



Melioidosis

What is melioidosis?

Melioidosis is a disease caused by bacteria known as *Burkholderia pseudomallei*. The bacteria live below the soil's surface during the dry season but after heavy rainfall are found in surface water and mud and may become airborne.

How is it spread?

The bacteria that causes melioidosis usually enters the body via cuts and sores in the skin or via inhalation of dust or droplets and very rarely by ingestion of contaminated water.

The disease has been found among some domestic and farm animals. Melioidosis does not usually spread from one person to another or from animals to humans.

Where does melioidosis usually occur?

Melioidosis is found in tropical areas throughout the world, particularly in South East Asia and northern Australia.

In Australia cases typically occur in the Top End of the Northern Territory (NT) and in far north Queensland and the Kimberley region of Western Australia. Cases have been found in the NT occasionally as far south as the Tennant Creek region.

What are the symptoms?

The symptoms of melioidosis depend on the site of the infection and this can vary. Often it starts as a chest infection with shortness of breath, productive cough and fever. Other possible presentations include fever with headache and confusion, or pain and/or difficulty passing urine. People can become ill from 1 to 21 days after being infected and the onset of symptoms may be sudden or gradual. The infection

can be fatal and melioidosis requires urgent medical attention and treatment with specific antibiotics.

In some cases the illness may come on much more slowly with weight loss, intermittent fever, chest pain and a cough. Some people may present with skin ulcers, boils or joint or bone infections.

There have also been cases where the disease has caused illness many years after the initial infection. In these cases, the bacteria have been carried by the person and have become active due to a weakening of the immune system.

The diagnosis of melioidosis is made by growing the bacteria with laboratory testing of blood, sputum, urine or a swab from an abscess or non-healing ulcer.

Who is at risk?

People most at risk are those with conditions such as diabetes, heavy alcohol consumption, kidney disease, lung disease, and cancer and those on immunosuppressive therapy including steroids.

Healthy people can also get the disease if they work in muddy soil without good hand and foot protection. Children are at a lower risk for acquiring melioidosis compared with adults. However, it is still possible for children to acquire melioidosis during the wet season, particularly those with chronic diseases or weakened immune systems.

What is the treatment?

All patients should be admitted to hospital initially. They are treated with antibiotics, which usually have to be continued for at least 3 months. If treatment is started early, recovery is usually complete. It is important to complete all antibiotics to prevent a relapse.

How can melioidosis be prevented?

There is currently no vaccine against melioidosis. Therefore preventive measures are the key to avoiding infection. People with past melioidosis can be infected again after new exposure.

Waterproof shoes or boots will protect your feet when you walk in wet soil where there is pooled water or you work in muddy conditions, for example, when gardening or working in excavations. Open footwear such as sandals are not very good protection. Protective gloves should be worn when handling soil, particularly during the wet season.

Wounds should be promptly and thoroughly washed clean and covered.

If necessary, use pumping equipment to control water ingress when working in excavations.

Due to the potential for aerosolisation (airborne droplets) of *Burkholderia pseudomallei* people with risk factors such as diabetes, heavy alcohol consumption, kidney disease, lung disease and cancer and those on immunosuppressive therapy

should stay indoors during periods of heavy wind and rain in the Top End. People using high pressure hoses around soil should cover their mouths and noses with a mask to avoid inhalation of bacteria.

Children should avoid playing in muddy areas, wet sandpits or places where water has pooled in grassy areas or where grassed areas are boggy. Sandpits which are dry or dry enough to comfortably play in are also low risk.

These preventative measures are most important if you have any of the following conditions:

- Diabetes
- Heavy alcohol consumption (>20 standard drinks a week or binge drinking)
- Kidney disease
- Lung disease
- Cancer
- Receiving immunosuppressive therapy, including steroids
- Cuts or sores in your skin, particularly on the hands and feet.

For more information contact the CDC in your region

Alice Springs	8951 7540
Darwin	8922 8044
Katherine	8973 9049
Nhulunbuy	8987 0357
Tennant Creek	8962 4259

or

www.nt.gov.au/health/cdc