

LEGIONELLOSIS - USA (SOUTH DAKOTA) (02): FOUNTAIN

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A ProMED-mail post <<http://www.promedmail.org>>

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<<http://www.aberdeennews.com/mld/aberdeennews/news/13031723.htm>>

Health Department identifies source of Legionnaires' outbreak

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An ornamental fountain in a restaurant waiting area has been identified as the source of an outbreak of Legionnaires' disease in Rapid City, state health officials said on Sat 29 Oct 2005.

Samples taken from the Casa Del Rey matched the *Legionella* strain isolated from people who have become sick, state Health Secretary Doneen Hollingsworth said.

The health secretary also said 2 new cases of Legionnaires' disease have been identified, bringing the total number of Rapid City cases to 15. One person died on 1 Jul 2005. Hollingsworth said 2 people remain hospitalized.

Jon Sharp, general manager at Casa Del Rey, said the fountain was removed on Wed 26 Oct 2005.

News of the restaurant's connection to the outbreak came as a shock, said Sharp. If the restaurant had known it would be a problem, the fountain never would have been installed, he said.

The disease can't be transmitted by person-to-person contact but rather by exposure to bacteria in a mist or vapor.

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[This outbreak, albeit not large, persisted over a number of months before the source was found.

The USA's Department of Labor's OSHA (Occupational Health and Safety Administration) Technical Manual Section III, Chapter 7 reviews quite nicely the epidemiology and control of legionellosis <[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)>. A part relating to water sources is reproduced below:

Water sources that frequently provide optimal conditions for growth of the organisms include:

- cooling towers, evaporative condensers, and fluid coolers that use evaporation to reject heat. These include many industrial processes that use water to remove excess heat; - domestic hot-water systems with water heaters that operate below 60 C (140 F) and deliver water to taps below 50 C (122 F); - humidifiers and decorative fountains that create a water spray and use water at temperatures favorable to growth; - spas and whirlpools; - dental water lines, which are frequently maintained at a temperature above 20 C (68 F), and sometimes as warm as 37 C (98.6 F), for patient comfort; and other sources, including stagnant water in fire sprinkler systems and warm water for eye washes and safety showers.

Water stored below 20 C (68 F) is generally not a source for amplified *L. pneumophila* levels. However, high levels of bacteria have been measured in the water supplying ice machines. The source of amplification in this case was thought to be heat from the condenser coil of the ice maker to the cold water supply. However, no cases of Legionnaires' disease have been linked to consumption of ice made from contaminated water. - Mod.LL]