

## LEGIONNAIRES' DISEASE - RUSSIA (URALS)

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Russia dealing with Legionnaires' outbreak

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A total of 3 people have died and more than 100 others ranging in age from 18 to 81 have been hospitalized in Russia with Legionnaires' disease. The outbreak is confined to an area some 6 miles from Yekaterinburg in the middle Urals region, the Russian news agency Itar-Tass reported Monday [30 Jul 2007]. An official of the regional health ministry says all of the victims are local residents and most are showing improvement with antibiotic therapy.

Several medical centers in the area have sent specialists and equipment to the town of Verkhnyaya Pyshma where the outbreak occurred. Authorities say the infection likely was spread through the water supply system.

Legionnaire's disease is a type of pneumonia caused by breathing in mist from water that contains the bacteria Legionella. It was first identified some 30 years ago when an outbreak of pneumonia occurred at an American Legion convention in Philadelphia.

Communicated by:

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Yekaterinburg is the 5th largest city in Russia with a population of about 1.3 million people. It is located about 1000 miles east of Moscow on the eastern slopes of the Ural mountains (<<http://www.wikipedia.org/wiki/yekaterinburg#history>>). Yekaterinburg (then Sverdlovsk) was the site of an anthrax outbreak in April and May 1979, which was attributed by Soviet officials to the locals eating contaminated meat. However, American agencies believe that the locals inhaled spores accidentally released from an aerosol of pathogen at a military microbiology facility. Summers are short and relatively cool; temperatures reach 70 degrees F (<<http://www.wikipedia.org/wiki/yekaterinburg#history>>).

Legionnaires' disease is the acute pneumonic form of disease caused by Legionella, usually Legionella pneumophila. About 80-90 percent of cases are caused by Legionella pneumophila serogroup 1. Pontiac fever is a non-pneumonic illness also caused by Legionella. Legionnaires' disease was first recognized when an outbreak of pneumonia occurred among participants at an American Legion convention during the summer of 1976 in Philadelphia and was focused mainly at one convention hotel (Fraser DW, et al. Legionnaires' disease: Description of an epidemic of pneumonia. N Engl J Med 1977; 297:1189-97), L. pneumophila grows best in warm water and are intracellular parasites of amebas that are found in biofilms that line piping in warm water plumbing systems. Disruption of the biofilm can release the organisms into the flowing water. Infection follows inhalation by susceptible people of aerosols of the contaminated water. Aerosols

can be generated by a building's faulty air conditioning systems, shower heads, misters, whirlpool spas, and other such devices.

A clinical description of cases in Yekaterinburg and possible sources for this outbreak are not as yet given in the news releases. A discussion of Legionnaires' disease and investigation of an outbreak can be found in  
<[http://www.osha.gov/dts/osta/otm/otm\\_iii/otm\\_iii\\_7.html](http://www.osha.gov/dts/osta/otm/otm_iii/otm_iii_7.html)> - Mod.ML]