

# Subtract the Sugar

## Discussion

### 1. What are added sugars?

- Sugar can occur naturally or be added to foods.
- Naturally occurring sugars can be found in fruit or milk. For example, the sweet taste you experience when eating watermelon comes from the natural sugar in the fruit. Sugar is not added to the watermelon to make it taste sweet.
- You might sometimes hear sugars referred to as complex carbohydrates. Complex carbohydrates are healthier than simple carbohydrates because complex carbohydrates take longer to break down in the body and create a consistent level of energy release. Fruits, vegetables, and grains are foods containing complex carbohydrates, while cookies, soda, and candies are foods containing simple carbohydrates.
- Added sugars, also called simple carbohydrates, are sugars and syrups added to foods or beverages when they are processed or prepared. For example, the sweet taste of soda pop is from added sugars. Sugar must be added to the soda to make it taste sweet.

### 2. What foods contain added sugars?

- sodas, energy drinks, sports drinks, and fruit drinks
- candies, cakes, and cookies
- pies and cobblers
- pastries and donuts
- dairy desserts
- yeast breads
- ketchup

### 3. Why is sugar added to foods?

- To enhance flavor, texture, and color.
- To preserve foods such as jams and jellies.
- To help bread to rise.

### 4. Is added sugar bad for me?

- Sugars are added to so many foods and beverages that you are often unaware you are even eating them. Added sugars can be unhealthy if you eat them in large amounts.
- Eating large amounts of added sugars provides extra calories that are low in nutritional value. Eating foods that contain a lot of added sugar versus nutritious foods can prevent the body from getting many of the important vitamins and minerals it needs.
- Extra calories from added sugars may also increase the risk of becoming overweight or obese.
- There are many risks and complications associated with obesity, such as increased risk of heart disease, high blood pressure, diabetes, breathing problems, and trouble sleeping.

## Learner Objectives

Participants will be able to:

- understand and define added sugars;
- identify food products with added sugars; and
- identify one goal or action to reduce added sugars in the diet.

## Materials

- Access to outside area to run around
- Dry erase board or chalkboard
- Pencils for participants



## 5. What are the limits for added sugar?

Age and Gender	Total Daily Calorie Needs	Daily Limit for Empty Calories	Daily Limit for Added Sugar Calories	Daily Limit for Total Grams of Added Sugar
Boys 9 to 13	1,800	160	80	20
Boys 14 to 18	2,200	265	132	33
Girls 9 to 13	1,600	120	60	15
Girls 14 to 18	1,800	160	80	20

The chart above shows the total calorie needs for girls and boys based on their age. It also shows the number of empty calories and grams of sugar that can be eaten based on age and gender. No more than 5 percent to 15 percent of daily calories should come from empty calories. Approximately half of the empty calories in your diet can come from added sugars and the other half can come from solid fats.

Try to decrease empty calorie intake from added sugars by choosing naturally sweet foods, such as fruits.



Calories that contain no nutrients are called empty calories. Added sugars and solid fats are empty calories because they provide the body with minimal to no nutrients.

## 6. Finding added sugars on a Nutrition Facts label.

You can find added sugars in the list of ingredients on food labels. Most of the time, food items that do not have a food ingredient label, such as fruits and vegetables, do not contain added sugars.

Find the added sugars in Lucky Charms cereal on the Lucky Charms food ingredient label and the list of added sugars provided on the resource sheet (page 6).

- In the ingredient section of the label, you can see three different sugars added to the cereal: sugar, dextrose, and corn syrup.

You also can determine the total grams of sugars in one serving of Lucky Charms by looking at the nutrition label.

- Underneath grams of carbohydrates, different types of carbohydrates, such as fiber, sugar, and other carbohydrates are listed. In this case, look at the line that says “sugars.” This line could be referring to naturally occurring sugars or added sugars. The only way to tell if a product has added sugars is by reading the ingredient list.
- One  $\frac{3}{4}$ -cup serving of Lucky Charms contains 11 grams of sugars. However, most people would probably eat two servings, so the grams of sugars would be 22 grams.

When reading nutrition facts labels, pay close attention to serving sizes. A bottle of soda may have two servings per container. In that case, you would have to double all of the nutrition information if you drank the whole bottle.

## 7. Making healthier choices to avoid too much added sugar.

- Try to eat only one or two items a day that contain added sugars.
- Eat apple wedges or watermelon slices instead of cookies and cakes.
- Drink water or low-fat milk with your meals instead of soda or fruit juice.
- Eat foods from all the different food groups.
- You don't have to eliminate foods with added sugars from your diet; you just have to remember not to consume too many of them.
- Exercise can't help you avoid sugar, but more exercise can help you burn extra calories.



## Lucky Charms

### Nutrition Facts

Serving Size 0.75 cup (27 g)	
Servings Per Container 25	
Amount Per Serving	
<b>Calories 110</b>	Calories from Fat 10
% Daily Value*	
<b>Total Fat 1 g</b>	1%
Saturated Fat 0 g	0%
Trans Fat 0 g	
<b>Cholesterol 0 mg</b>	0%
<b>Sodium 190 mg</b>	8%
<b>Potassium 45 mg</b>	1%
<b>Total Carbohydrate 22 g</b>	7%
Dietary Fiber 1 g	5%
Sugars 11 g	
<b>Protein 2 g</b>	
Vitamin A	10%
Vitamin C	10%
Calcium	10%
Iron	25%
Copper	—
Folic Acid	—
Iodine	—
Magnesium	2%
Niacin	25%
Phosphorus	4%
Riboflavin	25%
Thiamin	25%
Vitamin B12	25%
Vitamin B6	25%
Vitamin D	10%
Vitamin E	—
Zinc	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.

### Ingredients:

Whole grain oats, marshmallows (sugar, modified corn starch, corn syrup, dextrose, gelatin, calcium carbonate, Yellow 5 & 6, Blue 1, Red 40, artificial flavor), sugar, oat flour, corn syrup, corn starch, salt, trisodium phosphate, color added, natural and artificial flavor. Vitamin E (mixed tocopherols) added to preserve freshness. Vitamins and Minerals: calcium carbonate, zinc and iron (mineral nutrients), vitamin C (sodium ascorbate), a B vitamin (niacinamide), vitamin B6 (pyridoxine hydrochloride), vitamin B2 (riboflavin), vitamin B1 (thiamin mononitrate), vitamin A (palmitate), a B vitamin (folic acid), vitamin B12, vitamin D3.

## Activity

### Red Rover, Red Rover

- Separate into two teams of five or six players; if playing with a large group, separate into four teams and have a play-off between teams at the end.
- Each of the two teams will line up holding hands. The teams must be 30 feet apart and facing one another.
- The first team will call out, “Red Rover, Red Rover, send (player on opposing team) on over.” The selected player from the second team must run over to the first team and break the link of hands between two players. If the player breaks the link of hands, he or she can take back a player from the first team to join the second team. If the player does not break the link of hands, then he or she must join the first team. This process is repeated until one team has all the players.



### Rules:

- Hands must be linked at the waist and cannot be held above the waist when an opposing player is trying to break through.
- Only link hands! Players cannot hold onto someone's waist or arm. Players also cannot lock arms at the elbows.
- Players must not stick their hands out at a running opponent; hands must remain at the player's side.
- Players can be disqualified or removed from the game if they do not follow these rules.

## Nutrition Twist

- If a player breaks through the link of hands when running over, he or she must answer a question (see below) before the player can return with an opponent to his or her home team. If the question is answered incorrectly, the player can return to his or her home team, but may not bring back an opposing player.
- If a player does not break through the link of hands on the opposing team, the opposing team must answer a question before the player who did not break through can join their team. If the team answers the question incorrectly, the player can return to his or her home team.
- For the question: Ask players to name foods with added sugars. They must name specific foods; for example, a player cannot say cookies, he or she must say Oreos or chocolate chip cookies.
- Examples of foods with added sugars include any item from the following categories:
  - sodas, energy drinks, sports drinks, and fruit drinks
  - candies, cakes, and cookies
  - pies and cobblers
  - pastries and donuts
  - dairy desserts
  - yeast breads
  - ketchup



## Different Names of Added Sugars

- anhydrous dextrose
- brown sugar
- confectioner's powdered sugar
- white granulated sugar
- corn syrup
- corn syrup solids
- dextrose
- fructose
- high-fructose corn syrup (hfcs)
- honey
- invert sugar
- liquid sugar
- malt syrup
- maltose
- maple syrup
- molasses
- nectars
- pancake syrup
- raw sugar
- sucrose
- sugar



## Snack Ideas Low in Added Sugars

- part-skim mozzarella cheese sticks
- unsalted nuts
- sunflower seeds
- fruits
- vegetables
- apple slices and peanut butter
- fruit slices dipped in low fat yogurt
- dried fruit without added sugars
- 100% fruit juice mixed with sparkling water



# Worksheet

1. What are added sugars?

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2. List three foods with added sugars.

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3. What are two problems caused by eating too much added sugar?

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4. Circle the after-school snacks with no added sugars.

Gatorade	Water	Fat-free milk
Carrot sticks	Twinkie	Banana
Ranch dipping sauce	Raisins	Celery sticks

Use the Food Ingredient Label at right to answer questions 5 and 6.

5. What are the added sugars in chocolate chip cookie dough ice cream listed in the ingredients list to the right? You can refer to the List of Added Sugars on page 6.

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6. Mike is 14 years old and ate 1½ cups of chocolate chip cookie dough ice cream for an after-school snack on Tuesday. How many total grams of sugar did he eat? Using the Daily Limit Chart on page 2, did Mike overeat his limit for added sugars on Tuesday?

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## Ben and Jerry's Chocolate Chip Cookie Dough Ice Cream

One ½-cup serving has 28 grams of sugars.

Ingredients: cream, skim milk, liquid sugar (sugar, water), water, wheat flour, sugar, brown sugar, egg yolks, butter (cream, salt), eggs, expeller pressed soybean oil, chocolate liquor, coconut oil, vanilla extract, cocoa (processed with alkali), cocoa, salt, molasses, guar gum, natural flavor, cocoa butter, butteroil, soy lecithin, carrageenan

**Kansas School Wellness Policy Model Guideline — Nutrition Education**

**Classroom: Middle-High School**

Requirements achieved in this lesson:	Basic	Advanced	Exemplary
<b>Basic, Advanced, and Exemplary</b>	At least 25 percent of nutrition education involves hands-on activities that engage students in enjoyable, developmentally appropriate, culturally relevant, participatory activities.	At least 50 percent of nutrition education instruction involves hands-on activities that engage students in enjoyable, developmentally appropriate, culturally relevant, participatory activities.	
<b>Topics</b>	Proper hand washing Basic food safety		

## References

Ben and Jerry's Chocolate Chip Cookie Dough nutrition facts: [http://www.benjerry.com/flavors/our-flavors#product\\_id=610](http://www.benjerry.com/flavors/our-flavors#product_id=610)  
 Centers for Disease Control and Prevention, Food and nutrition: Retrieved from <http://www.cdc.gov/bam/nutrition/index.html>  
 General Mills Inc. Lucky Charms: <http://www.generalmills.com/Brands/Cereals/LuckyCharms.aspx>  
 Mayo Clinic, Added sugars: Don't get sabotaged by sweeteners: <http://www.mayoclinic.com/health/added-sugar/MY00845>  
 Teen Help, Teen Obesity: <http://www.teenhelp.com/teen-health/teen-obesity.html>  
 United State Department of Agriculture, What are solid fats?: <http://www.choosemyplate.gov/weight-management-calories/calories/added-sugars.html>

## Answer Key

- Added sugars are sugars and syrups that are added to foods or beverages when they are processed or prepared.
- Soda, sports drinks, energy drinks, fruit drinks, candies, cakes, and cookies, pies and cobblers, pastries and donuts, dairy desserts, and yeast breads. Specific answers, such as Coke or Sprite, are also correct.
- Eating too much added sugar can cause one to become overweight or obese. Added sugars can make one eat too many calories, eat foods low in nutritional value, or not consume enough vitamins and minerals.
- fat-free milk, banana, celery sticks, carrot sticks, water, and raisins
- liquid sugar, sugar, brown sugar, and molasses
- Mike ate 84 grams of sugar. One serving of ice cream is  $\frac{1}{2}$  cup, therefore  $1\frac{1}{2}$  cups of ice cream is three servings.  
 $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} = \frac{3}{2} = 1\frac{1}{2}$   
 $3 \text{ servings of ice cream} \times 28 \text{ grams of sugar} = 84 \text{ grams of sugar}$   
 For Mike's age, he is allowed 33 grams of added sugar each day. He ate 84 grams of added sugar. Mike went over his added sugar limit.

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