

## 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).



REUTERS

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

Isabelle Sutherland, as a “stunning achievement”.

Doll, now 91, set out in 1951, with Bradford Hill and other colleagues, to recruit British doctors to the study. They chose doctors because they thought doctors would describe their own smoking habits accurately, and because they would be easy to trace through the UK medical register, so long as they continued to practise. In addition, they thought that as doctors would be likely to have access to good medical care, their causes of death would be relatively accurately documented.

Doll said: “We planned it to last five years, which would give us enough data on lung cancer, but after that we began to see one or two other diseases associated with smoking, most notably coronary thrombosis. So we decided to continue and the longer it went on, the more it was clear that there were yet other diseases due to smoking.”

By 1954, the initial findings had pinned down the link between smoking and lung cancer. The papers that followed, after 4, 10, 20 and 40 years of follow-up, showed that smoking was associated with mortality from many different diseases, but that lung cancer accounted for less than half of the excess mortality among smokers.

The 2004 paper adds even more detail about the health risks of smoking. Its findings show that someone aged 70 who had never smoked had, between 1951 and 1961, a 12% chance of living to the age of 90. Between 1991 and 2001, this probability rose to 33% demonstrating improved health care. But for someone who was a cigarette smoker, this figure declined from 10% between 1951 and 1961 to 7% in the decade up to 2001 when the ill-effects of smoking began to take their toll on long-term smokers.

Dr Vera da Costa e Silva, Director of WHO's Tobacco Free Initiative said that the quality of the research and its time frame — it is the longest-ever study of smoking and health — adds much weight to the findings. “This study is an important contribution to the overwhelming body of evidence regarding the harmful effects of tobacco,” said da Costa e Silva. “Being able to quantify not only the dramatic difference in average life expectancy between smokers and non-smokers but also the benefits of smoking cessation at every age, has

a positive impact on public debate and on the decisions of individuals.”

Governments and nongovernmental organizations in several countries have already been using earlier data from the Doll study in health education and anti-smoking campaigns. “We can expect the publication of the 50-year results to reinforce the global move towards implementation of comprehensive tobacco control measures, as laid down by the WHO Framework Convention on Tobacco Control,” said da Costa e Silva. (See related news article, *WHO tobacco convention set to become law by year's end*, on p. 635.) ■

Sharon Kingman, *London*

## In brief

### Compensation for Africa's medical brain drain

A new report on Africa's medical brain drain, released on 15 July, calls on rich nations to reimburse African countries for the loss of medical professionals and to train more doctors and nurses domestically rather than recruit them from abroad. The 121-page report, *An action plan to prevent brain drain*, by US based advocacy organization, Physicians for Human Rights, demands reimbursement for the losses incurred by countries that have paid for the education of doctors, nurses and pharmacists only to lose them to countries offering higher wages. The Nobel Peace Prize-winning group also wants wealthy countries and international organizations to send money to boost salaries of African health workers. (See related news feature, *Should I stay or should I go?*, in this month's *In focus* on p. 634).

### WHO drops two generic AIDS drugs

WHO has removed two antiretroviral products from its list of approved AIDS drugs used to treat people with the disease in developing countries. The decision followed a routine inspection in May which found that the manufacturer — the Indian company Cipla — could not provide evidence that lamivudine

and zidovudine were biologically equivalent to their patented counterparts. Since then, four new AIDS medicines have been added to the prequalification list, including lamivudine from a newly prequalified generic manufacturer. This drug represents an alternative to the delisted Cipla version.

### Nigerian state announces resumption of polio immunization

The Governor of the northern Nigerian state of Kano has informed WHO that polio immunization campaigns will resume in July. This announcement follows the Governor's acceptance that the oral polio vaccine is safe and effective. Rumours circulating about the safety of the vaccine had previously led to the suspension of polio immunization in the region late last year. Ten previously polio-free countries across Africa have now been re-infected, most recently in the Sudan. “If the campaigns were not resumed in Kano, a twenty-year, three billion dollar effort involving 20 million people to eradicate polio would be in jeopardy,” said WHO Director-General, Dr LEE Jong-wook.

### Red AIDS ribbon banned from Zimbabwe television

The internationally recognized awareness symbol of HIV/AIDS — the red ribbon — is no longer allowed to appear on Zimbabwean state television, according to a report by Zimbabwe News Service. Zimbabwe's Ministry of Information and Publicity has ordered the state broadcaster not to show the colour. Producers of Zimbabwe's weekly HIV/AIDS discussion programme, *Perspectives*, ordered participants to remove their red ribbons before filming could begin. The colour red is associated with the opposition party, Movement for Democratic Change. Zimbabwe Television employees told the UK newspaper, *The Independent*, that they had received instruction not to give unnecessary publicity to the opposition by using the colour red on screen. ■