

HEALTHY BONES, HEALTHY BODIES

Introduction

This lesson introduces an older adult audience to basic concepts they can use to strengthen and maintain bone health through calcium consumption and physical activity. Talking about calcium more broadly, rather than dairy specifically, makes this lesson relevant (and particularly useful) for those dealing with lactose intolerance.

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 provided with this lesson should use high-calcium foods like dairy, dark leafy greens, white beans, tuna or salmon.

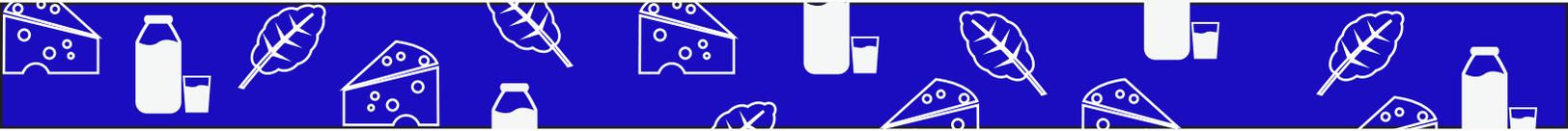
- Sautéed Collard Greens
- Easy Tuna Salad

Suggested Handouts

- “Add More Calcium to Your Diet”

Key Concepts

Many older adults are at risk for osteoporosis but can take major steps to improve their bone health by eating foods with plenty of calcium and vitamin D. Exercise is also crucial for bone health; older adults should include a variety of different types of physical activity in their regular routine to maintain strength and flexibility.



Discussion Guide

Do you know anyone with osteoporosis, or have you heard anything about it?

- Osteoporosis is a bone disease that can cause broken bones from minor accidents. 54 million Americans have osteoporosis or low bone density which puts them at risk for developing osteoporosis.
- People over 50 are at particular risk for osteoporosis, as are people with low body weight.

Why is bone health particularly important for older adults? What can you do to keep your bones strong?

- As you age you can lose bone mass—you lose more bone than you form. When your body doesn't have enough minerals to form and strengthen new bone mass, bones become weak and brittle and can break easily.
- If your bones are weak, a slip and a fall can lead to broken bones.
- Eating a diet full of fruits, vegetables, and foods with calcium and vitamin D can decrease your risk of developing osteoporosis.
- Calcium is an important mineral that our bodies need to build and strengthen bones and teeth. It also helps with muscle contractions (in our heart or other muscles) by supporting protein function.
- Exercise is a key complement to a healthy diet—bone is a living tissue that becomes stronger through exercise.

What are some foods with plenty of calcium? How do you like to make sure you get enough calcium?

- We get calcium from eating foods such as milk, yogurt, cheese, dark green vegetables, white beans, tofu, seafood, almonds and soybeans. Examples of whole foods with calcium are collard greens (360 mg/cup cooked), yogurt (310 mg/cup), sardines (325 mg/3 oz), milk (300 mg/cup), cheddar cheese (205 mg/1 oz), kale (180 mg/cup cooked), salmon (180 mg/cup), and broccoli (60 mg/cup). A cup of fortified orange juice also has about 300 mg of calcium as well as Vitamin D (which helps your body absorb calcium).
- People with low lactose tolerance can often eat hard cheeses and yogurt without experiencing discomfort. If you don't eat any dairy products, you can get enough protein by eating combinations of the foods listed above.
- Women over age 51 and men over age 71 need 1,200 mg of calcium a day (adults under 51 and men under 71 need 1,000 mg per day). One way to start making sure you are eating enough calcium is to check food labels for the amount of calcium and the % DV (daily values)—although remember that these are based on a 2,000 calorie diet. Many daily multivitamins do not contain significant amounts of calcium.
- ***How do you like to get exercise? Does anyone know what types of physical activity are particularly important for bone health?*** Weight-bearing exercises are best for your bones—weight training, jogging, walking, playing tennis or dancing. Resistance exercises help strengthen your bones and muscles, and flexibility exercises are important for keeping your joints limber to prevent injury. Other forms of exercise are also important for building strong muscles to help prevent falls that could lead to broken bones. Talk to your doctor about what forms of exercise could be best for you.
- Vitamin D is also important for bone health. It helps your body absorb calcium and keeps bones strong. Our skin makes vitamin D from sunlight, but we can also get it from eating fatty fish like tuna and salmon and fortified foods like milk, orange juice and cereals. ***What are some ways that you like to get Vitamin D—favorite outdoor activities, or ways to prepare foods like tuna and salmon?***



Suggested Activities

If you have access to basic ingredients and supplies, try 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 provided here or any of the other activities in the “Program Guide.”

A. Food-Based Activity: Yogurt Parfaits

These healthy and delicious parfaits are easy to make and can use a variety of ingredients. Plain nonfat yogurt is ideal, but you can also use flavored yogurts as a discussion topic (see below.) Fruit can be fresh, frozen or canned, and the topping can be made from scratch, or use pre-made granola or granola bars.

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

- Do you like to eat yogurt? Do you like to eat it plain or cook with it? Yogurt is a high-calcium food which provides a quarter to a third of your daily calcium needs per cup. It can also be a low-fat, high-protein substitute for sour cream.
- Explain what type of yogurt you are using. Ask: How do you decide what kind of yogurt to buy? It is important to check the ingredient list for added sugar or sugary syrups. Nonfat or low-fat varieties can be good options, but watch out for added sugars.
- What other kinds of fruit do you/would you like to eat with yogurt?
- Adding sliced or whole almonds, or using granola or granola bars with almonds, give the parfait a little extra calcium.

Materials	<ul style="list-style-type: none"> • Serving bowl(s): one per ingredient for demo/group • Servings spoon(s): one per ingredient for demo/group • Sample dishes and spoons for each participant
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 alone 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. • Modify recipe as necessary, and print copies for participants to take home. • Defrost if using frozen fruit, or drain canned fruit. • Cut fruit, unless you have space and equipment to let participants cut fruit themselves.
Ingredients	<ul style="list-style-type: none"> • Plain nonfat or low-fat yogurt • Fresh, canned or frozen fruit • Topping: granola or crumbled bars (ideally with almonds), sliced almonds
Directions	<ul style="list-style-type: none"> • Make a layer of yogurt at the bottom of serving cups, or invite participants to do the same. • Add a layer of fruit on top of the yogurt, or invite participants to do the same. • Add a layer of topping or invite participants to do the same, and continue layering ingredients until cups are as full as you like.

B. Alternate Activity: Add Some Calcium

Materials	<ul style="list-style-type: none"> • Calcium Crossword (see appendix)
Preparation	<ul style="list-style-type: none"> • Review crossword answers, decide whether to provide word bank initially (or hand out as needed) • Print copies of crossword and word bank for each participant
Activity	<ul style="list-style-type: none"> • Explain that this crossword will help participants think about foods with calcium and how to keep their bones strong. • Distribute crossword puzzles (and handouts, if using initially). • Encourage participants to ask questions if they are stuck on a clue, and use individual questions as an opportunity to explain foods or concepts to the group. • Through participants’ questions, or after most people have completed the crossword, discuss ways to eat more calcium-rich foods throughout the day. (For example, if a participant asks about Greek yogurt, ask “Do you like to eat yogurt? For which meals? Do you cook with it or combine it with other foods like fruit or cereal?”)

High-Calcium Yogurt Parfait

These healthy and delicious parfaits are easy to make and can use a variety of ingredients, including fruits and whole grains as well as high-calcium yogurt.

INGREDIENTS

- Plain nonfat or low-fat yogurt
- Fresh, canned, or frozen fruit
- Topping: granola or crumbled bars (ideally with almonds), sliced almonds

DIRECTIONS

1. Make a layer of yogurt at the bottom of a cup or bowl.
2. Add a layer of fruit on top of the yogurt.
3. Add a layer of topping, and continue layering ingredients until cup/bowl is as full as you like.

