



Personal hygiene behaviour

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A number of diseases can be prevented by personal hygiene. This fact sheet first defines personal hygiene. It then explores which diseases can be prevented through improved personal hygiene as well as the hygiene behaviour itself. It intends to be supportive to hygiene promoters by looking into some issues of behavioural change and promotional aspects. Last but not least it takes a look at what USAID calls the Hygiene Improvement Framework and its implications for practising hygiene behaviour.

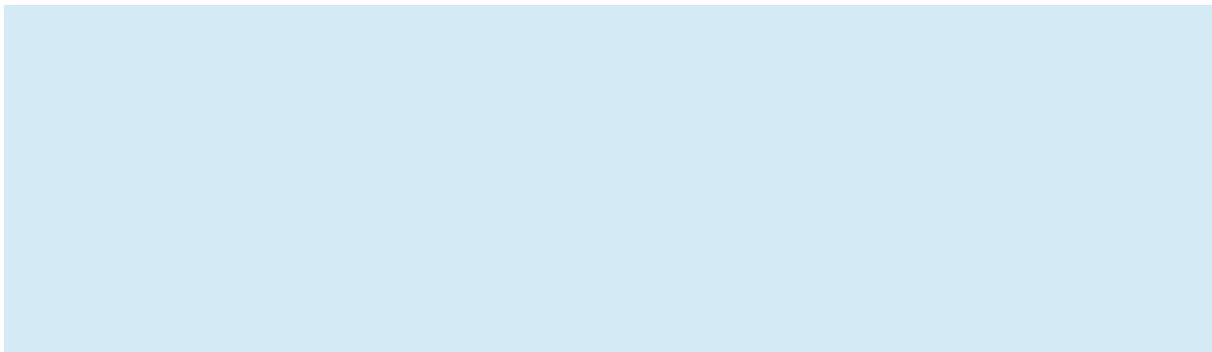
Introduction (Heading 1)

Hygiene behaviour plays an important role in the prevention of diseases related to water and sanitation. Water supply and sanitation make hygiene easier to practice, but the mere provision of facilities has proven to be less effective. In 1991, Esrey found that better hygiene through handwashing, food protection and domestic hygiene brought a reduction of 33% in diarrhoea incidence, whereas improved water supply led to an average reduction of only 15-20%.

Subsequent studies have also shown the health benefits of improved hygiene (Fewtrell et al. 2005). Although the quality of many of the studies is not optimal¹, the general consensus is that hygiene promotion to bring about improved hygiene behaviour and thus health is a worthwhile investment. This fact sheet focuses on personal hygiene as a sub-set of general hygiene behaviour. For more detailed information, see IFH (2002).

Defining the scope

Boot and Cairncross (1993) defined hygiene behaviour as the wide range of actions associated with the prevention of water and sanitation-related diseases. One of the five domains of hygiene behaviour which they identified is water and personal hygiene.



Boot and Cairncross do not really define personal hygiene, but describe it to include the following behaviours:

- Washing of hands / cleaning of nails
- Washing of face
- Body wash / bathing
- Hygiene after defecation
- Washing and use of clothes, towels and bedding

Separate mention is made of personal hygiene during natural events such as menstruation, birth, death and illness.

Benenson (1990) is more specific and describes personal hygiene measures to encompass

- washing hands in soap and water immediately after evacuating bowels or bladder and always before handling food or eating;
- keeping hands and unclean articles, or articles that have been used for toilet purposes by others, away from the mouth, nose eyes, ears, genitalia, and wounds;
- avoiding the use of common or unclean eating utensils, drinking cups, towels, handkerchiefs, combs, hairbrushes and pipes;
- avoiding exposure of other persons to spray from the nose and mouth as in coughing, sneezing, laughing or talking;
- washing hands thoroughly after handling a patient or his belongings; and
- keeping the body clean by sufficiently frequent soap and water baths.

In this fact sheet, the focus is on those hygiene behaviours that are generally considered to be associated with water and sanitation related diseases.

Relevance

Different aspects of personal hygiene are of interest to different potential users of this fact sheet.

For **policy makers**, statistics on the burden of disease are an important source of information when defining their policies. Some of these diseases are water and sanitation related. For defining a policy that seeks to contribute to the prevention of these diseases, they are best served with some general insight in the importance of hygiene promotion. This provides them with a justification for hygiene promotion in their policies.

Water and sanitation programme managers seek information on how hygiene education can increase the effectiveness of interventions such as the construction of water supply and sanitary facilities. This will help them to optimize the allocation of human and financial resources in their programmes.

Hygiene educators, who actually implement hygiene education, may additionally be helped with more details on hygiene behaviours. They need to be well informed about the nature of the behaviour required (e.g. whether it concerns behaviour related to personal or environmental hygiene) and how to address behavioural change in communities.

The story for policy makers (and programme managers and hygiene educators)

Transmission patterns and conditions in enteric infections

Infectious agent	Transmission pattern	Excreta disposal	Waste disposal	Water disposal	Water chain	Washing	Food and body
Various types of diarrhoea, dysentery, poliomyelitis, typhoid and paratyphoid, hepatitis A	multiple routes of faecal contaminated water, fingers and hands, food, soil and surfaces. Animal faeces may also be a source of diarrhoeal disease or hepatitis A	✓	✓	✓	✓	✓	✓
Roundworm (Ascariasis), Whipworm (Trichuriasis)	From faeces to mouth: Worm eggs in human faeces have to be ingested. Ingested eggs may be on food, dirty hands and playing with things that have been in contact with human or animal faeces. Animals eat their own faeces.	✓	✓	✓	✓	✓	✓
Hookworm	From faeces to skin: Worm eggs in the faeces have to reach moist soil, where they hatch into larvae. Larvae infect people's feet.	✓	✓	✓	✓	✓	✓
Schistosomiasis (Bilharzia)	From faeces to urine to skin: Worm eggs in human faeces or urine have to reach water where they hatch and enter snails. In the snails they develop and are passed on as cercariae to the skin when people swim in infected waters.	✓	✓	✓	✓	✓	✓
Scabies, Ringworm, Yaws	from skin to skin: Both through direct skin contact and through sharing of clothes, bedclothes and towels.	✓	✓	✓	✓	✓	✓
Trachoma, Conjunctivitis	From eyes to eyes or to discharge from an infected eye. Discharge such as towels, bedding, clothing, wash basins, washing water. Flies may also act as transmission agent.	✓	✓	✓	✓	✓	✓
Louse-borne typhus, Louse-fever	From person to person through the bite of lice which travel from person-to-person contact particularly when underwear is shared.	✓	✓	✓	✓	✓	✓
Malaria, Dengue fever, Yellow fever	From person to person through the bite of infected mosquitoes. Mosquitoes breed in standing water.	✓	✓	✓	✓	✓	✓
Leishmaniasis	From person to person through the bite of infected phlebotomine sandflies. The sandflies breed in damp organic debris, including excreta and solid waste.	✓	✓	✓	✓	✓	✓

Adapted from Boreham and Robinson (1980) and Ministry of Health, Uganda (1998a and b)

The story for programme managers (and hygiene educators)

Managers of water and sanitation programmes wish to improve people's living conditions by providing water and sanitation facilities. Reducing the distance to water points, improving the quality of water and the safe disposal of human excreta are indeed major improvements. However, they can be further optimized if they include hygiene promotion aimed at improving personal hygiene. Again, the table serves to demonstrate this, but figures comparing the impact of the various interventions are even more powerful. Frequent handwashing is the most important personal hygiene behaviour. Curtis and Cairncross (2002) did a literature review and found that

the single personal hygiene practice of washing hands with soap is alone able to reduce diarrhoea incidence by over 40%.

According to Curtis and Cairncross (2003), handwashing with soap and water after contact with faecal material can reduce diarrhoeal diseases by 42% or more. As indicated in the figure below, a more general review by Fewtrell et al (2004) found something similar.

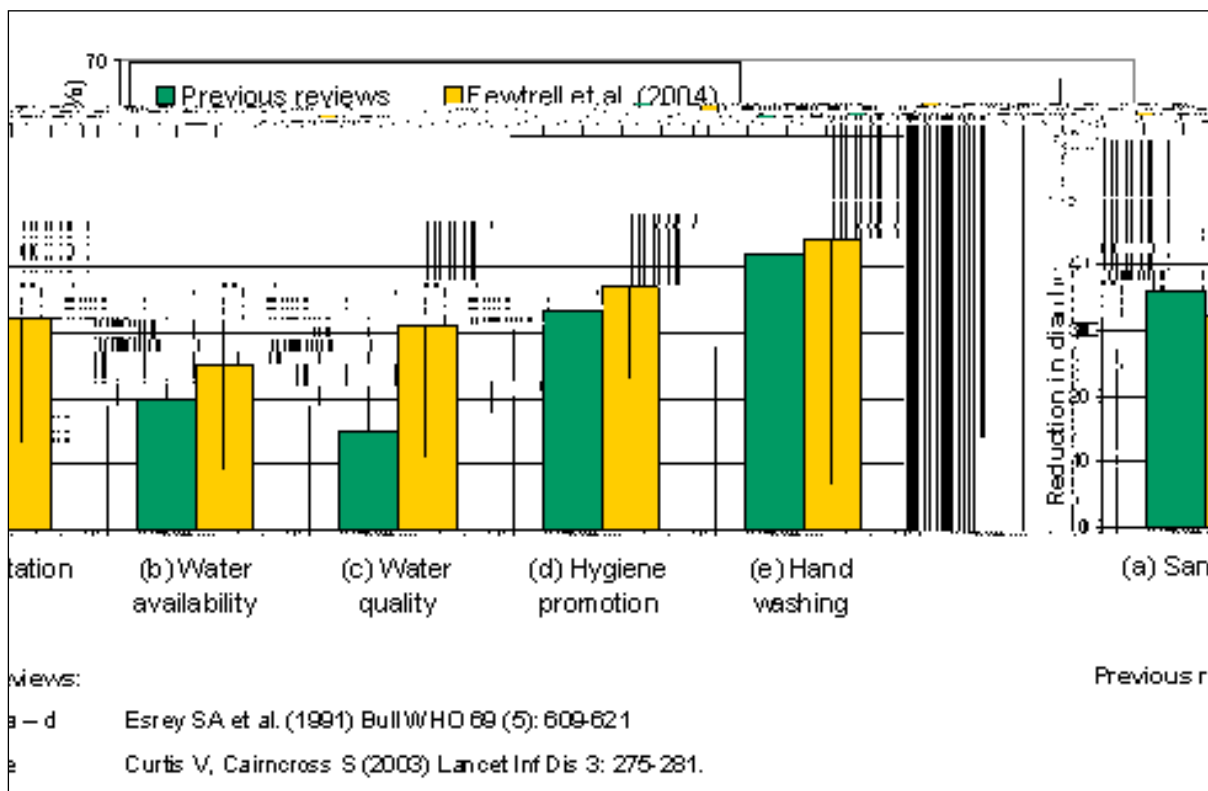


Figure 2.

The story for hygiene educators

As we can see from the table, personal hygiene as well as the safe disposal of excreta is important for preventing various types of diarrhoea, trachoma and also roundworm and whipworm,. However, for other diseases (scabies, ringworm, conjunctivitis and louse-borne typhus), personal hygiene is the single preventive measure to take.

Below we will take a closer look at the various personal hygiene behaviours by explaining their meaning for the prevention of disease transmission, their importance and the challenges hygiene promoters face when aiming at motivating people towards behavioural change.

The various personal hygiene behaviours discussed

Washing hands is the most effective behaviour for the prevention of diarrhoea as well as for the prevention of roundworm and whipworm. In fact handwashing is widely practised in one form or the other. However, it is rarely done at the most crucial times and done effectively, that is with soap.

Hands get most dangerously soiled through human faeces and earth (possibly containing worm eggs). Therefore crucial moments for handwashing to cut transmissions routes are:

Motivating for change

Given the health impact of personal hygiene behaviour, one could easily assume that motivating people to practise it would be quite simple. However, a multitude of factors make effective hygiene promotion rather challenging. In the WELL fact sheet on hygiene promotion, Curtis describes a number of fallacies (ideas which many people believe to be true, but which in fact are false) on which hygiene education programmes are built. One of these fallacies is that new knowledge leads automatically to new practice. Research has indeed shown that this is not necessarily true (Shordt and Cairncross, 2004).

The other fallacies are:

- Adults are 'clean slates' on which to write new ideas;
- Adults have time and motivation to learn new ideas;
- A whole variety of hygiene practices should be encouraged;
- Health education can be "added on" to an existing programme.

These fallacies indicate the need for an innovative approach to hygiene promotion. Building on field experiences, a number of key principles have been identified.

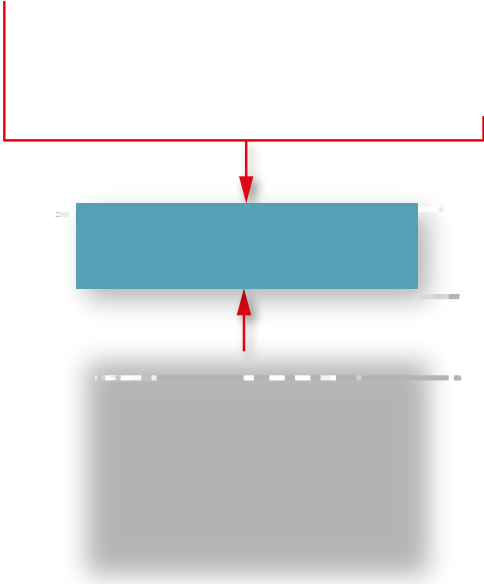
Box 2. Key principles for effective hygiene promotion

- Target a small number of risk practices.
- Target specific audiences.
- Identify the motives for changed behaviour.
- Hygiene messages need to be positive.
- Identify appropriate channels of communication.
- Decide on a cost-effective mix of channels.
- Hygiene promotion needs to be carefully planned, executed, monitored and evaluated.

Source: Curtis, WELL fact sheet on Hygiene Promotion

The enabling environment

However, for hygiene promotion to be effective, i.e. to lead to actual hygiene improvement, it should not be looked at in isolation. The USAID Environmental Health Project (www.ehproject.org) developed the Hygiene Improvement Framework. This offers a good framework that shows how the combination of hygiene promotion, access to hardware and a conducive enabling environment all contribute to hygiene improvement, including improvements in personal hygiene.



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¹ Cave and Curtis (1999) assessed health education studies against criteria developed by Loevinsohn (1990)

Regional Annex for East Africa

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The issue

To achieve the greatest health benefits from water supply and sanitation provision improvements in hygiene should be made concurrently. For people to utilize and benefit sustainably from water and sanitation facilities they must adopt the appropriate hygiene practices and therefore hygiene promotion should be an integral part of water supply and sanitation.

The grim global picture

1.1 billion people in the world do not have access to safe water, and 2.6 billion do not have access to adequate sanitation. It is estimated that 2.2 million people in developing countries, most of them children, die annually due to diarrhoea linked to lack of access to safe drinking water, inadequate sanitation and poor hygiene (WaterAid 2006).

Poor water quality continues to pose a major threat to human health. Diarrhoeal disease alone amounts to an estimated 4.1 % of the total DALY global burden of disease and is responsible for the deaths of 1.8 million people every year. It was estimated that 88% of that burden is attributable to unsafe water supply, sanitation and hygiene and is mostly concentrated on children in developing countries, (WHO, 2004).

The global challenge

Provision of safe water supply and sanitary conditions coupled with sustainable proper personal hygiene can drastically reduce this burden.

Hygiene behaviour plays an important role in the prevention of diseases related to water and sanitation, such as cholera, typhoid, dysentery, diarrhoea and intestinal worms. Providing water

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