



# Legionella Treatment

*Legionella* is a type of bacterium found naturally in freshwater environments, like lakes and rivers. It can become a health concern when it grows and spreads in human-made building water systems, especially in hospitals and health-care settings, for example, showerheads and sink faucets, cooling towers, hot water tanks and heaters, and large plumbing systems. The bacteria multiply where temperatures are between 20-45°C and nutrients are available. The bacteria are dormant below 20°C and do not survive above 60°C. It is therefore essential that hospitals follow the guidelines published by the Health Executive Agency. These outline the importance of implementing water temperature control using fully serviced and maintained thermostatic mixing valves (TMV) and water disinfection protocols using chlorine and other disinfectants. Also, it is essential to ensure TMVs are working effectively by performing further maintenance servicing and testing.

## The Risk of Infection

After *Legionella* grows and multiplies in a building water system, water containing Legionella then has to spread in droplets small enough for people to breathe in. People can get Legionnaires' disease or Pontiac fever when they breathe in small droplets of water in the air that contain the bacteria. Such droplets can be created, for example, by hot and cold-water outlets; atomisers; wet air conditioning plant; and whirlpool or hydrotherapy baths. Legionnaires' disease is very severe and can result in complicated pneumonia and other respiratory tract infections and be fatal for vulnerable patients.

## The Most Susceptible

Everyone that comes in contact with contaminated water droplets is at risk of acquiring the disease. However, the elderly, immunosuppressed patients and people with chronic lung disease, diabetes, cancer and kidney or liver failure are at a higher risk of developing severe complications when they encounter this disease.



### Did you know...



LEGIONELLA INFECTIONS CAN BE AVOIDED THROUGH THERMAL CONTROL. HSE STATES LEGIONELLA GROWTH IS INHIBITED AT TEMPERATURES OVER 60°C AND BELOW 20°C<sup>1</sup>

- Many man-made water systems not only provide the ideal environment for legionella to multiply but also involve water sprays which can release dangerous aerosols into the atmosphere<sup>2</sup>
- There is a strong relationship between biofilms (microbial slimes), amoebae and the growth of Legionella. Legionella bacteria multiplies quickly in dirty systems fouled with corrosion products and scale<sup>2</sup>

Sources: See overleaf.



## How Inivos Can Help

Our *Legionella* water treatment service can be delivered as an on-call service, emergency call out, specific project or as a scheduled managed service contract. Our work is carried out following the legislation laid down by the Health and Safety Executive.

This enables us to reduce the risk of a patient acquiring and infection whilst in hospital, by reducing the number of reservoirs available for dangerous pathogens to multiply in.

## Our Service

Unlike other decontamination companies, we provide rapid-response services on quick turnarounds to minimise clinical downtime. Our professional temperature monitoring and safety testing services deliver several important benefits to our customers in accordance with health and safety standards, including regulations regarding temperature control, water quality standards, failsafe operation and correct TMV specification. This is particularly important in order to ensure safe, accurate and reliable temperature control, water flow control, TMV specification and that failsafe mechanisms operate correctly to protect users in the event of water supply failure as well as protecting them from harmful infections.

## Risk Assessment

Our experienced technicians, upon arrival to your premises, will survey your site wearing appropriate PPE equipment and carry out a full risk assessment of the hot and cold water systems and ensure adequate measures are in place to control the risks. Then they will assess the function of TMVs and take water samples for further analysis at our test labs.

## Treatment Phase

Water is drained from hot water cylinders to check for debris or signs of corrosion which act as food supply for legionella. Our technicians then, if necessary, would perform water disinfection using chlorine and other disinfectants. If required, treatment fluids are also flushed through the system to ensure any hidden reservoirs where *Legionella* could colonise are fully disinfected.

## Validation

After delivering our service, we will provide you with fully detailed technical audit and report that outline the function of your TMV. We also take water samples for further testing at our labs in addition to providing you with recommendations for your water system to minimise legionella growth. Such solution include using materials that do not encourage bacterial growth and preventing contamination by fitting tanks with lids and insect screens.

## Our Approach

Our knowledge and experience in the field of infection prevention and control means we are best placed to support you in ensuring water borne infections do not threaten your environment, staff or patients. We use tried and tested technologies in disinfecting cooling towers, closed systems and building services water supplies as well as point of use tap and specialist use supplies..

## Why Inivos?

Not only are we an established and trusted name in healthcare, with facilities and hospitals around the world relying on our advanced hydrogen peroxide vapour and UV-C light disinfection robots, but we also offer **a level of expertise second to none**, and **services not provided by other companies**, including on-call services and maintenance programmes across a range of industries.



Multiple areas included



Evidence based processes



Validated assurance



Dedicated project management

Helping you provide patient-ready spaces with on-call decontamination and managed services



Our Inivos services are easy to arrange and tailored to your requirements:

Call **0845 270 6690** or email **customerservices@inivos.com**