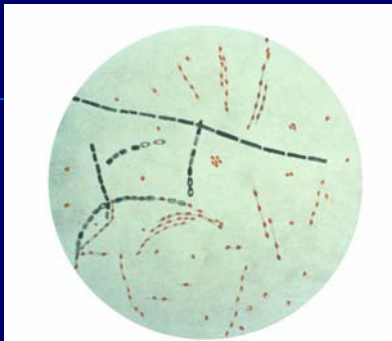


## ANTHRAX

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## WHAT IS ANTHRAX (Woolsorters' disease) or (Ragpickers' disease)

- Anthrax (also referred to as **splenic fever**) is a bacterial disease caused by *Bacillus Anthracis*. This bacteria produces **Spores** (dormant form), which can survive for years in soil, skin and hides of infected animals, wool, dried or processed hides, paper, silk thread, pond water etc ( 2-71 years)



Rod Shape occurring in chains

*Anthrax* is derived from the Greek word *anthrakis*, or "coal", in reference to the black skin lesions victims develop.



## Viability of spores

- Spores are resistant to adverse environmental conditions
- Many disinfectants but are susceptible to 2% glutaraldehyde formaldehyde and 5% formaline
- Highly resistant to drying, heat and sunlight, need direct exposure to 121° C for at least 30 minutes for adequate sterilization
- Remain viable in soil etc

## Its Occurrence

- Most commonly occur in wild and domestic grass and meat eating animals
- Spread through contaminated soil and food
- Contaminated meat, bone meal or other feed
- Through biting flies which had fed on infected animals

## Disease in Human

- Though rare but could infect humans
- At risk are:
  - Farmers/ Veterinarians
  - Occupational ; related to animal products like hides, hunters, wool, yarns, bone and bone products and lab workers
  - Bioterrorism

## Types of disease in Human

- Cutaneous (skin) Anthrax



## Oro-pharyngeal Anthrax (Mouth & Pharynx)

- Lesions inside mouth, base of tongue, sore throat like symptoms, difficulty in swallowing, swollen glands in the neck and fever.

## Gastrointestinal (intestinal) Anthrax

- Intestinal anthrax from ingestion of contaminated undercooked meat
- can affect anywhere in the digestive system from the mouth to the intestines
- The symptoms are nausea, vomiting, fever, pain and bloody diarrhea
- Cutaneous anthrax is 100-200 times more common than gastrointestinal anthrax

## Pulmonary (inhalation) Anthrax



## Complications

- Very few case reported worldwide with complications like meningitis and sepsis

## Cases in Canada

- In Canada there have been very few cases of anthrax.
- Since 1931 there have been 24 cases reported with most of them occurring in 1936.
- The last two cases occurred in 1961 with the most recent in 1990 (young woman from Vancouver with a cutaneous lesion on her neck. It was suspected that it came from a wool sweater that she bought at a thrift shop)

## Treatment & Prevention

- Anthrax is usually easily treatable with a variety of antibiotics.
- Antibiotic prophylaxis is only indicated for inhalation exposure or if the person handled infected animals bare hands and had cuts etc on hands
- Prophylaxis duration depends upon type and extent of exposure

## Preventive Measures

- Be informed, get educated about the disease, how its transmitted, signs & symptoms etc
- Thorough hand washing
- Proper food practices
- Take care of skin abrasions
- Use proper PPE when caring for animals

## Control disease in animals

- Immunize at risk animals annually
- Symptomatic animals can be treated with antibiotics
- *"Control of the disease in humans ultimately depends on control of disease in animals"*

## TAKE HOME MESSAGE

- Anthrax is primarily disease of animals
- Very unlikely transferred to human
- Transmission from person to person is very rare. ( non contagious)
- 1/10 risk of skin anthrax if you spend lot of time handling infected animals

- Cutaneous anthrax is 100-200 times more common than gastrointestinal anthrax
- There is virtually no risk of inhalation anthrax ( you need to inhale at an average 8-10( up to 50) K spores
- It is a known risk on the prairies especially during this time of the year ( North Battleford in 2004)
- Mostly risk is cutaneous anthrax as opposed to the inhalation anthrax (Like in US weaponised, high mortality occurred in 2001).

## Old is gold

- Old saying
- *"An ounce of prevention is better than a pound of cure"*
- is still true.

■ *Thank You*