

FROM BACTERIA TO PARASITES

HOW CAN WE PROTECT OURSELVES?

There are many different bacteria, viruses, or parasites that can present a problem to humans. They are found in soil, water, air, in food, plants or animals. It is important to recognize that there is a way to help protect yourself and others from these microorganisms. Microorganisms are spread everyday by humans sneezing, coughing, being sick or having poor hygiene. Germs are everywhere! (Think about the door knob next time you touch it. How many other people have touched it before you?)

You do have some good bacteria, but then there is the bad bacterium that makes you ill. Bacteria are extremely tiny one celled organisms that are self sufficient and multiply rapidly but are only visible by a microscope. They are so tiny that one thousand of them could line up and still fit across the tip of a pencil eraser! But not all bacteria are harmful. Only about 1% causes disease. The good bacterium resides in your intestines and helps you digest food, and destroy disease causing organisms. The infectious or bad bacteria can reproduce rapidly and produce toxins, which make you feel ill. Examples of contagious bacterial infections would be strep throat, diphtheria, or tuberculosis. A non contagious bacterial infection would include anthrax, an infection of the heart valves or bone infections. There are numerous strains of bacteria to long to list.

Viruses, on the other hand, have an ability to reproduce but aren't self sufficient. They need a suitable host to thrive on. After the virus achieves what it needs for reproduction, it then kills your healthy cells, thus making you feel ill. Examples of viral infections that are not contagious are West Nile, dengue fever, or yellow fever. A contagious viral infection would include influenza, measles, or the common cold. Again the list is quite long.

Lastly we come to parasites that can live on or inside your body and derive its existence from the host. Humans have two types of parasites, ecto parasites, such as lice or mites.

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These parasites live on the outside of the body. Endo parasites such as Giardia, or cryptosporidium, are parasites that live in the intestines. These parasites can enter the body from shaking hands, going barefoot, eating undercooked meat or drinking contaminated water. Also parasites can be found in rivers, streams, lakes or swimming pools that are polluted. There are many ways to acquire parasites. To help to protect yourself from parasites, don't swim in polluted lakes, rivers or streams. Have your swimming pool checked for bacterial counts and use chlorine accordingly. Always try to wear shoes when you are outside. Parasites can only be diagnosed by a stool culture.

In most instances, there are treatments for these illnesses. If one attracts a bacterial infection, you can be prescribed antibiotics. Viruses can be prevented in most cases by vaccines, or anti viral medicine. If you contract a parasite, then a physician might prescribe amebicides or antiprotozoals as needed.

But the most important thing we as humans can do is use common sense and wash our hands to protect us from, bacterial, viral or parasitic illnesses. Remember to wash your hands after:

- Using the bathroom

- Changing a baby

- Touching pets

- Gardening

- After sneezing or coughing

Throughout the day wash your hands often with soap and warm water for about 20 seconds, rinse thoroughly then dry with a disposable towel. If you cannot wash your hands, use a hand sanitizer, especially during flu season. Be aware that there could be germs on everything you touch, so get rid of them! Teach your children good hygiene habits.

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Also remember when preparing food to wash all raw vegetables before eating. When preparing food use good hygiene and cook your food thoroughly before eating. If you have any leftover food, cool and store properly.

Our best defense against many things is implementing **good hand washing**. As always, if you have any questions or comments, eMail me at gheffelmire@dearborncounty.in.gov