

NUTRITION PHYSIOLOGY LESSON PLAN

GRADE LEVEL(S): 6-8

TITLE: RE-THINK YOUR DRINK

NEXT GENERATION STANDARDS:

Examine how family health behaviors influence health of adolescents. (HE.7.C.2.1)

Select healthy alternatives over unhealthy alternatives when making a decision. (HE.7.B.3.6)

Analyze the relationship between healthy behaviors and personal health. (HE.8.C.1.1)

NATIONAL HEALTH STANDARDS:

Explain the importance of assuming responsibility for personal health behaviors.

Demonstrate healthy practices and behaviors that will maintain or improve the health of self and others.

Demonstrate behaviors to avoid or reduce health risks to self and others.

BACKGROUND:

A recent study published in Pediatrics and led by researchers at Columbia University Mailman School of Public Health found that sugar-sweetened beverages (SSBs) are an increasingly large part of children and teens' diets. Teens who consume SSBs, which include sodas, fruit drinks and punches, and sports drinks, drink an average of 356 calories per day, a significant increase from 10 years earlier. The findings suggest that reducing empty caloric intake by limiting these drinks may be a key strategy for promoting healthy eating and preventing excess weight gain.

OBJECTIVES: The student(s) will be able to

1. Understand the importance of limiting sugar in their diet.
2. Determine the amount of sugar in a beverage using the food label.
3. Compare the amount of sugar in various beverages.
4. Analyze which beverages are lower in sugar.

MATERIALS:

A. Visuals: Drinks poster and sugar test tubes

B. Supplies: Container of sugar, measuring teaspoons, clear cups, pencils

C. Demonstration beverages: Soda (12 oz can), Fruit drink (8 oz or 12 oz container), Iced tea (12 oz can or bottle), Milk (8 oz carton), Chocolate milk (8 oz carton), 100% orange juice (8 oz bottle), Sports drink and bottle of water

D. Handouts: *"How much sugar is in my soda?"*

E. Hand wipes

F. Reinforcement- ERN cups (or any other appropriate reinforcement)

G. Food tasting- *Fruit Fizzies* (frozen juice concentrate, club soda, large pitcher, stirring spoon, cups)
or Sub: Small boxes (6 - 8 oz) of 100% fruit juice

STUDENT-LEARNING SKILLS:

Explain that today we will be discussing healthy drinks. Students will learn why they need to be concerned with what types of beverages they consume. They will also find out how to determine much sugar is in some common beverages.

PROCEDURE:

1. Have each student state their favorite drink and if they think their drink is healthy or unhealthy. Record the results on the board.
2. Discuss facts and myths about sugar and health. Read the following statements about sugar and health. Have students guess if the statement is a fact or myth.

Sugar in large amounts can cause you to gain too much weight.

Sugar can contribute to cavities in the teeth.

Sugar causes diabetes

Sugar causes children to become hyperactive

Sugar causes heart attacks

3. Introduce topic of choosing healthy drinks. Explain that what students choose to drink is just as important as what they eat. Beverages can provide excess calories and sugar, which can lead to weight gain and cavities. We need to choose the right types of beverages to keep our bodies healthy.
4. Discuss how to tell the difference between a healthy drink and a less healthy drink by using the food label as a guide. Show students where to find the sugar content and serving size of the beverage on the food label. Explain that sugar is contained within many foods, including drinks. We may be eating and drinking more sugar than we think. Let's take a look at how much sugar is in each drink.
5. Explain to students that they are about to become "**nutrition experts**" in choosing healthy drinks.
Activity: How much sugar is in my soda?
Distribute the "*How much sugar is in my soda*" handout. Go over this together with the students as an example. Write on board: 4gm sugar= 1 teaspoon of sugar. Have students find the grams of sugar and the servings per container on the label. Multiply these numbers to get the total grams of sugar for the whole bottle or can. Then have the students divide that

number of grams of sugar by 4 to get number of teaspoons of sugar. Have a student volunteer help measure out the amount of sugar in the soda in front of the class.

6. Have the students do the same calculation with their own drinks. Distribute the empty demonstration bottles/cans to the students. Have the students work in groups to see if they can calculate how much sugar is in these other drinks.
7. Give each group a clear cup so they can measure out the teaspoons of sugar in their drink once they have finished the calculation. Remind the students that if they drink more than one bottle or can of the beverage, they will consume even more sugar.
8. Compare and discuss results with the rest of the class. Each group can designate a recorder who will record the information and a spokesperson who will report the information to the rest of the class.

Which drinks have the most sugar? Which have the least sugar? Explain that milk and 100% fruit juice do have sugar, but it is natural sugar. They also contain more vitamins and minerals, which makes them healthier choices. Soda, fruit drinks and sport drinks have artificial sugar added to them and usually have no vitamins or minerals. Explain that many of us consume much more sugar than we think especially if we are drinking more than one of these high sugar drinks each day. Ask students if they think they can switch to a healthier drink option such as, milk, 100% juice, water or flavored water.

STUDENT ASSESSMENT:

Student group presentation discussing findings will be assessed.

REFERENCES:

Food Stamp Nutrition Education (Drexel University)

VOCABULARY: vitamins, minerals, diabetes, sweeteners

HOME EXTENSION:



Which milk is healthier?

Whole Milk	
Serving Size 8 fl oz (240mL)	
Servings Per Container 2	
Amount Per Serving	
Calories 150	Calories from Fat 70
% Daily Value*	
Total Fat 8g	12%
Saturated Fat 5g	25%
Cholesterol 35mg	12%
Sodium 125mg	5%
Total Carbohydrate 12g	4%
Dietary Fiber 0g	0%
Sugars 11g	
Protein 8g	
Vitamin A 6% • Vitamin C 4%	
Calcium 30% • Iron 0% • Vitamin D 25%	
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

1. Which nutrients are the same for both types of milk?

2. Which nutrients are different?

3. Which type of milk do you think is healthier?

Nonfat Milk	
Serving Size 8 fl oz (240mL)	
Servings Per Container 2	
Amount Per Serving	
Calories 80	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Cholesterol less than 5mg	1%
Sodium 130mg	5%
Total Carbohydrate 12g	4%
Dietary Fiber 0g	0%
Sugars 11g	
Protein 8g	
Vitamin A 8% • Vitamin C 4%	
Calcium 30% • Iron 0% • Vitamin D 25%	
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

How much sugar is in my soda?

1. How do I find out how many total grams of sugar are in the bottle?

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ grams}$$

2. How do I find out how many teaspoons of sugar are in the bottle?

(HINT: 1 teaspoon of sugar = 4 grams)

$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ teaspoons of sugar}$$

Label: 20 oz cola

VERY LOW SODIUM		
Nutrition Facts	Amount/Serving	% DV*
Serv. Size	Total Fat 0g	0%
8 fl oz	Sodium 35mg	1%
(240 mL)	Total Carb 27g	9%
Servings 2.5	Sugars 27g	
Calories 100	Protein 0g	

*Percent Daily Values (DV) are based on a 2,000 calorie diet.

