

Good hand hygiene – is there a health benefit outside of the hospital?

There is a substantial body of scientific research that has shown how handwashing can help reduce the spread of pathogens in the hospital environment, and there is increasing evidence that it can also have significant health benefits for people in the community.

In a study reported in the [Journal of the American Medical Association in 2004 by Luby *et al.*](#), an educational campaign to promote handwashing with soap was run in Karachi, Pakistan. Field workers made regular visits to homes to teach children about the importance of washing their hands after defecation, and before preparing food, eating, and feeding another child. Children under the age of 15 living in households that received the visits had 53% fewer cases of diarrhoea compared to children living in households not receiving the training. The authors of a review of studies similar to this one have concluded that **by improving hand hygiene, around a million deaths due to diarrhoeal illness could be prevented each year** ([Curtis and Cairncross 2003](#)).

Another study has suggested that improvements in hand hygiene can translate to a 31% reduction in gastrointestinal illness (which includes diarrhoeal illness) and a 21% reduction in respiratory illness ([Aiello *et al.*, 2008](#)). As well as being spread through the air, bacteria and viruses that can cause respiratory illness such as colds and flu, can survive on the skin of the hands for a while. In this way they can be spread to other people via touch. Thus, handwashing, especially after bouts of coughing or sneezing, is an important means of stopping their spread. By helping to reduce the spread of infections, good hand hygiene can also reduce absenteeism from work and school.

Just in case you think your hand hygiene practices are perfectly adequate, a recent survey has produced some very thought-provoking results. Scientists from the London School of Hygiene and Tropical Medicine swabbed the hands of 409 commuters waiting at bus stops outside five train stations around the UK (Newcastle, Liverpool, Birmingham, Euston and Cardiff). Over a quarter of the commuters had bacteria normally found in faeces on their hands. Forty-four percent of those sampled in Newcastle had this type of contamination, compared to just 13% of those in London. Having these types of bacteria on the palms doesn't necessarily lead to

illness, but it suggests there has been inadequate or ineffective handwashing after going to the toilet.

To read more about this survey, see:

<http://news.bbc.co.uk/1/hi/health/7667499.stm>

<http://www.lshtm.ac.uk/news/2008/dirtyhandsstudy.html>

References

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[Curtis V, Cairncross S. Effect of washing hands with soap on diarrhoea risk in the community: a systematic review. Lancet Infect Dis. 2003 May;3\(5\):275-81.](#)

[Fierer N, Hamady M, Lauber CL, Knight R. The influence of sex, handedness, and washing on the diversity of hand surface bacteria. PNAS published November 12, 2008, doi:10.1073/pnas.0807920105](#)

[Luby SP, Agboatwalla M, Painter J, Altaf A, Billhimer WL, Hoekstra RM. Effect of intensive handwashing promotion on childhood diarrhea in high-risk communities in Pakistan: a randomized controlled trial. JAMA. 2004 Jun 2;291\(21\):2547-54.](#)

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