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CURRENT AFFAIRS

Date: 16 December 2023

ANTHRAX

This article covers "Daily Current Affairs" and the topic details "Anthrax". This topic has relevance in the Science and technology section of the UPSC CSE exam.

GS 3: Science and technology

Why in the news?

Recently, there has been an outbreak of Anthrax disease in Zambia.

About Anthrax

Anthrax, an infectious disease caused by the bacterium *Bacillus anthracis*, presents a considerable threat due to the resilience of its spores in the environment. This article delves into the various modes of transmission in humans, diagnostic approaches, available treatments, and preventive strategies against anthrax.

Modes of Transmission in Humans

- **Cutaneous Anthrax:** The most prevalent form occurs when spores make contact with compromised skin, resulting in distinctive skin lesions.
- **Gastrointestinal Anthrax:** Arising from the consumption of contaminated meat, this form initially manifests symptoms akin to food poisoning before progressing to severe abdominal issues.
- **Inhalational Anthrax:** Recognized as the deadliest form, it initiates with flu-like symptoms and swiftly advances to severe respiratory distress and shock, primarily caused by inhaling anthrax spores.

Diagnosis

- The identification of *Bacillus anthracis* in blood, skin lesions, or respiratory secretions relies on laboratory tests such as cultures, PCR, or ELISA. Anthrax exposure is not confirmed by a single test, necessitating a comprehensive approach integrating clinical findings and specialized tests.

Treatment

- Antibiotics such as ciprofloxacin, doxycycline, or levofloxacin demonstrate efficacy in treating anthrax infections. Severe cases may warrant hospitalization for supportive care, encompassing fluid drainage and mechanical ventilation.

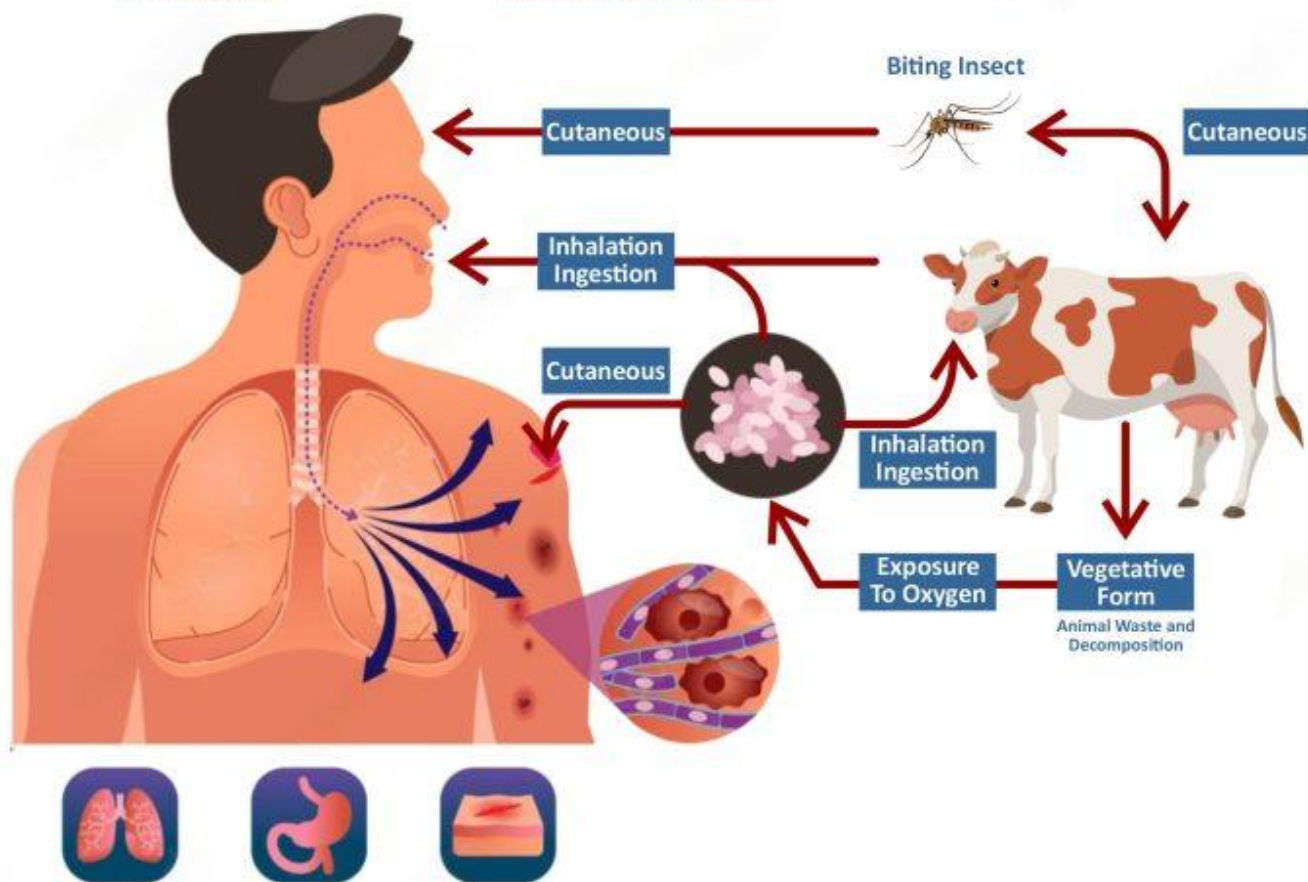
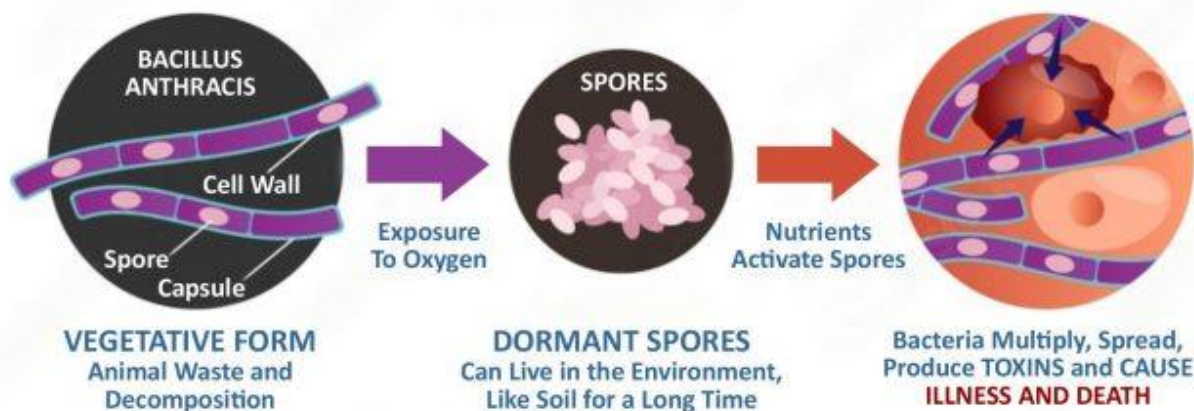
Prevention

- Vaccines, tailored for both animals and humans, particularly target high-risk groups. Mitigating contact with potentially infected animals or their products is essential, emphasizing proper hygiene and handling procedures for animal products to avert transmission.

Conclusion

Comprehending the modes of transmission, facilitating prompt diagnosis, and ensuring timely treatment are pivotal in managing and preventing the spread of anthrax. Vaccination and meticulous adherence to safety protocols play indispensable roles in safeguarding both human and animal populations from this infectious disease.

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About Zambia

Geographical Overview:

Zambia, situated in south-central Africa, is a landlocked country surrounded by eight neighboring nations—Angola, Botswana, Democratic Republic of Congo, Malawi, Mozambique, Namibia, Tanzania, and Zimbabwe. Its strategic location makes it a hub in the heart of the continent.

Economic Significance:

Renowned as one of the world's major producers of copper and cobalt, Zambia plays a pivotal role in the global electronics industry. In addition to these minerals, the country exports a diverse range of agricultural products, including maize, tobacco, sugar, cotton, and flowers. This economic diversity contributes significantly to Zambia's position in the international market.

Cultural and Linguistic Diversity:

English serves as the official language, fostering communication and administrative processes. However, Zambia's cultural landscape is rich and varied, with over 70 local languages spoken across the nation. Prominent among these are Bemba, Nyanja, Tonga, and Lozi, reflecting the country's linguistic tapestry.

Tribal Identity:

Zambia is characterized by a tapestry of tribes, each contributing to the nation's cultural mosaic. Key tribes include the Lozi, Bemba, Ngoni, Tonga, Luvale, and Kaonde.

Source: 5 countries in East and southern Africa have anthrax outbreaks, WHO says, with 20 deaths reported, ET HealthWorld (indiatimes.com)

Q.1 Anthrax disease is caused by:

- (a) Bacteria
- (b) Virus
- (c) Protozoa
- (d) Fungi

ANSWER: A

Q.2 Evaluate the Efficacy of Pandemic Management Strategies in India. Discuss Lessons Learned from the COVID-19 Pandemic and Propose Recommendations for Enhancing Future Pandemic Resilience in the Country.

Rishabh

