



American
Heart
Association.

Nutrition & Health Education

Toolkit



**USDA Meal
Programs**

A collection of health curriculum resources to supplement programming to leverage USDA-funded meals.

WHAT YOU WILL FIND IN THIS GUIDE:



ABOUT

LESSON 1 – 5

- Appropriate for Kindergarten – 5th grade students
- Focus on exploration, development and positive habit forming

- [Portion Size](#)
- [Picky Eating](#)
- [How Hungry](#)
- [Happy Heart](#)
- [Healthy Heart](#)


LESSON 6 – 10

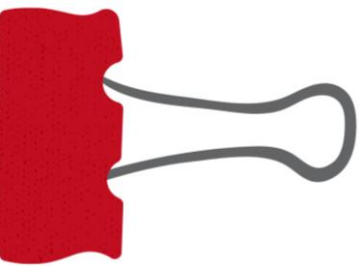
- Appropriate for 6th – 8th grade students
- Focus on discussion and reflection with competitive components

- [Sugar Smart](#)
- [Heart Flex](#)
- [Slow Down Fast Food](#)
- [Five Finger Meditation](#)
- [Healthy Lungs](#)

ABOUT



- 
- The US Department of Agriculture offers federal funding for organizations who provide meals to students in low-income communities, including dinner funding.
 - In 2019, only 55 of 311 eligible afterschool programs participated in the USDA dinner program in the Greater Seattle Area.
 - To receive reimbursement for dinner, afterschool providers are required to provide structured educational programming.
 - Through surveys and informational interviews, American Heart Association Puget Sound identified this programming requirement as a barrier for implementing dinner programs.
 - This toolkit was developed to mitigate that barrier. It offers a collection of curriculum resources focused on heart health for after school providers to engage Kindergarten - 5th and 6th - 8th grade students with their third meal of the day.
 - These curriculum ideas can also be used in summer meal programs and in any setting where there is an opportunity to engage participants in health education.



“To be a relentless force for a world of longer, healthier lives.”

American Heart Association Mission Statement

LESSON 1

PORTION SIZE

MATERIALS

- Box of dry cereal (example: Cheerios)
- Measuring cup
- Plastic bag filled with 1 cup of cereal
- Plastic bag filled with 2 cups of cereal
- 3 different sized bowls (small, medium, large)
- [MyPlate Placemat image](#) for each participant
- Alternatively, the [healthy eating pyramid image](#) for each participant



THEME
Nutrition



TIME REQUIRED
30 minutes



APPROPRIATE AGE GROUP
3-8 years old

LEARNING OBJECTIVES

1. Identify healthy portion sizes of common food items
2. Gain understanding of caloric content of different foods
3. Gain understanding of benefits of nutrition and its impact on the body
4. Learn that there are other resources to help with nutrition

Sourced from Health Powered Kids, MyPlate, Harvard University



LESSON 1

PORTION SIZE

INTRODUCTION

1. Place the two plastic bags of cereal next to each other and show them to the group.
2. Ask the group which one has more and ask them “how much more?”
3. Ask how many participants would choose the smaller portion and how many would choose the larger portion. Then tell them that the larger portion is double the smaller one.
4. Explain that the smaller portion is about one serving for their age group. Ask participants how they would make three servings.
5. Next place the three different bowl sizes next to each other from small to large. Then ask them which bowl they would choose. Explain that it is easier to measure portion sizes with bowls similar to the serving size.
6. From small to large, fill each of the three bowls with one, two, and three servings, respectively.
7. Ask the group which kinds of foods they enjoy and would likely eat more than one serving.

DISCUSSION

1. Show each participant a printout of the [MyPlate placemat](#) or [Harvard Healthy Eating Plate](#) placemat for portion sizes.
2. Explain to the group that a healthy body likes a proper balance of food to remain healthy.
3. Ask the group why fruits and vegetables make up half of the plate. Explain that those foods provide important nutrients like vitamins, minerals, and fiber to help our bodies.
4. Ask participants what their favorite foods are and which section of the plate that food goes on.
5. Have participants try to come up with their own complete plate of food with their favorite foods including a main entrée and sides.

SOURCES

<https://healthpoweredkids.org/lessons/whats-my-portion-size/>
<https://www.myplate.gov/resources/graphics/myplate-graphics>
<https://www.hsph.harvard.edu/nutritionsource/healthy-eating-pyramid/>

LESSON 2

PICKY EATING

MATERIALS

- Produce that may be less commonly recognized or eaten:
 - Kumquats
 - Jicama
 - Grapefruit
 - Dragon fruit
 - Kiwi
 - Pummelo
 - Starfruit
 - Avocado
- Napkins
- Plates
- Whiteboard
- Writing utensil



THEME
Nutrition
Food
Exploration



**TIME
REQUIRED**
20 minutes



**APPROPRIATE
AGE GROUP**
3-8 years old

LEARNING OBJECTIVES

1. Increase exposure to a new variety of foods
2. Increase sense of adventure and discovery
3. Expand repertoire of food consumption

Sourced from Health Powered Kids



PICKY EATING

ACTIVITY

1. Procure a variety of fruits and vegetables (any that the group may not have tried before). Clean, prepare, and portion the food before the session. Make sure there is enough for each person to try at least two or more.
2. On the whiteboard, create a list called "Favorite Foods". Ask participants their favorite foods and list them on the whiteboard.
3. Now ask the group to describe each of their favorite foods regarding the flavor, texture, and smell. Write these descriptors under each of the listed foods on the whiteboard.
4. Bring out the fruits and vegetables and encourage each participant to choose two items they have never tried before.
5. Have them eat their chosen food. Then ask each one to say which ones they chose and to describe the flavors, textures, and smell.
6. Ask if they liked it and to say why they did or did not.
7. On the whiteboard, create a list called: Favorite Reasons. Then have the group talk about their favorite reasons why they liked their food. Be sure to focus on the descriptors of flavors and textures.
8. Encourage the participants to surprise their families at the next meal they share by using one or more of the words you talked about and learned today to describe taste, texture or smell.

SOURCE

<https://healthpoweredkids.org/lessons/picky-eating/>

LESSON 3

HOW HUNGRY

MATERIALS

- Finger food/snacks like:
 - cut-up fruit
 - pretzels
- Whiteboard
- Writing utensil

LEARNING OBJECTIVES

1. Understand hunger signals
2. Learn proper portion sizes
3. Learn nutritional needs the body requires



THEME

Nutrition
Body
Physiology



**TIME
REQUIRED**
20 minutes



**APPROPRIATE
AGE GROUP**
3-8 years old

BEFORE ACTIVITY

1. On the whiteboard, create two columns: 1) Before I Ate and 2) After I Ate.
2. Inquire what the group feels like when they are hungry. Ask what might a baby, or an animal like a baby bird do to signal hunger (e.g. chirping).
3. Relay that this is similar to how our bodies act when we feel hungry. The body will send signals to let us know we are hungry, for example, our stomach growling or causing us to feel grumpy.
4. Write down what the group comes up with in the **Before I Ate** column.
5. Contrast that information by informing them that once we eat, our body also sends out signals that we are full. This process can take up to 20 minutes, so eating slowly and allowing our bodies to take its time to send the signal will help prevent us from eating too much.

LESSON 3

HOW HUNGRY

ACTIVITY

1. Have the group make a fist and relay that their stomachs are relatively the same size as that fist.
2. To further explore that topic, ask the group:
 - What happens if you eat too much? What happens to your fist?
 - What happens if you don't eat enough?
 - What happens if you eat the proper amount?
3. Have the participants eat some of the food and make sure the serving is a bit smaller than the size of their fist. You can pass out the food in two separate halves with 5 minutes in between the two increments to increase the time it takes to eat.
4. Then inquire how the participants feel after eating and write down their feelings in the column: **After I Ate.**
5. Encourage the group to eat slower, take their time to chew, and truly enjoy the flavor of the food. Remind them to stop eating when they are feeling satisfied whether there is food remaining or not.
6. Contrast that feeling with the idea that cravings are not the same as feeling hungry. A craving is not necessarily a response to hunger and that the participants should be aware of the feeling of being full when they have a craving.

SOURCE

<https://healthpoweredkids.org/lessons/how-hungry-am-i/>

LESSON 4

HAPPY HEART

MATERIALS

- Straws cut in half

LEARNING OBJECTIVES

1. Understand the connection between the lungs and the heart
2. Learn about how breathing impacts exercise and the body
3. Learn about the benefits of aerobic exercise
4. Risks of smoking



THEME

Physiology
Smoking Risks



TIME REQUIRED

20 minutes



APPROPRIATE AGE GROUP

3-8 years old

ACTIVITY

1. Explain to the group that physical activity makes their hearts beat faster. Ask why that happens. Explain to them that we breathe in oxygen that goes from the lungs to the heart to be redistributed through the system to fuel our muscles.
2. Instruct the group to sit down quietly with both legs relaxed, hands in their laps, and to uncross their legs.
3. Have them take slow, deep breaths in and out. Talk about how the body's muscles are not being used, so their breathing is regular and not fast. Ask the group how their body knows to make their lungs breathe more. The answer is exercise.
4. Have the group stand up and run in-place for 30 seconds or any other independent exercise like jumping jacks.
5. Ask the group why they are now breathing faster. Explain to them that the body needs oxygen, so they breathe faster to get more oxygen in and that the heart takes that oxygen to the muscles.
6. Talk about how regular exercise will make the muscles stronger.

HAPPY HEART

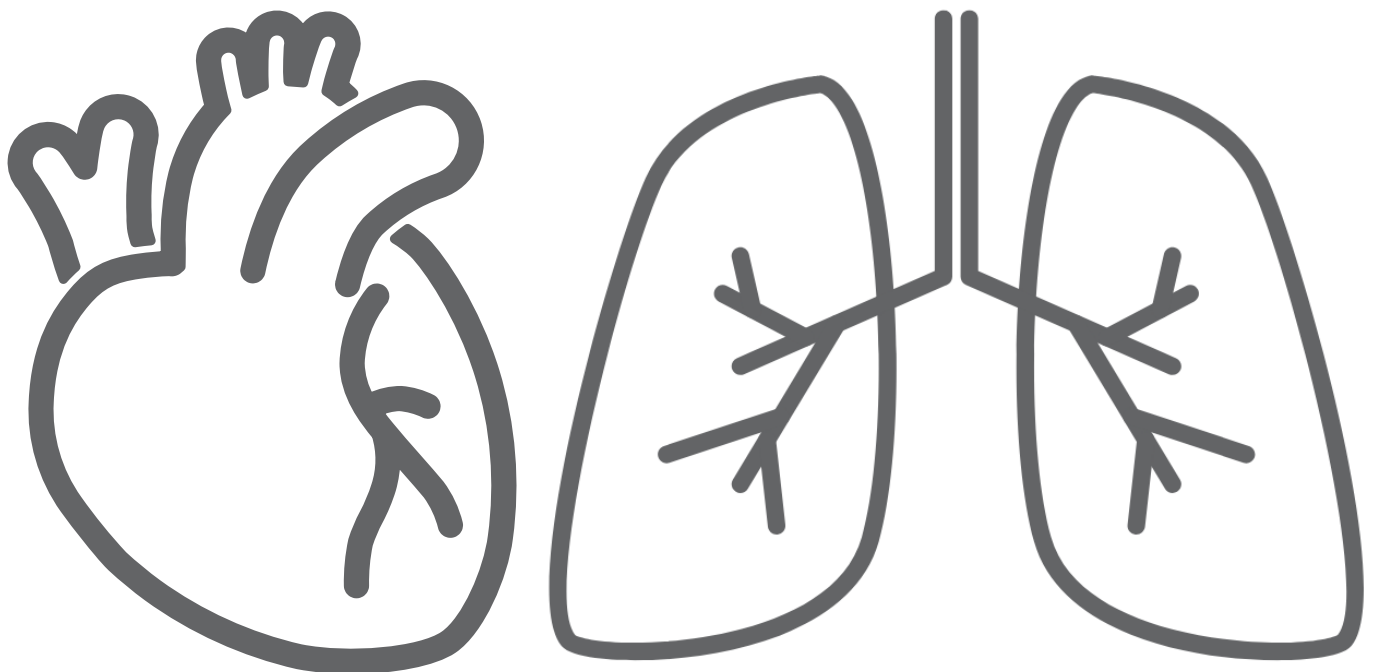
SMOKING COMPONENT

1. Ask the group what happens if the lungs are hurt or not working well. Tell them that smoking will cause their lungs to not work as strong.
2. Give each participant a straw, have them sit down, and have them breathe through it calmly.
3. Have each participant talk about how they feel when they breathe through the straw compared to how they breathe without it.
4. Then ask what happens if they breathe through the straw while they are exercising.

SOURCES

<https://healthpoweredkids.org/lessons/your-happy-heart/>

http://www.shapeamerica.org/events/pesportweek/upload/Heart_Healthy.pdf



LESSON 5

HEALTHY HEART

MATERIALS

- None

LEARNING OBJECTIVES

1. Understand the effects of exercise on the heart muscle
2. Learn how the heart works and why it is a muscle
3. Understand the importance of exercise



THEME
Physiology



TIME REQUIRED
30 minutes



APPROPRIATE AGE GROUP
5-12 years old

BEFORE ACTIVITY

Review the following information about the heart. These facts can be shared during your discussions:

- Your heart is a muscle that pumps oxygen-rich blood to your body and brings oxygen-poor blood back to your heart and lungs. Your blood travels through several miles of blood vessels. The cells in your body need the oxygen to survive.
- Your heart is located near the middle of your chest, slightly to the left. This tough muscle is about the size of an adult fist, and it weighs about one pound. The average adult human heartbeat ranges from 60 to 100 beats per minute.

Sourced from Health Powered Kids and Shape America

HEALTHY HEART

ACTIVITY

1. Ask the group what they know about their heart and how the heart works.
2. Discuss how the heart works:
 - The heart is a muscle, not unlike your bicep. On average, the heart beats from 60 to 100 beats per minute and it never stops working.
 - The heart pumps oxygenated blood to the rest of the body as we breathe. The blood travels back to the lungs to pick up oxygen, which then goes back to the heart to be pumped out again. This cycle happens with each pump.
3. Have the group identify their bicep muscles and have them flex the biceps and hold for 5-10 seconds and then relax. You can do this with other large muscle groups like the quadriceps or even their fists.
4. Then ask the participants to flex their heart. Let the group figure out that they cannot.
5. Ask the group how it would be possible to flex their heart. The answer would be exercise.
6. Have the participants describe how they feel when they are sitting and at rest. Ask them how their heart feels and describe it. They might not be able to.
7. Then have the group stand up and do a variety of exercises:
 - High-knee marching for 30 seconds
 - 30 jumping jacks
 - Jogging in place for 30 seconds
8. Ask the group to describe how they feel after the exercise. Focus on how their heart feels. Explain that this is how the heart gets strong just like how one would exercise and build up their bicep muscle.
9. Have the group talk about their favorite types of exercise and how they can incorporate that into their daily routine. Tell them that a regular amount of exercise will keep their hearts strong and healthy.

SOURCES

<https://healthpoweredkids.org/lessons/healthy-heart/>
<https://healthpoweredkids.org/lessons/move-it-the-importance-of-daily-exercise/>
http://www.shapeamerica.org/events/pesportweek/upload/Heart_Healthy.pdf

LESSON 6

SUGAR SMART

MATERIALS

- Measuring teaspoon
- Measuring cups
- Spoons
- Empty bottle of Gatorade filled with 7 grams of sugar
- Cups with lids (ex: mason jars)
- Ice
- Water, can also bring seltzer water or club soda (low sodium and no added sugar)
- Fresh fruit and mint (see recipes on the next page for recommendations)



THEME
Nutrition



TIME REQUIRED
30-40 minutes



APPROPRIATE AGE GROUP
11-14 years old

LEARNING OBJECTIVES

1. Learn the maximum recommendation for sugar intake per day
2. Identify popular drinks highest in sugar
3. Explain how sugary drinks might impact health, particularly heart
4. Practice making healthy drink recipes to replace sugary drinks

BEFORE ACTIVITY

1. Ask group what some of their favorite drinks are, outside of milk and water. Some examples might be sports drinks, energy drinks, soda, and juice from concentrate.
2. Lead a discussion about how many teaspoons of added sugar they think are in some of these drinks. Show them a teaspoon for reference.
3. Show them the Gatorade bottle full of sugar. In a 20 oz sports drink, there are about 35 grams, or 7 teaspoons of added sugar – this is already **more** than what is recommended to have in **ONE DAY!**
4. According to the American Heart Association, it is recommended that kids do not exceed 25 grams of sugar per day. This is around 6 teaspoons.

Sourced from Health Powered Kids and USDA Food and Nutrition Services

LESSON 6

SUGAR SMART

BEFORE ACTIVITY CONTINUED

5. Ask group, "What is the difference between added sugar and natural sugar?" Natural sugars are found in fruits and milk. Fruits and dairy also offer nutrition such as vitamins and minerals. Added sugar is for sweetness and for a longer shelf life.
6. Next ask participants how much added sugar is found in water and fruit (we gave you a hint earlier! There is ZERO added sugar in water and fruit – only natural sugars in fruit).
7. Discuss with the group that too much added sugar in your diet can cause inflammation in your vessels and heart, increase your blood pressure, cause weight gain and diabetes. All of these combined can lead to early heart disease, heart attack and or stroke.
8. Share this interesting fact: Sugary drinks trick your body into thinking it is still hungry. You end up eating more than your regular diet when you have these drinks!

ACTIVITY

1. Invite group to start their own fruit infused water. Substitute this drink for their favorite added sugar drink!
2. Add ingredients to water
3. "Muddle" or mash up fruit with the back of a spoon so the flavors are released
4. Close lid and take home to sit overnight in the refrigerator
5. When ready to drink, add ice and enjoy!
6. Encourage group to share the recipe ideas with their families to make at home together

SOURCES

<https://healthpoweredkids.org/lessons/oversweetened-the-truth-about-sugary-drinks/>
<https://www.health.harvard.edu/heart-health/the-sweet-danger-of-sugar>
<https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sugar/life-is-sweet-with-these-easy-sugar-swaps-infographic>

United States Food and Nutrition Service. The power of choice : helping youth make healthy eating and fitness decisions : a leader's guide. U.S. Dept. of Agriculture, Food & Nutrition Service , 2003.

SUGAR SMART

RECIPES

Lemon and Lime

- ½ lemon sliced into wedges
- ½ lime sliced into wedges
- 2 cups of water

Blackberry and Mint

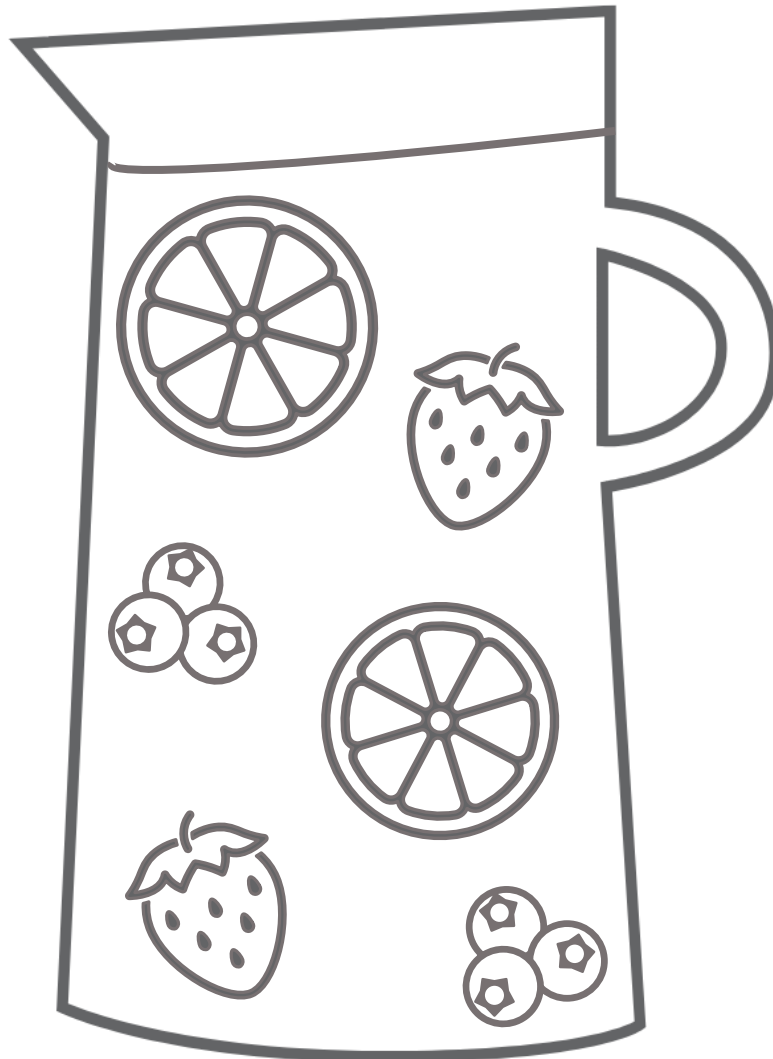
- ¼ cup of blackberries
- 2 sprigs of mint
- 2 cups of water

Strawberry and Cucumber

- ½ cup strawberries sliced
- ½ cup cucumber sliced

Blueberry and Orange

- ¼ cup blueberries cut in half
- 1 orange sliced into wedges



LESSON 7

HEART FLEX

MATERIALS

Dependent on activity stations:

- Buckets
- Balls
- Jump ropes
- Frisbee
- Chairs
- Timer

LEARNING OBJECTIVES

1. Learn the difference between anaerobic and aerobic exercise
2. Understand which is better for heart health and why
3. Identify recommended amount of physical activity for a healthy heart



THEME

Physical activity
Family involvement



TIME REQUIRED

30 minutes



APPROPRIATE AGE GROUP

11-14 years old

BEFORE ACTIVITY

1. Ask participants to raise their hands if they ever engage in physical exercise.
2. Next, ask them, "For those of you who raised your hands, is your exercise aerobic or anaerobic?"
3. Relay to them when the word aerobic is broken down, it means "with oxygen." Aerobic exercise uses large muscle groups for a long period of time and requires your lungs and heart to pump more oxygenated blood to the body during these activities. Usually, your heart beats more quickly and you breathe more heavily.
4. Share that if aerobic means "with oxygen," anaerobic means "without oxygen." These types of activities are done for shorter amounts of time. They strengthen certain muscles in your body without needing more oxygen from the lungs and heart.
5. Remind them the heart is also a muscle. It needs exercise to stay healthy, strong and to reduce the risk of heart disease. This is why AEROBIC exercise is better for heart health!
 - Share interesting fact: your heart has to pump 2,000 gallons of blood a day! It has a big job to do and needs to stay in shape.

LESSON 7

HEART FLEX

BEFORE ACTIVITY CONTINUED

6. It is recommended to have at least 60 minutes of moderate or vigorous daily physical exercise that strengthens your muscles, focusing on aerobic exercise (which means exercising your heart!)
7. Here are some examples of exercises:
 - Aerobic: running, swimming, jumping jacks, biking, dancing, basketball, soccer, hiking
 - Anaerobic: weight-lifting, sit ups, squats, pushups, sprinting
8. Other benefits to regular exercise include strengthening your bones, maintaining a healthy weight and improving mood and concentration.

ACTIVITY: FIT FAMILY OBSTACLE COURSE

1. Create an aerobic obstacle course at home for the entire family. You can do these outside if it's a nice day!
2. Set up 4-6 stations. Each station will have a different activity that you do before moving onto the next one. Go through 3 rounds of the course before you stop and take a water break! You want your heart thumping quickly and to be breathing a little harder by the end of the course.
3. Station ideas:
 - Jumping jacks (20)
 - Mountain climbers (10)
 - Throw balls or beanbags into a bucket or laundry basket
 - Jump rope for 30 seconds, break, and then jump rope in the opposite direction for 30 seconds
 - Throw a frisbee until you hit the target 3 times
 - Push-ups (10)
 - Sit ups or crunches (20)
 - Army crawl through a tunnel of chairs
4. See which family member can finish 3 rounds first! Encourage each participant to finish the course!

SOURCES

<https://health.clevelandclinic.org/facts-about-the-heart/>

Patel H, Alkhawam H, Madanieh R, Shah N, Kosmas CE, Vittorio TJ. Aerobic vs anaerobic exercise training effects on the cardiovascular system. *World J Cardiol.* 2017;9(2):134-138. doi:10.4330/wjc.v9.i2.134

LESSON 8

SLOW DOWN FAST FOOD

MATERIALS

- Paper
- Pens or markers or colored pencils

LEARNING OBJECTIVES

1. Learn recommended daily food intake
2. Explain which unhealthy ingredients fast food meals are often high in
3. Describe strategies to make healthy substitutions when ordering from fast food restaurants



THEME
Nutrition



TIME REQUIRED
30 minutes

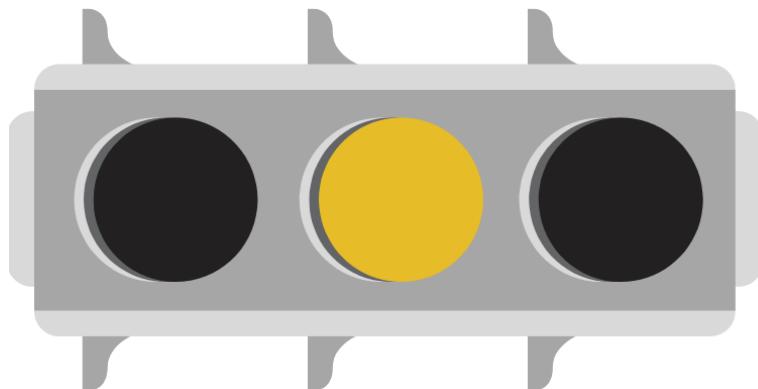


APPROPRIATE AGE GROUP
11-14 years old

BEFORE ACTIVITY

1. Discuss what some of the participants' favorite fast-food meals are, from where and why do they choose to eat at fast food restaurants.
2. Relay to students: The recommended calories from fats per day is 25 to 35% of daily calories for their age group.
3. Share this interesting fact: A typical fast-food meal is a cheeseburger with fries and a milkshake. This can be about 50g of total fat in one meal. This meal alone can exceed the total amount of recommended fat in a day!

Sourced from Coordinated Approach to Child Health and Allina Health



SLOW DOWN FAST FOOD

ACTIVITY

1. Have participants stand up.
2. Ask group: Do you think the typical fast-food meal is **high** or **low** in: sodium (salt), sugar, fat, and vitamins?
 - Ask each question individually to allow for physical activity. Instead of saying the answer, they will act it out. If their answer is “high” ask them to do 3 jumping jacks. If their answer is “low” ask them to do 3 squats or push ups.
3. Relay to students: Compared to homecooked meals or less processed foods, fast foods are **high** in sodium, added sugar and unhealthy fats (such as trans and saturated fats). They are **low** in vitamins and minerals. As we learned earlier, they are also very high in calories.
4. Share fact: According to the American Heart Association, a healthy diet and lifestyle are your best weapons to prevent cardiovascular disease.
 - Unhealthy fats, such as saturated fat and trans fat, can clog the vessels in the heart, the high sodium can cause your blood pressure to rise. High calories, sodium, fats, and added sugars together can cause early heart disease and other diseases like obesity and diabetes.
5. Distribute paper and writing utensils. Have students fold paper in half “cheeseburger style.” They can work alone or in pairs.
6. On one half of the paper have them write down or draw what their favorite fast-food meal is and where it is from.

(Continued next page)

LESSON 8

SLOW DOWN FAST FOOD

ACTIVITY CONTINUED

7. On the other half write down or draw strategies of how to “slow fast food down.” What would a healthier version of the same meal look like?
 - Try to include all 5 food groups (Fruits, Vegetables, Grains, Protein Foods, and low-fat or fat free, low sugar Dairy) and make sure you include a variety of **color** in your meals! For example, if your meal is lacking the color red, add an apple.
 - What can they do to decrease the number of calories, have less sodium, sugar and fat? How can they increase vitamins and minerals?
 - Here are some recommendations: share the meal with someone, order the smallest sizes, substitute fries or onion rings with fruit or salad options, order grilled chicken instead of fried, try unflavored, low-fat or fat-free milk or water instead of soda or sports drinks, ask for dressing on the side, yogurt instead of ice cream or milkshakes
8. Provide an opportunity for participants to share their thoughts and papers with the group. Encourage students to share their strategies with their families and practice them together.
9. Emphasize that eating fast food once in a while is acceptable, but that when we do, we want to be conscious about choosing items that will nourish our bodies and keep our heart strong and healthy!

SOURCES

Bains A, Rashid MA. Junk food and heart disease: the missing tooth. *J R Soc Med.* 2013;106(12):472-473. doi:10.1177/0141076813512297
<https://letsgo.catch.org/courses/take/catch-kids-club-5-8-curriculum/texts/10001522-fast-food-strategies>
<https://healthpoweredkids.org/lessons/fast-food-alert/>
<https://www.heart.org/en/healthy-living/go-red-get-fit/unhealthy-foods>

LESSON 9

5 FINGER MEDITATION

MATERIALS

- None

LEARNING OBJECTIVES

1. Understand the impact stress can have on heart health
2. Learn how meditation can help with stress reduction
3. Practice the 5-finger meditation exercise



THEME
Mindfulness



TIME REQUIRED
10-20 minutes



APPROPRIATE AGE GROUP
11-14 years old

BEFORE ACTIVITY

1. Relay to students:
 - Stress that lasts for a long time can negatively impact our health.
 - Stress that is not managed well can raise our blood pressure and inflammation (our immune system turns on as though it is fighting an infection on the inside). It might put us at risk for heart disease.
 - Some people cope with stress by making heart damaging lifestyle decisions such as smoking, drinking, eating too much or too little and not exercising.
2. Ask the group to share what ways to cope with stress are. Examples include: walking and other physical activities, nature, talking to someone you trust, drawing, journaling, listening to music, and meditation.
3. Discuss meditation as an activity that is free, quick, and can be done anywhere you feel comfortable doing it. It involves practicing slowing your mind down to remain calm and relaxed. It can decrease blood pressure, reduce stress, and improve the health of your heart. It can also motivate you to steer clear from the unhealthy coping behaviors we mentioned earlier.
4. Practice the five finger meditation/breathing exercise, of which the group can use either to prevent stress, or to practice when they are feeling stressed out. This exercise focuses on positive thoughts and memories. "Teach your family when you go home and practice keeping your heart healthy, together!"

LESSON 9

5 FINGER MEDITATION

ACTIVITY

1. Close your eyes for this exercise.
2. Take a deep breath in. Touch your thumb to your second finger and hold it there. Remember a time when your body was tired after an exhilarating activity like exercise or a sport. As you breathe out, remember how your body felt when you sat down to rest. Let your muscles feel that same relaxation now.
3. Take a deep breath in. Touch your thumb to your middle finger. Breathe out and recall a time you had a loving experience when you felt connection with someone. This could have been a good conversation, a hug, or a bonding activity.
4. Take a deep breath in. Touch your thumb to your ring finger. Think about the nicest compliment you've received from someone. Compliment that person in return when you breathe out by fully accepting what they said and believing it.
5. Finally, take a deep breath in and touch your thumb to your smallest finger. Remember the most beautiful and relaxing place you've ever been to. Breathe out and imagine you are there, relaxing in that same spot.
6. Open your eyes. Take a cleansing breath in and out.

SOURCES

<https://www.health.harvard.edu/heart-health/mindfulness-can-improve-heart-health>

<https://www.health.harvard.edu/heart-health/stress-and-your-heart>

<https://www.heart.org/en/healthy-living/healthy-lifestyle/stress-management/stress-and-heart-health>

<https://www.seattlechildrens.org/globalassets/documents/for-patients-and-families/pfe/pe2260.pdf>

LESSON 10

HEALTHY LUNGS

MATERIALS

- Large diameter straws
- Small diameter straws – coffee straws
- Ping pong balls
- Cups
- Water
- Timer



THEME

Substance use



TIME REQUIRED

10-20 minutes



APPROPRIATE AGE GROUP

11-14 years old

LEARNING OBJECTIVES

1. Provide “talking points” to use with students
2. Describe where tobacco is found and how it is harmful to the body
3. Identify how tobacco and nicotine are harmful for health and the cardiovascular system (heart)
4. Describe harmful chemicals found in cigarettes and e-cigarettes
5. Demonstrate how smoking might affect the heart and respiratory system

Sourced from Trumbull County Health Department



HEALTHY LUNGS

DISCUSSION

1. Recommendations for discussion about smoking with this age group. This can also be shared with parents if they need ideas:
 - Have a casual, open-ended conversation. Avoid a lecture.
 - Do not judge, criticize or threaten them not to smoke.
 - Share educated and interesting facts and the resources you find them from.
 - Encourage them to ask questions and to keep learning.
 - Texting is a helpful way of communicating.
 - Be patient! Be an example, by also being tobacco free.
2. Tobacco is found in cigarettes, cigars and pipe tobacco.
 - Almost one third of deaths from heart disease are due to smoking.
 - Even if you are not smoking yourself, "second-hand smoke," the smoke you breathe in from someone else smoking near you, also puts you at risk for these health problems.
3. Nicotine:
 - The substance in cigarettes and e-cigarettes that is highly addictive. This means once you start something, it makes it difficult to stop even when you want to.
 - Young brains are continuing to develop until the mid 20's. Nicotine can harm your brain's development, affect your mood, memory and concentration.
 - It causes your vessels (the way your body transports blood to your body) to harden and narrow. Your heart has to work harder to pump blood to your body and increases your blood pressure.
 - It also increases how fast your heart beats per minute.
 - Over time, tobacco and nicotine increase the risk of stroke (a heart attack of your brain), cancer and an irreversible lung disease that makes it difficult to breathe.
4. There are up to 5,000 different toxic chemicals that are in tobacco products. They are also used in other products:
 - Acetone: nail polish remover
 - Acetic Acid: hair dye
 - Arsenic: rat poison
 - Benzene: gasoline and to make rubber
 - Lead: batteries
 - Tar: paving roads
 - Toluene: paint

LESSON 10

HEALTHY LUNGS

ACTIVITY (OPTIONAL)

1. Separate group into two teams.
2. Each participant will get a straw and a ping pong ball. One team will have the small diameter straws, the other team will have the large diameter straws.
3. This will be relay race style – once you say “Go!” team members will take turns blowing a ping pong ball across a finish line using the straw only. No hands allowed!
4. Time them using a stopwatch.
5. Once one team member crosses the finish line, the next one can go.
6. The team that has all ping pong balls cross the finish line wins!
7. The group with the small diameter straws should take longer to finish.

This activity simulates how nicotine decreases blood flow and makes the heart work harder AND how tobacco products can make breathing more difficult by damaging the lungs.

SOURCES

https://e-cigarettes.surgeongeneral.gov/documents/SGR_ECig_ParentTipSheet_508.pdf
https://www.cdc.gov/tobacco/basic_information/index.htm?s_cid=osh-stu-home-nav-003
<https://www.lung.org/quit-smoking/smoking-facts/whats-in-a-cigarette>
https://www.aafp.org/dam/AAFP/documents/patient_care/tobacco/tar_wars/ExperimentsActivities.pdf

APPENDIX

Fruit and Veggie Toolkit for Kids:

<https://www.heart.org/en/healthy-living/healthy-eating/add-color/fruit-and-veggie-toolkit-for-kids>

25 Ways to Get Moving at Home Infographic:

<https://www.heart.org/en/healthy-living/fitness/getting-active/25-ways-to-get-moving-at-home-infographic>

Kids Heart Challenge Yoga Videos:

- Yoga - Part one:
<https://www.youtube.com/watch?v=SShT-GwarQQ>
- Yoga - Part two:
<https://www.youtube.com/watch?v=WCC3Gca0xqI>
- Yoga - Part three:
<https://www.youtube.com/watch?v=6Fo2PQUvPFo>

NFL Play 60 Virtual Experiences: <https://aha-nflplay60.discoveryeducation.com/virtual-experiences>

10 Minute Interactive Home Workout:

<https://www.heart.org/en/healthy-living/fitness/getting-active/10-minute-home-workout>

AHA Virtual/Streaming Workouts:

<https://www.heart.org/en/healthy-living/fitness/fitness-basics/move-more-together>

American Heart Association®



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