

Heart-Healthy Body



Main Objective

Learn about the different body parts that help us eat and move, and participate in physical activities that are good for the heart.

Background

CVD is currently the number one cause of death in the U.S. and is largely preventable through proper diet and exercise. Even though children are at a very low risk of CVD, childhood is the best time to start protecting the heart. Good (and bad) habits are established during the early years, and proper diet and physical activity can help to ensure that the heart stays healthy for many years to come.

From a nutritional perspective, it is important to eat lots of fruits, vegetables, whole grains and low-fat foods. Fruits, vegetables and whole grains provide vitamins, minerals, fiber and special phytonutrients (“phyto” meaning “from plants”) that protect the heart. Too much fat in the diet can start to clog the blood vessels that carry blood to and from the heart. If the vessels get blocked, blood may not be able to flow to the heart resulting in a potential heart attack. Even though it is unlikely that a young child will have a heart attack, too much fat consumed early in life has been shown to promote fatty deposits in the vessels, so it is never too early to start eating healthy.

Exercise is equally, if not more, important to consider for heart health. Just like the other muscles in your body, the heart needs daily exercise to keep it functioning properly. It is important that you and your students pay attention to your hearts as you exercise. The faster the heart beats, the harder it is working. Students can learn to monitor their heart rates in two ways – the talk test or by taking their pulse.

Talk Test: If students can carry on a long conversation while they are being physically active, they are not working hard enough for their hearts to benefit. However, if they are working so hard that they can’t talk at all, they are working too hard. The goal is to be somewhere in between. **Pulse:** This refers to how many times the heart beats in one minute. Students can find their pulse by putting their hand over their chest, by gently placing two fingers on the inside of their wrist just below their thumb, or by gently placing two fingers on their neck just below and slightly in front of their ear. For optimal heart health, encourage students to keep their heart rates up for at least 20 minutes at a time.

The digestive tract helps the body grow and stay healthy by processing the foods and beverages we consume and getting as many of the nutrients into the blood as possible. The digestive tract is like a big hose inside your body. It starts in your mouth at one end, and it ends at...well, the other end. Be mindful of the entire body this month! (See KP KIDS handout, “Positive Body Image.”)

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Take Home Activities

- 1) Students – teach your family members how to monitor their heart rate. As a family, do activities that increase your heart rate.
- 2) Be good to your heart, and make a plan to be physically active most days this month.
- 3) As a family, do stretches every morning or every night to reinforce your knowledge of the body parts that help us remain physically active.
- 4) Explore all of your senses by taste-testing new foods this month.

School Activities

Participate in American Heart Association's *Jump Rope for Heart* or *Hoops for Heart* fundraising programs. Both programs promote the value of physical activity to elementary school children while showing them they can contribute to their community's welfare. By jumping rope or playing basketball, students can secure sponsors and raise money for the fight against heart disease and stroke. In addition to being physically active, students will learn about the seriousness of these diseases, the lifelong benefits of physical activity and the importance of living a heart-healthy lifestyle. (See AHA Resources below.)

Classroom Reward Ideas

Reward students and classes with extra time to play physically-active games. Other great rewards are also offered through AHA for participation in their fundraisers. (See AHA Resources below.)

Resources

American Heart Association (AHA)

<http://www.americanheart.org>

This is the main website for the American Heart Association. This site provides lots of information, background and resources on heart disease and heart health. In addition, many handouts are available to download free of charge to help students learn about their heart and other important muscles.

AHA – Jump Rope for Heart

<http://www.americanheart.org/presenter.jhtml?identifier=2360>

Here you will find all the information you need to participate in the *Jump Rope for Heart* fundraising opportunity and help kids become more physically active. This site also provides information on how you can tie jumping rope into the academic content standards. Information is also available for teachers of students with disabilities – they too can participate! (See Program Modifications on website.)

AHA – Hoops for Heart

<http://www.americanheart.org/presenter.jhtml?identifier=2441>

Here you will find all of the information you need to participate in the *Hoops for Heart* fundraising opportunity. This program is similar to the *Jump Rope for Heart* program, but it focuses on playing basketball instead of jumping rope.

Local AHA Chapter, San Jose Division

One Almaden Blvd., Ste. 500

San Jose, CA 95113

Phone: (408) 977-4950; Fax: (408) 977-4959

This is a great contact for fundraising opportunities and local information and events.

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Resources

Santa Clara County Office of Education - Library Media Center

1290 Ridder Park Drive
San Jose, CA 95131-2398
Phone: (408) 453-6800

<http://www.sccoe.org/depts/library>

Most of the resources needed to teach students about the body, including the heart, muscles and digestion can be found in the science books currently used in your classroom. For additional resources, visit the library at the Santa Clara County Office of Education. Resources can be checked out free for four weeks.

American Dental Association

<http://www.ada.org/public/education>

This organization provides a wealth of information and resources for children's dental health. Since we would have a very difficult time eating without our teeth, this would be a great time to talk about healthy teeth. A curriculum is available for teachers of all grade levels, *Smile Smarts*, that can be downloaded free of charge.

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Activities Linked to 5th Grade Content Standards & Framework

**Writing 1.0 & 2.0,
Listening & Speaking
1.0 & 2.0**

**Written & Oral English
Language Conventions 1.5,
Physical Education 3.6**

**Number Sense 1.0 & 2.0,
Physical Education 4.8**

**Statistics, Data Analysis,
& Probability 1.1 & 1.2,
Physical Education 4.11**

Life Sciences 2.b

Life Sciences 2.c

 **Selected
Reading
List**

- Students can practice their writing, researching and penmanship skills by writing about topics related to how our bodies help us eat and play. They can then share these stories out loud.
- Include grade-appropriate words on their spelling list that relate to body parts that help us eat and play. If possible, spend a few minutes during class once a week stretching some of these body parts to gain a greater appreciation of where they are on the body and how important they are.
- Have students feel their heart working by checking their pulse for 10 seconds and then multiplying that number by 6 to see how many times their heart beats in one minute. Explain to them that while exercising, your heart rate should be between 50% - 75% of your maximum heart rate. Your maximum heart rate is approximately 220 minus your age. To calculate your target heart rate range: $[(220 - \text{age}) 0.75] / 6 =$ maximum number of beats per 10 seconds, $[(220 - \text{age}) 0.50] / 6 =$ minimum number of beats per 10 seconds.
- Once students know how to monitor their heart rate, they can check it before, during and after various exercises. Results can be recorded and graphed for further explanation.
- Learn how the blood circulates through the heart chambers, lungs and body and how carbon dioxide (CO₂) and oxygen (O₂) are exchanged in the lungs and tissues.
- Understand the sequential steps of digestion and the roles of the teeth, mouth, esophagus, stomach, small intestine, large intestine and colon in the function of the digestive system.

Burp! The Most Interesting Book You'll Ever Read About Eating, by Diane Swanson – Science

Muscles: Our Muscular System, by Seymour Simon – Science

Bones: Our Skeletal System, by Seymour Simon – Science