

# Glanders



## What is glanders?

Glanders is an infectious disease that is caused by the bacterium *Burkholderia mallei*. Glanders primarily affects horses, donkeys and mules although animals such as goats, dogs, and cats can be infected. Human infection is very rare and requires close prolonged contact with infected animals. The infection may be rapidly fatal. The organism can be produced in a form that allows its spread through the air, making it a potential agent for biological terrorism.

## How do people get glanders?

Humans become infected with glanders through direct contact with infected animals. The bacteria enter the body through the mucous membranes of the eyes, nose and mouth; by being breathed in, or through cuts in the skin. Laboratory workers have been accidentally infected with glanders. Other human cases of glanders have involved veterinarians and livestock handlers outside of the United States.

Glanders can be transmitted from one person to another through an infected person's bodily fluids.

## How is glanders diagnosed?

The disease is diagnosed in the laboratory by isolating *Burkholderia mallei* from blood, sputum, urine, or cuts in the skin.

## What is the treatment?

Because human cases of glanders are rare, there is little information about treatment. Specific antibiotics may be used effectively to treat glanders.

## What are the symptoms of glanders?

Symptoms are fever, muscle aches, chest pain, muscle tightness, weakness and headache. Additional symptoms depend upon the way the infection was acquired:

- **Skin infections:** If the bacteria enter through a cut or scratch in the skin, a local infection with ulceration develops at the infected site within 1 to 5 days. Swollen lymph nodes are common.
- **Infections of the eyes, nose, and respiratory tract:** These infections will cause the affected sites to produce

increased amounts of mucous. If the infection is in the nose, sores may form with a bloody discharge.

- **Pulmonary infections:** Infection of the lungs can lead to pneumonia, pulmonary abscesses, and the collection of fluid inside the chest cavity around the lung. Symptoms include chest pain, cough and shortness of breath.
- **Bloodstream infections:** Any infection can progress to an infection of the bloodstream. Bloodstream infections are usually fatal within 7 to 10 days. Symptoms include very high fever, rapid heart rate, and often a rash.
- **Chronic infections:** Symptoms of chronic infection appear later than other types of infection. The usual symptoms are abscesses in the skin and muscles of the arms and legs, or more rarely, in the spleen or liver.

## How common is glanders?

The United States has not seen a naturally occurring case since the 1940s. However, it is still commonly seen among domestic animals in Africa, Asia, the Middle East, and Central and South America.

## How can the spread of glanders be prevented?

There is no vaccine for glanders. Where glanders is found in animals, the disease can be prevented in humans by identifying and eliminating the infection in the animal population. In the health care setting, transmission can be prevented by using common blood and body fluid precautions.

## What should I do if I suspect someone in my family has glanders?

Contact your primary health care provider or call your local health department.

## Where can I get more information?

For information about the disease in humans, call Communicable Disease Epidemiology, (206) 418-5500 or toll-free 877-539-4344. For information about the disease in animals, call Kathy Connell at the Washington State Department of Agriculture (360) 902-1878.



P.O. Box 47890  
Olympia, Washington  
98504-7890

[www.doh.wa.gov](http://www.doh.wa.gov)

1-800-525-0127