

MAKE SHOWERING SAFE

W.E.T's brand new Hygiene 20 Shower Management service is saving facility teams time and money, whilst achieving an impressive 99.9% kill rate of bacteria currently thriving in shower systems.

Directed by the company's sensible and simple mission, W.E.T has developed an innovative process for managing the quarterly task of descaling and disinfecting showers, flexi-hoses and other water system assets.

Following the successful completion of R&D trials, W.E.T has invested in a new production facility to manage the cleaning of over 100,000 showers; faster and more effectively than any known process available today.

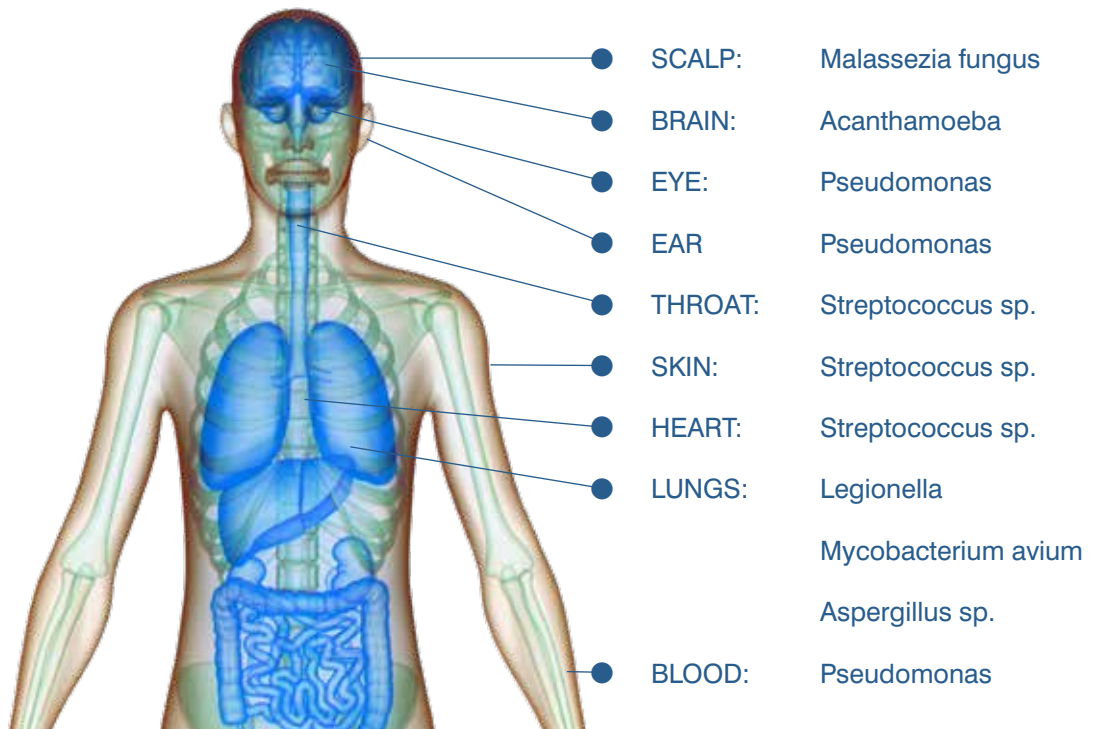


WHY ARE SHOWERS A HIGH RISK?

- **Aerosol Generating** – Showers atomise water, spreading contamination across sites and creating the risk of lung infections, such as Legionnaires' Disease, when pathogens are breathed in.
- **Roughened Internal Surfaces** – Shower hose rubber materials are typically pitted, creating a perfect environment for pioneering bacteria to settle and evade disinfection procedures.
- **Ideal Temperatures** – Typical shower operating temperatures are in the optimum range (20°C - 50°C) for many bacteria to proliferate.
- **Stagnation** – Even with regular use, shower hoses sit stagnant for relatively long periods of time as they typically do not self-purge.
- **Nutrient Rich Materials** – Shower hose materials such as EPDM, even if WRAS approved, will release hydrocarbons used as a food source for harmful pathogens.
- **Filter by Design** – Showerheads are a trapping for sediment and nutrients found naturally in mains water supplies, becoming a breeding ground for bacteria.
- **Difficult to Clean** – Current cleaning regimes can leave a layer of dead cells and biofilm in the hose length, becoming a food source for new bacteria.

INFECTIONS FROM SHOWER USE

There are several pathogenic bacteria and fungi present in mains water supplies at low concentrations. If allowed to proliferate in hot and cold water systems such as showers, they can cause serious infections.

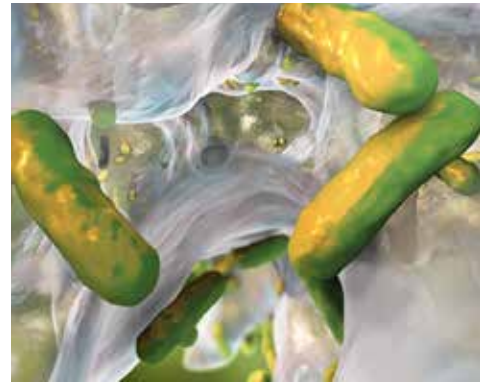


ADVICE AND LEGISLATION

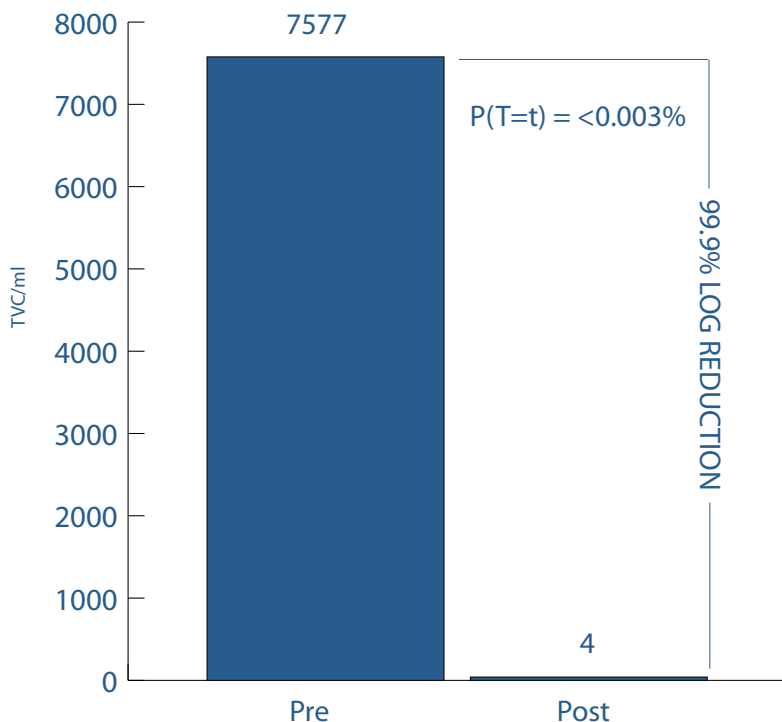
- **HTM 04-01 Part B** - Disinfection of showerheads and angle-valve strainers has only a short-lived effect on microbial colonisation and growth.
- **HSG 274 Part 2** – Dismantle, clean, descale and disinfect removable parts, heads, inserts and hoses every 3 months.
- **WRAS** – Some non-metallic materials are unsuitable for use with wholesome water, because they support extensive microbial growth.
- **Department of Health** – Flexible hoses may have an enhanced risk of harbouring Legionella bacteria and other potentially harmful microorganisms.
- **BS6920** – It is a legal requirement that flexible hoses are assessed by a competent laboratory for their compliance with BS6920: Parts 1 to 3.
- **IHEEM** - Pathogens from shower water and aerosolised shower mist are recognised sources of infection for immunocompromised patients.

KEY RESEARCH FINDINGS

- Shower materials are rapidly colonised by microorganisms from aquatic sources
- Legionella Pneumophila observed to colonise biofilms after only 24 hours
- Harmful pathogens such as Pseudomonas Aeruginosa, Mycobacterium and Legionella Pneumophila isolated in shower samples
- Pathogens found in shower head biofilms enriched over 100 times above the background water supply
- Infection rates with non-tuberculous mycobacteria correlated with the increased exposure to aerosolised microbes through use of showers
- Free-living amoeba isolated from water samples with their own pathogenicity (ability to cause disease)
- Protozoas observed under electron microscope, acting as Trojan horses for bacteria such as Legionella to proliferate
- Thick biofilms observed in showers known to be cleaned regularly, resulting in total viable counts in excess of 15,000 cfu/ml



AVERAGE BACTERIAL COUNT RECOVERED FROM SHOWERS PRE AND POST CLEAN



SOLUTION...?

As part of W.E.T's research objectives, the company wanted to validate the effectiveness of its Hygiene 20 Shower Management system by engaging a Professor of Microbiology, with specialities in clinical environments, to carry out a study of its processes. This involved the statistical analysis of microbiological results taken from showers (used regularly and cleaned quarterly by hand), compared to sample results taken after the showers had been through W.E.T's Shower Management system. The findings were enlightening.

Hygiene²⁰
shower management



KILLS 99.9% OF BACTERIA

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“As a Professor of Applied Microbiology, I was delighted to engage with W.E.T’s research project to improve water quality conditions in hot and cold water systems. Their Shower Management service has achieved encouraging results since its inception, having significantly reduced microbiological fouling in showers, including pathogens harmful to human health. After several modifications to the process, this innovative system by W.E.T has been scientifically developed to achieve a 99.9% kill rate of bacteria and the effective removal of organic matter so frequently present in flexible hoses.”

Professor Anthony C. Hilton

ARE CURRENT PROCEDURES GOOD ENOUGH?

The current procedures adopted by the industry are somewhat rudimentary, typically undertaken by hand and bucket, with a focus on descaling the shower head.

W.E.T’s latest research project has suggested that these procedures are not effectively penetrating and breaking down biofilms in the hoses, leaving organic matter throughout the shower, which is known to become a favourable environment for new bacteria to proliferate.

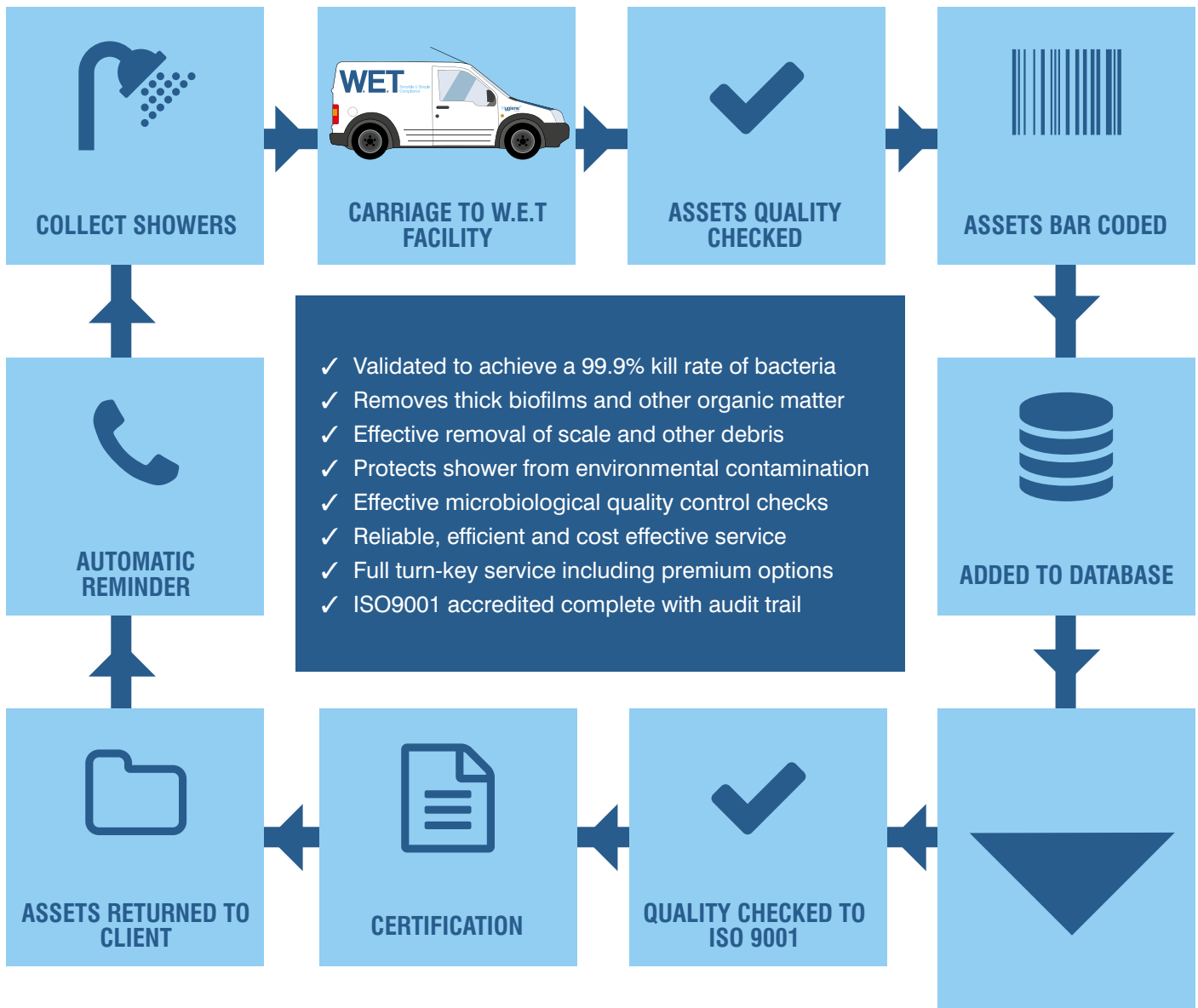
WRAS also recognises that attempts to disinfect hoses are hampered, pointing to inner surfaces being roughened and pitted, protecting surface bacteria from these control measures. In addition, hand disinfection is not physically removing all organic matter, leaving dead cells and a complex matrix of biofilm in a wet and warm environment until next use.

These ineffective procedures are time consuming and require each shower to be shut down during cleaning. There is also little to validate the efficacy of the clean, other than relying on random microbiological sampling.

W.E.T believe that the industry has to look at new ways at managing Legionella control schemes and in particular the procedures for the quarterly task of shower cleaning. Through R&D projects and working closely with clients, W.E.T is leading the way on providing Sensible & Simple water hygiene solutions.

Hygiene²⁰

shower management



6 STAGE SHOWER MANAGEMENT SYSTEM

Designed to provide superior cleaning of over 100,000 showers, flexi-hoses and other water system assets, offering clients a cost effective and reliable solution.

STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5	STAGE 6
Decontamination	Descaling	Disinfection	Shearing	Drying	Bagging
Targets and breaks down thick surface biofilms	Removes scale to expose all surface areas	Specialist treatment to penetrate biofilms and target harmful pathogens	Highly effective removal of microbiological fouling and other deposits	Final pasteurisation of all surfaces including hose internals	Air tight sealing to avoid environmental contamination



“W.E.T’s Shower Management service has met a real need for our hospitals. Managing 500 showers every 3 months has been an ongoing challenge for our busy estates team and so we are pleased to have implemented an effective solution. We now have a simple process to follow, a clear audit record in place and confidence that we are achieving a 99.9% effectiveness at clearing bacteriological issues. The decision to go with W.E.T’s service was made even more straightforward when it was calculated that we would save money against our current regime costs.”

Engineering Manager – NHS Trust



ABOUT W.E.T SENSIBLE & SIMPLE COMPLIANCE SOLUTIONS

W.E.T has been providing Legionella control services for over 25 years, today managing 2000 sites across the UK and Ireland. In 2014, the company embarked upon a £250k research & development project to improve the services available to customers under the mission of sensible and simple. Hygiene 20 Shower Management is one of a number of new innovations developed as a result of this project, today helping customers responsible for water systems manage compliance in a much more effective way.

For more information about W.E.T, visit our website www.wet-services.com or contact our team on 01827 288 810.

Sensible & Simple

