

## HAND WASHING

Keeping hands clean through improved hand hygiene is one of the most important steps we can take to avoid getting sick and spreading germs to others. Many diseases and conditions are spread by not washing hands with soap and clean, running water. If clean, running water is not accessible, as is common in many parts of the world, use soap and available water being poured over the hand. If soap and water are unavailable, use an alcohol-based hand sanitizer that contains at least 60% alcohol to clean hands.

### HOW SHOULD YOU WASH YOUR HANDS

- **Wet** your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
- **Lather** your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
- **Scrub** your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
- **Rinse** your hands well under clean, running water.
- **Dry** your hands using a single use paper towel, clean towel or air dry them.

### HERE ARE 8 STEPS FOR EFFECTIVE HAND WASHING



**Step 1** - Wet your hands with running water. If possible, use warm running water.



**Step 2** - Apply enough soap to wash both your hands (antibacterial liquid soap preferably)



**Step 3** - Wash your palms by rubbing them against each other. While washing, keep your hands away from the running water. For effective cleaning, keep your fingers interlaced.



**Step 4** - Wash your fingers, thumbs, and the parts in between. Rub the tip and the back of your fingers on the opposing palms. Rub the thumb and its base by clasping it in the opposite hand. Rub the parts in between the fingers (including thumb) after interlacing your fingers.



**Step 5** - Clean your finger nails. You can do this by rubbing each set of finger nails on the opposing palm.



**Step 6** - Clean the back of your hands. Rub the back of each hand with the palm of the opposing hand. Keep your fingers interlaced for effective and quick cleaning.



**Step 7** - After washing your hands with soap, the next step is to rinse your hands thoroughly with running water. Take care not to touch the sides of the sink (or basin) while rinsing. After rinsing, you can use your elbow to turn off the tap or the paper towel.



**Step 8** - The final step after rinsing your hands is to dry it thoroughly with a single use paper towel or a clean and unused towel.

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## WHEN SHOULD YOU WASH YOUR HANDS

- Before, during, and after preparing food
- Before eating food
- Before and after caring for someone who is sick
- Before and after treating a cut or wound
- After using the toilet
- After changing diapers or cleaning up a child who has used the toilet
- After blowing your nose, coughing, or sneezing
- After touching an animal, animal feed, or animal waste
- After handling pet food or pet treats
- After touching garbage

## WHAT SHOULD YOU DO IF YOU DON'T HAVE SOAP AND CLEAN, RUNNING WATER?

Washing hands with soap and water is the best way to reduce the number of germs on them in most situations. If soap and water are not available, use an alcohol-based hand sanitizer that contains at least 60% alcohol. Alcohol-based hand sanitizers can quickly reduce the number of germs on hands in some situations, but sanitizers do **not** eliminate all types of germs and might not remove harmful chemicals.

***Hand sanitizers are not as effective when hands are visibly dirty or greasy.***

## HOW DO YOU USE HAND SANITIZERS?

- Apply the product to the palm of one hand (read the label to learn the correct amount).
- Rub your hands together.
- Rub the product over all surfaces of your hands and fingers until your hands are dry.

## SITUATIONS WHERE HAND SANITIZER CAN BE EFFECTIVE & HOW TO USE IT IN COMMUNITY AND HOME SETTINGS - THE SCIENCE BEHIND IT

***Washing hands with soap and running water is the best way to reduce the number of microbes on them in most situations. If soap and water are not available, use an alcohol-based hand sanitizer that contains at least 60% alcohol.***

**Why?** Many studies have found that sanitizers with an alcohol concentration between 60–95% are more effective at killing germs than those with a lower alcohol concentration or non-alcohol-based hand sanitizers<sup>1,2</sup>.

Non-alcohol-based hand sanitizers may:

- 1) not work equally well for all classes of germs (for example, Gram-positive vs. Gram-negative bacteria, [Cryptosporidium](#), [norovirus](#));
- 2) cause germs to develop resistance to the sanitizing;
- 3) merely reduce the growth of germs rather than kill them outright, or
- 4) be more likely to irritate skin than alcohol-based hand sanitizers<sup>1,2</sup>.

***When using hand sanitizer, apply the product to the palm of one hand (read the label to learn the correct amount) and rub the product all over the surfaces of your hands until your hands are dry.***

**Why?** The steps for hand sanitizer use are based on a simplified procedure recommended by the Centre for Disease Control (CDC) USFDA <sup>3</sup>. Instructing people to cover all surfaces of both hands with hand sanitizer has been found to provide similar disinfection effectiveness as providing detailed steps for rubbing-in hand sanitizer <sup>4</sup>

***Alcohol-based hand sanitizers can quickly reduce the number of microbes on hands in some situations, but sanitizers do not eliminate all types of germs.***

**Why?** Although alcohol-based hand sanitizers can inactivate many types of microbes very effectively when used correctly <sup>5-19</sup>, people may not use a large enough volume of the sanitizers or may wipe it off before it has dried <sup>14</sup>. Furthermore, soap and water are more effective than hand sanitizers at removing or inactivating certain kinds of germs, like [\*Cryptosporidium\*](#), [\*norovirus\*](#), and [\*Clostridium difficile\*](#) <sup>15-19</sup>.

***Hand sanitizers may not be as effective when hands are visibly dirty or greasy.***

**Why?** Many studies show that hand sanitizers work well in clinical settings like hospitals, where hands come into contact with germs but generally are not heavily soiled or greasy <sup>20</sup>. Some data also show that hand sanitizers may work well against certain types of germs on slightly soiled hands <sup>21,22</sup>. However, hands may become very greasy or soiled in community settings, such as after people handle food, play sports, work in the garden, or go camping or fishing. When hands are heavily soiled or greasy, hand sanitizers may not work well <sup>6,17,20</sup>. Handwashing with soap under running water is recommended in such circumstances.

***Swallowing alcohol-based hand sanitizers can cause alcohol poisoning.***

**Why?** Ethyl alcohol (ethanol)-based hand sanitizers are safe when used as directed, <sup>23</sup> but they can cause alcohol poisoning if a person swallows more than a couple of mouthfuls <sup>24</sup>.

From 2011 – 2015, U.S. poison control centers received nearly 85,000 calls about hand sanitizer exposures among children <sup>25</sup>. Children may be particularly likely to swallow hand sanitizers that are scented, brightly colored, or attractively

packaged. Hand sanitizers should be stored out of the reach of young children and should be used with adult supervision. Child-resistant caps could also help reduce hand sanitizer-related poisonings among young children <sup>24</sup>. Older children and adults might purposefully swallow hand sanitizers to become drunk <sup>25</sup>.

***Hand sanitizers might not remove harmful chemicals, like pesticides and heavy metals, from hands.***

**Why?** Although few studies have been conducted, hand sanitizers probably cannot remove or inactivate many types of harmful chemicals. In one study, people who reported using hand sanitizer to clean hands had increased levels of pesticides in their bodies <sup>27</sup>. If hands have touched harmful chemicals, wash carefully with soap under running water (or as directed by a poison control center).

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