

Controlling Legionella in the Workplace

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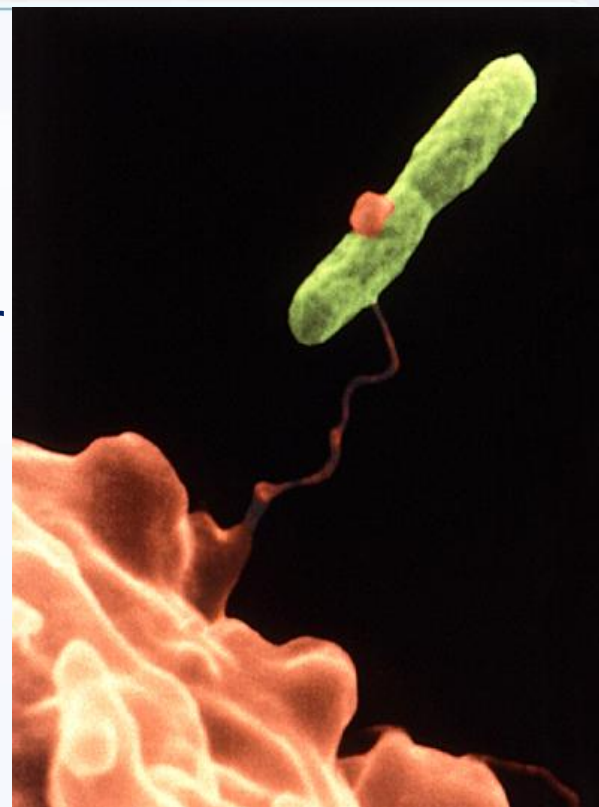
Legionella

- American Legion Convention 1976
 - 221 affected/34 Deaths
- - Barrow Borough Council 2002
 - 180 affected/7 deaths
- Ireland
 - 67 Reported cases 2000-2007
 - 6 Deaths(Fatality Rate 9%)



What is Legionellosis?

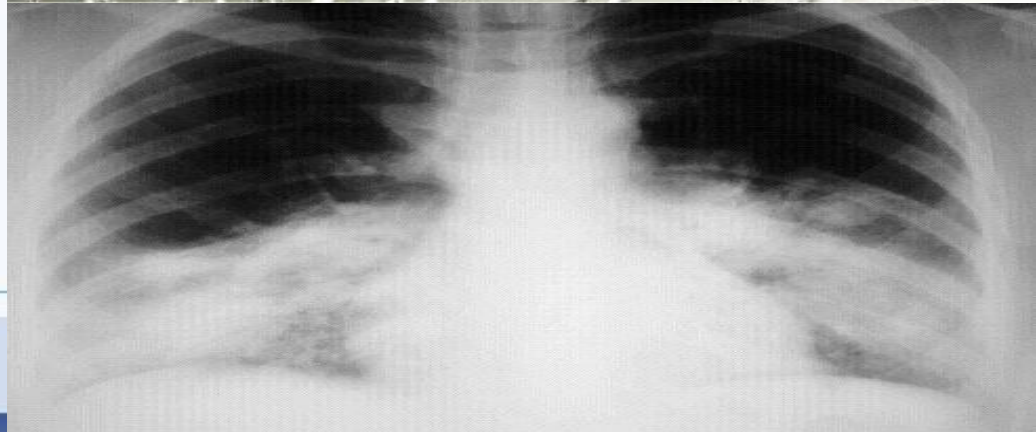
- Caused by legionella bacteria
- Legionella is widespread in Nature
- Bacteria which is found at low levels in Rivers, Lakes and Groundwater
- Enter man made water systems
- Also been found in soil





Legionnaires disease

- Legionnaires Disease (potentially fatal form of pneumonia)
- Pontiac Fever (recover)
- Infected by breathing in aerosols containing legionella bacteria





Growth

- Legionella multiplies between 20 and 45°C
- Does not multiply above 50°C or below 20°C.
- High Temperatures(> 60°C) kill the bacteria.
- Biofilms(slime), scale and sludge provide a source of nutrients.



Legislation

- Safety, Health and Welfare at work Act 2005. (S.I 10 of 2005)
- Safety, Health and Welfare at Work(Biological Agents) Regulations , 1994 amended 1998
- The Safety, Health and Welfare at Work(General Application) Regulations 2007(S.I 299 of 2007)
- Safety, Health and Welfare at Work(Chemical Agents) Regulations 2001



Risk Assessment

- Identify Potential Sources of Risk of exposure to Legionella from work activities and water systems.
 - Identify any water systems that likely to contain water $>20^{\circ}\text{C}$ and $<55^{\circ}\text{C}$
 - Frequency of use of water outlets.
 - Systems that generate aerosols.



Potential sources of infection

- Water systems with a cooling Tower
- Hot and cold water systems
- Spa pools
- Water cooled machine tools
- Ornamental water fountains
- Dental chair unit waterlines
- Vehicle washer
- Spray booth water curtains



Decide who might be harmed

- Identify any susceptible, sensitive group of employees.
- Maintenance Workers.
- Persons other than employees..



Evaluate/Control

- Evaluate the Risks.
 - Eliminate where possible
- Identify Controls.



Record/Implement

- Record results of assessment.
- Document control measures.
- Should include detail of:-
 - Hot and cold water system (e.g. a plan or schematic diagram)
 - The safe and correct operation of your system.
 - Biocide / Temperature.



Control of Legionellosis

Your **written scheme** should also include descriptions of:-

- What control methods and other precautions you will be using; and
- The checks that will be carried out on the control methods and how often these will be done, so as to ensure that they remain effective.
- Who will carry out these checks and what training they should have had.



Control of Legionellosis

Legionella control can be achieved by;

- Keeping water systems clean
- Preventing stagnation, and
- Maintaining water temperatures that prevent or minimise Legionella growth.

Remember;

Legionella control will only be achieved if ***all*** the control measures are in place.

Review and update Risk assessment.



Further Information

- www.hsa.ie
- National Guidelines for the Control of Legionellosis in Ireland, 2009
- Health Protection Surveillance Centre
- The Health and Safety Executive.