



Ministry of
Health & Family Welfare
Government of India

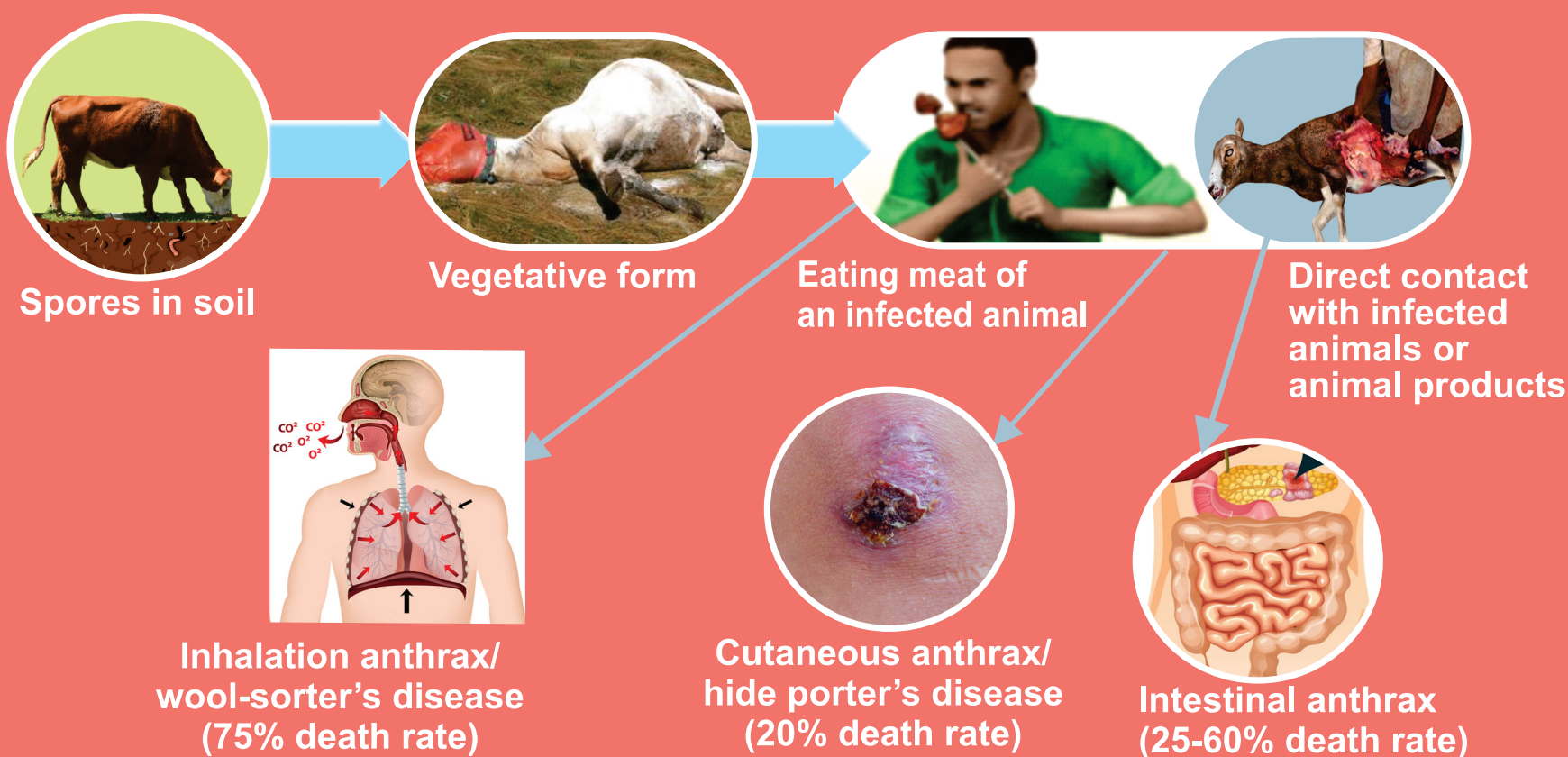
What is Anthrax?



Anthrax is a serious zoonotic disease in humans & animals infection caused by gram-positive, rod-shaped bacteria known as *Bacillus anthracis*.

Transmissions cycle of Anthrax

Anthrax spores are found naturally in soil and infect domestic and wild animals. Death due to anthrax leads to bleeding from all natural orifices of the animals which contaminate the environment and spreads the spores into the soil.



People at Risk



Farmers



Veterinarians



Livestock handlers



Wool Sorters



Laboratory Professionals

Mode of Transmission

- Through Inhalation of Spores
- Consumption of raw or under cooked meat of dead animal infected due to anthrax
- By contact with contaminated hair, wool, hides or products made from the skin of dead animals

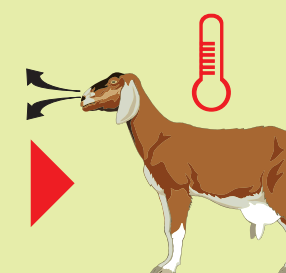


Signs and Symptoms in Animals



Sudden death in animals

Just prior to death, animals may show signs of high fever



Oozing of blood from natural orifices (mouth/nose/ear/anus)

Anthrax could be the probable cause of death in case of sudden death in animals

Zoonoses are commonly undiagnosed, hence underreported. As a routine practice, always elicit history of contact with livestock/wild animal.

Signs and Symptoms in Humans

The symptoms of anthrax depend on the mode of exposure.

Cutaneous Anthrax	Pulmonary Anthrax	Intestinal Anthrax
<ul style="list-style-type: none">• Most common• Anthrax spores enter through abraded skin/wound in the body• Present as a raised, itchy bump resembling an insect bite that quickly develops into a painless sore with a black center• Swelling of the nearby lymph glands	<ul style="list-style-type: none">• Most severe & rare• Caused when a person is directly exposed to a large number of anthrax spores suspended in the air, and breathes them in• Presents as common cold, but can rapidly progress into severe breathing difficulties and shock	<ul style="list-style-type: none">• Caused by eating contaminated meat• Present with symptoms similar to food poisoning• Gradually progress to severe abdominal pain, vomiting of blood & severe diarrhoea

Anthrax is a potential bioterrorism organism and adequate biosafety & biosecurity measures must be taken.

Diagnosis of Anthrax

Should be attempted only by well-trained laboratory personnels:

- When there is High index of suspicion of the disease
- Collection and transportation of suspected sample should be carried out under strict aseptic condition following safety precautions

Diagnostic Test

- Clinical symptoms and history of exposure
- Bacteriological identification- Gram Staining and Culture
- Serological testing - ELISA
- Molecular testing - PCR

Prevention

- Avoid grazing of livestock in dry areas
- Avoid contact with dead animals that have died of unknown causes
- Do not handle dead animals without protective clothing
- Avoid eating meat from animals dead due to unknown cause
- Do not open the carcass of dead animal suspected with anthrax
- Routine immunization with Anthrax vaccine in animals
- Wear protective clothing such as face masks, gloves, and long clothes when examining sick animals

For more information, visit the nearest Health Centre.



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National One Health Program for Prevention & Control of Zoonoses