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# BURKHOLDERIA (GLANDERS & MELIOIDOSIS)



FREQUENTLY ASKED QUESTIONS December 7, 2007

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What are Glanders and Melioidosis?

Glanders and Melioidosis are the names for 2 serious illnesses caused by a group of bacteria called *Burkholderia*.

Glanders is mainly a disease of horses, donkeys, and mules, though other animals such as goats, cats and dogs can be infected. Glanders was wiped out of the United States in the early 1900s, but still occurs occasionally in parts of Africa, Asia, and South America. Human cases are extremely rare.

Melioidosis occurs in humans and in many other animal species including mammals, birds, and reptiles. The bacteria live in soil, mud, and water, and are found in rice paddies. Naturally-occurring infection of humans occurs only in Southeast Asia and Australia. In Thailand, there are 2,000-5,000 cases per year of Melioidosis. In the USA, fewer than five cases are reported each year, typically in immigrants and in travelers returning from areas where the infection is present.

How do people get Glanders or Melioidosis?

People can get Glanders or Melioidosis by touching, drinking or breathing in *Burkholderia* bacteria. This is called exposure to Glanders or Melioidosis. Not everybody who is exposed to these diseases will get sick. But many will, and as the bacteria multiply inside the body, they can cause serious illness.

People have come into contact with Glanders bacteria by touching infected animals while in Africa, Asia, or South America and by working with Glanders bacteria in a laboratory. However, human cases of Glanders are extremely rare worldwide. The only recent case in North America occurred in 2000 in Maryland when a laboratory worker acquired Glanders by working with the bacteria. This was the first human case reported in the US since 1945.

People have come into contact with Melioidosis bacteria by touching contaminated soil or mud or by drinking contaminated water in Southeast Asia and Australia. People at higher risk for Melioidosis include rice farmers and other agricultural workers.

Terrorists could use *Burkholderia* bacteria as a weapon by releasing the bacteria in public places.

What if there is a Glanders or Melioidosis emergency in San Francisco?

The San Francisco Department of Public Health (SFDPH) has a plan to quickly respond to a Glanders or Melioidosis emergency. SFDPH will evaluate the situation and may recommend ways for people to keep themselves and their families safe. Recommendations may include antibiotics for people who are at risk of illness. SFDPH will also participate in efforts to provide needed medical support and treatment, and to reduce any ongoing sources of Glanders or Melioidosis bacteria.

How can I keep from getting Glanders or Melioidosis?

To reduce your risk of getting Glanders or Melioidosis from a **natural source**:

- Avoid contact with soil and standing water in Southeast Asia, especially if you have diabetes or open skin lesions
- Wear boots while performing agricultural work in Southeast Asia.
- Do not handle sick or dead animal bodies, especially in countries with Glanders. If you must handle sick or dead animal bodies, use gloves, eye protection, and a mask.
- It is always a good idea to wash your hands regularly and avoid touching your eyes, nose, and

mouth

If terrorists release Glanders or Melioidosis bacteria on purpose, check for recommendations from SFDPH. For example, you may be asked to wash your skin and hair thoroughly and to remove and wash clothing that may have been contaminated.

Is there a medicine to prevent Glanders or Melioidosis?

Several antibiotics have been studied to prevent Glanders and Melioidosis disease. At this time, there is no standard recommendation for which antibiotic would offer the best protection. In an emergency involving *Burkholderia*, SFDPH may be able to offer guidance about which antibiotics to take, who should take them, and how and where you can get them.

Is there a vaccine (shot) to prevent Glanders or Melioidosis?

No. There is no vaccine available for humans.

Can I catch Glanders or Melioidosis from someone?

It is possible but very unlikely. Glanders and Melioidosis are not spread from person-to-person except in very rare cases.

What are the signs of Glanders and Melioidosis?

People usually have fever, sweats, chills, headaches, and body-aches. Other signs of *Burkholderia* disease develop depending on how the bacteria entered the body:

- **Cutaneous (skin):** swelling and sores at the site of the point of entry; possible swollen lymph nodes. It usually takes 1-5 days after exposure until these signs develop.
- **Upper respiratory:** mucus or pus discharge from the mouth, nose or eyes.
- **Pulmonary (lung):** pneumonia, lung abscess, or large pockets of fluid in the lung. It usually takes 10-14 days after exposure until these lung signs develop.
- **Septicemic (blood):** bacteria spread to the bloodstream from other parts of the body. When this happens, the disease is usually fatal.

See a doctor right away if you are having the signs listed above and you think you may have been exposed to *Burkholderia* bacteria. It is important to start medical treatment as soon as possible.

Are there treatments for Glanders and Melioidosis?

Most cases can be treated with high-dose antibiotics, usually given in a hospital setting. Your health care provider will determine the best course of treatment. Glanders and Melioidosis can be deadly without medical attention, and so it is important to start treatment promptly.

How can I find information during a Glanders or Melioidosis emergency?

Check the SFDPH website [www.sfdph.org/cdcp](http://www.sfdph.org/cdcp). Local media such as newspapers, TV stations and radio will carry emergency instructions. Emergency radio stations include: KCBS 740 AM and KGO 810 AM.

What can I do now if I am worried about a Glanders or Melioidosis attack?

- Read about the diseases at the CDC pages [www.cdc.gov/ncidod/dbmd/diseaseinfo/glanders\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/glanders_g.htm) and [www.cdc.gov/ncidod/dbmd/diseaseinfo/melioidosis\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/melioidosis_g.htm)
- Go to [www.72hours.org](http://www.72hours.org) to learn about steps you can take now to prepare for all disasters.
- Keep a card in your wallet with a list of your health problems, the names and doses of medicines you take, and any medicines you are allergic to.