

Like a Breath of Fresh Air: The Respiratory System

Well, now it is time to discover yet another system in our wonderful machines. This time we will learn about the respiratory system. We will learn how the respiratory system helps our bodies, and we will discover what all the parts of the system are.

People can survive for a week or more without food. It would not be much fun, and we would become very weak, but we could stay alive for a while. People can survive for a few days without water. Do you know how long people can live without oxygen? You can only stay alive for a few minutes if your body does not have oxygen. Why can you live so long without food or water, and die so quickly if you do not have oxygen?

Your body has storage systems for food. When you eat, the nutrients that are not used right away are stored. Those nutrients can then be used in the future when new nutrients are not available. In a similar way, your body is able to store some water. If you do not have a supply of fresh water, you can use the stored water from your body to keep yourself alive. Your body does not, however, have any way to store oxygen. You must provide your body with new oxygen all the time. If you do not have a supply of fresh oxygen, you cannot stay alive.

This is not unique to humans. All organisms exchange gases with their environment. The gases needed and the wastes produced may be different from one organism to another, but all living things must absorb gases from the environment and release waste gases back into the environment.

The respiratory system is responsible for providing your body with the oxygen that it needs. The first job of this system is **to pass oxygen from the air to the blood**. Remember that one of the jobs of the circulatory system is to carry oxygen to all the body cells. The respiratory system brings in the oxygen, and then the circulatory system gets the oxygen to the places where it is needed.

Your circulatory system also removes wastes from your body cells. In order for you to be healthy, your body must have a way to get rid of its wastes. Some of those wastes are gases. They cannot stay in your body. Those wastes leave your cells and enter your blood. The blood carries the gaseous wastes to your respiratory system. The respiratory system then removes them from your body. This is the second job of the respiratory system: **to remove gaseous wastes from the body**.

Now you know why you have to have a respiratory system. Next we will take a look at some of the organs that help your respiratory system do its jobs.

Name: _____ Date: _____

Questions

1. How long can people live without food? Why?

2. How long can people survive without water? Why?

3. Why can't people survive more than a few minutes without oxygen?

4. What do people have in common with all living organisms?

5. What are the two jobs of the respiratory system?

6. Why does the respiratory system need to pass oxygen to the blood?

7. How does the circulatory system help the respiratory system get rid of gaseous wastes?

8. When astronauts travel in space, they must wear special helmets. Why?

9. How are people like trees?

10. Fish are able to breathe underwater. Why can't humans?
