

PURPOSE

To help students understand a healthy reproductive system is essential to the wellbeing of the whole body.

LEARNING OBJECTIVES

By the end of the lesson students will be able to:

1. Understand every system in the body must function properly for the whole body to be healthy.
2. Understand that healthy hormones are needed for a healthy body.
3. Use teenMEN, a health program, to help identify signs of puberty.

MATERIALS & RESOURCES

- **Lesson 1 teenMEN powerpoint**
- **Game: Name That System**
- **Worksheet: Body Systems**

VOCABULARY

- **Hormones:** Chemical signals that travel in the bloodstream, directing the activity of every system in the body. The body has many different hormones, produced in different parts of the body.
- **Puberty:** Time when physical and sexual characteristics mature due to hormonal changes (typically between 10-17 years old for a boy, and 9-14 years for a girl).
- **Maturity:** The growth and development of the body, brain and emotions.

PREPARATION

- ☐ *Print the **Body Systems Worksheet** for each student.*
- ☐ *Obtain two buzzers or noisemakers for the **Name That System** game, one for each team.*

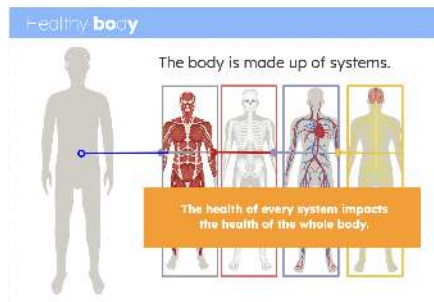
Step 1 (2 minutes): Introduce teenMEN as a health program

teenMEN is a health program that will help you understand your body as you go through puberty and grow to full maturity.



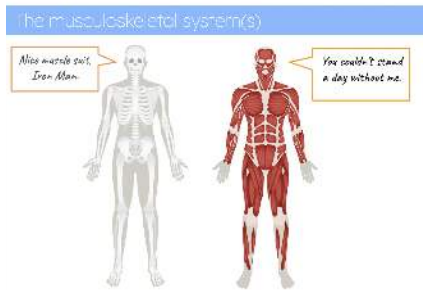
Maturity means the growth and development of the body, brain and emotions. Through this course, you will learn about the reproductive system, the physical and emotional changes of puberty, and how your choices have a big impact on your growth and health!

Step 2 (8 minutes): Systems of the body

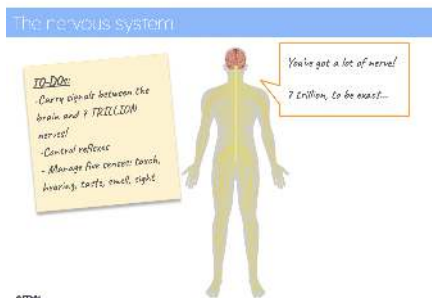


Your body is made up of many parts. Each part has its own important job to do. When certain parts work together for a similar purpose, they are called a **system**.

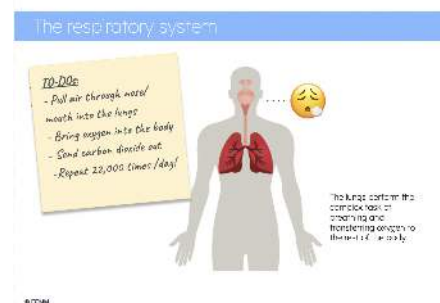
Your body has several **systems**, all working together to make sure you function well. *Can anyone name a system in the body?* What about the **skeletal system** or the **muscular system**? Since these two systems work together so closely, they are also called the **musculoskeletal system**.



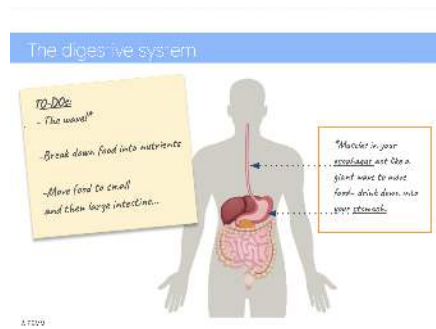
Without these two systems and the work they do together, you wouldn't be able to stand up or sit down! Let's look at a few other systems in the body to see what they do to keep our bodies healthy and functioning!



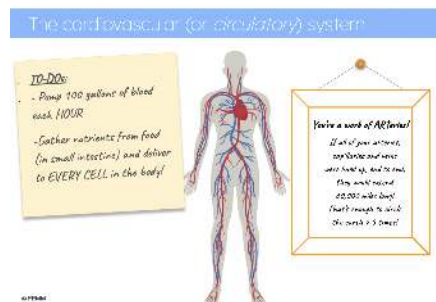
The **nervous system** sends quick impulses between the brain and body. It includes the brain and spinal cord and the nerves. (Example: the fire is hot; your muscles yank your hand from the flame.)



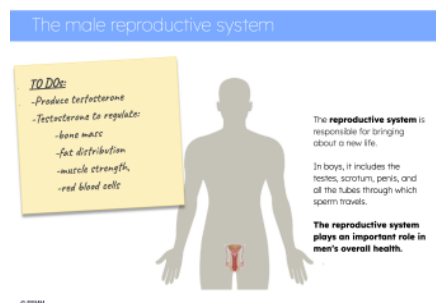
The **respiratory system**, through the lungs, breathes the air and oxygen needed for life. It includes the airways from the mouth and nose to the lungs, as well as the lungs.



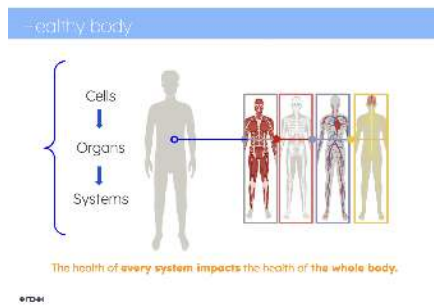
The **digestive system** breaks down the food you eat to make fuel for your body then eliminates the waste it cannot use. The digestive system includes the mouth, esophagus, stomach, intestines, and the anus.



The **circulatory system** carries blood pumped by the heart through the blood vessels, carrying oxygen from the lungs and fuel from food, to all parts of the body. It includes the heart and the blood vessels. This system is also referred to as the circulatory system.

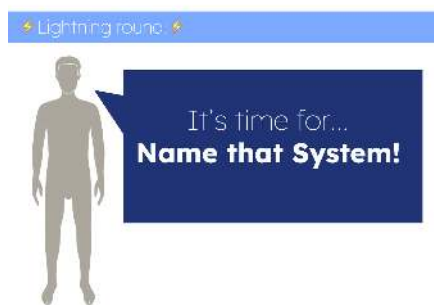


The **reproductive system** is responsible for bringing about a new life. In boys, it includes the testes, scrotum, penis, and all the tubes through which sperm travels. In girls, it includes the ovaries, fallopian tubes, the uterus, and vagina. **The testicles produce testosterone, the main male hormone.**



The body has levels of organization that build on each other. Cells make up tissues, tissues make up organs, and organs make up body systems. **Every system of the body must function properly** for the whole body to be healthy. For example, if the lungs are congested, or the stomach is upset, or the heart is weak, the body will not feel well.

Step 3: (5 minutes): Name that System!



Divide students into two teams. Give each team a “buzzer” or noisemaker for them to ring when they know the answer. Individuals may consult with their teammates, but the first team to sound their buzzer gets to answer first. For each correct answer, the team gets one point. The team with the most points wins!



Note that the first slide shows the body system and the next slide reveals the answer.

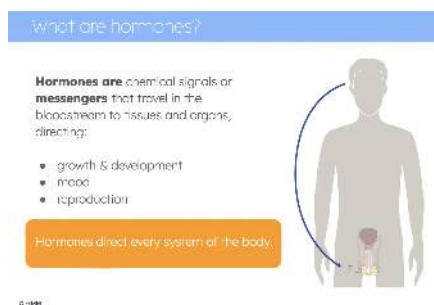
Step 4 (10 minutes): Introduce Hormones and Puberty

To function properly, the body needs many things, including good food, fresh air and exercise. Each body system needs clear signals from the brain. The brain is the control center of our bodies, telling each body system when to do what and how much.

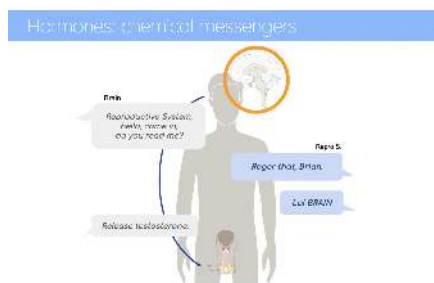
These signals are called **hormones**.

Hormones are the reason that your arms and legs are the same length, why you can turn food into fuel and why your body changes dramatically during puberty.

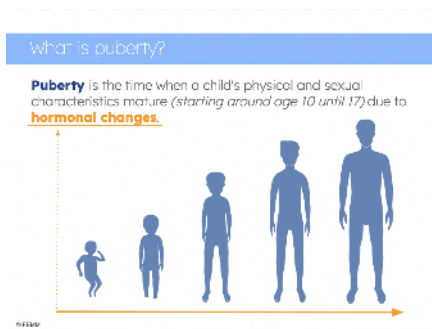
Do you know that over 70 hormones have been discovered? It's possible that scientists may even discover more!



Hormones are chemical signals, or messengers, that travel in the bloodstream and direct the activity of every system in the body. You can think of them like text messages sent from your brain to communicate with every part of your body.

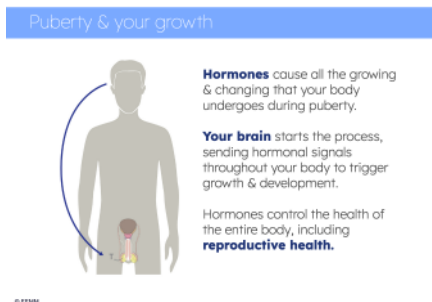


Hormones in the brain kick start puberty. Hormones located in the pituitary gland, a tiny part of the brain, signals to the testes to produce the main male hormone, testosterone



Puberty is the time when your physical and sexual characteristics mature, due to hormones. For boys, puberty usually happens between the ages of 10-17 years and between the ages 9-14 years for girls. **Puberty is a time of rapid growth and development as a result of hormonal changes.**

Hormones cause all of the growing and changing that your body undergoes during puberty.



You may notice body odor, increased sweating, hair growth, especially in your armpits and pubic area, your voice will start to deepen and you'll grow taller. Your body shape will also change as your shoulders and muscles develop. You may also experience more oily skin, fatigue, and moodiness.

All of these changes are a normal part of growing and maturing. They are all signs of hormonal health! We will learn more about these changes in upcoming lessons and what you can do to support your growth and health.

Step 5 (10 minutes): Body Systems Worksheet

Provide students with the **Body Systems Worksheet**. Give students a few minutes to complete their worksheet. When finished, review together as a class using the **Teacher's Answer Key** provided in the materials.



CONCLUSION

Review

- All body systems are important for overall health.
- A healthy reproductive system is an important indicator of your body's overall health.
- Your brain and reproductive system are linked by **chemical messengers** called **hormones**.
- Puberty is the time when your body grows to full maturity.

All of the body's systems are important to your overall health. Through teenMEN, we will learn more about hormones and puberty, focusing on how a healthy reproductive system is an important indicator of your overall health. In the next lesson, we will learn about the parts of the reproductive system.

REFERENCES

Betts, J. G., Young, K. A., Wise, J. A., Johnson, E., Poe, B., Kruse, D. H., Korol, O., Johnson, J. E., Womble, M., & DeSaix, P. (2022). *Anatomy and physiology*. OpenStax. <https://openstax.org/details/books/anatomy-and-physiology>

Strauss, J. & Barbieri, R. (Eds.) (2009). *Yen and Jaffe's Reproductive Endocrinology: Physiology, Pathophysiology, and Clinical Management*. Elsevier Health Sciences.