

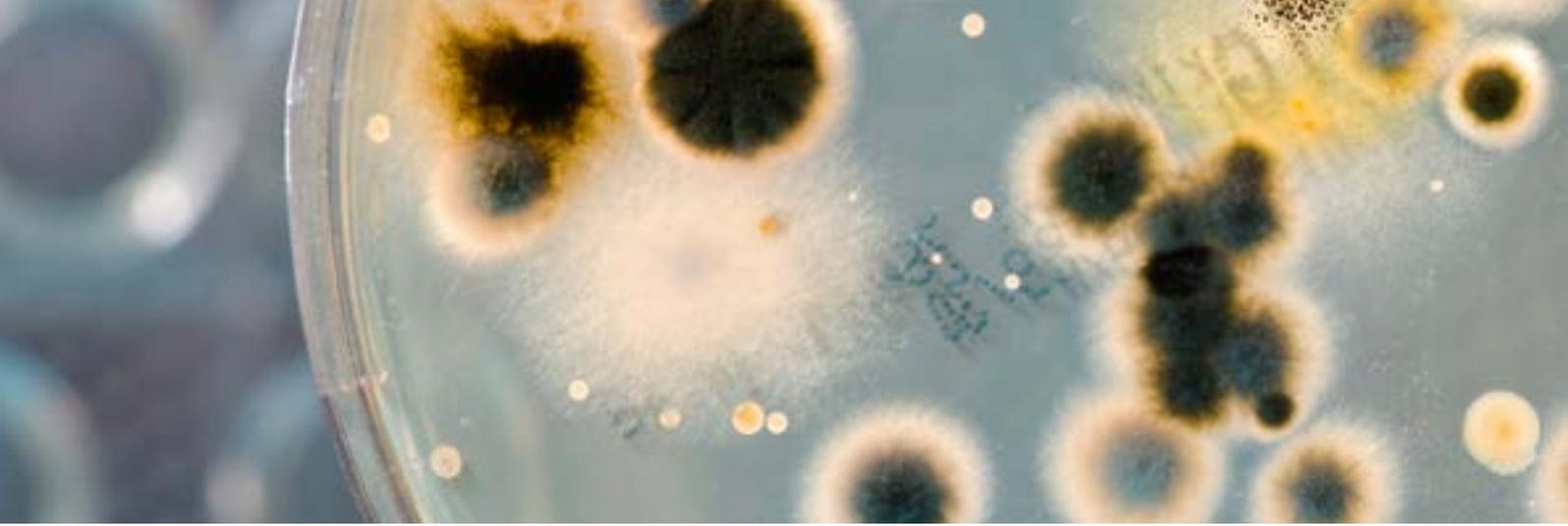
The sneeze effect

Following the journey of the germ from the washroom



- 1 million bacteria survive until the next toilet flush
- Faecal and urine matter can spread up to 20 feet away
- Bacteria can be found in the washroom air for several hours
- Hand washing is one of the most important things you can do to stay healthy





The sneeze effect

Following the journey of the germ from the washroom

Washroom Fallout

Washrooms are well known as places where there is a risk of cross-contamination, if hygiene standards are poor. But what causes this risk? Flushing the WC would seem to be risk-free, but flushing the toilet spreads invisible water droplets within cubicles and further throughout the washroom^{1,3,4} up to 20ft away.

The turbulent flushing action, which is necessary to remove faeces, unavoidably creates splashes of flush water droplets. These droplets transport faecal bacteria out of the bowl, larger droplets land on the seat and floor⁵, but others are so small and invisible, that they remain suspended in the air for several hours¹. Their small size means that they float on natural air currents allowing them to spread quickly throughout the washroom and be deposited on surfaces that are often touched, such as toilet seats, dispensers and handles^{3,7}, waiting for a hand to pick them up and take them on another journey³.

From your hand these germs can easily get into your body, as we often rub our eyes, nose and lips. There is also the risk that the airborne droplets can be directly inhaled¹.

The Research

WCs are a permanent reservoir of bacteria as they are frequently replenished with millions of bacteria (there are an estimated 100,000 million bacteria/gram of faeces!), which survive for many weeks on the bowl surfaces⁵, as they thrive in damp conditions.

Even after repeated flushing, toilet surfaces and bowl water remain contaminated with faecal bacteria^{3,4}, with 1 million bacteria surviving until the next flush.

The relatively infrequent daily clean, with a brush and disinfectant, only tackles hygiene at a single point in time, as the WC immediately becomes contaminated when it is next used.

Initial's Research and Development scientists have investigated the hazards of the sneeze effect and developed an effective system to reduce the risk.



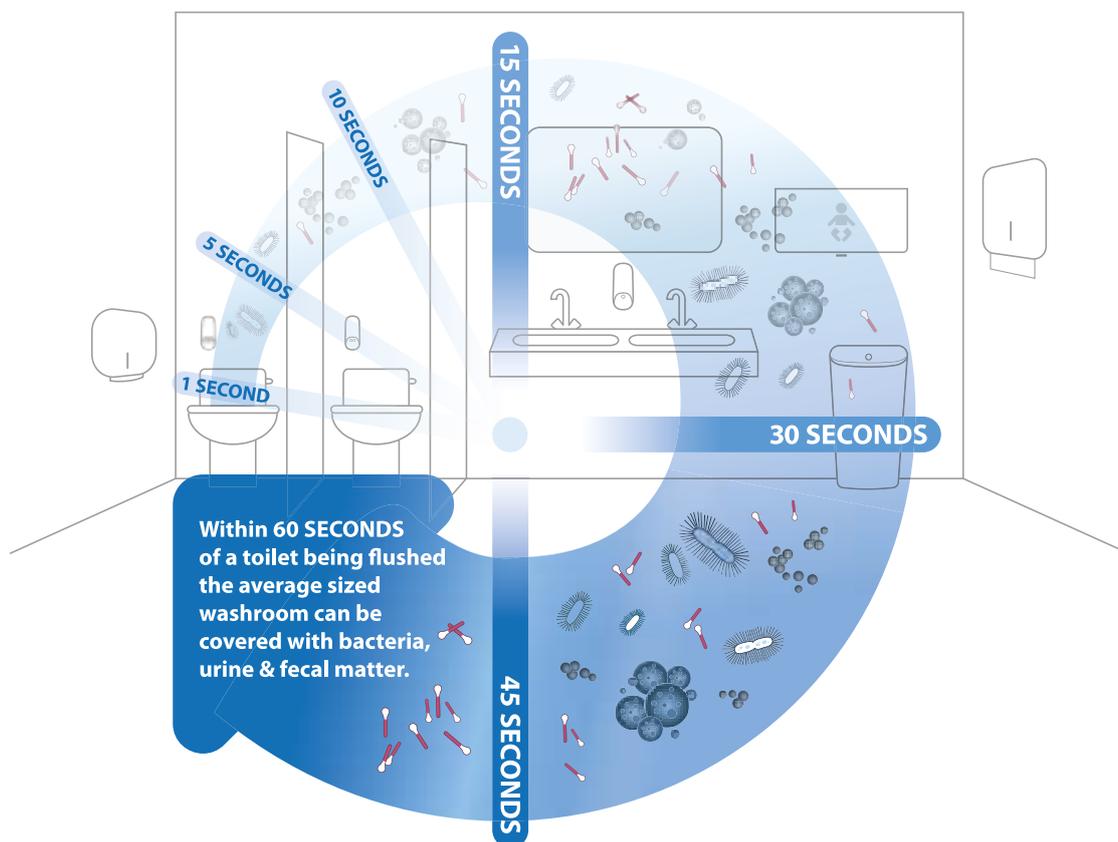


This includes managing the germs, scale and bacteria build up within the toilet, providing:

- a toilet seat cleaner to allow users to wipe the seat clean before using the toilet
- toilet rolls which are protected in anti-microbial protected holders
- No-Touch feminine hygiene units with integral anti-microbial protection to give users peace of mind they are protected

A toilet brush will enable users to clean thoroughly in those 'hard to reach areas'.

Hand washing is one of the most important things you can do to stay healthy. Make sure you wash your hands with soap for at least 20 seconds, before leaving the washroom, and use hand sanitiser for that extra level of protection throughout the day.



Sources to references made within this white paper:

¹ Infective hazards of waterclosets (1959) Darlow H.M. and Bale W.R. Lancet 6 1196-1200

² Bacteria aerosol from waterclosets (1966) Bound W.H. and Atkinson R.T. Lancet i 1369-1370

³ Microbiological hazards in household toilets: droplet production and the fate of residual organisms (1975) Gerba C.P. Applied Microbiology 30 229-237

⁴ The potential spread of infection caused by aerosol contamination of surfaces after flushing a domestic toilet (2005) Barker J., Jones M.V. Journal of Applied Microbiology 99 339-347

⁵ Survival of Salmonella in bathrooms and toilets in domestic homes following salmonellosis (2000) Barker J., Bloomfield S. Journal of Applied Microbiology 89 137-144

⁶ Reduction of microbial aerosols by automatic toilet bowl cleaners (1992) Yahya M.T, Cassells J.M., Straub T.M, Gerba C.P. Journal of Environmental Health 55 32-34

⁷ A bacteriological survey of washrooms and toilets (1976) Mendes M.F. and Lynch D.J. Journal of Hygiene (Cambridge) 76 183-190

Produced by Rentokil-Initial Marketing and Innovation,
Riverbank, Meadows Business Park, Camberley GU17 9AB

www.initial.com

Rentokil Initial plc. Registered in England 5393279.
Registered office: Riverbank, Meadows Business Park, Camberley GU17 9AB
The names Rentokil® and Initial® are registered trademarks. ©2014 Initial Hygiene. All rights reserved.

Part of **Rentokil
Initial**