



KidsHealth.org/classroom

Teacher's Guide

This guide includes:

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Standards

This guide correlates with the following National Health Education Standards:

Students will:

- Comprehend concepts related to health promotion and disease prevention to enhance health.
- Demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
- Demonstrate the ability to advocate for personal, family, and community health.

Your state's school health policies:
nasbe.org/HealthySchools/States/State_Policy.asp

"Do you appreciate how hard I work?" If the cardiovascular system could talk, this might be what it would ask. The discussion questions and activities in this guide will help earn this system some well-deserved appreciation for nourishing and cleansing the body's tissues, and they will help students learn some heart-healthy habits.

Related KidsHealth Links

Articles for Teens:

Heart and Circulatory System

KidsHealth.org/teen/your_body/body_basics/heart.html

Why Exercise Is Wise

KidsHealth.org/teen/food_fitness/exercise/exercise_wise.html

The Food Guide Pyramid

KidsHealth.org/teen/food_fitness/nutrition/pyramid.html

What Is Cholesterol?

KidsHealth.org/teen/food_fitness/nutrition/cholesterol.html

Hypertension (High Blood Pressure)

KidsHealth.org/teen/diseases_conditions/heart/hypertension.html

Obesity

KidsHealth.org/teen/food_fitness/dieting/obesity.html

Atrial Septal Defect

KidsHealth.org/teen/diseases_conditions/heart/asd.html

Ventricular Septal Defect

KidsHealth.org/teen/diseases_conditions/heart/vsd.html

Discussion Questions

Note: The following questions are written in language appropriate for sharing with your students.

1. What does the heart do? How do its structures help it to pump and distribute blood? Explain what you think the terms cardiac cycle, systemic circulation, and pulmonary circulation mean.
2. The heart and circulatory system contain different kinds of blood vessels - mainly arteries, veins, and capillaries. What does each do? What are the largest arteries and veins?
3. Why is it so important to try to keep the heart and circulatory system healthy? What problems can people have? What can you do to maintain good cardiovascular health?



Activities for Students

Note: The following activities are written in language appropriate for sharing with your students.

Surgeon General for a Day

Objectives:

Students will:

- Learn the effects that certain behaviors can have on cardiovascular health
- Gain an understanding of the goals and value of public health campaigns
- Discover which public health messages and intervention strategies work for them
- Advocate for change in their school or community

Materials:

- Computer with Internet access
- Pen and plain paper or computer word processing program and printer

Class Time:

30 minutes

Activity:

OK, it takes years of school and decades of experience to become the surgeon general of the United States. Just take a look at this job description: “America’s chief health educator, giving Americans the best scientific information available on how to improve their health and reduce the risk of illness and injury.” The surgeon general is the national leader in a field called public health. Those little messages on cigarette packs are just the beginning!

To get a better idea of what the surgeon general does, take a look at the surgeongeneral.gov website. Now pretend that you’re the surgeon general for a day. You want to encourage high school students to improve their cardiovascular health by eating better and exercising more. Write “A Letter From Your Surgeon General” addressed to all students in your school. Be sure to include statistics that you think will make students stop and think - and make positive changes.

Extensions:

1. Write a second letter, this time from you to the surgeon general. Explain at least three things that you think the surgeon general could do to help high school students adopt heart-healthy habits. For example, this might mean taking steps to help them reach a healthy weight or doing something to encourage exercise. Think big - remember, the surgeon general has a powerful job and can impact things such as food labels, TV commercials, community and in-school programs, and more. And be sure to drop those good ideas in the mail!
2. If the surgeon general asked you to get more exercise, would you do it? If not, whose advice would you take about exercise? First, make a list off the top of your head. It could be anyone from an actor to a champion athlete. Next, make a list of 10 people in your state whose exercise expertise you’d value. Tally up the two lists from all your classmates into two final lists. Pass them along to your principal - there could be a possible school speaker in the bunch!



Go With the Flow

Objectives:

Students will:

- Learn the path that blood takes throughout the body
- Identify and describe the roles of the structures that move the blood
- Use a flowchart to illustrate the cardiac cycle

Materials:

- Go With the Flow handout (available at: KidsHealth.org/classroom/9to12/body/systems/cardiovascular_handout1.pdf)
- Pen and plain paper or computer word processing program and printer

Class Time:

30 minutes

Activity:

What better way to look at the cardiac cycle than by drawing a flowchart? If you've never made a flowchart before, don't let your heart race about it. Here's what you need to know: Five basic symbols represent the start or end, flow, input or output, a process, and a decision. In the end, the symbols in your flowchart will look like different-shaped boxes joined by arrows.

Here's how to begin: Read the articles on KidsHealth to learn how blood moves into the heart through the two vena cava veins, travels through different structures, and finally returns to the heart. Starting where the blood enters the heart (the right atrium), chart the blood's path through the heart and throughout the body. End with the vena cava veins returning the blood to the heart - one complete cardiac cycle!

Extensions:

1. On a separate sheet, make a list of all the structures in your flowchart - the heart and its chambers, arteries, valves, lungs, and so forth. Using one sentence per structure, briefly describe each structure's functions.
2. You've learned about some diseases that affect the cardiovascular system. On a separate sheet, pick a disease and describe how it affects the cardiovascular system. Be sure to mention any of the cardiovascular structures involved in the disease. For example, you might describe how atherosclerosis affects the arteries.

Reproducible Materials

Handout: Go With the Flow

KidsHealth.org/classroom/9to12/body/systems/cardiovascular_handout1.pdf



Name: _____

Date: _____

Go With the Flow

Instructions: Using the five basic flowchart symbols, chart the blood's path through the heart and throughout the body. Start in the right atrium where the blood enters the heart and end with the vena cava veins returning blood to the heart - one complete cardiac cycle!

