

Unit 4 – The Natural Environment and Species Survival

TB

How does TB form?

- The M.Tuberculosis bacteria are inhaled and lodge in the lungs where they start to multiply.

What are the two phases of the disease?

- Primary infection (first phase).
- Active tuberculosis (second phase).

What happens during the first phase?

- The M.Tuberculosis causes an inflammatory response from the host's immune system.
- Macrophages engulf the bacteria and a mass of tissue known as a granuloma forms as a response to the infection.
- After three to eight weeks the infection is controlled and the infected region of the lung heals.

What is the second phase of the disease?

- It occurs if the patient's immune system cannot contain the disease when it first arrives.
- With active tuberculosis in the lungs, the bacteria multiply rapidly and destroy the lung tissue, creating holes or cavities.

What are the symptoms of active TB?

- Coughing: the patient may cough up blood
- Shortness of breath
- Loss of appetite and weight loss
- Fever and extreme fatigue.

What is the role of fever?

- A person with TB experiences fever because it is part of the inflammatory response as fever-causing substances are released from neutrophils and macrophages.
- These chemicals affect the hypothalamus and alter the set point for the core body temperature to a higher temperature.

How is TB tested?

- Skin and blood tests
- Chest x-rays
- Identification of bacteria