



Water Tank Cleaning

Water-borne pathogens can easily grow and multiply within poorly maintained and neglected water tanks, giving rise to hospital acquired infections and increasing risk of cross-contamination.

Therefore, keeping water tanks clean is an extremely vital part of water hygiene and minimising water contamination. Also, it is extremely important that regular tests are taken to detect any harmful microorganisms within the hospital water tanks to ensure no contamination occurs. Water tank cleaning is usually done through chlorination and use of thermal disinfection with high temperature water.

The Risk of Infection

Bacterial infections present a significant problem – contaminated water tanks can give rise to nosocomial infections as these reservoirs serve as the perfect breeding ground of water-borne pathogens such as *Legionella*, *Escherichia coli*, and *Pseudomonas aeruginosa*, that can ultimately grow in large populations known as biofilms which can be very difficult to remove. These biofilms are composed of highly infectious agents known as spores that can eventually travel from water tanks into the water distribution systems and further contaminate other parts of the system and environment, ultimately increasing the risk of infection as a result of coming in contact with contaminated water droplets. Many hospitals and clinics have a persistent problem with *Pseudomonas* and other water-borne pathogens, giving rise to harmful infections such as pneumonia, blood poisoning and urinary infections.

The Most Susceptible

Immunocompromised, the elderly and patients with chronic and respiratory diseases are among the most vulnerable to develop disease as a result of encountering contaminated water-droplets. However, that doesn't mean healthy individuals such as the staff and visitors are at less risk. Contaminated water-droplets can affect everyone, especially maintenance personnel that work closely to water tanks. Asymptomatic carriers can still transmit the disease and increase the risk of cross-contamination as soon as they leave the contaminated area.

How Inivos Can Help

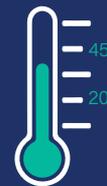
Our water tank cleaning service can be delivered as an on-call service, emergency call out, specific project or as a scheduled managed service contract. Our work is carried out following the legislation laid down by the Health and Safety Executive.

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 water tank cleaning services can be combined with our other services focused on the water vector of transmission to create an effective strategy, ensuring a consistent supply of clean, safe water.



Did you know...



LEGIONELLA BACTERIA MULTIPLY WHERE TEMPERATURES ARE BETWEEN 20-45°C AND NUTRIENTS ARE AVAILABLE!

- Once a *pseudomonas* contamination takes hold in a water tank, it produces a thick fluorescent green/yellow biofilm, which can be very difficult to remove. The biofilm is composed of siderophores, a strong, water-soluble iron-chelating compound that binds to other metallic compounds in the feed water²
- Waterborne disease is a global burden which is estimated to cause more than 2.2 million deaths per year and higher cases of illness every day, including diarrhoea, gastrointestinal diseases and systematic illnesses³

Sources: See overleaf.



Our Service

Alongside water tank cleaning, we can also provide our customers with water treatment solutions and microbiological testing and sampling to ensure no contamination is present within the water system. Hospitals can benefit from our water cleaning services in decontaminating potential reservoirs of different water outlets as well as testing for potential pathogens that might be present in the water systems. Our trained technicians wear personal protective equipment throughout all the cleaning and disinfection procedures.

Pre Risk Assessment

We carry out all risk assessments and method statements before starting work. All safety precautions and checks have been carried out before cleaning and disinfecting your water tanks. Visual inspection is carried out.

Our technicians would inform the relevant personnel of any interruption, disturbances or potential of such, to the water supply that may occur. They also carry out a visual inspection of the electrical equipment and the storage tank, logging and reporting any leaks or problems before commencing work (if the tank has a division then each compartment will be cleaned individually ensuring a constant water supply. In addition to wearing PPE throughout all stages to ensure maximum safety, our technicians also liaise with the authorised personnel to restrict access to the water storage tank during working hours and minimise downtime.

Water Tank Cleaning

Any debris is cleared, and then the tank is filled with fresh water then filled again with sodium hypochlorite and chlorine. Disinfection period is held for 60 minutes, if disinfection is successful, the Chlorine solution is then neutralized using a validated solution. After completing this stage, our operators then test the water for correct ppm levels ensure free chlorine level within the tank is comparable to the incoming mains and toxicity is kept to the minimum.

Validation

A certificate of disinfection is issued in accordance with ACOP L8 (2001) requirements, outlining the outcomes of the service as well as further suggestions and recommendations to minimize contamination of water tanks and other water outlets. Also, water samples may be taken to further test for potential contamination, if required.

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 water tanks to provide a validated service on a rapid turnaround that can be delivered nationally.

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**

Sources: ¹ <https://www.hse.gov.uk/healthservices/legionella.htm>. ² <https://blog.wychwood-water.com/how-to-treat-pseudomonas-in-commercial-water-systems>. ³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4493476/>.