

The Benefits of Handwashing
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In the current era of “high-tech” medical care, it’s easy to forget that one of the most basic public health measures, handwashing, is of great benefit to all of us. The Centers for Disease Control and Prevention notes that “Clean Hands Save Lives” (see <https://www.cdc.gov/handwashing/index.html>). Handwashing reduces illness at home, at work and in many other settings.

Fecal matter from humans or animal products can contain bacteria such as *E. coli* and *Salmonella* species and viruses such as norovirus and rotavirus. These germs can get onto people’s hands after using the bathroom, changing a diaper, handling raw meat or touching surfaces that others touched after they coughed or sneezed into their hands. People can then become infected by touching their mouth, nose or eyes—this may lead to stomach or lung diseases. Even very small amounts of germs may cause illness.

People with germs on their hands can spread them to others and cause illness. For example, this can occur among healthcare workers, people who prepare and/or handle food or drinks for others and daycare center employees. Once bacteria are present in some types of food and/or drinks, they may multiply which can lead to illness in the person who consumes the product.

The Centers for Disease Control and Prevention (CDC) likens handwashing to a vaccine—it prevents people from getting sick. In scientific studies, handwashing was noted to reduce diarrheal illness by about 30% in both institutional (hospitals, nursing homes, etc.) and community settings. In a community setting, the use of antibacterial soap has not been shown to be more effective than plain soap. For typical home use, antibacterial soap is not needed.

According to CDC, handwashing also helps reduce antibiotic resistance by preventing illness. Both lung and stomach illnesses are ones where antibiotics are commonly prescribed when they are not needed. By preventing illness, antibiotics that are already overused do not need to be prescribed. This helps reduce antibiotic resistance.

CDC recommends the following steps for handwashing: (1) wet hands with clean, running water that is warm or cold and apply soap, (2) lather hands by rubbing them together with soap and be sure to wash the backs of hands, in between fingers and underneath fingernails, (3) scrub hands for at least 20 seconds, (4) rinse hands well under clean running water and (5) dry hands using a clean towel or air dry them. The World Health Organization (WHO) recommends a longer time (about 40 seconds) for handwashing—more detailed information can be found at https://www.who.int/gpsc/5may/Hand_Hygiene_Why_How_and_When_Brochure.pdf (see page 3).

It’s recommended that hands be washed: (1) before, during and after preparing food, (2) before eating food, (3) before and after caring for someone who is sick, (4) before and after treating a cut or wound, (5) after using the bathroom, (6) after changing diapers or cleaning up a child who has used the toilet, (7) after blowing your nose, coughing, or sneezing, (8) after touching an animal, animal feed, or animal waste, (9) after handling pet food or pet treats and (10) after touching garbage.

A few words should be mentioned about the use of alcohol-based hand sanitizer. While thorough handwashing with soap and water is optimal, hand sanitizer can be used if soap and water are

unavailable. CDC recommends that alcohol-based hand sanitizer contain at least 60% alcohol. Hand sanitizer should be used according to the package directions. In general, the product should be applied to the palm of one hand and the solution then rubbed over all the surfaces of the hands and fingers until it is dry. Alcohol-based hand sanitizer is less effective when hands are visibly dirty or greasy and it removes fewer germs compared to handwashing. For example, norovirus (a common virus causing nausea, vomiting and diarrhea) is not reliably inactivated by an alcohol-based hand sanitizer. For more information about hand sanitizers see <https://www.cdc.gov/handwashing/when-how-handwashing.html>.

Thorough handwashing is one of the best methods of preventing infections at home, at work and in other settings. Practicing good handwashing and teaching it to others helps protect individuals, their families and the community.