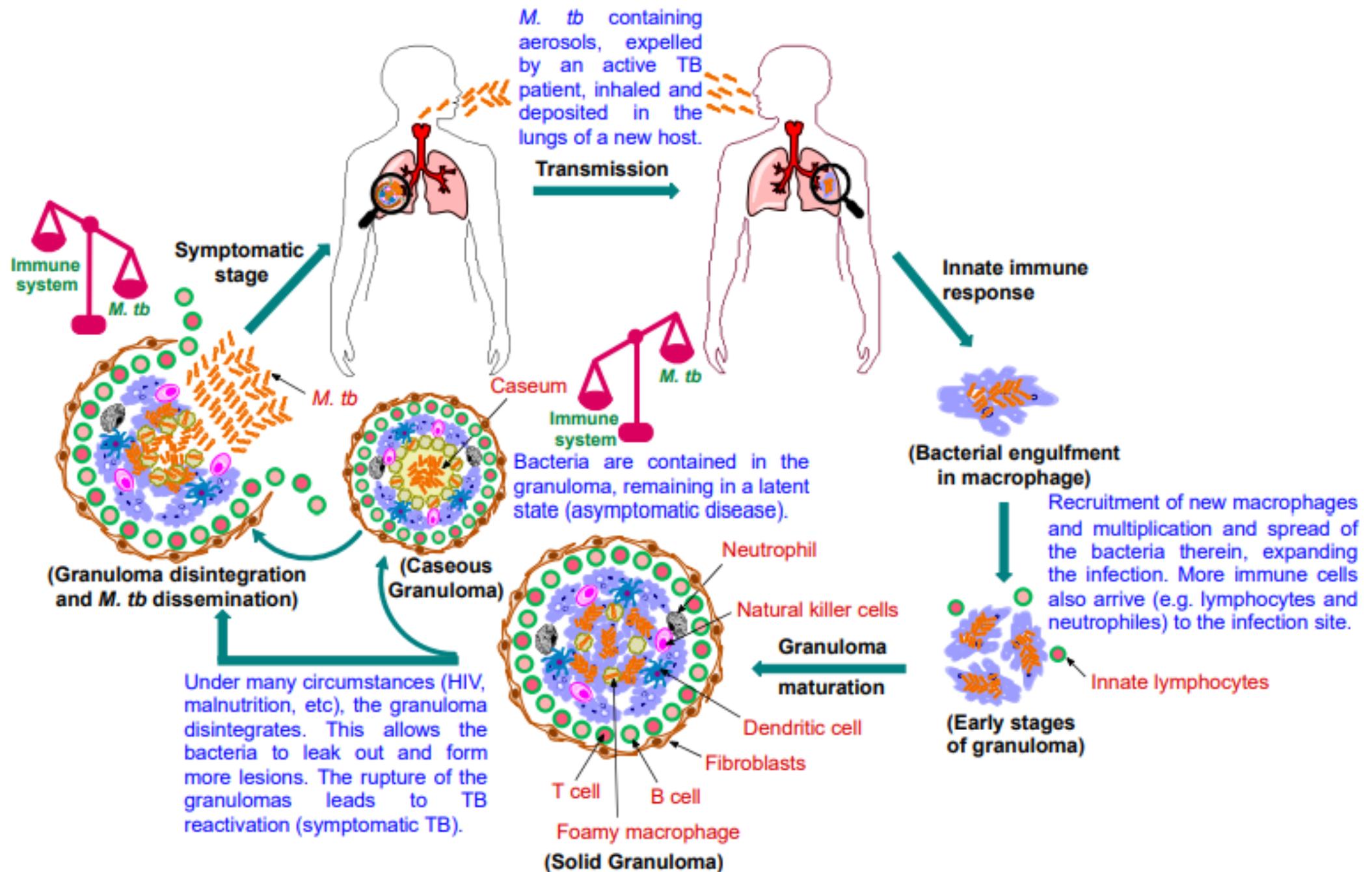
- Persistent cough
- Chest pain
- Coughing with bloody sputum
- Shortness of breath
- Urine discoloration
- Cloudy & reddish urine
- Fever with chills.
- Fatigue

# Mechanism of transmission

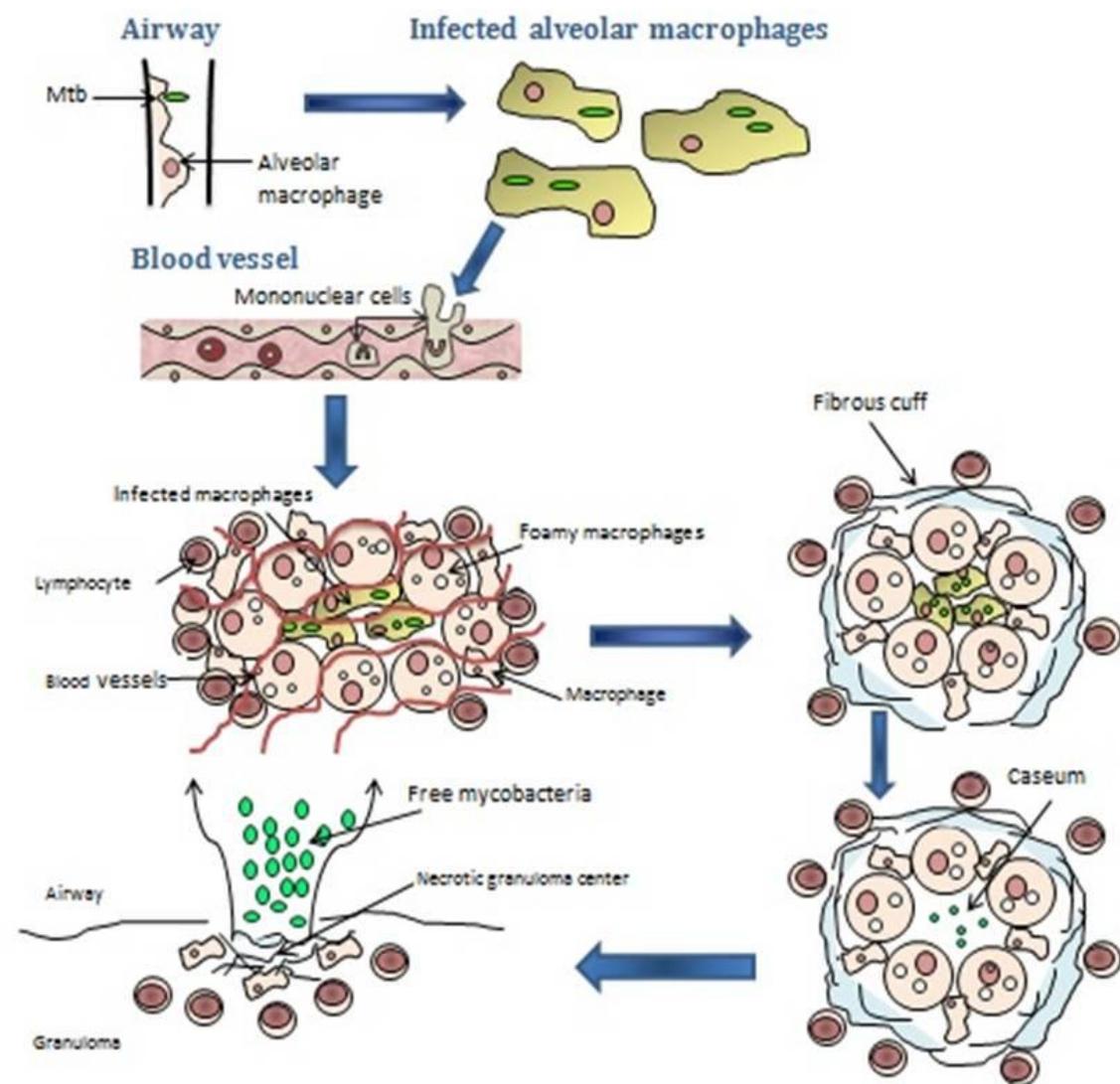
- TB is spread from person to person through the air.
- When a person with active TB coughs or sneezes, droplets loaded with the infectious organism are propelled into the air.
- The moisture evaporates from these particles to leave droplet nuclei that can remain airborne for days and spread long distances.

**Inhalation of infectious nuclei**  
**Ingestion of sputum or milk of infected cases**  
**Contamination into skin**





# Pathogenesis of Tuberculosis



Progression of the tuberculosis granuloma

# Diagnosis of Tuberculosis

**Chest X-ray analysis**

**Acid fast bacilli test**

specimens used to -

-**smear test** (microscope, dye)

**Nucleic acid amplification test**

**Tuberculin test**

(Tuberculin injected into skin, causing hard swelling area)

# Preventive measures

- 1) Mask
- 2) BCG vaccine (bacillus Calmette-Guérin)
- 3) Regular medical follow up
- 4) Isolation of Patient
- 5) Ventilation
- 6) Natural sunlight
- 7) UV germicidal irradiation

# Treatment of Tuberculosis

