



LEGIONELLOSIS Q&A (Legionnaires' disease, Pontiac fever)

(updated April 2008)

What is legionellosis?

Legionellosis is a disease that is caused by a species of bacteria called *Legionella*. Infection with *Legionella* can cause two different types of illness. Legionnaires' disease is the more severe form and is characterized by pneumonia. A milder disease caused by *Legionella* bacteria is called Pontiac fever.

Why is it called legionellosis?

An outbreak of pneumonia occurred in Philadelphia in 1976 among people attending a state convention of the American Legion, which led to the name "Legionnaires' disease." Investigation of the outbreak revealed that it was caused by a bacterium, which was later named *Legionella*.

What are the symptoms of legionellosis?

Patients with Legionnaires' disease usually have fever, chills, and a cough. The cough associated with Legionnaires' disease may be a dry cough or may produce sputum. Some patients also have muscle aches, headache, shortness of breath, tiredness, loss of appetite, and sometimes diarrhea. Chest X-rays usually show pneumonia. Persons with Pontiac fever experience fever and muscle aches but do not have pneumonia. They usually recover in 2 to 5 days without treatment.

How soon do symptoms appear after exposure?

The incubation period (the time between exposure to the bacterium and the onset of illness) for Legionnaires' disease is 2 to 10 days. Pontiac fever has a shorter incubation period of a few hours to two days.

How is legionellosis diagnosed?

The diagnosis of legionellosis requires special tests that are not routinely performed on persons with fever or pneumonia. Therefore, a physician must consider the possibility of legionellosis in order to obtain the correct tests. One test that is recommended for the diagnosis of Legionnaires' disease detects *Legionella* antigens in a urine sample. Other tests are used to detect the bacteria in sputum samples or to detect a rise in antibodies to *Legionella* in two blood samples that are obtained 3-6 weeks apart.

What is the treatment for legionellosis?

Erythromycin is the antibiotic that is currently recommended for the treatment of Legionnaires' disease. Rifampin is another drug that may be used in addition to erythromycin for severe cases. Pontiac fever requires no specific treatment.

Where are Legionella bacteria found?

Legionella bacteria are widely distributed in our environment. Warm, stagnant water (90°-105°F) such as that found in certain plumbing systems and hot water tanks, cooling towers, evaporative condensers of large air-conditioning systems, and whirlpool spas is an especially favorable



environment for the bacteria to live and multiply. *Legionella* bacteria have also been found in creeks and ponds, potting soil, and soil at excavation sites.

How is legionellosis spread?

Legionellosis is most commonly spread through the air from a water source that is contaminated with *Legionella* bacteria. Persons may be exposed in their homes, workplaces, hospitals, or in public places such as hotels. Legionellosis is not transmitted directly from person-to-person.

Who gets legionellosis?

People of any age may get Legionnaires' disease, but the illness most often affects persons more than 50 years of age, particularly those who smoke cigarettes or have chronic lung disease. Also at increased risk are persons whose immune system is suppressed by diseases such as cancer, kidney failure requiring dialysis, diabetes, or AIDS. Persons who take drugs that suppress the immune system are also at higher risk. Pontiac fever most commonly occurs in persons who are otherwise healthy.

How widespread is legionellosis?

Legionellosis is believed to occur worldwide. It is estimated that 8,000 to 18,000 people develop Legionnaires' disease 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. Outbreaks of Legionnaires' disease are rare, but they receive significant media attention when they do occur. Legionnaires' disease usually occurs as a single, isolated case.

When and why does the health department investigate a case of legionellosis?

Because sporadic cases are common and are difficult to prevent, they are often investigated only to confirm the diagnosis and to evaluate whether the case is part of an outbreak. If an outbreak is identified, health department investigators try to identify the source of disease transmission and recommend appropriate prevention and control measures. Control measures may include decontamination of a water source or improved design and maintenance of cooling towers and plumbing systems to limit the growth and spread of *Legionella* bacteria.

Where can I get additional information on legionellosis?

Contact the Georgia Division of Public Health, Epidemiology Section, by email at gaepinfo@dhr.state.ga.us, or view the CDC Legionellosis Fact Sheet at http://www.cdc.gov/ncidod/dbmd/diseaseinfo/legionellosis_g.htm.