

Legionella awareness for hot and cold water systems

Course content:

Introduction & Learning objectives

- Introduction and Assessment, The team, Candidate Assessment
- History - The Name Legionnaires' disease
- Learning Objectives

Understand the health risks and causative chain associated with Legionella

- 1.1 The Domino effect.
- 1.2 Explain how Legionella bacteria get into domestic water systems.
- 1.3 How bacteria multiply
- 1.4 Legionella bacteria
- 1.5 Nutritional conditions required for legionella bacteria to multiply.
- 1.6 Temperature conditions required for legionella bacteria to multiply.
- 1.7 Biofilms & Legionella multiplication.
- 1.8 Routes of Infection - Inhalation
- 1.9 Summary of conditions that promote the growth of Legionella
- 1.10 Routes of Infection - Aspiration
- 1.11 Dissemination methods of transmission.
- 1.12 The initial and more advanced symptoms of Legionnaires' disease
- 1.13 The groups of people most commonly at risk to infection.
- 1.14 Legionella species with different levels of virulence.
- 1.15 The Domino Effect - Halted

Cases of Legionnaires disease

- 2.1 Cases of Legionnaires' disease in England and Wales
- 2.2 Under reporting

Understand the scope of legislation and codes of practice in the management of Legionella in workplace premises.

- 3.1 The legislation - The Health & Safety at Work etc. Act 1974
- 3.2 The legislation - Regulations COSHH
- 3.3 Notification of Cooling Towers and Evaporative Condensers Regulations
- 3.4 Health and Safety (Consultation with Employees) Regulations
- 3.5 Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
- 3.6 Approved code of practice L8
- 3.7 Guidance note HSG274
- 3.8 Other guidance

Allocation of responsibility

- 4.1 The Dutyholder
- 4.2 Competent person - Responsible Person(s)
- 4.3 Communication & Allocation

Legionella Risk Assessment - The Process

- Hazard or Risk
- Risk assessment process

A written control scheme & Record keeping

- A written control scheme
- Schematic diagrams
- Record keeping

Proportionality

- ACoP L8 - low risk situation

Types of Hot & Cold water systems

- Instantaneous water heaters
- Instantaneous water heaters - Gas
- Low volume POU water heaters
- Combination Water heaters
- Gravity without recirculation
- Gravity with recirculation
- Pressurised (tankless) water systems

Legionella awareness for hot and cold water systems

Cisterns and Tanks

- Header Tanks (Cisterns)
- Tanks in Parallel
- Tank Inspections
- Water Heaters (Calorifiers)
- External heat exchangers & Buffer vessels
- Expansion vessels

Distribution systems

- Failure in hot water system return
- Sentinel locations
- Routine temperature testing
- Cold Water Supply Temperatures
- Thermostatic Mixing Valves

At the Outlets

- Dead Ends and Dead legs
- Flexible Hoses
- Showers

Cleaning & Disinfection

- C&D When to and to what standard

Water treatment

- Pretreatment
- POU Bacterial retention filters
- Biocides

Sampling & Summary

- Microbiological sampling - TVC
- Microbiological Sampling - Legionella
- Summary risk observations