

You Say I Have an Immune System?

First we need to learn what the immune system does for you. It is a very complex system to understand so I will try to make it simple. You need to be aware of this system and how to keep it healthy. So to start let's learn the immune system. With the help of the internet, I will try to make it simple.

The immune system has its own circulatory system and is composed of lymph which is clear and free flowing within the body. It is made up of cells and organs which filter out millions of germs and viruses. Its purpose is to create a barrier that prevents the germs, viruses, toxins and parasites from entering the body. It also is in charge of eliminating whatever may invade the body as in when we get sick.

So how does the immune system work? In living organisms, the immune system is always working. You can see the effects by the healing process when you are hurt. Remember that your first line of defense is healthy skin so germs and viruses can't get into the body. There are millions of germs that try to enter the body everyday thru cuts, nose, eyes and your mouth.

When germs or viruses enter the nose, the mucous and cilia (hair) filter out the bacteria and viruses. The eyes have tear ducts that wash bacteria away. The ears produce cerumen, a yellowish wax that traps bacteria and viruses and helps protect the skin. When bacteria enter the mouth, the saliva is antibacterial and destroys most of the bacteria. If bacteria should get past the mouth then the stomach acid will kill the germs. Only when you get sick

is when the bacteria get past the barriers. If this happens your immune system will work to make you well.

You can see your immune system working when you get bug bites, you get a red itchy bump. When you get colds or flu, these germs or viruses have gotten through and as a result made you sick. If you have eaten bad food you might see vomiting or diarrhea. If you have allergies you might be congested.

Organs that make up the immune system are:

- Skin – Your body protects you from germs and viruses. Secretes antibacterial substances to protect you. Salvia is also antibacterial.
- Lymph system – produces a clear fluid that oozes thru the lymph system. This is where water and nutrients are produced. The role of this system is to filter and drain bacteria and viruses.
- Spleen – The spleen filters foreign cells.
- Thymus - Produces T-cells helper cells that fight bacteria and is located close to the heart.
- Bone marrow - Produces new red and white cells.
- White blood cells - Destroy bacteria & viruses.
- Antibodies - Responds to antigens such as bacteria, virus or toxins.
- Complement system – This is where proteins are manufactured in the liver and float freely in the blood. This system works with antibodies to fight germs and viruses.
- Hormones - found within the body and work to suppress the immune system when needed.

So what can you do to keep healthy? Have good nutrition and get plenty of rest. Also stay away from others who are sick. Try to limit the intake of trans fats, saturated fats, and foods high in cholesterol and eat moderate amounts of polyunsaturated and monounsaturated fats. Make the effort to include from the five food groups:

- Grains – The grains contain carbohydrates for energy, along with vitamins and nutrients. Buy whole wheat breads.
- Fruits – The fruits contain many vitamins and nutrients necessary for growth, along with fiber. It also provides natural sweetness for children and adults alike.
- Vegetables – Vegetables provide many vitamins and nutrients and are necessary for the body to work correctly. It helps in the growth process along with aiding with all healing.
- Milk, Yogurt or Cheese - The dairy group provides Vitamin D needed for strong bone growth and development. This group also provides protein and calcium. Consider buying the low fat milk so to limit fat intake. The calcium remains the same.
- Meat – The meat group provides the protein our bodies need to maintain health. It helps maintain bones and provides for shiny healthy hair.

When addressing sleep needs it is important that your child get their much needed rest. As adults, we need at least 8 good hours of sleep. Preschoolers need about 11-13 hours of sleep a night. Develop a schedule and have a relaxing bedtime ritual. Avoid having the TV in the bedroom. This sometimes stimulates the imagination and hinders sleep.

School aged children need about 10-11 hours of sleep to do well mentally in school. Without proper sleep, the child could experience mood swings, behavioral problems or disruption with cognitive functions that could impede school learning ability.

The body needs to wind down from all activities. Make sure you have a comfortable bed in a room that is quiet and dark with no distractions. Also try not to have a heavy meal or caffeine before bed: you will sleep much easier. (Remember that most pop have caffeine in them.)

The goal is to be healthy so we can fight illness. Along with good nutrition, rest, exercise and immunizations, these are tools that can make for a healthier you. As always, if you have a question or comment, please eMail me at gheffelmire@dearborncounty.in.gov