



## Activities

1. Pick a body system listed in the article, and do further research using library or online resources. Write a short one-page report on the system you chose that describes the system and its functions. Include a diagram of the system and its major organs.
2. With your teacher leading this activity, write the headings - Circulatory System, Respiratory System, and Nervous System. Under each system, list conditions or diseases that can affect these major body systems. As time permits, do the same activity for the other body systems.
3. In groups, discuss what you know about cancer and how it can affect some or all of the body's systems. What healthy steps can a person take to reduce their risk of cancer?
4. What types of tests and technology are available that can diagnose problems with the body's systems? Do further research, if necessary, and be prepared to share your information with your classmates.



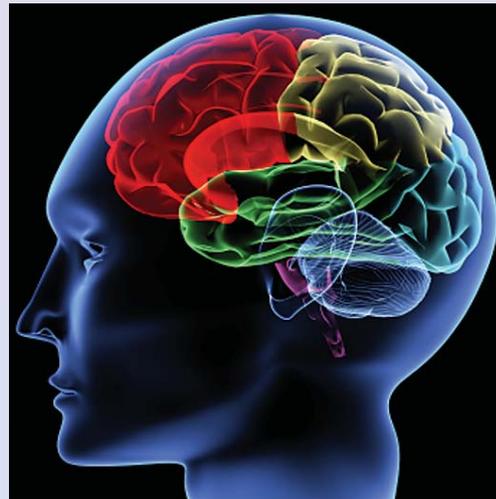
**Home Connection** Interview your parents and grandparents about your family's health history. What diseases are common in your family? Are there any known conditions that are hereditary? Discuss lifestyle steps that might prevent these diseases.

## Discussion Questions

What body system does a disease like asthma affect?

Which body system are you most familiar with?

# A Closer look at the Human Body Systems



Within the body, there are many units called systems that work together to keep the body functioning properly. Some of the body's functions are directly controlled by the brain and heart, while others are not. Let's look closer at each body system and its responsibilities.

**The Nervous System** - The brain controls many of the body's main functions. In addition, nerves and the spinal cord let messages flow back and forth between the brain and the body systems.

**The Circulatory System** - The circulatory system includes the heart, blood, and blood vessels. The main role of this system is to take both oxygen and nutrients to the cells, and pick up waste from the cells.

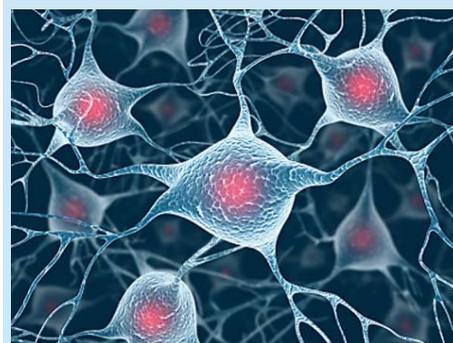
**The Respiratory System** - The primary function of the lungs and the respiratory system is to supply the blood with oxygen and deliver it to all parts of the body. The respiratory system does this through breathing. When we breathe, we inhale oxygen and exhale carbon dioxide. This exchange of gases is the respiratory system's means of getting oxygen to the blood.

**The Skeletal System** - The skeletal system is the collection of bones that holds the body up and gives the body its shape. The skeletal system has three main functions: it protects organs such as the brain, heart, and lungs; it gives the human body its shape; and it helps the body move.

**The Muscular System** - Muscle is tissue that makes the body move. The network of muscles in the body includes both voluntary (muscles that must be told to move) and involuntary muscles (muscles that move on their own without being told). There are three types of muscles: skeletal muscles, smooth muscles, and cardiac muscle.

**The Digestive System** - Food provides the body with energy and the nutrients it needs to build new cells. The process of taking in food, the absorption of nutrients, and the elimination of waste is known as digestion.

**The Excretory or Urinary System** - The excretory system gets rid of the body's waste. It also regulates the amount of water and ions present in body fluids. The kidneys are the main organs in this system, and they filter the blood and make sure that the body expels waste that could be fatal if left in the body.



**The Endocrine System** - The glands of the endocrine system and the hormones released influence cells, organs, and systems. The endocrine system influences mood, growth and development, tissue function, and metabolism. This system also plays a role in sexual function and reproduction.

**The Reproductive System** - Reproduction is the process of a new life beginning when a sperm from a man fertilizes an egg from a woman. Eggs (ova) are made in the ovaries of a woman and sperm in the testicles of a man. The ovaries and testicles (gonads) also produce sex hormones.

