



Updated April 2011

Legionnaires' disease

- [What is it?](#)
- [Where is it found?](#)
- [How can I catch it?](#)
- [What are the symptoms?](#)
- [Can I prevent it?](#)
- [What is my risk?](#)
- [Can it be treated?](#)
- [Links](#)

What is it?

Legionnaires' disease is a type of [pneumonia](#), caused by bacteria called *Legionella*.

It is called Legionnaires' disease because it was first reported during an [American Legion](#) convention in Philadelphia, United States (US) in 1976. *Legionella* bacteria can also cause a mild, flu-like illness called [Pontiac fever](#). This is not usually serious and does not lead to pneumonia.

Where is it?

Legionella bacteria are found naturally in streams, rivers, lakes and thermal pools. They can also be present in domestic water sources such as showers, air conditioning units and spas. Outbreaks take place when these water sources become contaminated with bacteria and warm temperatures help the bacteria to grow.

The disease spreads when tiny droplets of water (aerosols) containing the bacteria are inhaled. Approximately 40% of cases reported in England and Wales have been linked to trips abroad.

Legionnaires' disease is found all over the world, but is mainly reported in industrialised countries. Small outbreaks have occurred on cruise ships, such as in July 2007 on a Baltic cruise, when *Legionella* bacteria were found in the showers and other areas of the ship.

In 2008, 5,960 cases of Legionnaires' disease were reported from 34 European countries, with the highest number in France. In the US there were 3,181 cases reported in 2008.

How can I catch it?

You get Legionnaires' disease by breathing in a fine spray of contaminated water, often from air conditioning systems, cooling towers or showers. You do not catch it directly from another person.

Legionella bacteria are less active in cool water. Water temperatures need to be between 25°C and 42°C for bacteria to grow rapidly. Scale, sediment and sludge also help bacteria grow, but the temperature rise is the essential factor.



After you have been exposed, it takes about a week for symptoms to appear.

What are the symptoms?

- chills
- cough
- difficulty breathing
- fever (high temperature)
- headache
- muscle aches

Headaches and muscle pain are usually the first symptoms and often appear very suddenly. You can also get chest pain, confusion, delirium, diarrhoea, loss of appetite and vomiting. If you get very ill, you may cough up blood.

If you become unwell with these symptoms, you should see a doctor as soon as possible.

How can I prevent it?

Correct maintenance of water systems is the best way to prevent Legionnaires' disease. This includes making sure that water systems are cleaned and properly chlorinated. Guidance for ensuring safe water systems in hotels, holiday accommodation and cruise ships is available from the [Health and Safety Executive website](#).

It is often unrealistic to avoid all contact with water. However, outbreaks have been traced to badly maintained whirlpools, hot tubs and spas, so if you have any concerns about upkeep of facilities, avoid using them.

There is no vaccine to prevent infection.

What is my risk?

Your risk is higher if you are over 50, a smoker, have a chest, heart or chronic medical condition, or your immune system is compromised due to cancer or certain types of treatment. If you have any of these risk factors you should avoid jacuzzis and whirlpool spas and any environment that increases your risk of inhaling water droplets.

Between 2000 and 2009, 39% of Legionnaires' disease cases reported in England and Wales were linked to travel abroad. In 2009, out of 345 total cases reported, including 43 deaths, 126 cases were linked to foreign travel.



Reports of Two or More Clusters of Travel-Associated Legionnaires' Disease in 2009

Country of Infection	Number of case clusters
Italy	26
France	16
Turkey	10
Spain	9
Portugal	3
Greece	2
Cuba	2
South Africa	2
Thailand	2
Cruise Ships	3

[Data courtesy of the European Surveillance Scheme for Travel Associated Legionnaires' Disease](#)

Can it be treated?

Yes, most people will get better with the correct antibiotic treatment. However, severe illness can develop, particularly if you are over 50, have a chest problem, a long-term illness or your immune system is not working properly.

It can be difficult for doctors to tell the difference between Legionnaires' disease and other types of pneumonia. Ways of identifying *Legionella* include testing saliva, blood, or urine samples for bacteria.

Links

- [Health Protection Agency: Legionnaires' disease](#)
- [Health and Safety Executive: Legionnaires' disease](#)
- [NHS Choices: Legionnaires' disease](#)