

This introduction is to show how serious and dangerous Anthrax is.

Doctors made a working diagnosis of anthrax after the media reported two postal workers from the same facility were diagnosed with anthrax. Although both were treated with antibiotics, both died within 24 hours of hospitalization.

Without warning that anthrax was present in the area, doctors would be unlikely to consider such a rare condition," said Dr. Henry Masur, chief of critical care medicine at the NIH Clinical Center.

The analysis and prompt publication of these findings will help doctors avoid such tragic consequences in the future.

A Hong Kong boy died of anthrax in 2003 after eating improperly cooked meat. Eating Anthrax meat or blood or even contact with the blood can kill people very quickly. Immediate symptoms are abdominal pain and diarrhoea.

I hope the New Zealand immigration department knows about Anthrax and that it has occurred in Slovenia in 2015 killing seven heifers on pasture and in India in 2014 killing seven people.

Anthrax is an ancient disease with the first reports as far back as 1500 BC.

Bacteria can survive in soils indefinitely. I've read of a duration of 50 years. They don't multiply or spread in soil.

If suspected, for example if an animal dies for no known reason, don't touch or move it and phone your vet or your appropriate government department. Time is of the essence so have both phone numbers handy.

Vets should get a laboratory test to confirm anthrax.

Despite it being a notifiable disease in most countries it is under-reported.

In October 2014, an outbreak of anthrax in a village in India allegedly killed seven people. The village was located in the Simdega district within the Indian state of Jharkhand.

Symptoms

Affected animals can become lethargic, usually stop eating, get a swelling in the neck, salivate a lot, lie down and die within a day. Dead ones bloat quickly and ooze blood so the ground becomes contaminated with the spores of *Bacillus anthracis* bacteria.

Action

Cover carcasses immediately. Move other animals just to an adjacent paddock and monitor them hourly. If no more cases occur within 24 hours, move them one paddock further away. If none occur in another 24 hours move them further away.

Burn carcasses with fuel and heat the polluted soil with wood, diesel and/or kerosene, not with tyres or oil which make too much pollution. If burning is banned in your area, contact the authorities, then dig a hole and bury all and 30 cm of soil under the carcasses, so that everything affected is buried under 30 cm or more of clean soil.

Pets, rodents, wild birds and animals should be kept well away and certainly off carcasses. Thorough covering keeps birds off them and saves having to guard carcasses day and night.

Antibiotics can prevent anthrax from developing in people who have been exposed, but have not developed symptoms. Ciprofloxacin and Doxycycline are two antibiotics that should be used to prevent anthrax.

Anthrax spores take 1 to 6 days to activate, but some spores can remain inside the body and take up to 60 days or more to attack. Spores release toxins, or poisons, that attack the body, causing the person to become sick. That's why people who have been exposed to anthrax must take the correct antibiotics for more than 60 days.

Vaccination

This can prevent it spreading provided it is caught soon enough and should be done if anthrax occurs in your area. It is a live vaccine so should not be administered with antibiotics and animals must be withheld from slaughter for at least two months.

Animals develop immunity after about ten days.

The vaccine is approved by the USA Food and Drug Administration (FDA) for at-risk adults before exposure to anthrax. The vaccine does not contain any anthrax bacteria and cannot give people anthrax.

Currently, FDA has not approved the vaccine for use after exposure for anyone. However, if there were ever an anthrax emergency, people who are exposed might be given anthrax vaccine to help prevent disease. This would be allowed under a special protocol for use of the vaccine in emergencies.

While there is a vaccine licensed to prevent anthrax, it is not typically available for the general public. Anthrax Vaccine Adsorbed (AVA) protects against cutaneous and inhalation anthrax, according to limited but well researched evidence. The vaccine is approved by the Food and Drug Administration (FDA) for at-risk adults before exposure to anthrax. The vaccine does not contain any anthrax bacteria and cannot give people anthrax.

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Routine Use

To build up protection against anthrax, at risk groups should get 5 shots of anthrax vaccine over 18 months. To stay protected, they should get annual boosters. The shots are injected into the muscle (intramuscular).

Anthrax vaccine is routinely used in three groups of adults 18 to 65 years of age who may be at risk of coming in contact with anthrax because of their job -

- Certain laboratory workers who work with anthrax.
- Some people who handle animals or animal products, such as some veterinarians.
- Some members of the United States military.

Who Should Not Get the Vaccine?

Certain people shouldn't get the anthrax vaccine in routine situations.

Anyone who has had a serious allergic reaction to a previous dose of anthrax vaccine should not get another dose.

Anyone who has a severe allergy to any component of the anthrax vaccine should not get a dose. Anyone with severe allergies, including allergy to latex, should tell their doctor.

For anyone with a moderate or severe illness, their doctor might ask them to wait until they recover to get the vaccine. People with mild illness can usually be vaccinated.

Pregnant women should not get the vaccine.

Emergency Use (After Exposure)

In certain situations, such as a bioterrorist attack involving anthrax, anthrax vaccine might be recommended to prevent anthrax in people after they have been exposed.

If this were to happen, people who were exposed would get 3 shots of anthrax vaccine over 4 weeks plus a 60-day course of antibiotics to prevent disease.

During an emergency, the only people who should not get the vaccine after exposure are those who have had a serious allergic reaction to a previous dose of anthrax vaccine.

NEW: Updated Recommendations for the Treatment of Anthrax

Updated clinical recommendations for anthrax in adults, pregnant and postpartum women, and children were released in 2014. These articles describe in detail recommendations for preventing anthrax, evaluating patients, and treating patients with anthrax:

Centers for Disease Control and Prevention Expert Panel Meetings on Prevention and Treatment of Anthrax in Adults

Special Considerations for Treatment of Anthrax in Pregnant and Postpartum Women

Pediatric Anthrax Clinical Management: Executive Summary

Clinical Report: Pediatric Anthrax Clinical Management

Humans

Don't touch any dead animals, their antlers or bones. Educate people and children about this.

Exposure to anthrax animals can cause black sores that require medical attention so wear long trousers, long sleeves and gloves even when vaccinating.

Some tribes in Africa live on blood, milk and a mix of both, to avoid having to slaughter their

animals which is their wealth and food source. Africans drinking blood from affected animals have died in a day.

Swellings can develop rapidly and cutaneous lesions can develop where blood contacts skin resulting in death in some cases. Intense itching can occur before the swellings. Parts of the body can swell.

US authorities investigating the mistaken shipment of live anthrax by a military lab have discovered another batch of the lethal bacteria dating back to 2008, some of which was sent to Australia, officials said Friday.

The Pentagon orders an urgent review after admitting live samples of deadly anthrax were sent from a USA Army base to Australia.

An NIH Clinical Center researcher, in collaboration with physicians in Maryland and Washington DC, has published a detailed assessment of the fatal cases of inhalational anthrax that occurred in two District of Columbia postal workers. The findings, which will be published in the Nov. 28 issue of the Journal of the American Medical Association, have been posted ahead of publication at <http://www.jama.com> because of their public health importance.

For More Information

Visit the USA Food and Drug Administration website, where some of this came from.

"These results are presented in an effort to make doctors aware of what to look for when diagnosing suspected anthrax patients," said Dr. Luciana Borio, lead author of the paper. Borio, who is fellow in the Critical Care Medicine Department of the NIH Clinical Center and researcher at the Johns Hopkins Center for Civilian Biodefense Studies, published the findings in collaboration with physicians at the Greater Southeast and Southern Maryland Hospitals, and the DC and Maryland Medical Examiners Office. An accompanying editorial by Anthony S. Fauci, MD, Director of the National Institute of Allergy and Infectious Diseases (NIAID) and H. Clifford Lane, MD, NIAID Clinical Director, is also posted on the JAMA website.

"Because the symptoms in these two cases were nonspecific, they were initially misidentified as flu or other common infections. However, a later review of the laboratory data showed pathology different from common infections, according to Borio. Both patients' blood tests showed increased white blood-cell counts and concentrated red blood-cell counts. Neither finding would normally be seen in flu patients, said Borio. In addition, blood cultures quickly showed long chains of the distinctive anthrax bacilli.

"Laboratory tests should be ordered if there is any suspicion of anthrax," Borio stressed. "Both cases show the importance of testing by microbiology laboratories with staff experienced in growing and identifying these unusual organisms."

Both postal workers also developed fluid build up in the chest and infiltrates in the lungs that resembled pneumonia on radiologic images. "It would have been easy to misdiagnose these cases as pneumonia, and thus rule out anthrax, if doctors had relied on the x-rays alone," said Borio.

"It's essential that doctors are familiar with how anthrax presents in order to distinguish it from more common infections," said Borio. "Both patients were sick enough to seek medical help," she said, "but neither had symptoms that would normally require further tests or hospitalization, so they were initially sent home."

The two anthrax victims were among five postal workers who worked at the Brentwood postal facility in Washington who contracted anthrax in October. One had gastrointestinal symptoms, including nausea, vomiting and stomach pain. The other had flu-like symptoms, including muscle ache, discomfort and fatigue. Both developed chest pain and breathing difficulty, eventually requiring a respirator.

Vaughan Jones, ONZM Queen's Honour 2013, for services to the farming industry. NZ M.Mkt.I. Dairying 99% Honours Award 1948. Waikato Most Improved Dairy Farm Award 1959. International Agricultural Consultant & Journalist. Represented NZ in Agricultural Journalist Congresses in USA in 1992 & Austria 1994. Managing Director of the website GrazingInfo Ltd, compiled since 1970.