

SUGAR SMARTS

Introduction

This lesson uses health concerns around diabetes to introduce a discussion of sugar in our diets. Depending on your audience, you may want to talk about diabetes more generally (including the other lifestyle and dietary changes that can help with prevention and treatment) or focus on sugar without the context of a particular diet-related condition.

Preparation

1. Review the topic.

- Start with the key concepts and discussion guide. The discussion guide provides suggested questions to draw out participants' existing knowledge as well as information you can offer in response to each question.
- Consider your participant demographics and potential interests, and conduct any additional research that may be necessary to prepare for specific questions or improve your own understanding of key concepts (see "Program Guide" for suggested resources).

2. Plan your lesson structure.

- Determine whether time and resources allow for a food-based activity or whether you will use an alternate activity. This lesson includes one alternate activity, and additional activity suggestions are available in the "Program Guide."
- See "Exercise for Health" lesson for ways to incorporate physical activity into the lesson, and plan to ask participants to share their favorite ways to exercise.
- Prepare a rough timeline of your lesson and a plan to integrate discussion with the activity. Depending on available time and participant interests, you can integrate discussion topics into an activity or use discussion time to open or close the lesson.

3. Plan how to administer pre-test (as well as post-test if this is the final session). See "Program Guide" for details.

4. Prepare materials.

- Review the appropriate activity and prepare any necessary materials.
- Choose and print handouts, recipes and pre-tests.

Suggested Recipes

Recipes should provide an alternative to common dishes with added sugars, or highlight "diabetes superfoods."

- Loaded Baked Sweet Potato
- Quinoa with Broccoli

Suggested Handouts

- "Diabetes Superfoods"
- "Rethink Your Drink"

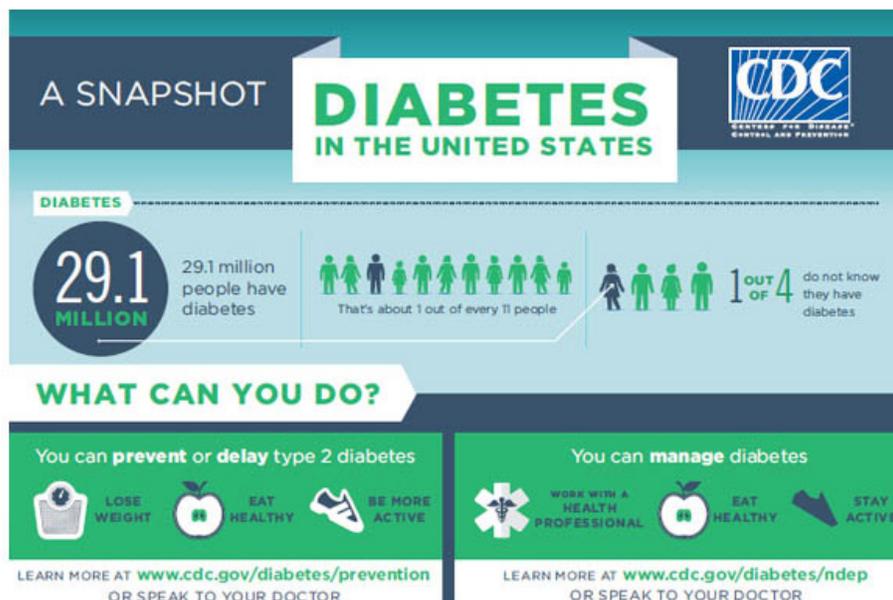
Key Concepts

Diabetes is one of the most common health issues affecting older adults today: nearly a quarter of older adults have diabetes, and many of them have not been diagnosed. According to the National Diabetes Information Clearinghouse, Type 1 diabetes most often develops among young people whose bodies do not make enough insulin, while Type 2 diabetes usually affects middle-aged and older people whose bodies develop resistance to insulin (the hormone that helps the body process glucose). Type 2 diabetes is often preceded by "pre-diabetes," indicated by persistently high blood sugar levels. Making lifestyle changes like increasing exercise and following a healthy eating plan can lower blood sugar levels and lead to weight loss that can prevent pre-diabetes from becoming type 2 diabetes.

Discussion Guide

Do you know anyone with diabetes? What is diabetes and why is it a problem?

- People with diabetes either don't have enough insulin or their bodies can't use the insulin that they produce. Insulin is a hormone that tells cells when there is too much glucose (sugar) in our bloodstream—right after we eat most carbohydrates, for example (because carbohydrates are composed of sugar molecules like glucose).
- Symptoms of diabetes can include extreme fatigue, thirst, hunger and frequent urination. Diabetes is diagnosed using a test to measure blood sugar levels after at least six hours without eating.
- The most common form of diabetes (about 90% of those diagnosed) is type 2. Type 2 diabetes can be developed at any age and is often associated with being overweight. People with type 2 diabetes often develop symptoms gradually, as their body has trouble processing insulin or doesn't produce enough insulin. Type 1 diabetes is usually diagnosed after patients develop severe symptoms because their body produces little or no insulin.
- Diabetes is the leading cause of blindness and kidney failure for adults, can cause nerve damage that leads to amputation, increases the risk of heart disease and directly causes almost 7,000 deaths a year.



How can you reduce your risk for developing diabetes? What changes can also help you live with diabetes?

- 9 in 10 cases of type 2 diabetes could be prevented through weight control, exercise, healthy eating and not smoking.
- Basic changes to your diet, paired with regular physical activity, can both reduce your risk of developing diabetes and help you manage it and prevent additional related conditions if you already have it:
 - * Skip sugary drinks. (Consider showing “Rethink Your Drink” handout.)
 - * Look for polyunsaturated fats (vegetable oils, nuts, seeds) instead of trans fats (margarine, packaged baked goods, fried fast food). People with diabetes have a high risk of developing heart disease, and eating healthy fats can help to reduce that risk.
 - * Choose whole instead of refined grains. Whole grains prevent blood sugar spikes by breaking down more slowly.
 - * Choose nuts, poultry or fish instead of red meat or processed meats. These foods have healthy proteins without as much unhealthy saturated or trans-fats.
 - * Choose smaller portions, and look for foods with less fat and cholesterol.
- You don't have to stop eating your favorite foods, or eating at restaurants or friends' houses. Managing your diet for diabetes means making more general changes and learning how what you eat affects your blood sugar. Meal plans can be helpful, but don't have to be restrictive.
- If you have diabetes, try to eat around the same time every day. Eating the same size meals every day can also help keep your blood sugar levels regular. (Blood sugar control is important to prevent damage to your eyes, nerves and kidneys.)



What are some strategies for reducing the amount of sugar you eat?

- Read labels to watch out for added sugars:
 - * Anything that ends in -ose (sucrose, maltose, dextrose, fructose, glucose, galactose, lactose, high fructose corn syrup, glucose solids)
 - * Many types of syrup (corn syrup, corn syrup solids, buttered syrup, carob syrup, malt syrup, golden syrup, sorghum syrup, refiner's syrup)
 - * Names for sugarcane or fruit juice (dehydrated cane juice, cane juice solids, cane juice crystals, fruit juice, fruit juice concentrate, dehydrated fruit juice, fruit juice crystals)
 - * Other names you may not recognize (dextrin, maltodextrin, dextran, barley malt, caramel, diastase, diastatic malt, turbinado, ethyl maltol)
- Take sugar and honey off your table.
- Choose sugar-free beverages, or drink water! Alcoholic beverages can also have high sugar or carbohydrate content.
- Try cutting the amount of sugar you add to coffee, tea, cereal or other foods in half.
- Substitute fresh or dried fruit for sugar in cereal, oatmeal, and baked goods.
- Baking? Substitute vanilla or cinnamon for some of the sugar.
- Look for canned fruits packed in their own juices or in water instead of syrup (and drain the liquid before eating).
- You can cut the sugar in baked goods down by 1/4 or half (but avoid sugar substitutions for baked goods that need to rise, as the sugar helps the yeast).
- Avoid high-sugar flavored yogurts, and add fruit or jam to plain yogurt instead.
- Order “kid” sized ice cream servings—often available even if it's not listed.

What are other ways to keep your blood sugar low in addition to reducing the amount of added sugar you eat?

- Watch out for refined grains. Eating whole grains instead can help keep your blood sugar down, because the bran and fiber slow down the rate at which the carbohydrates/starches get broken down into glucose.
- Whole fruits (rather than fruit juice) have fiber to help slow down the release of sugar into the bloodstream.
- In general, the more cooked or processed a food is, the higher the glycemic index (GI, a number that tells you how much it raises blood glucose). Easy ways to lower the GI of your food:
 - Eat fruits and vegetables soon after you buy them.
 - Eat foods in more whole form (mashed potatoes have a higher GI than baked whole potatoes).
 - Don't cook foods longer than necessary.
 - Remember, GI needs to be balanced with other nutritional considerations—don't make food choices based on GI alone.



Suggested Activities

If you have access to basic ingredients and supplies, we recommend planning the lesson around a cooking demonstration or activity that will show participants concrete skills that apply the lesson concepts. If limited resources or time make a food-based activity impossible, use the alternate activity or any of the other suggested activities in the “Program Guide.”

A. Food-Based Activity: Fruit Salad

Fruit is a great choice for a sweet snack or dessert, with plenty of fiber to slow down the release of sugar into the bloodstream. Fruit salad is easy to make with fresh or canned fruit and requires no actual cooking, but feel free to substitute other fruit-based desserts with minimal added sugars and flour if you have an oven or stovetop available.

Discussion points to address while preparing food (see discussion guide as well):

- Fruits contain sugar but also plenty of fiber to balance the effect of the sugar on your bloodstream.
- Cut down on added sugar by looking for fruit canned in water or its own juices; drain cans before using fruit.
- What are some of your favorite fruit desserts?

Materials	<ul style="list-style-type: none"> • Mixing bowl(s): one for demo, or per group • Mixing spoon(s): one for demo, or per group • Sample dishes and spoons for each participant • Optional: knives and cutting boards for whole fruit 	<ul style="list-style-type: none"> • Can opener(s): one for demo, or per group • Container(s) for liquid drained from cans
Preparation	<ul style="list-style-type: none"> • Start by deciding whether the activity will be a demonstration or will involve participation. If participants will be preparing food themselves, decide whether they will work individually or in groups. • Review Program Guide for tips on leading a cooking demo or guiding participants through a recipe. • Review ingredients and make substitutions as necessary. Canned and frozen fruits are easiest to work with, but whole fresh fruit is a great option if available; pre-cut or let participants peel and cut in class. • Modify recipe as necessary, and print copies for participants to take home. 	
Ingredients (Serves 8, 1 cup/serving)	<ul style="list-style-type: none"> • 10-12 oz. bag frozen blueberries, defrosted • 1 can cut pineapple in fruit juice or water • 1 can diced peaches in fruit juice or water 	<ul style="list-style-type: none"> • 1 can sliced pears in fruit juice or water • OR substitute fresh fruit (apples, bananas, berries, peaches, pears, etc.) for canned/frozen
Directions	<ul style="list-style-type: none"> • Open cans and drain, or peel and cut fresh fruit into bite-sized pieces. • Add fruit to bowl and mix. Suggest adding herbs (like mint) or citrus at home for extra flavor. • Serve fruit salad on individual dishes or invite participants to serve themselves 	

B. Alternate Activity: Get the Facts on Sugar

Materials	<ul style="list-style-type: none"> • “Get the Facts on Sugar” handout • Answer key in Appendix
Preparation	<ul style="list-style-type: none"> • Decide whether to give each participant a handout or ask questions of the whole group • Print copies of handout as necessary • Review answer key for explanations of false answers
Activity	<ul style="list-style-type: none"> • Option 1: Give each participant a copy of the handout and invite them to guess the correct answers. After everyone has had time to review all the statements, go through the correct answers with the whole group. Explain false statements and answer questions as necessary. • Option 2: Go through statements with the whole group, either asking everyone to raise their hands to indicate whether they think a statement is true or false, or asking for volunteers to answer. Review correct answers after each statement, addressing questions as they come up. • Option 3: Divide group into teams (any number). Read each statement aloud and ask teams to decide whether it is true or false, then reveal correct answer and award points accordingly.

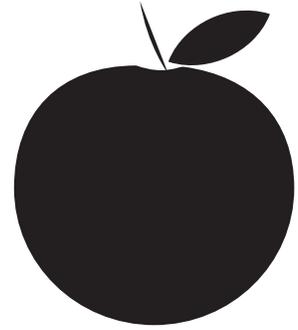
Sweet Fruit Salad

Fruit is a great choice for a sweet snack or dessert, with plenty of fiber to slow down the release of sugar into the bloodstream. Fruit salad is easy to make with fresh or canned fruit and requires no actual cooking.

INGREDIENTS

serves 8, 1 cup per serving

- 10-12 oz. bag frozen blueberries, defrosted
- 1 can cut pineapple in fruit juice or water
- 1 can diced peaches in fruit juice or water
- 1 can sliced pears in light syrup or water
- OR substitute fresh fruit (apples, bananas, berries, oranges, peaches, pears, etc.) for some or all canned/frozen fruit
- Optional herbs (try mint or basil)



DIRECTIONS

1. Open cans, if using, and drain juice or water.
2. Peel (if necessary) and cut fresh fruit into bite-sized pieces.
3. Add fruit to bowl and mix.

