

LEGIONELLOSIS

(Legionella, Legionnaires' Disease)

Your Questions Answered

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EAST CAMBRIDGESHIRE
DISTRICT COUNCIL

What is Legionellosis?

Legionellosis is an infection of the lungs caused by Legionella bacteria. These are found in sources of water such as rivers, streams and ponds. In their natural environment they cause no trouble. However, problems can arise if the water supplies in cooling towers and air conditioning units become contaminated. These then have the potential to spread large outbreaks of the disease when sited on tall buildings, such as hotels, hospitals, offices and factories.

There are two main forms of the disease. Legionnaires' disease is the more serious and causes mild to severe pneumonia. Pontiac fever gives a mild influenza like illness without any pneumonia.

How do I know I have Legionellosis?

Legionellosis may be suspected from its typical clinical features. The diagnosis can only be confirmed by tests that distinguish the disease from other causes of pneumonia. This is done by isolating the bacteria from respiratory secretions (sputum) or by testing a sample blood.

How is it spread?

You catch the infection by breathing in fine water droplets contaminated with the bacteria. The most common source of these is from cooling towers and water cooled air-conditioning units. Legionella can multiply in the cascade of water used to cool the air in the pipes or vanes. A great deal of this water is blown away or lost by evaporation. A fine mist that contains the bacteria may then fall on people working in or passing by the building. This can sometimes travel a considerable distance.

The bacteria can also grow in hot water and cold water systems. The risk is greatest when there is air in pipes together with warm water. Showers and spa baths have, therefore, been sometimes associated with infection. Fortunately this does not happen very often.

Ultrasonic humidifiers used in supermarkets and hotels for chilled displays have also been implicated in outbreaks. These provide a water misting or fogging device to keep food from drying out. There is no evidence that water systems in domestic homes present any significant risk.

Investigation has shown that as many as 40% of cases of Legionnaires Disease reported in the UK were contracted abroad.

What are the symptoms?

Legionnaires' Disease patients usually have fever, chills and a cough. In some there will be muscle aches, headache, tiredness, appetite loss and occasionally diarrhoea. The most severe effect is often acute pneumonia.

Pontiac Fever is a mild infection resembling flu. Typical symptoms are tiredness, mild aches, some fever, chills and a headache.

There are other rarer forms of legionellosis. These can cause septicaemia with confusion, disorientation and hallucinations. Some patients may have difficulty with muscle co-ordination or severe limb weakness.

How soon after exposure do symptoms appear?

- symptoms for Legionnaire's disease appear anywhere from 2-10 days after exposure. Onset is usually 5-6 days
- the incubation period is shorter for Pontiac fever at between 5-66 hours. The average is 24-48 hours

Do infected people need to stay away from work or school?

There is no evidence that it is passed between humans. Patients with the symptoms are usually under medical care. Your doctor will advise you whether you are fit enough to return to work, school or nursery.

What action is taken if there is an outbreak?

As soon as an outbreak is suspected a team of specialists including staff from the local Environmental Health Department and the Public Health Laboratory Service, mount an investigation to:

- identify the source
- identify those people likely to be effected
- ensure that contaminated water, misting or fogging systems are treated as quickly as possible

How can the risk be reduced?

Since Legionella is widespread, it can never be prevented from entering water systems. However, taking the precautions overleaf can greatly reduce the risk of an outbreak:

Hot and cold water services

- Ensure that cisterns and pipes are designed so that water is not allowed to stand undisturbed for long periods.
- Cover cisterns to prevent the entry of dirt, debris and pests. Inspect, clean and disinfect them on a periodic basis.
- Avoid water temperatures between 20°C and 45°C by insulating cold water tanks and pipes in warm spaces. Store hot water at 60°C for circulation at 50°C. Consider the need for thermostatically controlled taps where there is a risk of scalding young children or the elderly.
- Only use fittings and materials that comply with Water Authority bylaws. Certain materials e.g. leather, some rubbers and plastics support the growth of bacteria and should not be used.
- Ensure that all parts of humidified chilled food displays coming into contact with the mist or liquid water are regularly cleaned. Thoroughly disinfect them on a weekly basis with a food grade disinfectant. Test the equipment for the presence of Legionella at least every 6 months.

Cooling towers

- Ensure cooling towers and their water systems are well designed, maintained and operated. Fitting devices that reduce the escape of spray is especially important-
- Clean and disinfect systems at least every 6 months.
- Treat water to prevent scale, corrosion and the growth of bacteria.
- Where reasonably practicable, replace cooling towers with dry cooling systems.

REMEMBER TO WASH YOUR HANDS FREQUENTLY

Further advice is available by contacting your Doctor or from:

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Environmental Services
The Grange
Nutholt Lane
Ely, Cambs CB7 4EE
Tel: 01353 665555
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