



Glanders Information Sheet

NORAD-USNORTHCOM/SG

What is glanders disease(s)?

Glanders is an infectious disease that is caused by the bacterium *Burkholderia mallei*. Glanders is primarily a disease affecting horses, but it also affects donkeys and mules and can be naturally contracted by goats, dogs, and cats. Human infection, although not seen in the United States since 1945, has occurred rarely and sporadically among laboratory workers and those in direct and prolonged contact with infected, domestic animals.

Why are we concerned with glanders as a bioweapon?

Currently it is not weaponized but could serve as an incapacitating agent. *Burkholderia mallei* is an organism that is associated with infections in laboratory workers because so very few organisms are required to cause disease. The organism has been considered as a potential agent for biological warfare and of biological terrorism. Mortality rate is over 50% despite antibiotic treatment.

Does this disease occur naturally?

Yes. Geographically, the disease is endemic in Africa, Asia, the Middle East, and Central and South America.

Are there different forms of this disease?

The symptoms of glanders depend upon the route of infection with the organism. The types of infection include localized, pus-forming skin infections, lung infections, bloodstream infections, and chronic infections of the skin.

Is the disease seasonal in its occurrence? No.

How does it spread?, Who is at risk? Glanders is transmitted to humans by direct contact with infected animals. The bacteria enter the body through the skin and through mucosal surfaces of the eyes and nose. The sporadic cases have been documented in veterinarians, horse caretakers, and laboratorians. The United States has not seen any naturally occurring cases since the 1940s. However, it is still commonly seen among domestic animals in Africa, Asia, the Middle East, and Central and South America.

What are the symptoms of glanders (clinical presentation)?

The symptoms of glanders depend upon the route of infection with the organism. The types of infection include localized, pus-forming cutaneous infections, pulmonary infections, bloodstream infections, and chronic suppurative infections of the skin. Generalized symptoms of glanders include fever, muscle aches, chest pain, muscle tightness, and headache. Additional symptoms have included excessive tearing of the eyes, light sensitivity, and diarrhea.

Localized infections: If there is a cut or scratch in the skin, a localized infection with ulceration will develop within 1 to 5 days at the site where the bacteria entered the body. Swollen lymph nodes may also be apparent. Infections involving the mucous membranes in the eyes, nose, and respiratory tract will cause increased mucus production from the affected sites.

Pulmonary infections: In pulmonary infections, pneumonia, pulmonary abscesses, and pleural effusion can occur. Chest X-rays will show localized infection in the lobes of the lungs.

Bloodstream infections: Glanders bloodstream infections are usually fatal within 7 to 10 days.

Chronic infections: The chronic form of glanders involves multiple abscesses within the muscles of the arms and legs or in the spleen or liver.

Is a vaccine available to prevent glanders infection?

There is no vaccine available for glanders. In countries where glanders is endemic in animals, prevention of the disease in humans involves identification and elimination of the infection in the animal population. Within the health care setting, transmission can be prevented by using common blood and body fluid precautions.

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Can glanders be treated?

Because human cases of glanders are rare, there is limited information about antibiotic treatment of the organism in humans. Normally, the organism can be controlled with several of the more common and readily available antibiotics.

Where will the medications/immunizations to treat infected individuals come from?

Regionally dependent resources based on national stockpiles when they become available.

Contraindications to vaccine, antibiotic therapy, other treatments.

Given the mortality rate in excess of 50%, known exposure should be treated with antibiotics.

Are there ways to test for glanders in the environment?

No field expedient methods are available for testing. Samples must be sent to laboratory for testing

What should someone do if they suspect they or others have been exposed to glanders?

Contact your health care provider if you have concerns about your health or if you or your family members develop symptoms such.

What can I do to reduce the risk of getting Glanders or giving it to someone else?

In addition to animal exposure, cases of human-to-human transmission have been reported. These cases included two suggested cases of sexual transmission and several cases in family members who cared for the patients. Good hygiene practices, especially handwashing, are most effective along with proper containment and disposal of any body fluids or items that have come in contact with them.

Reference:

www.bt.cdc.gov

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