

Safer Gardening – Legionnaires’ Disease

Gardening is a popular pastime enjoyed by thousands of New Zealanders, helping people relax and escape the stresses of life. It provides enjoyment and exercise.

The huge growth of interest in home-grown vegetables and fruit in recent years has added to people’s culinary enjoyment, and help stretched their budgets further.

Soil is rich with living organisms beneficial to plants which generally cause no harm to animals or people. Soil does, however, also contain some organisms that are not beneficial. A type of *Legionella* bacteria, which is commonly found in the environment, is one of these. It has been shown to cause Legionnaire’s disease in a few people.

This guide will provide some simple and natural steps that all gardeners can take to reduce risk while continuing to enjoy their garden.

***Legionella* and legionellosis**

Legionnaire’s disease (legionellosis) is a respiratory (lung) infection, caused by the *Legionella* bacteria and may be contracted from air conditioning and when you handle garden soils, compost and potting mixes.

Legionella bacteria occur naturally in the environment and are common in water, garden soils, compost, soil conditioner and potting mixes. *Legionella* appears to infect humans by inhalation of dust or liquid droplets contaminated with the bacteria.

The severity of legionellosis can range from a relatively mild respiratory non-pneumonic illness (Pontiac fever) to pneumonia (Legionnaires’ disease) which left untreated may be fatal.

There are two strains of *Legionella* bacteria responsible for most cases of legionellosis in New Zealand. *Legionella pneumophila* has been responsible for illnesses linked to engineered water systems such as hot water systems and cooling towers used in air conditioning systems of buildings. On the other hand human exposure to *Legionella longbeachae*, has been linked to the inhalation of airborne droplets or particles from garden soils, potting mix or composts containing the bacteria.

Few who come into contact with the bacteria become sick and symptoms will vary from person to person.

Symptoms

If people become infected with *Legionella*, they may get flu-like symptoms that can range from mild to severe. Those in good health may experience little more than mild flu-like symptoms. It is more common in older people, particularly if they smoke, have poor immunity or have a chronic illness. There has been no reported person-to-person transmission of the bacteria.

Symptoms can include

- muscle aches;
- headache;
- tiredness;
- chills;
- shortness of breath;
- loss of appetite;
- coughing; and sometimes
- stomach pain and diarrhoea.

If left untreated, the disease can progress to Legionnaire’s disease, and require hospitalisation. In severe cases, death has resulted from contracting this disease. The period between exposure and onset of illness for Legionnaires’ disease can vary between 2-14 days. For Pontiac fever, the onset of illness usually occurs between 5 hours to three days. People who develop a flu-like illness which is worsening should see a doctor immediately.

Reducing the Risk

As low as the incidence of *Legionella* contracted from gardening may be, it's a serious issue and there are a few simple, easy and natural steps that all that gardeners can take to reduce the risk while continuing to enjoy their garden.

The Ministry of Health has an excellent publication – “Safer and Healthier Gardening”. It provides guidelines to help reduce the risks for the home gardener which includes:

- *Minimise the amount of dust when working in the garden*
- *Water your garden and indoor plants using a gentle spray*
- *Read the warning on bags of composted potting mixes*
- *Wear gloves when handling soil, mulches, compost or potting mix*
- *Wear a dust mask if handling potting mixes indoors or in windy conditions*
- *Dampen potting mixes before use*
- *Open bags of soil products or composted potting mixes slowly and away from the face*
- *Make sure the working area (glasshouse, potting shed) is well ventilated.*
- *Wash hands thoroughly after gardening or handling soil products.*

See your doctor immediately if you develop a flu-like illness that is worsening. Antibiotics are effective against legionellosis if given early.

In addition, store bags of potting mix in the shade; raised temperatures in bags stored in the sun may encourage growth of the bacteria. And when working around bulk supplies of potting mix, avoid breathing dust or inhaling steam or mist.

As a reminder, potting mix and compost packaging should contain a warning panel alerting gardeners of the risks.

References

Safer and Healthier Gardening – Ministry of Health – HE4605, 2010 September

Order here: www.healthed.govt.nz/resources/saferandhealthiergardening.aspx

Legionellosis - What You Should Know If You Work With Soils, Compost And Potting Mix – Department of Labour 2010

Read here: www.osh.govt.nz/publications/factsheets/legionellosis.html

Key Points

1. **Legionella bacteria occur naturally in water, garden soil, potting mix and compost and under some circumstances can lead to a flu-like illness that can range from mild to severe.**
2. **If you think somebody is infected with a worsening flu-like illness, arrange a visit to a doctor immediately. Key signs are high fever, chill, breathlessness or cough.**
3. **Legionnaires' disease can be avoided through a few simple and natural precautions that all gardeners are encouraged to take to reduce risk while continuing to enjoy their garden.**

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