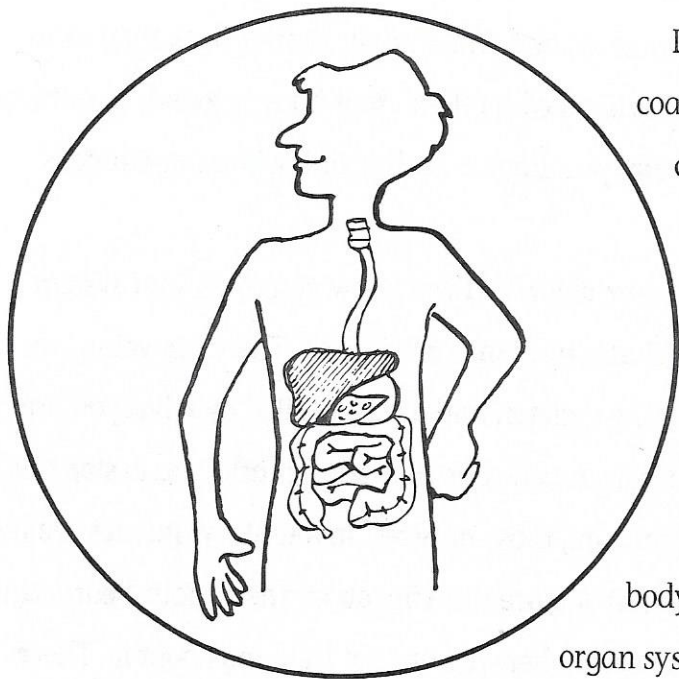


Body Systems



Last week I scored a goal in my soccer game! My coach reminded me that I did not score it all on my own. The goalie first kicked the ball to Jimmy who dribbled it halfway up the field and passed it to Tim. Tim dribbled the ball to the far corner of the field, passed it across to me, and I kicked it in the goal. We were so excited! Because our team worked together, we were able to win the game!

In the same way, the many parts of your body (which is made up of cells, tissues, organs, and organ systems) work together as a “team” to perform bodily

functions. When many organs work together, they form an “organ system.” There are nine organ systems in your body. They are the skeletal, respiratory, nervous, muscular, digestive, circulatory, excretory, endocrine, and reproductive systems.

Did you know that without your skeletal system, you would be like a blob of Jell-O® on the floor? Your skeletal system holds up your body, allows you to move, and protects your vital organs such as your heart, lungs, and brain. It includes your bones, joints, cartilage, and ligaments.

Take a deep breath and let it out. You can thank your respiratory system for that! When you inhaled, you took in the oxygen from the air. When you exhaled, you got rid of the carbon dioxide that you did not need. The “team players” that help you to breathe are your mouth, your windpipe, your lungs, a muscle that controls your breathing, two tubes that carry air to your lungs, and smaller tubes and tiny air sacs inside of your lungs.

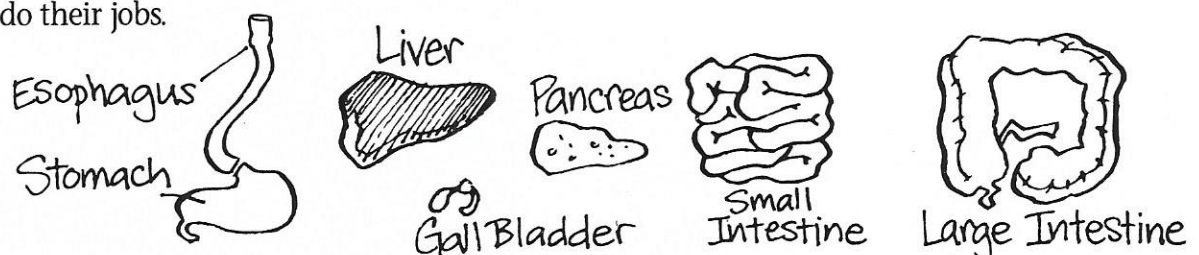
Can you guess which organ system is the most complex and fragile? If you guessed your nervous system, you are right! This system includes your brain, your spinal cord, and all your nerves. Your spinal cord receives messages from your brain and sends them to the other parts of your body. Everything that you see, hear, smell, taste, or touch becomes a message and is sent to the spinal cord and brain to be read. Then, your brain can send back an answer to your muscles, organs, and glands.

Sometimes, your spinal cord recognizes a familiar message and will send an answer back right away without sending the message to your brain first. This is called a reflex. Your body responds so quickly because it does not need to think about it. This is why you automatically blink when something is coming right at your face.

Have you ever had goose bumps when you were cold? Did you know your muscular system causes the goose bumps? Your muscular system includes two kinds of muscles. There are voluntary and involuntary muscles. Voluntary muscles cover the skeleton and are controlled by what you are thinking. Your lip muscles are an example of voluntary muscles. If your teacher asks you to stop talking, you CAN stop because you tell yourself to stop moving those muscles. Involuntary muscles are the opposite. If they are healthy, they work whether or not you are thinking about them. Your heart is an example of an involuntary muscle. It pumps blood even when you are not thinking about it. There are tiny involuntary muscles in your skin that give you goose bumps when you are cold.

Another organ system in your body is the digestive system. The food we eat needs to be broken down before our body can absorb or eliminate it. Your teeth, tongue, and saliva break down food. After you swallow it, the food is sent down your esophagus into your stomach. When the food reaches your stomach, acid breaks down the food even more. After it passes through your small intestine, the digestive process is complete. Then, the body can absorb the nutrients it needs, and the excretory system removes and eliminates wastes from the body.

The circulatory system uses your heart, arteries, veins, capillaries, and blood. Your heart pumps blood to the rest of your body through arteries, which then divide into small capillaries. Veins return blood to your heart. Your endocrine system is made of glands that produce hormones to regulate your growth and development. Your reproductive system makes it possible for you to have babies when you are older. As you can see, the human body is a complex “team” where every “player” relies on the others to do their jobs.



Comprehension Questions



Literal Questions

- 1 What is formed when many organs in your body work together?
- 2 What are your nine organ systems? List two characteristics of each system.
- 3 Which organ system is the most complex and fragile?
- 4 What are the different types of muscles in your body? Give two examples of each type.
- 5 Explain why you automatically blink when something is coming at your face.



Inferential Questions

- 1 How does blood flow through your body? Clearly explain the flow and identify the organ system that is responsible.
- 2 Which organ system is affected when people have asthma? What effect do you think an inhaler has?
- 3 Pretend that you just ate a candy bar. Explain in detail what happened to the candy bar. Use the language you learned from the story in your explanation.
- 4 When the doctor checks the reflexes in your knee, are you using voluntary or involuntary muscles?
- 5 Why is oxygen important to your life?



Making Connections

- 1 Choose one organ system. Create a commercial or advertisement to tell everyone how important that organ system is.
- 2 Rank the organ systems that you read about according to how much you already knew about them. Next to each system, list a new fact that you learned.
- 3 Some people have disabilities that make them shake, tremble, or nod uncontrollably. What is really going on? People often make fun of others who make unusual involuntary movements. Is this fair? Why or why not?
- 4 In the story of *The Three Little Pigs*, the Big Bad Wolf used one of his organ systems repeatedly. Which organ system did he use? How did he use it?
- 5 Athletes go to extra measures to keep their organ systems in "top-notch" condition. Name at least one thing that athletes might do to enhance the performance of each organ system.

Sharpen Your Skills



- 1 The heart pumps blood throughout your body.

In which of these sentences is the division of the subject and the predicate shown properly?

- ☐ The heart / pumps blood throughout your body.
- ☐ The heart pumps blood / throughout your body.
- ☐ The heart pumps / blood throughout your body.
- ☐ The heart pumps blood throughout / your body.

- 2 Every organ system is **vital** to your survival.

What does the word "vital" mean?

- ☐ important
- ☐ unique
- ☐ beneficial
- ☐ necessary

- 3 The doctors were optimistic that the heart transplant would be successful for the ailing patient.

What is the meaning of this sentence?

- ☐ They hope he gets better.
- ☐ They think he will be healthy once again.
- ☐ They hope the heart transplant works.
- ☐ They predict that their surgery will help him.

- 4 If you wanted to find the pronunciation of the word "excretory," which resource would be the most helpful?

- ☐ dictionary
- ☐ atlas
- ☐ almanac
- ☐ thesaurus

- 5 The respiratory therapist needed a lung transplant.

This sentence is an example of _____.

- ☐ humor
- ☐ irony
- ☐ alliteration
- ☐ metaphor

- 6 Which term would finish this analogy?

Excretory system is to **eliminate waste** as _____
is to **allow movement**.

- ☐ muscular system
- ☐ digestive system
- ☐ circulatory system
- ☐ reproductive system

- 7 What is missing from the following classification sequence?

- cells _____ organs organ systems
- ☐ systems
 - ☐ atoms
 - ☐ tissues
 - ☐ organisms



Name _____

Date _____

Get Logical

Harbor View General Hospital has just hired five new doctors: Dr. Able, Dr. Help, Dr. Better, Dr. Care, and Dr. Love. Each doctor specializes in one of the following areas of medicine: respiratory care, digestive disorders, heart surgery, bones and joints, and brain surgery. Use the clues below to decide which area of medicine each doctor specializes in.

Clues

- 1 Dr. Better does not perform surgery. Instead, he helps people with esophageal and stomach problems.
- 2 Dr. Able is a surgeon.
- 3 Most of Dr. Care's patients are referred to her after they fall down in some way.
- 4 Dr. Love does not help people with respiratory problems or heart problems.
- 5 Dr. Help helps people breathe a little easier.

Respiratory Care					
Digestive Disorders					
Heart Surgery					
Bones and Joints					
Brain Surgery					
	Dr. Able	Dr. Help	Dr. Better	Dr. Care	Dr. Love

Dr. Able specializes in _____

Dr. Help specializes in _____

Dr. Better specializes in _____

Dr. Care specializes in _____

Dr. Love specializes in _____

