



What Are Germs?

The term "germs" refers to the microscopic bacteria, viruses, fungi, and protozoa that can cause disease.

Washing hands well and often is the most important thing your family can do to prevent germs from leading to infections and sickness.

Types of Germs

Bacteria are tiny, single-celled organisms that get nutrients from their environments. In some cases, that environment is your child or some other living being.

Some bacteria are good for our bodies — they help keep the digestive system in working order and keep harmful bacteria from moving in. Some bacteria are used to produce medicines and vaccines.

But bacteria can cause trouble, too, as with cavities, urinary tract infections, ear infections, or strep throat. Antibiotics are used to treat bacterial infections.

Viruses can't survive, grow, and reproduce unless a person or an animal puts up rental space. Viruses can only live for a very short time outside other living cells. For example, viruses in infected body fluids left on surfaces like a countertop or toilet seat can live there for a short time, but quickly die unless a live host comes along.

Once they've moved into someone's body, though, viruses spread easily and can make a person sick. Viruses are responsible for some minor sicknesses like colds, common illnesses like the flu, and extremely serious diseases like smallpox or HIV/AIDS.

Antibiotics are not effective against viruses. Antiviral agents have been developed against a small, select group of viruses.

Fungi are multicelled, plant-like organisms. They get nutrition from plants, food, and animals in damp, warm environments.

Many, such as athlete's foot and yeast infections, are not dangerous in a healthy person. People who have weakened immune systems (from diseases like HIV or cancer), though, may develop more serious fungal infections.

Protozoa are, like bacteria, one-celled organisms and many are able to move on their own. Protozoa love moisture, so intestinal infections and other diseases they cause are often spread through contaminated water. Some are also encapsulated in cysts, which help them live outside the human body and in harsh environments for long periods of time.

What Germs Do

Once organisms like bacteria, viruses, fungi, and protozoa invade a body, they get ready to stay for a while. These germs draw all their energy from the host. They may damage or destroy healthy cells. As they use up your nutrients and energy, they may produce proteins known as **toxins**.

Some toxins cause the annoying symptoms of common colds or flu-like infections, such as sniffles, sneezing, coughing, and diarrhea.

But other toxins can cause high fever, increased heart rate, low blood pressure, a generalized inflammatory response in the body, and even life-threatening illness.

If a child isn't feeling well, the doctor may take blood tests, throat cultures, or urine samples to find out which germs (if any) are responsible.

Protection From Germs

Most germs are spread through the air in sneezes or coughs or through body fluids like sweat, saliva, semen, vaginal fluid, or blood. So limiting contact with those substances, as far as possible, is our best protection against germs.

Teaching kids the importance of **hand washing** is absolutely the best way to stop germs from causing sickness. It's especially important after coughing or nose blowing, after using the bathroom, before preparing or eating food, after touching any pets or animals, after gardening, and before and after visiting a sick relative or friend.

There's a right way to wash hands, too. Use warm water and plenty of soap, then rub your hands together vigorously for at least 15 seconds (away from the water). Kids can sing a short song — try "Happy Birthday" — during the process to make sure they spend enough time washing. Rinse your hands and finish by drying them well on a clean towel.

When working in the kitchen, wash your hands before you eat or prepare food, and make sure that kids do the same. Use proper food-handling techniques, such as separate cutting boards, utensils, and towels for preparing uncooked meat and poultry; and warm, soapy water for cleaning utensils and countertops.

Cleaning household surfaces well is also important. Wipe down frequently handled objects around the house, such as toys, doorknobs, light switches, sink fixtures, and flushing handles on the toilets.

Soap and water are perfectly fine for cleaning. If you want something stronger, you can try an antibacterial cleanser. It may not kill all the germs that can lead to sickness, but it can reduce the amount of bacteria on an object.

You also can use bleach or a diluted solution that contains bleach, but you may want to use soap and water afterward so that the strong smell doesn't irritate anyone's nose.

It's generally safe to use any cleaning agent that's sold in stores but try to avoid using multiple cleaning agents or chemical sprays on a single object because the mix of chemicals can irritate skin and eyes.

Vaccines

Another way to fight infections from germs is to make sure your family has the right immunizations, especially if you'll be traveling to countries outside the United States. Be sure to check with your doctor before travel and make sure you have taken the necessary precautions because different infections are prominent in different countries and often have seasonal variation.

Doctors recommend a yearly flu vaccine for everyone, especially people who have weakened immune systems or other chronic medical problems.

Teens who are sexually active should understand that condoms can help prevent infection because viruses, bacteria, fungi, and protozoa can be spread via oral, anal, or vaginal contact.

Also, all teens should be vaccinated against hepatitis B. This disease is often transmitted through sexual activity but people also can get it from contaminated needles, such as those used for tattooing or drugs.

Human papillomavirus (HPV) is one of the most common sexually transmitted diseases (STDs) and causes genital warts. The HPV vaccine is approved for use in both males and females.

Be sure to talk to your doctor if you have any questions. With a little prevention, you can keep harmful germs out of your family's way!

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Date reviewed: September 2015

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