

# Think Your Drink & Hydrating for Fitness

*Create My Plate Teen for Grades 6-8*

## MATERIALS NEEDED

Funnel, sugars, drink containers, decode your drink worksheet, snack ingredients, physical activity dice

## OVERVIEW & PURPOSE

Students will learn about the importance of dairy for building strong bones, the sugar content of various drinks, and choosing appropriate drinks for physical activity.

## Utah Health Education Standards 2; Objectives 1-3

1. Objective 1: Describe the components and benefits of proper nutrition.
2. Objective 2: Analyze how physical activity benefits overall health.
3. Objective 3: Recognize the importance of a healthy body image and develop appropriate weight management behaviors.

## SNAP-Ed Message

1. See what happens when they don't get enough calcium (don't build strong bones for a healthy future).
2. Identify how much dairy is needed per day and what foods are included in the dairy group.
3. Identify foods they eat that are in the dairy group.
4. Compare and understand the amounts of sugar in soda and identify the health benefits of milk versus soda.

## BACKGROUND INFORMATION (not to be taught as part of the lesson)

You may have a significant number of students who don't consume dairy: allergies, intolerances, taste preferences, animal welfare concerns—all valid, but encourage the need to incorporate dairy alternatives, soy especially, but *make sure they are fortified*. Adolescence is a critical time period for accruing bone mass, calcium and vitamin D are essential for strong bones.

### ***The sugar demonstration will require a bit of prep-work:***

Gather an assortment (5-10) of CLEAR beverage containers in various sizes: soda bottles, sports drinks, juice bottles, gas station cups, milkshake/blended icy beverages, etc. **The important thing is that they know what the drink is supposed to be and that there's a variety of products with added and naturally occurring sugars.** Could use a plastic sandwich bag to hold how much sugar is in a can of soda. **Include a sports drink because it will connect to the physical activity portion of the lesson.**

This demonstration is when you will introduce the concept of added sugars versus naturally occurring sugars to the students. To do this, you will need to use some food coloring to dye granulated sugar, the amount you need will depend on the drinks you chose. You could dye either the natural sugars portion or the added sugars.

Instructions for dyeing sugar can be found here: <https://www.tasteofhome.com/recipes/diy-colored-sugar/>

4g of sugar = 1 teaspoon

## TEACHING THE LESSON

***Anchor (2-5 minutes):*** Writing prompt and discussion about drinks.

Have the students take out a sheet of paper to write on: Tell them to take a minute to write down what they remember drinking.

- Prompt them to think back over the last 24 hours and try to remember what they drank.
- What did you drink with meals, with snacks and throughout the day.
- Did you have a soda? Was it in a cup or a can?

- Did you have milk or water?
- Did you drink any juice or sports drinks?

Really pick your brain and write down as much as you can remember. (2-5 minutes)

When they're finished, discuss the prompt.

- Was it hard to remember what you had to drink? Why or why not?

It's easy to forget what we drink throughout the day but it can really add up, whether that's with healthy nutrients we need or extra sugars that we don't. Today we're going to be talking about the importance of what we drink and how that can impact our health.

**Add (12 minutes):** *Sugar demonstration, importance of dairy*

With the sugars and funnel, use teaspoons and have a few kids come up to the front of class and take turns measuring the amount of sugar present into each container to show their peers. You could also have a few drink examples pre-measured to save time. Leave the containers with the sugar present throughout the rest of the class.

Follow-up questions:

- What happens if you have a bigger serving or more than one drink?
- Was it surprising to see how much sugar is in these?
- What do you think the difference between added and naturally occurring sugars is? (There's no wrong/right answer here, just let them discuss)
- Why is there a limit for added sugars in our diets? (because it adds calories, typically without any real nutritive value).

Sugar sweetened beverages like these are the main source of *added* sugar for Americans. Drinks and foods with lots of added sugar tend to also be high in calories, but low in other nutrients. Who knows what a calorie is and can explain it to the class?

A calorie is how we measure how much energy we get from food. People who are active need more calories than less active people. What happens if we're consuming a lot of calories from food that doesn't have other nutrients?

- We won't get all the vitamins, minerals, or other food groups we need. We might end up eating or drinking more calories than our bodies really need.

The majority of the calories you eat and drink should come from the food groups on MyPlate to make sure that you're getting the right combination of nutrients your body needs to grow.

Added sugars are different from those that naturally occur in food, like lactose, which is the type of natural sugar present in milk, which has other important nutrients in it. 100% fruit juice also has naturally occurring sugars from the fruit used to make it.

The reason that dairy is part of MyPlate is because dairy products contain valuable vitamins and minerals like calcium and vitamin D. Calcium and vitamin D are important at all ages, but for youth especially. Right now, you may be having growth-s spurts as your body is working hard to reach your adult height! But your body also has to build the strong bones to support your new height.

On average, 11-14 year olds gain nearly **40% of the minerals** needed to make your bones strong for the rest of your life because your bones don't grow very much after your teenage years. In fact, your body will start taking calcium from your bones if you don't get enough of it.

Missing out on dairy and foods high in calcium doesn't just mean that you're not getting valuable nutrients today, it means your bones could be weaker as you get older and put you at risk for osteoporosis.

***Apply (5 minutes): Decode Your Drink worksheet + discussion***

Now that we've seen how much sugar is in some drinks and know the benefits of dairy, we're going to practice reading labels to see how these drinks do or don't fit into our everyday lives. On this worksheet, you'll see nutrition labels from common drinks. With a partner, go through the examples and see if you can decode the drinks!

You're going to practice calculating how much of your daily allowance of *added* sugars is in each drink, as well as how many servings are in each container.

**Away (7 minutes):** Worksheet discussion + other dairy foods

Bring class back together after they've finished their worksheets for teaching material about dairy and making smart beverage choices.

- How do these drinks fit into your everyday life? Do they fit?
- Were you surprised by anything?
- Which drink had the most added sugars?

We know that dairy is an important source of vitamins and calcium, but dairy isn't just in drinks though, is it? The dairy group also includes other dairy foods.

What kinds of other dairy foods can you think of (or what is your favorite dairy food)? So, the good news is that there are lots of ways to make sure you're getting the recommended 3 cups of dairy everyday.

Give examples of servings: 4 oz of yogurt is half a serving, 2 slices of hard cheese is a serving, etc.

There are also other benefits of dairy foods:

- Protein in cheese and milk
- Dairy products also make tasty additions to other food groups (cheese on vegetables or whole grain sandwiches, yogurt with fruit and granola, cereal and milk)

Transition to physical activity portion of the lesson

**PHYSICAL ACTIVITY (15 minutes): Hydrating for Fitness**

*Warm up (2 minutes or more if time allows):* use the physical activity dice to get the students moving for a few minutes, you can let 2 students roll the dice each time you finish a sequence.

**Anchor (5 minutes):** Connect back to beginning of lesson

We just learned about how important our drink choices are to our health, and we've learned about the importance of exercise. How much exercise should we get each day? (60 minutes)

Does anyone know what types of exercise are important for building strong bones?

- Strength training, like lifting weights
- Load-bearing and high impact activities like running, hiking, playing tennis or skiing also helps build strong bones
- These exercises help build strong bones because your bones have to support the weight of your body and work against gravity to do them.
- Some exercises, like biking, are great for building muscle and cardiorespiratory health aren't as beneficial for bone mass but are still important forms of exercise!

What do you normally drink during and after you exercise? What about after you play sports or after practice? (water, sports drinks, protein shakes, juice, etc.)

If students mention sports drinks, this could be a good time to ask them why they make that choice, does advertising play a role in their choices? (use of athletes, "replacing what you lost" during activity)

***Add and Apply (5 minutes):*** Looking at decode your drink worksheet and sugar demo, application to drink choices while active

What kind of things do our bodies need before, during and after exercising? What happens when we exercise? Let them answer.

- We sweat and lose water
- We burn energy from the food we've eaten and the energy stored in our bodies as fat
- Carbs (sugars) for fuel
- Water for hydration
- Protein for muscle recovery
- Maybe some salts if we've worked out really intensely, worked out for long periods or it's hot outside

Let's look at our worksheets and the results of our sugar experiment again. (bring milk and sports drink forward, having a water bottle would be a nice addition)

Do any of the drinks on your worksheet have all 4 of those things? Milk does. Reduced fat milk is about 90% water, it has naturally occurring sugar in the form of lactose, 8 grams of protein and even a little bit of natural salts. Now that's not to say you need to drink milk while you're exercising, but it is a good choice afterwards. (Protein shakes/powders tend to be high in added sugars.)

Our bodies are pretty good at storing energy but we tend to lose water pretty quickly, mainly through sweating when we're exercising. Sweat does have some salts and sugars in it, but it is primarily made up of water.

**Away (3 minutes):** *focus on water, how to rethink drinks*

If sweat is mainly water and our bodies are good at storing energy, what type of drink do you think is the best choice to drink throughout the day and for exercising? (Water)

Sports drinks can taste pretty good and might seem to be the best choice for exercise, but as we've seen, they contain a lot of added sugar. They're fine in moderation and if you've been exercising for prolonged periods or in the heat.

Now that you know about the importance of our drink choices, including what we drink before, during and after exercising, what are some ways you can rethink your drinks?

- Carry a reusable water bottle
- Drink water throughout the day
- Pay attention to serving sizes
- Try milk before or after a workout
- Save sports drinks for really intense exercise
- Save other sugary beverages for special occasions

## HEALTHY SNACK

Dairy-based snack, good time to show appropriate servings, include fortified plant-based dairy options.

## SOURCES

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