

MEN'S PUBLIC RESTROOM REALITY

Urinals in men's public restrooms are often described by the end-users as "smelly", "dirty" and most of all unsanitary due to urine splatter and back splash. The offensive smell is caused by bacterial degradation of organic components of urine to produce ammonia-like odor (2, 1).

In high traffic public restrooms where urinals smell bad, and are poorly maintained, there is a higher risk of spread of pathogens as urine splatter provides organic nutrients for germs to multiply. A better design of urinals is needed to minimize backsplash and urine splatter.

Common problems experienced by men using urinals are the back-splash of urine onto themselves or others in adjacent urinals as well as surrounding walls, flooring and partitions, where urine stains can easily build up. In addition, continual flushing of



urinals provides a moist environment which serves as a reservoir for microorganisms to thrive and grow with urine components as a food source. Break down of the nitrogen containing compounds in urine produce ammonia as a waste product, which is all too often an unpleasant washroom smell.

While the human immune system is resilient and can deal with some of the germs that it comes into contact with on a daily basis, in high traffic public restroom facilities, an individual may be exposed to a pathogen that the immune system has not built up defenses against. This is particularly important in the elderly, children, and immunocompromised individuals who are at a higher risk of acquiring infection.

Urine which is normally sterile, in individuals with urinary tract infections may harbor pathogenic organisms (3).

Selected Pathogens & Related Diseases* Commonly Associated with Human Waste

Microorganisms**	Source	Related Diseases
E.coli	Urine & Feces	Urinary Tract Infection, Gastroenteritis
Klebsiella	Urine	Urinary Tract Infection
Proteus	Urine	Urinary Tract Infection

*Source: Manual of Environmental Microbiology 2 nd edition 2002: Chapter 16 Waterborne transmission of infectious Agents, Published by American Society of Microbiology (ASM) Press.

** Selected number of enteric pathogens- the total numbers of enteric pathogens exceeds the scope of this report

High traffic public urinals serve as ideal reservoirs where germs lurking in hidden areas can grow and become airborne by the flushing mechanisms of toilets and urinals. While in the US there is an increased awareness on the importance of hygiene and good sanitation, men's public urinals whether in restaurants, crowded airports, shopping centers or sporting events, are far from being regarded as sanitary facilities. To make the matter worse, men are less likely to wash their hands after using washrooms and even less frequently after using urinals (5).

According to the Center for Disease Control and Prevention, the most effective means of reducing germs and cross-contamination is hand washing (4); however, people's hand washing habit while it may improve overtime, by continual awareness campaigns it is not easy to control.

Extract from a report of research performed by Celanalytical inc.

References:

1. Yahya MT et.al.,(1992) 'Reduction of Microbial Aerosols by Automatic Toilet Bowl Cleaners', Journal of Environmental Health, Vol. 55, No. 3, pp32-34,
2. Encyclopedia on the web: <http://en.wikipedia.org>
3. "Urinary tract Infections in adults" Report. National Kidney and Urology Diseases Information Clearing House <http://kidney.niddk.nih.gov/kudiseases/pubs/utiadult/>
4. "An ounce of Prevention: Keeps the Germs Away" Publication From The National Center for Infectious Diseases (CDC); <http://www.cdc.gov/ncidod/op/handwashing.htm>
5. August 2005 study conducted for by Harris Interactive® for American society of microbiology (ASM) <http://www.asm.org/Media/index.asp?bid=38075> and The Soap and Detergent Association www.cleaning101.com