

# Melioidosis- Wet Season Factsheet for Health Professionals

## Background

Melioidosis is a serious disease caused by bacteria called *Burkholderia pseudomallei*, which live in tropical soils and water worldwide, particularly in Southeast Asia and northern Australia. Melioidosis mostly occurs in the wet season (October to April), but cases also occur in the dry season. Heavy rainfall brings the bacteria into surface water and soil, where they can be picked up by the wind and spread in the air.

Melioidosis bacteria can infect a person through penetrating injuries, skin cuts and sores exposed to soil and water, breathing in dust or droplets (especially during storms or spray from high-pressure hoses), and rarely by drinking unchlorinated water that contains the bacteria. It can also infect some domestic and farm animals and animals in zoos. Melioidosis does not usually spread from one person to another or from animals to humans.

The people with the following conditions are most at risk of melioidosis:

- Diabetes mellitus
- Kidney disease
- Lung disease
- Cancer
- Transplant recipients
- Treatment with immunosuppressive therapy, including steroids
- Heavy alcohol consumption (more than 20 standard drinks a week, or binge drinking)

High risk oncology, rheumatology and all haemodialysis patients should commence prophylactic trimethoprim-sulfamethoxazole during the wet season.

Up to 20% of cases occur in healthy people without any of the above risk factors, but who have been exposed to the bacteria in soil or water, usually through skin exposure.

Healthy children are much less likely to get melioidosis than adults. However, children with chronic diseases or a weakened immune system can become sick with melioidosis.

## Clinical features

- Around half of melioidosis cases present with pneumonia.
- Other presentations range from skin lesions without systemic illness, to overwhelming sepsis with abscesses disseminated in multiple internal organs.
- Genitourinary disease with prostatic abscesses is especially common in the Top End.
- Bone, joint and neurological infections are all well documented.

## Testing

The likelihood of diagnosing melioidosis is maximized if the diagnosis is considered in at-risk subjects and appropriate clinical samples from a variety of sites are sent to the microbiology laboratory for microscopy and culture.

Culture is the mainstay of diagnosis. Blood cultures are positive in over 50% of all patients. Diagnosis of melioidosis (i.e. active disease) is NOT made based on a positive serology (IHA) result, although melioidosis serology should be ordered if melioidosis is suspected. Serologic testing alone is not a reliable method of diagnosis and culture confirmation should always be vigorously sought in patients with suspected melioidosis.

All patients with suspected melioidosis should have the following samples, if available, taken for culture:

- Blood cultures
- Sputum
- Urine
- Abscess fluid or pus
- Swab of an ulcer or skin lesion; placed into Ashdown's selective medium (purple bottle)\* to enhance recovery of the organism
- Throat swab; placed into Ashdown's selective medium\*
- Rectal swab; placed into Ashdown's selective medium\*

\*In remote clinics where Ashdown's media is not available, do not do throat and rectal swabs. But for skin sores collect standard swabs and place in bacterial transport medium tubes. For these AND for sputum and urine samples, please add to the laboratory request form 'Melioidosis culture also please'.

Chest X-ray should be performed in all suspected cases.

## Treatment

All confirmed cases of melioidosis and any suspected cases without confirmation despite appropriate diagnostic work up (as above) should be referred to the RDH Infectious Diseases team or ASH Infectious Diseases team. Melioidosis is a laboratory-notifiable disease in the NT.

## Public health management

There is no way to eradicate melioidosis from tropical soils and there is no vaccine against melioidosis. People who have previously had melioidosis can get infected again. For key preventive measures see [Melioidosis \(nt.gov.au\)](http://nt.gov.au)

For more information call your nearest [Centre for Disease Control](http://nt.gov.au).

Location	Phone
Darwin (Top End Region)	(08) 8922 8044, 1800 008 002
Katherine (Big Rivers Region)	(08) 8973 9049
Tennant Creek (Central Australia Region)	(08) 8962 4259
Alice Springs (Central Australia Region)	(08) 8951 7540
Nhulunbuy (East Arnhem Region)	(08) 8987 0357