

Legionnaires' disease

What is Legionnaires' disease?

Legionnaires' disease is an infection of the lungs (pneumonia) caused by bacteria of the *Legionella* family. There are approximately 70 cases of Legionnaires' disease notified in NSW each year, most of which are caused by *Legionella pneumophila*. *Legionella pneumophila* is usually found in warm water, whereas *Legionella longbeachae*, another bacterium of the *Legionella* family, is commonly found in soil and potting mix.

What are the symptoms?

Legionnaires' disease usually causes:

- fever
- chills
- a cough
- shortness of breath
- muscle aches
- headache
- tiredness
- loss of appetite, and
- diarrhoea.

Most people recover from the illness; however, some become very sick with pneumonia and may die.

How is it spread?

Legionnaires' disease can occur after people have breathed in aerosols from water sources that are contaminated with *Legionella pneumophila*, for example, from air conditioning cooling towers, whirlpool spas, warm water systems or showers. Sometimes it can occur after breathing aerosols contaminated with *Legionella longbeachae* from soil, potting mix or dripping water from hanging pot plants. People may be exposed at home, work or in public places.

It is not spread from person to person. The time between the patient's exposure to the bacteria and becoming sick is between 2 and 10 days.

Who is at risk?

Legionnaires' disease most often affects middle-aged and older people, particularly those who smoke or who have chronic lung disease. People whose immune systems are suppressed by medications or diseases such as cancer, kidney failure, diabetes or HIV infection, are also at increased risk.

How is it prevented?

Legionella pneumophila bacteria can be found in many types of water systems; however, the bacteria reproduce to high numbers in warm, stagnant water. Good design, disinfection and maintenance of cooling towers and plumbing systems limit the growth and spread of *Legionella* bacteria. Building occupiers and owners should follow the 'NSW Code of Practice for the Control of Legionnaires Disease. 2nd Edn. 2004' (http://www.health.nsw.gov.au/pubs/2004/pdf/legionnaires_disease.pdf).

Legionella longbeachae is common in the soil. Reducing exposure to potting mix dust (by following the manufacturers' warning on potting mix labels), wearing gloves and a mask when using potting mix and avoiding breathing in droplets of water from dripping pot plants and when watering plants may help prevent infection. Wash your hands after handling potting mix or soil, especially before eating, drinking, smoking or putting your hand in your mouth.

How is it diagnosed?

It is difficult to distinguish Legionnaires' disease from other types of pneumonia by symptoms alone. Chest X-rays often show pneumonia but the diagnosis requires special tests. Tests of blood (taken 3 to 6 weeks apart), sputum and urine samples can help to confirm the diagnosis.

How is it treated?

Legionnaires' disease can be treated with antibiotics. Patients with Legionnaires' disease may be treated in hospital with antibiotics through a drip. Some people may need intensive care and a ventilator to assist them to breathe.

What is the public health response?

Hospital staff and laboratories must notify cases of Legionnaires' disease to the local public health unit. Public health unit staff will talk with the treating doctor and patient (or their carer) to identify risk factors for the disease. When two cases share a common exposure, the public health unit will work with local council to investigate and control possible sources of infection.