

What is glanders?

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

Who is at risk for glanders?

Glanders is a disease that mainly affects people who work in certain jobs, such as individuals who are exposed to infected horses, mules and donkeys, along with laboratory personnel who work with the bacteria. However, because precautions are used, these infections are rare.

What are the symptoms of glanders?

The symptoms of glanders depend on the type of infection. In general, symptoms of glanders include fever, muscle aches, chest pain, muscle tightness and headache. Additional symptoms may include 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 a sore will develop at the site where the bacteria entered the body. Swollen lymph nodes may also be apparent. Infections of the eyes, nose and respiratory tract will cause increased mucus production from the affected sites.
- **Pulmonary infections:** In pulmonary lung infections, pneumonia, pulmonary abscesses, and pleural effusion can occur. Symptoms can include difficulty breathing or shortness of breath.
- **Bloodstream infections:** Glanders bloodstream infections are usually fatal within seven 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.

How soon do symptoms appear?

How soon symptoms appear depend on the site of infection. For localized infections, however, the sores typically develop within one to five days.

How is glanders spread?

Glanders mainly is spread to humans by direct contact with infected animals. The bacteria enter the body through the skin and through the moist surfaces of the eyes and nose. Cases have been documented in veterinarians, horse caretakers and laboratory personnel.

When and for how long is a person able to spread the disease?

Cases of human to human transmission have not been reported in the U.S.

How is a person diagnosed?

The disease can be diagnosed in the laboratory by testing blood, sputum, urine or skin sores.

What is the treatment?

Glanders can be treated with antibiotics. Make sure to follow all directions when taking antibiotics to reduce the chance of developing antibiotic-resistant strains.

Does past infection make a person immune?

The extent of immunity is unknown.

Should children or others be excluded from child care, school, work or other activities if they have glanders?

Unless a doctor determines the child is contagious, infants, toddlers and school-age children should not be excluded unless the staff determines the child is unwilling or unable to participate in activities. They also should be excluded if the staff determines that they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group.

All others can attend work and other functions as long as they are well enough to do so. As always, good hand washing and respiratory etiquette is recommended.

What can be done to prevent the spread of glanders?

There is no vaccine available for glanders. In countries where glanders is common 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 standard blood and body fluid precautions.

Additional Information

Additional information is available by calling the North Dakota Department of Health at 800.472.2180.

This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health.

Resources:

American Academy of Pediatrics. [Children in Out-Of-Home Care]. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015: 132-151

Centers for Disease Control and Prevention. (2012). Glanders. www.cdc.gov/glanders/index.html