

## Hand-washing could save the lives of millions of children

Parents and other household members who wash their own hands carefully and regularly with soap as well as the hands of infants who are too small to do it themselves could halve the rate of deadly diarrhoea, according to a new study.

A team of researchers led by Dr Stephen P. Luby from the Atlanta-based Centers for Disease Control and Prevention in the United States conducted an intensive programme of hand-washing education and promotion among 906 families with 4700 children.

According to Luby, although washing hands with soap is a well-known disease prevention measure, his study is

the first to focus on washing the hands of infants under 12 months who are too young to wash their own hands but are at highest risk from diarrhoea-related diseases.

“It is remarkable that hand-washing with soap led to a marked reduction in diarrhoea without improving water quality, even among malnourished children who are at increased risk of death from diarrhoea,” said Luby who reported that the water used for drinking and washing available to the communities participating in the study was highly contaminated with sewage.

“The study re-emphasises that behavioural changes can have an impact,” said Dr James Bartram, Coordinator of WHO’s Water, Sanitation and Health

Programme. However, access to safe water remains a prerequisite for maintaining hygiene and to further reducing diarrhoeal disease — 88% of which is attributed to unsafe water supply, inadequate sanitation and hygiene, said Bartram.

Families participating in the study published in *JAMA* (2004;291:2547-54) lived in urban squatter settlements in Karachi, Pakistan, and had at least two children younger than 15, at least one of whom was younger than five.

The team visited these households weekly from April 2002 to April 2003 to show them how to wash hands properly with soap after defecation, and before preparing food, eating, and feeding a child. They used slide shows,



The incidence of diarrhoea among young children in poor urban settlements like this one in Hyderabad, Pakistan, could be dramatically reduced by regular hand-washing with soap, according to a new study (*JAMA* 2004;291:2547-54).

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A woman smokes a cigarette in London on "World No Tobacco Day", 31 May 2004. According to a new study published in the *BMJ* (2004;328:1519-33), people who smoke die an average of 10 years earlier than non-smokers.

videotapes and pamphlets to illustrate health problems resulting from contaminated hands.

The researchers found that children younger than 15 years living in households that received hand-washing education and plain soap had a 53% lower incidence of diarrhoea compared with children in households not receiving this education and free soap. They found no significant difference in households using antibacterial soap.

According to WHO, 1.8 million children die every year from diarrhoeal diseases and 90% of those are aged less than five years, mainly in developing countries. The study's findings suggest that half of those lives could be saved. It also suggests that vigorous public promotion of hand-washing, particularly among those without reliable clean water supplies, could have a major impact on health.

Whilst recognizing the important role played by governments in the promotion of hand-washing as a cost-effective way of fighting diarrhoea, Bartram also said that the key question for policy-makers is how to sustain that hygienic behaviour: "People make an effort to wash their hands during

a study like this, but how long is it before that behaviour tails off?" ■

Fiona Fleck, *Geneva*

### Smoking shortens life by a decade, concludes 50-year study

Up to two-thirds of those who smoke cigarettes will eventually be killed by their habit, but those who give up by the age of 30 will avoid almost all the risk, according to a study of British doctors which has now been running for 50 years.

The study, *Mortality in relation to smoking: 50 years' observations on male British doctors*, published in the *BMJ* (2004;328:1519-28) shows that, on average, cigarette smokers die about 10 years younger than non-smokers. While the life expectancy of non-smokers has been increasing steadily since 1900, that of smokers has been progressively decreasing due to earlier and more intensive use of cigarettes.

Quitting works, however: stopping at age 60, 50, 40 or 30 adds, respectively, about 3, 6, 9 or 10 years to a person's life expectancy.

Sir Richard Doll, lead author of the study and emeritus professor of medicine at the University of Oxford told the *Bulletin*: "For countries where smoking has yet to take hold, the most important thing to do is to stop it doing so, and have the governments prevent the promotion of tobacco. But in countries where many people smoke but have not been smoking for very long, the message is that the way to save lives in the first half of this century will be by getting people to stop, rather than by stopping people from starting."

"This new report provides critical new information and convincingly shows that the risks for persistent cigarette smoking are actually substantially larger than had previously been suspected," wrote Meir Stampfer of the Department of Epidemiology at Harvard School of Public Health in Boston, US, in an editorial accompanying the paper in the *BMJ*.

Stampfer describes the study, which was led by Doll, along with Sir Richard Peto of the Clinical Trial Service Unit and Epidemiological Studies Unit at the Radcliffe Infirmary, Oxford, England, and co-authors Jillian Boreham and