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Legionnaires' Disease and Pontiac Fever

Updated: October 2012

Original: February 2004

IT'S YOUR HEALTH

Legionnaires' Disease and Pontiac Fever

THE ISSUE

Legionellosis is an infection caused by a type of bacteria called *Legionella*. It can lead to two distinct illnesses: Legionnaires' disease and Pontiac fever. Legionnaires' disease is a type of pneumonia, which can occur in outbreaks. It varies in severity, and is sometimes fatal. Pontiac fever is a milder flu-like illness without pneumonia.



Legionnaires' disease got its name in 1976, when an outbreak of pneumonia killed 29 people at an American Legion Convention in Philadelphia. Scientists later discovered that *Legionella* bacteria could also cause a milder type of infection, called Pontiac fever.

HOW LEGIONELLOSIS SPREADS

Legionella bacteria are found in water sources. They can multiply in stagnant water at certain temperatures (between 25°C and 45°C). People become infected by breathing in droplets, mist or steam containing the bacteria. Single cases of Legionnaires' disease are more common, than outbreaks, but outbreaks do occur, and have been reported in places like hospitals, hotels, other large buildings, and cruise ships. Outbreaks and individual cases have been traced to a number of specific sources, including:

- plumbing systems (including water heaters, showers and faucets)
- respiratory therapy devices (in hospitals)
- whirlpool baths and hot tubs
- humidifiers
- the cooling towers of large air-conditioning systems (e.g. in apartment buildings, hotels, hospitals)

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Legionellosis is not spread from one person to another. You cannot contract Pontiac fever or Legionnaires' disease from an infected person.

SYMPTOMS OF LEGIONELLOSIS

Pontiac fever causes a flu-like illness. The symptoms include fever, lack of appetite, headache, and aching muscles. Pontiac fever is not associated with pneumonia. In most cases no treatment is required, and you will recover within two to five days.

Legionnaires' disease is a serious respiratory illness involving [pneumonia](#). The symptoms can include high fever, chills and a cough, as well as fatigue, headache, aching muscles, chest pain, and loss of appetite. Sometimes there is also nausea, diarrhea, or a change in a person's mental condition, including confusion or memory loss. Special tests are usually required to confirm that the illness has been caused by *Legionella* bacteria.

Anyone with symptoms of Legionnaires' disease should seek immediate medical attention. Many cases are treated successfully with antibiotics. Approximately 10 to 15 percent of people with Legionnaires' disease may die, but this varies with age and overall health, and can also depend on how quickly the person receives the right medical treatment.

RISK FACTORS FOR LEGIONELLOSIS

Anyone can get legionellosis, but the risk of developing Legionnaires' disease is greater for men who are middle aged and older. The following groups are also at greater risk:

- [smokers](#)
- people who [abuse alcohol](#)
- people with a [chronic lung](#) or [kidney disease](#)
- people with [diabetes](#)
- people with weakened immune systems due to conditions such as [cancer](#) or an organ transplant

Pontiac fever doesn't seem to have any higher "at risk" groups.

People in certain occupations, like those who do maintenance work on large air-conditioning systems, may be at increased risk for exposure to *Legionella* bacteria. However, if exposed, an individual's risk of developing a serious infection would depend on the factors listed above.



REDUCE YOUR RISK

Legionellosis is not a common disease, and the risk of getting it is generally quite low.

The key to controlling the risk of infection is a combination of good engineering practices and good [infection control policies and guidelines](#).

Water sources should be properly designed and maintained. A good design, along with proper maintenance, including appropriate treatments, will prevent stagnant water and the growth of *Legionella*.

In your home, you can reduce your risks through the proper maintenance of all mist-producing devices, such as shower heads, hot tubs, whirlpool baths and humidifiers. Make sure you clean and disinfect these devices regularly according to the manufacturers' directions. Keeping your home water heater at a suitable temperature (50°C or higher) will also prevent the growth of *Legionella*. However, to reduce the risk of scalding, it is important that mixing valves or faucets with mixing valves be installed by a qualified plumber to ensure that the hot water temperature is limited to 49 °C at the tap.

GOVERNMENT OF CANADA'S ROLE

The [Public Health Agency of Canada](#) collects information about the number of cases of legionellosis in Canada as part of its work with provincial and territorial public health officials, to monitor and analyze the incidence of infectious diseases. They also develop [guidelines](#) to prevent and control the spread of infections acquired in health care facilities, such as hospitals. When requested, they will help to investigate outbreaks of infectious diseases.

In addition, The Public Health Agency of Canada and [Health Canada](#) participate in public information initiatives, and continue to work globally with other countries to develop and implement strategies to reduce or eradicate infectious diseases.



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FOR MORE INFORMATION

- Public Health Agency of Canada's [Infection Control Guidelines](http://www.phac-aspc.gc.ca/dpg-eng.php) at: www.phac-aspc.gc.ca/dpg-eng.php
- *It's Your Health* – Cool-Mist Humidifiers at: www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/humid-eng.php
- Canadian Centre for Occupational Health and Safety, [Legionnaire's Disease](http://www.ccohs.ca/oshanswers/diseases/legion.html) at: www.ccohs.ca/oshanswers/diseases/legion.html
- U.S. Centers for Disease Control and Prevention, [Legionellosis Resource](http://www.cdc.gov/legionella/patient_facts.htm) site at: www.cdc.gov/legionella/patient_facts.htm

RELATED RESOURCES

For safety information about food, health and consumer products, visit the [Healthy Canadians](http://www.healthycanadians.gc.ca) website at: www.healthycanadians.gc.ca

For additional articles on health and safety issues, go to the *It's Your Health* web section at: www.healthcanada.gc.ca/iyh

You can also call Health Canada toll free at 1-866-225-0709 or TTY at 1-800-267-1245*

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Catalogue: H13-7/126-2012E-PDF

ISBN: 978-1-100-21309-5



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