

The importance of washing our
hands with soap and water!

When Do We Wash Our Hands?



It is important to wash your hands before or after certain activities.

Can you think of any of these activities?



Why Should We Wash Our Hands?



Washing our hands stops germs from spreading.



What are germs?

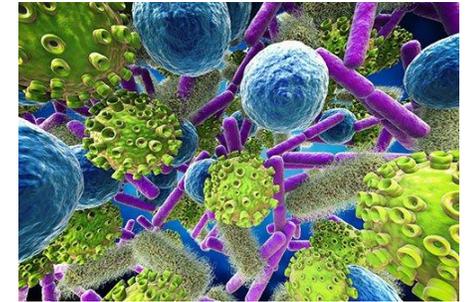


A **germ** is a tiny organism that causes a disease in a plant or animal. Scientists call these microbes or microorganisms. They are so tiny that they can only be seen through a microscope. Several different kinds of organisms can be **germs**, including bacteria, viruses, protozoans, and fungi.

Germs, or microbes, are everywhere. Literally, *everywhere*. In the air, soil, water and on every surface, including your body. **Most microbes are harmless and some are important for human health,** like the ones that live in our gut. But there are several germs that cause problems, and these are the ones we prefer not to have on or in our bodies.

Our first line of defense against those harmful germs is soap.

Not all germs are harmful, and some bacteria that live in your body are helpful.



Why should we use soap?



Soap doesn't kill germs on our hands, it removes them.

Germs stick to the oils and grease on our hands (sounds yucky, but it's totally normal)

Water alone won't remove much of the germs on our hands because water and oil don't like each other, so they won't mix. But soap likes both water and oil.

When you wash your hands with soap, the soap molecules bind with both the oil and water at the same time. ***Then when you rinse everything off, the soap carries away the germs with the water.***

Experiment to test the importance of soap!

What you will need:

- Washing up liquid
- Pepper (to represent the germs or virus!)
- Water
- Shallow bowl



What to do:

1. Fill the bowl with some water.
2. Sprinkle pepper (the germs!) evenly across the surface. The pepper should float on the surface and not sink.
3. Place your finger into the middle of the water and notice how the pepper sticks to your finger! The germs have stayed there!
4. After cleaning your finger with a tissue, rub some soap on your finger.
5. Place your soapy finger back into the middle of the bowl of water and observe what happens!

What happened to the pepper when you added soap?

- Video tutorial: <https://www.youtube.com/watch?v=ho0o7H6dXSU>

Why does the pepper move away when soap is used?

- Soap is able to break down the surface tension of water—that's part of what makes soap a good cleaner.
- As the soap moves into the water, and the surface tension changes, the pepper no longer floats on top. But the water molecules still want to keep the surface tension going, so they pull back away from the soap, and carry the pepper along with them.

Task

- When do we wash our hands?
- Why do we use soap and water to wash our hands?