

## FACT SHEET

### For Health Professionals

# LEGIONNAIRES' DISEASE

(Legionellosis)

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#### What is Legionnaires' disease?

Legionellosis is an infection caused by the bacteria *Legionella pneumophila*. The infection has two distinct forms: Legionnaires' disease, the more severe form of infection, which includes pneumonia, and Pontiac fever, a milder flu-like illness. See the Pontiac fever fact sheet for more information.

#### What are the symptoms of Legionnaires' disease?

Persons with Legionnaires' disease usually have fever, chills, cough, body aches, headache, tiredness, loss of appetite, and occasionally diarrhea. Laboratory tests may indicate decreased kidney function. Chest x-rays often show pneumonia. The incubation period for Legionnaires' disease is 2 - 10 days.

#### How is Legionnaires' disease spread?

Outbreaks of legionellosis have been associated with a water source (e.g., air conditioning cooling towers, whirlpool spas, showers) contaminated with *Legionella* bacteria. Persons may be exposed to these aerosols in homes, workplaces, hospitals, or public places.

#### Who gets Legionnaires' disease?

People of any age may get Legionnaires' disease. Males, especially middle-aged and older males, particularly those who smoke or have chronic lung disease, are at higher risk. Also at increased risk are persons whose immune system is suppressed by diseases such as cancer, chronic renal failure, diabetes, or AIDS. Those that take drugs that suppress the immune system are also at higher risk.

#### How is Legionnaires' disease diagnosed?

The diagnosis of legionellosis requires tests that are not routinely performed on persons with fever or pneumonia. Diagnosis depends on isolation of the causative organism on special media, its demonstration by direct immunofluorescent (IF) stain of involved tissue or respiratory secretions, or detection of antigens of *Legionella pneumophila* serogroup 1 in urine by radioimmunoassay (RIA) or by a fourfold or greater rise in indirect immunofluorescent antibody test (IFA) titer between an acute phase serum and one drawn 3-6 weeks later.

#### How long is a person infectious?

Legionnaires' disease is not spread person to person.

#### What is the treatment for Legionnaires' disease?

Erythromycin is the antibiotic currently recommended for treating persons with Legionnaires' disease. In severe cases, a second drug, rifampin, may be used but should not be used alone. Penicillin, cephalosporins and aminoglycosides are ineffective. Other drugs are available for patients unable to tolerate erythromycin.

#### Do infected people need to be excluded from school, work, or child care?

No.

#### Where is the *Legionella* bacterium found?

*Legionella* organisms can be found in many types of water systems. However, the bacteria reproduce to high numbers in warm, motionless water (95-115° F), such as that found in certain plumbing systems and hot water tanks, cooling towers and evaporative condensers of large air-conditioning systems, and whirlpool spas.

#### What can be done to help prevent Legionnaires' disease?

Improved design and maintenance of cooling towers and plumbing systems to limit the growth and aerosolization of *Legionella* organisms are the foundations of legionellosis prevention. During outbreaks, health department investigators seek to identify the source of disease transmission and recommend appropriate prevention and control measures, such as decontamination of the water source.