

FRUIT JUICES AND SHAKES

Target Audience:

Adults

High School Teenagers

Topic Areas:

How to use more 100% fruit juice without really trying

Reading Food Labels

Objectives:

- Choose 100% juice over juice drinks and cocktails and non-juice drinks
- Read labels to choose foods that are 100% fruit juice

FRUIT JUICES AND SHAKES

Lesson Creators:

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Funding For The Development Of This Lesson Was Provided By:

Fiscal Year 2005, 2009, 2010m 2011, 2012 and 2013 SNAP-ED (Supplemental Nutrition Assistance Program-Education, Formerly New Jersey Food Stamp Nutrition Education Program)

Purpose:

To get participants to choose fruit juices that can be used as servings of fruit or that best suits their families' needs and to use ripe fruit to make healthy shakes.

What the Nutrition Educator Needs to Know So that Participants' Questions Can Be Answered:

Vegetable and fruit juices are a good source of healthy nutrients. Most vegetables and fruits have vitamins and minerals like folate or folic acid, magnesium, potassium, dietary fiber, and vitamins A, C, and K. and good for you antioxidants too. Juice can have a lot of these healthy things but most of the time juice does not have dietary fiber and can have twice as much sugar as whole fruit.¹ Dietary fiber comes from whole veggies and fruits. Fiber will help you to feel full and be less hungry. It also helps keep food moving through your body.² A diet that has a lot of dietary fiber may help lower the risk of many diseases like heart disease, obesity, and type 2 diabetes. The Dietary Guidelines for Americans 2010 says that there research says that increased intake of 100% fruit juice may cause weight gain in children who are already overweight or obese.²

Let's talk about fruit. We will talk about veggies in a little while. The vitamins and minerals in whole fruit and fruit juices like vitamin A and vitamin C help build strong bones, heal cuts and bruises, and keep your eyes and skin healthy.^{3, 4} See the chart below to find out how much fruit MyPlate tells you to have each day.

Drinking 100% fruit juice is a good way to get one fruit serving for the day. One cup of 100% fruit juice is equal to one cup from the fruit group. But remember

fruit juice does not have dietary fiber and can have twice as much sugar as whole fruit. Whole fruit and veggies are best. Find out more about fruit juice at MyPlate.gov (<http://www.choosemyplate.gov/preschoolers/daily-food-plans/about-beverages.html>)

MyPlate Fruit Servings each Day ²:

Children	2-3 years old	1 cup
	4-8 years old	1 cup to 1 ½ cups
Girls	9-18 years old	1 ½ cups
Boys	9-13 years old	1 ½ cups
	14-30 years old	2 cups
Women	19-30 years old	2 cups
	31-50+ years old	1 ½ cups
	51+ years old	1 ½ cups
Men	19-50+ years old	2 cups

However, the American Association of Pediatric Physicians makes the following recommendations for how much fruit juice is best for your child each day ⁵:

Age Group	Amount Daily
Infants six months and under	No Juice
1-6 years old	4 – 6 ounces per day
7- 18 years old	8-12 ounces per day

You can eat whole fruit that is fresh, frozen or canned instead of juice. All these kinds of whole fruit have fiber. A small amount of dried whole fruit can work too, but dried fruit will have a lot more sugar than fresh fruit. Whole fruit can take longer to eat than drinking juice. This can help you eat slowly, enjoy your snack, and avoid extra Calories from juice. For example, 8 oz of orange juice has 112 Calories, and there are just 86 Calories in a large orange and 1 cup of apple juice has 114 but a medium apple has only 95 .⁶ If you choose to have fruit juice be sure it is 100% juice. Juice that is not 100% juice can be called a juice drink or juice cocktail. Also juice drinks with the letters *ade* after them are not 100% juice. Juice drinks are things like Hi-C and Hawaiian Punch or Cranberry Cocktail Lemonade and Orangeade. Juice drinks and juice cocktails have added vitamins and minerals so you might get all the same vitamins and minerals as you do from whole fruit, but not all the benefits of the whole fruit like dietary fiber which can help you feel more full. You also will not get as much of the phytochemicals and antioxidants that help you stay healthy. A lot of phytochemicals are in the skin of veggies and fruit and also get removed when the fruits get made into juice. Juice

drinks also have added sugars. They may also have some sodium. To make the best choice for you and your family use the nutrition facts label to make sure what you buy is 100% juice. ⁷ Labels can trick you so take your time when you chose your juice to make sure you have 100% juice. Look for the words 100% juice as one of the first 3 ingredients.

If the bottle says 100% juice it can be either fresh or from concentrate. From concentrate means that right after the fruit or veggie is picked water is taken out of it and it is frozen. Then water is put back into the juice before you buy it. This is done the most with fruit juice. The nutrients are the same for both fresh and from concentrate.

When fruit is chopped or cut to make juice it is easier for germs to grow. When choosing 100% juice make sure it is pasteurized. This means that it is heated to kill the germs. When you choose pasteurized juices you know your juice is safe to drink. Also remember if you are cutting up any fruit to serve be careful and follow good food safety rules by washing your hands, washing the fruit and making sure you are cutting the fruit on a clean surface. It is best to use a cutting board that has only been used for vegetables and fruits and not meat. ⁸

You may find it easy to offer a child juice, but remember 100% fruit juice can be higher in Calories and sugar because there is a lot of natural sugar in fruit and without the flesh of fresh fruit the sugar is more concentrated. Children drinking a lot of juice each day may get more Calories and sugar than they need. Also don't forget, it is easy to drink too much juice and be too full at meal times. If they are too full at meal time then they will eat less of the foods they need to grow. If your child is thirsty, show your child other things to drink like water or low-fat milk. ⁷

Here is a summary of facts about buying and drinking fruit juice:

- Make sure the labels on the front and back say “100% juice”. Juices that are not 100% have names like “drink”, “cocktail”, “beverage” or “punch” in the name.
- Drinking too much juice can cause your child to have too many Calories in place of healthy foods. Also, kids should brush their teeth after drinking fruit juice. The sugar found in juice sticks to teeth and can lead to cavities. It can also give some kids diarrhea.
- It is best not to use juice to quench thirst. Water is best for that, especially if your child has been playing in the hot sun for two or three hours.

- Make sure you serve only pasteurized juice to your child. This way the germs that are found on fruits are killed and the juice is safe to drink.
- Make a fun fruit soda drink with less Calories. Mix soda water or seltzer with fruit juice.

You might not like to buy a lot of fresh whole fruit because it goes bad before you get a chance to eat it. But, if your fruit gets too ripe, do not throw it away. You can use it in recipes and save money. You can:

- Cut out any bruises and cook fruit with spices.
- Use over ripe veggies and fruit when you bake bread like banana or carrot bread.
- Blend fruit with yogurt to make smoothies
- Use on top of dessert.

Now we are going to talk about vegetables and vegetable juice. Veggies have a lot of the same good things whole fruits do. Veggies are important sources of things like potassium, fiber, vitamin A, vitamin C and folate which can also be called folic acid, Diets that have a lot of veggies can help to you keep your blood pressure down, lower cholesterol levels and lower the risk of heart disease.⁹ Vegetable juice has a lot of the nutrients from the whole veggie but like fruit juice it does not have dietary fiber and may have less phytochemicals. It is best to get your veggie servings each day from whole veggies.

Find what MyPlate tells you to eat each day in this chart ²:

Children	2-3 years old	1 cup
	4-8 years old	1 ½ cups
Girls	9-13 years old	2 cups
	14-18 years old	2 ½ cups
Boys	9-13 years old	2 ½ cups
	14-18 years old	3 cups
Women	19-30 years old	2 ½ cups
	31-50 years old	2 ½ cups
	51+ years old	2 cups
Men	19-30 years old	3 cups
	31-50 years old	3 cups
	51+ years old	2 ½ cups

Sweeteners

As we said, some juices may have a lot of added sugar and sometimes artificial sweeteners. Juices that are not sweet like lemon or cranberry usually have the most added sugar like in lemonade and cranberry juice or cocktail. To find out if your drink has added sugar, look at the ingredients list on the package label. If high fructose corn syrup or sugar is one of the first 3 or 4 ingredients than the drink is most likely high in sweeteners. High-fructose corn syrup on a label is an ingredient that is a big word for added sugar in your juice. Juices with added sugar are mostly empty Calories. Empty Calories means this is a food that is high in Calories but low in nutrients.

Some fruit drinks use artificial sweeteners instead of added sugars to lower the amount of Calories in the drink. Artificial sweeteners are man-made sugars from chemicals that are often sweeter than sugar. While the FDA has said they are safe for everyone, there are not too many studies that have been done with children. The Institute of Medicine (IOM) has stated that artificially sweetened drinks can cause children to drink less milk and 100% juice at meals. Also the IOM and the American Association of Pediatricians feel that we need more research to know if artificial sweeteners are safe if they are used for many years starting in childhood.¹⁰

Common artificial sweetener names you may have seen:

- Equal or Nutrasweet
- Aspartame
- Sunett or SweetOne
- Acesulfame potassium
- Splenda
- Sucralose
- Sweet' N Low
- Saccharin
- Sucaryl

So drink juice, not too much and make sure it is 100% juice with no added sugars. Fresh whole fruits and veggies are the best way to get your nutrients.

Here are some fun ways to enjoy whole fruit:

- Fruit pops: For a nutritious “fruit pop,” freeze pureed fruit or juice in ice cube trays or paper cups with wooden sticks.
- Frozen bananas: Push a wooden stick into half of a peeled banana. Roll in yogurt or a light coating of chocolate syrup, then in crunchy cornflakes. Wrap; freeze.

- Freeze grapes, blueberries or any other berries for a frozen treat.

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For Additional Reading:

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FRUIT JUICES AND SHAKES

Main Themes:

Nutrition & Diet

Cooking & Food Storage

Shopping

Budgeting

Safety & Sanitation

Materials Needed:

Chalkboard and chalk or flipchart and markers

6-8 juice bottles/cans/labels – make sure to have orange juice, apple or grape juice, cranberry juice, Hi-C or Hawaiian Punch, a juice blend, and a powdered juice mix

2 bananas, peeled and frozen

1 can pineapple rings or chunks in juice

12 strawberries (if not in season, buy frozen strawberries)

8 oz. low fat frozen yogurt any flavor

1 c. 100% natural fruit juice – pineapple, orange, or a blend

Sharp knife

Cutting board

Blender

Small paper cups, one per participant

Recipes: Banana-strawberry and Creamy Pineapple Strawberry Smoothies

Handout: “Smoothies – Done in a Whirl”

Time the Activity is Expected to Take:

Activity 1: 15-20 minutes

Activity 2: 30 minutes

Next Week’s Goals: 5 minutes

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Lesson Plan:

Before you begin - Activity 1: Fruit Juice or Sugar Water? (15-20 minutes)

1. Ask participants:
 - What do you drink or give to your children when they are thirsty?
 - How many servings of fruit do you eat per day? How many servings does the body need in a balanced diet?
 - Do you ever drink fruit juice as a serving of fruit?
 - What type of juices do you buy and use at home?
 - What flavor of juice do you believe is the healthiest?Briefly discuss what makes them choose one type of juice over another.
2. Ask the participants if there is anything they look for on the label when choosing juices. If they use juice to count as a serving of fruit, they should look for the following:
 - 100% fruit juice
 - Good source of vitamin C
 - No added sugars

It is better if one of the first 3 ingredients are **not** apple, pear or grape juice because they are higher in sugar than other 100% fruit juice.

Sugars can have many names. Tell participants that some names to look for are: (You can write this on a flip chart or make a poster and bring it with you to class).

- Brown sugar
- Corn sweetener
- High-fructose corn syrup
- Invert sugar
- Dextrose
- Fructose
- Glucose
- Honey
- Maltose
- Sucrose
- Corn syrup
- Lactose

- Malt Syrup
- Molasses
- Raw Sugar
- Syrup

Sometimes juice cocktails and drinks are sweetened with juice concentrate from apple or grape juice. This increases the sugar in the drink also because these juices are higher in sugar.

3. Write

- 100% fruit juice
- Good source of vitamin C
- No added sugars

on the board or flipchart. Juices that have these things are best because they also have other nutrients from the fruit that help the body.

4. 100% fruit juices are better compared to soda or fruit flavored drinks and teas because they come from real fruit and have no added sugar. Juices with artificial flavors or sweeteners are not as good for you and have a lot of empty Calories. If you offer your family fruit *drinks, cocktails or ades*, remember that they do not count as a serving of fruit, even if they are vitamin fortified.
5. Display the bottles or cans of fruit juice that you brought. Hand them out to the participants. Make sure each participant has a bottle or can to look at. Group the participants in twos or threes if necessary.
6. Ask them to look at their bottle or can and see if it has any of the things on the flip chart. Have each person or group tell the class if their juice is a good choice to drink as a serving of fruit for the day.
7. Ask participants which one of the bottles or cans of juice they would drink or serve to their families as a serving of fruit. Ask them if the things on the label in any of the juices surprised them. Ask them why they were surprised and discuss this.

Activity 2: Smooth Moves (30 minutes)

1. Ask how many participants have ever bought fruit or veggies and have had to throw them away because they went bad before they could eat them. If you have brought some overripe fresh fruit, set it out for participants to see. Encourage participants to suggest some ways to use the fruit or veggie before it spoils. Briefly discuss some ways to use overripe fruit.

Here are some ideas you can share with the class:

- Cut out any bruises and cook fruit with spices.
 - Put over ripe fruit or veggies into bread like banana or carrot bread.
 - Blend fruit with yogurt to make smoothies.
 - Use on top of dessert.
2. If it hasn't been mentioned, suggest that they could combine old fruit in a blender to make a fruit smoothie shake. Inform participants that it is easy and can be done quickly. Explain that one smoothie can give them all the fruit that MyPlate tells them to have each day if they include enough veggies or fruits in their ingredients.
 3. You can suggest that if your participants have overripe fruit at home in addition to the suggestions they discussed in number 1. If they haven't mentioned it, you can tell them that they can wash the fruit and cut off any bruises. They can then freeze the fruit and use it to thicken a smoothie. They can also use the frozen fruit later in another time in a recipe or for dessert. Remind them that they can also use canned or pre-frozen fruit instead of fresh fruit.
 4. Break the class up into 2 groups. Give each group a recipe and ingredients to prepare a smoothie. Share the blender between the two groups. When they are done, pour the smoothies into small cups for the whole class to sample. Keep track of how long it took to make each recipe. Inform participants of the length of time and remind them that it did not take long to make a nutritious snack or a healthy breakfast that could be eaten on the go.
 5. Pass out the "Smoothies: Done in a Whirl" handout.
 6. Have the participants circle ingredients from each category that they would try at home with fruit. Remind them that this is a good way to use overripe fruit. Have participants share their ideas with the rest of the group. Discuss the different possibilities and ways to improve on the recipes. Ask the participants if and what time of day they would try making smoothies.

Next Week's Goals: (5 minutes)

1. Ask the participants to name one thing that they learned in today's class that they would use. Make sure that each learning objective is mentioned, and if not, be sure to re-state that objective. Ask them to choose a related goal to work on during the week. Let them know that they will be sharing their personal experiences during next class.
2. Invite comments, suggestions, or questions.
3. Thank the participants for coming and tell them what the class will be about in the next lesson.

For the Teacher: "What makes this lesson behaviorally focused?"

- Activity 1 allows participants to practice looking at juice labels in order to choose fruit juices that they like that would count as a serving of fruit. Participants gain knowledge that helps them make healthy choices when choosing beverages for themselves and their families.
- Activity 2 helps participants choose fruits they like and already buy to combine in a recipe that they would be willing to make again at home. Participants talk about combinations of ingredients to add to new recipes that they would like and therefore be more likely to use at home.
- In Next Week's Goals, the participants are invited to name one thing that they learned during the class that they will use. Through this activity and by reviewing the objectives again, the participants are reminded of the many topics discussed during the lesson. They will choose the behaviors that they will want to work on during the coming week.



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Smoothie Recipes

Strawberry-Banana*

6 Strawberries, cleaned
1 Banana, peeled & frozen
1 c. Pineapple or Orange
Juice
Ice cubes, if desired

Creamy Pineapple-Strawberry*

6 Strawberries, cleaned
1 Banana, peeled & frozen
4 Pineapple rings, canned in juice
8 oz. Low-fat frozen yogurt, any
flavor
1 c. Pineapple juice (you can use
the juice from the can)

- 1) Put all ingredients in a blender.
- 2) Blend well for 30 seconds to 1 minute.
- 3) Serve right away or chill until ready for use.

*For extra nutrition:

- Use Orange juice (the calcium fortified kind adds more nutrition) in both recipes instead of pineapple juice.
- Add 2-T. dry non-fat milk powder and/or 1T. wheat germ to each recipe.

9/28/17



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Smoothies: Done in a Whirl

Circle 1 liquid and 1 thickener. Circle as many fruits as you like.

Liquid (1cup)

Milk *
Orange Juice **
Pineapple Juice
Or any 100% juice
you like



Thickener (6-8 oz.)

Flavored yogurt*
1 frozen Banana
Low-fat ice cream*
Sherbet
Ice Cubes (4-5)
Low Fat Frozen
yogurt *

<p>C = canned F = fresh FR = frozen</p>

Peaches (C, F, FR)
Pineapple (C, F, FR))
Cantaloupe (F) **
Honeydew (F) **
Strawberry(F, FR)* *
Kiwi (F)
Apricots (C, F)
Berries (F, FR)
Mango (F **
Papaya (F) **
Or any fruit you like

* calcium

** vitamin C, or folic acid.

Chose one of the things below if you want to add sweetness or boost nutrition.

Flavoring

½ tsp. Vanilla
2 T. Chocolate syrup
1 T. Honey
1 T. Maple syrup
¼ c. Oatmeal flakes

Nutrition Boost

1 T. Wheat germ*
¼ c. Granola
¼ c. Dry cereal
2 T. Non-fat dry milk *

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Experiment, and Be Creative!

Tropical Fruit Popsicles

1 cup mandarin oranges with juice
1 cup crushed pineapples
1 mango
2 cups orange juice

1. Add ingredients to a blender.
2. Blend until smooth.
3. Pour into Popsicle molds and freeze.



Banana Pops

2 Bananas
4 popsicle sticks
Peanut butter or melted chocolate
Toppings of choice like sprinkles, crushed cereal flakes, grape nuts cereal, chopped nuts, coconut

1. Cut banana in half and insert popsicle sticks at sliced end.
2. Have child roll in peanut butter or melted chocolate.
3. Roll again in topping of their choice. Eat or freeze until firm.

Orange Sherbet

$\frac{3}{4}$ cups evaporated milk
12 oz can of thawed orange juice
Plastic wrap
Paper or plastic cups
Blender
Bowl

1. Mix $\frac{3}{4}$ cups evaporated milk with a 12 oz can of thawed lite frozen cranberry juice concentrate.
2. Cover it with plastic wrap and freeze for 2 hours.
3. Take from the freezer, break it into small pieces.
4. Put it in a blender and mix until it's smooth.
5. Then, pour it into cups.
6. Cover the cups with plastic wrap and freeze until firm.

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