

New York State Department of Health

Legionellosis (Legionnaires' disease)

Last Reviewed: November 2006

What is legionellosis?

Legionellosis is a bacterial disease which may cause pneumonia. Fewer than 100 cases are reported each year in upstate New York. Most cases occur as single isolated events. Outbreaks are relatively rare.

Why is it called legionellosis?

An outbreak of this disease in Philadelphia in 1976, largely among people attending a state convention of the American Legion, led to the name "Legionnaires' Disease." Subsequently, the bacterium causing the illness was named *Legionella pneumophila* and the name of the illness was changed to legionellosis.

Is this a new disease?

No. The bacterium was first identified in 1976, but earlier cases have been confirmed as far back as 1947.

How widespread is legionellosis?

It is estimated that about 25,000 people develop legionellosis in the United States each year. An additional unknown number are infected with the *Legionella* bacterium and have mild symptoms or no illness at all. Cases occur sporadically and in outbreaks. Outbreaks occur most often in the summer but cases occur all year round.

How severe is the illness?

Legionellosis can be a mild respiratory illness or it can be severe enough to cause death. From 10 to 40 percent of healthy adults have antibodies showing previous exposure to the organism, but only a small percentage have a history of previous pneumonia.

Where are *Legionella* found?

Legionella exist naturally in water and moist soil. They have been found in creeks and ponds, hot and cold water taps, hot water tanks, water in air conditioning cooling towers and evaporative condensers, and soil at excavation sites.

How is legionellosis spread?

The disease appears to be spread through the air from a soil or water source. All studies to date have shown that person-to-person spread does not occur.

Who gets legionellosis?

People of any age can get legionellosis but the disease most often affects the elderly. People with underlying illnesses such as cancer or those with lowered immune system resistance to disease are also at higher risk. It rarely occurs in otherwise healthy people.

What are the usual symptoms of legionellosis?

The early symptoms of legionellosis may be flu-like with muscle aches, headache, tiredness and dry cough followed by high fever, chills and occasionally diarrhea. Temperatures commonly reach 102-105 degrees Fahrenheit and chest X-rays often show pneumonia.

How soon do symptoms occur/appear?

The incubation period for legionellosis ranges from two to 10 days, but is usually five to six days.

What is the treatment for legionellosis?

Antibiotics such as erythromycin, levaquin or azithromycin appear to be effective in treating the disease.

Why is legionellosis so difficult to diagnose?

Legionellosis often causes symptoms similar to those caused by other organisms, including influenza virus and other types of bacterial pneumonia. In addition, the specific laboratory tests needed to confirm the diagnosis are not always requested. The diagnosis depends on very specialized laboratory tests involving culture of the patient's sputum or detecting the organism in urine. Routine laboratory tests will not identify the *Legionella* bacteria.

When does the health department investigate a case of legionellosis?

Because sporadic cases are common and presently not preventable, they are often investigated only to confirm the diagnosis and rule out an outbreak. If an outbreak occurs, an investigation to look for a possible environmental source is conducted.

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