Published in final edited form as:

J Sch Health. 2012 November ; 82(12): 572–576. doi:10.1111/j.1746-1561.2012.00738.x.

Promoting Healthy Lifestyle Behaviors: The Heart Smart Discussion Activity

Judith R. McCalla, PhD [Research Assistant Professor],

University of Miami Department of Psychology 5665 Ponce de Leon Blvd Coral Gables, FL 33146-0751 Phone: 305-284-6778

Cheryl L. Juarez, MEd [Director of Professional Development],

Center for Interactive Learning Miami Science Museum Gables One Tower, Suite 720 1320 South Dixie Highway Coral Gables, FL 33146 Phone: 305-284-2757 cheryl@miamisci.org

Lúcia E. Williams, MLA [Project Director],

Miami Science Museum 3280 S. Miami Ave. Miami, FL 33129 Phone: 305-646-4210 lwilliams@miamisci.org

Judy Brown, EdD [Senior VP of Education],

Miami Science Museum Center for Interactive Learning 1320 South Dixie Highway, Suite 720 Coral Gables, FL 33146 Phone: 305-284-2760 jabrown@miamisci.org

Katie Chipungu, MS [Doctoral Student], and

University of Miami Department of Psychology 5665 Ponce de Leon Blvd. Coral Gables, FL 33146-0751 kchipungu@psy.miami.edu

Patrice G. Saab, PhD [Professor]

University of Miami Department of Psychology 5665 Ponce de Leon Blvd Coral Gables, FL 33146-0751 psaab@miami.edu

INTRODUCTION

The health habits of high school students affect not only their current health but also their future risk for obesity and cardiovascular disease.^{1,2} National surveys revealed that the majority of US high school students do not consume the recommended daily amounts of fruits and vegetables or meet recommended aerobic physical activity requirements.^{3,4} Almost one third of high school students engage in 3 or more hours per day of sedentary activity (ie, using computers for nonacademic purposes or watching television).⁴ The probability of students engaging in unhealthy lifestyle behaviors and failing to follow healthy behavior guidelines is increased when they are stressed, a common occurrence during high school.⁵ Because unhealthy lifestyle behaviors contribute to cardiovascular disease risk, prevention efforts for high school students are vital.^{1,6} Many cardiovascular risk factors, such as obesity, poor eating habits, and inactivity, are modifiable through behavior change. Two important aspects of encouraging behavior change are (1) creating awareness of the connection between lifestyle habits and health outcomes and (2) increasing self-efficacy for behavior change by setting achievable goals.^{7,8} Health education can improve students' well-being and reduce their cardiovascular risk.⁹ This may be accomplished by engaging them in activities that promote healthy habits and helping them attain personal goals that are consistent with recommended healthy lifestyle guidelines.¹⁰

(Corresponding Author) jmccalla@miami.edu.

The *Heart Smart Discussion Activity* was developed to provide information about heart health, good nutrition, physical activity, and stress management. It encourages students to discuss health-related information and set achievable behavioral goals to improve heart health.

GRADE LEVEL

This activity is designed for students in grades 9-12.

OBJECTIVES

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

1. Discuss how healthy and unhealthy lifestyle behaviors can affect their health.
2. Discuss the benefits of and barriers to improving healthy eating, physical activity and stress management.
3. Develop a plan to change a personal lifestyle behavior related to nutrition, physical activity or stress management to decrease their heart health risk.

NATIONAL HEALTH EDUCATION STANDARDS: PERFORMANCE INDICATORS

1.12.1 Predict how healthy behaviors can affect health status.

1.12.7 Compare and contrast the benefits of and barriers to practicing a variety of healthy behaviors.

6.12.2 Develop a plan to attain a personal health goal that addresses strengths, needs, and risks.

MATERIALS AND RESOURCES

For teacher:

- Teacher Guide*
- Group Content and Participation Checklist*
- Personal Health Plan Evaluation Checklist*
- Optional: Introduction (Teacher Guide in PowerPoint format)*
- Optional: computer and projector for PowerPoint presentation

For each group (5-7 students):

- Student Guide*
- Activity Board*
- Discussion Statements* (Table 1)
- Agree, Disagree and Let's Talk Cards* (Table 1)
- Opinion Record Sheet*

For each student:

- Heart Token*

- Pencil
- Two index cards
- Worksheet* (Figure 1)

*Download from <http://www.miamisci.org/heartsmart>

ACTIVITIES AND STRATEGIES

Setup (Figure 2)

Place the Discussion Statements on the activity board in order (numbered side up) from #1 (top card) to #12 (bottom card). Put the Agree, Disagree, and Let's Talk cards in order (numbered side up) from #1 (top card) to #12 (bottom card), and place each stack on the board. Place the Opinion Record and Student Guide beside the board.

Divide students into groups of 5-7, asking each group to sit around an activity board. Then direct each group to select students for the following roles: 1) *record keeper* who uses the Opinion Record Sheet to record the final number of students who agree or disagree with each statement; and 2) *facilitator* who keeps the group on track and promotes discussion. To confirm that roles have been chosen, ask all record keepers to raise their hands and then do the same for the facilitators. Direct each student to take a heart token.

Procedure (40–50 minutes)

Introduce the *Heart Smart Discussion Activity* by using the PowerPoint presentation to review “surprising” facts related to physical activity, nutrition, stress, and heart health (e.g. “too much stress can damage your heart and blood vessels over time”), or read them aloud from the back of the Teacher Guide. As the facts are being reviewed, ask for students’ comments. This serves to prime the activity.

Tell students that the goals are to (1) “think and talk about your health” and (2) “decide what you can do for a healthier heart.”

Review the rules of the activity:

- A student reads aloud the Discussion Statement. (Students take turns reading the other statements.)
- Students place their heart token on the “agree” or “disagree” side of the board and state why they made that choice.
- Students take turns reading aloud the Agree card that lists facts supporting the Discussion Statement and the Disagree card that list facts opposing the Discussion Statement. The students can use both sets of facts to facilitate their discussion.
- The facilitator asks the question(s) on the Let's Talk card to encourage further discussion.
- After the discussion, the facilitator asks if anyone has had a change of heart (change of opinion). If so, these students then move their heart tokens to the other side.
- Record keeper records on the Opinion Record how many students agree or disagree with each statement by counting the number of heart tokens on each side.
- Students retrieve a heart token for the next round.

- All used cards are placed at the bottom of each stack before going to the next Discussion Statement.
- Repeat steps 1-8 until all Discussion Statements have been discussed and opinions recorded or until time runs out.

Guide the students through the first round. After that round, circulate around the room to keep students on task, answer questions, and correct misinformation in student-led discussions. If desired, complete the *Group Content and Participation Checklist* for each group. Each round should last no more than 5 minutes, but groups may progress according to their needs. Encourage groups to vote and move on if they are discussing a statement for too long or lagging significantly behind the others. Groups do not need to complete all twelve rounds. As the activity comes to an end, provide a five-minute signal to alert groups to finish their final discussion.

Make a Plan (5–10 minutes)

Close the discussion activity by encouraging students to think about healthy behaviors they already practice, and behaviors that need improvement.

Distribute pencils, index cards, and Worksheets. Ask students to complete section 1 of the Worksheet (Figure 1) to develop a plan to change one lifestyle behavior related to nutrition, physical activity or stress management to improve their heart health. Teachers may use the following script to aid students in developing their plans:

Research shows that when you make small specific goals you are more likely to achieve them. Your plan should be challenging, but achievable. *Choose the behavior* you want to change. It could be related to diet, physical activity, or stress management. Let's use physical activity as an example. *Be realistic.* Don't write something unrealistic like "I will go to the gym 5 days/week for 2 hours" when you know you don't have that kind of time. Here is a more realistic example: "I will start walking as exercise." *Be specific.* Don't write something vague like "I want to exercise more." Here is a specific example: "I will start walking 30 minutes per day, 5 days per week."

Ask students to write their goal on two index cards: one to keep as a reminder and one for the teacher to post, if desired, in the classroom as a prompt. Ask students to share their goals within their groups. Remind students that even small changes make a difference and encourage them to track of their progress by keeping a log of their goal activity. Finally, have students complete the "What Have You Learned?" section of the Worksheet (Figure 1).

ASSESSMENT TECHNIQUES

The *Group Content and Participation Checklist* can be used to evaluate the quality of students' comments and level of participation during the discussion activity and to assess Objectives 1 and 2. Teachers may rate the following items "all" "some" or "none" for each group: (1) students actively involved; (2) students state reasons why they agree or disagree with each statement; (3) students use personal knowledge or information from sources outside of the activity to support their opinions; (4) students use information provided in the activity to support their viewpoint; (5) students are respectful when engaged in a discussion with others with an opposing viewpoint; (6) students discuss the impact of healthy and unhealthy lifestyle behaviors on their health; (7) students discuss the barriers to improving healthy eating, physical activity and stress management; (8) students discuss the benefits of improving healthy eating, physical activity and stress management.

Teachers may assess Objective 3 by using the *Personal Health Plan Evaluation Checklist* with section 1 of each student's Worksheet (Figure 1). The checklist is used to determine the following: (1) Is the plan related to the selected type of behavior? (2) Is the plan realistic (achievable)? (3) Is the plan specific (does it have an observable goal)? (4) Does the student have a strategy to overcome potential barriers? (5) Did the student rate his/her level of confidence? In addition, teachers can determine what students learned by reviewing section 2 of the Worksheet.

Ask students to keep a log of their behavior change for two weeks or longer to monitor their progress toward their behavioral goals. Reinforce behavior change or assist with problem solving based on students' progress. If desired, assign students to report on whether they achieved their goals, what benefits they noticed, and what prevented them from or helped them in reaching their goals. Self-monitoring is an effective way to improve the likelihood of positive behavior change by increasing awareness.

In addition, teachers may choose to pair students to provide social support and encouragement to reach their goals. Students can report on the advantages/disadvantages of having a partner to support them in the attainment of their goals. Social support can aid in achieving lifestyle goals by reducing stress and being held accountable to someone else.

Acknowledgments

This project was supported by a Science Education Partnership Award (SEPA) Grant Number 5 R25 RR023279 from the National Center for Research Resources (NCRR), which is a component of the National Institutes of Health (NIH). The content is solely the responsibility of the authors and does not necessarily represent the official views of the NCRR or NIH.

REFERENCES

1. Daniels SR, Arnett DK, Eckel RH, Gidding SS, Hayman LL, Kumanyika S, et al. Overweight in children and adolescents: pathophysiology, consequences, prevention, and treatment. *Circulation*. 2005; 111(15):1999–2012. [PubMed: 15837955]
2. Kavey RW, Daniels SR, Lauer RM, Atkins DL, Hayman LL, Taubert K. American Heart Association guidelines for primary prevention of atherosclerotic cardiovascular disease beginning in childhood. *Circulation*. 2003; 107(11):1562–1566. [PubMed: 12654618]
3. Kimmons J, Gillespie C, Seymour J, Serdula M, Blanck HM. Fruit and vegetable intake among adolescents and adults in the United States: percentage meeting individualized recommendations. *Medscape J Med*. 2009; 11(1):26. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2654704/?tool=pmcentrez>. [PubMed: 19295947]
4. Eaton DK, Kann L, Kinchen S, Shanklin S, Flint KH, Hawkins J, et al. Youth risk behavior surveillance — United States, 2011. *MMWR Surveill Summ*. 2012; 61(4):1–162. [PubMed: 22673000]
5. American Psychological Association. [Accessed July 21, 2011] Stress in America. 2010. Available at: www.apa.org/news/press/releases/stress/national-report.pdf
6. Gidding SS. Cardiovascular risk factors in adolescents. *Curr Treat Options Cardiovasc Med*. 2006; 8(4):269–275. [PubMed: 17038266]
7. Schwarzer R. Modeling health behavior change: how to predict and modify the adoption and maintenance of health behaviors. *Appl Psychol*. 2008; 57(1):1–29.
8. Budd GM, Volpe SL. School-based obesity prevention: research, challenges, and recommendations. *J Sch Health*. 2006; 76(10):485–495. [PubMed: 17096821]
9. Kann L, Telljohann SK, Wooley SF. Health education: results from the school health policies and programs study 2006. *J Sch Health*. 2007; 77(8):408–434. [PubMed: 17908101]

10. US Department of Health and Human Services. Office of Disease Prevention and Health Promotion. [Accessed August 31, 2011] Healthy people 2020: topics and objectives. Available at: <http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx>

\$watermark-text

\$watermark-text

\$watermark-text

Section 1: Personal Health Plan

1. Choose the type of behavior that you would like to change. Circle your selection:

Diet Physical activity Stress Management

2. Write a realistic and specific goal for your selected behavior that you can achieve.
3. What barriers might prevent you from reaching this goal?
4. What strategies might you use to overcome these barriers?
5. How confident are you that you can achieve this goal? **Rate on scale below from 1** (you cannot do it at all) **to 5** (you are completely certain that you can reach this goal). Circle the appropriate number.

Cannot do at all	Slightly certain can do	Moderately certain can do	Fairly certain can do	Completely certain can do
1	2	3	4	5

Section 2: What Have You Learned?

1. How can healthy lifestyle behaviors affect your health? Give one example discussed in the activity.
2. How can unhealthy lifestyle behaviors affect your health? Give one example discussed in the activity.
3. State one benefit of each of the following:
- a. healthy eating
 - b. physical activity
 - c. managing your stress
4. List one barrier to the following:
- a. healthy eating
 - b. physical activity
 - c. managing your stress
5. What is one thing that you learned from the discussion activity that you can share with your family?
6. What topic, that was not discussed, do you wish had been covered in this activity?

Figure 1.
Heart Smart Discussion Activity Student Worksheet

Figure 2.
Setup for Heart Smart Discussion Activity

Table 1Heart Smart Discussion Activity: Content for *Discussion Statements*, *Let's Talk*, *Agree*, and *Disagree* Cards

	Discussion Statement	Agree	Disagree	Let's Talk
1	I don't have to worry about my health because I'm young.	Adults are more likely to die of heart attacks than teenagers.	One third of teenagers already have risk factors for heart disease, like poor fitness, high cholesterol, high blood pressure, and obesity.	What things do teenagers do now that affect their health when they are older? Can you have unhealthy habits and still be healthy?
2	I can eat whatever I want as long as I exercise.	You can maintain your weight if you burn off extra calories by doing exercise.	You still have to watch what you eat. Most people don't know how much they have to exercise to burn off calories. For example, a 150-lb. person has to walk for 1 hour to burn the calories in a candy bar.	How do teenagers decide what to eat? How do teenagers decide how much exercise they need?
3	Stress can seriously affect my health.	Being stressed makes you more likely to get sick and makes it harder for your body to recover. For example, teenagers with constant stress have higher blood pressure, which may lead to heart disease.	Managing stress well can reduce its negative effects on your health. For example, teenagers who meditate for 10-20 minutes per day have lower blood pressure and heart rate.	What happens to teenagers' bodies when they get stressed? Does stress affect your heart?
4	Eating a doughnut for breakfast is better than skipping breakfast.	Skipping breakfast can lead to obesity because people tend to overeat at the next meal and make poor food choices when hungry.	Eating food high in sugar or carbohydrates, like doughnuts, can lead to a preference for sweets that results in weight problems.	How does skipping breakfast affect the rest of the day? Why does it matter what you eat for breakfast?
5	Restaurants serve more food than I need to eat in one meal.	Most restaurant portions are 2 to 8 times bigger than recommended serving sizes.	Sometimes it is OK to eat a large meal as long as you watch what you eat the rest of the day.	What is a healthy amount of food to eat at one time? How do teenagers know when they have had enough to eat?
6	It's hard to eat healthy.	It takes more time to prepare healthy food at home than to order fast food, which is often high in fat and salt.	Teenagers can easily make healthy choices, like drinking water instead of soda, eating more fruit and vegetables, and controlling their portion sizes.	What does it mean to eat healthy? How can teenagers make healthy food choices away from home?
7	Only big lifestyle changes can improve heart health for teenagers.	A big change, like running for 1 hour every day, will lower weight.	A small change, like cutting out a can of regular soda a day, will lower your weight by almost 15 pounds a year and lower your risk of heart disease.	What is an example of a specific change teenagers could make to be healthier?
8	It is only worth exercising if you do it for at least 30 minutes at time.	Sports and aerobic exercise classes usually last longer than 30 minutes.	Exercising for 10 minutes, 3 times a day, is as good as exercising for 30 minutes at a time.	What is the minimum amount of time that teenagers should exercise at one time to be heart healthy?

	Discussion Statement	Agree	Disagree	Let's Talk
9	Computers, TVs, and cell phones make it easy to be unhealthy.	Activities, like watching TV, social networking, and playing video games, leave less time for a healthy, active lifestyle.	Playing the Wii™, exercising to videos, and listening to mp3 players during workouts help people to be active.	How do electronic gadgets influence physical activity and diet?
10	My lifestyle habits are not as important to my health as my family history of heart disease.	Teenagers who have a family history of heart disease, diabetes, or high blood pressure have a higher risk of developing heart disease.	Lifestyle habits, like eating fast food and being inactive, increase risk of diabetes, high blood pressure, and heart disease for everyone.	What lifestyle habits affect teenagers' health? How does family history affect teenagers' health?
11	Teenagers eat more when stressed, bored, or watching TV.	Television is a distraction. Teenagers often overeat when they are distracted.	Some teenagers eat less or skip meals when they are stressed or in a bad mood.	How do your eating habits change when you are stressed, bored, or watching TV?
12	It is better to eat six small meals per day than three large meals.	Eating several small meals a day controls hunger, maintains energy, and helps teenagers to stay active.	Even small meals can be high in calories, and teenagers are likely to overeat if they are eating several times a day.	How often do teenagers usually eat?