

Calci–Yum!

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Purpose:

This lesson helps participants find ways to get more calcium into their diets.

What The Nutrition Educator Needs To Know So That Participants' Questions Can Be Answered:

There is a lot of talk about how it is very important to get enough calcium in your diet so you can:

- build strong bones and teeth;
- help prevent gum disease;
- help your blood clot;
- allow your muscles to contract every time you move;
- help your nerves carry messages through your body;
- help your cells to work better¹
- lower your risk of osteoporosis;
- lower your risk of high blood pressure;
- possibly lower the risk of getting kidney stones;
- possibly lower the risk of lead poisoning in children;
- possibly lower your risk of colon cancer.

What is Osteoporosis?

¹ Wardlaw, Gordon M. and, Hampl, Jeffrey. Perspectives in Nutrition, 7thed. (New York: McGraw-Hill, 2007).

Osteoporosis is a disease that makes your bones become very weak and brittle. They may even break. Men and women of all ethnic groups are at risk of getting this bone thinning disease. As you get older, the chances of getting osteoporosis go up. Some other things that make your risk go up are:

- if you are a woman;
- if you are white;
- if you are a woman who has gone through menopause;¹
- if you drink more than 2 or 3 alcoholic drinks each day,²
- if you smoke. Smoking lowers the amount of calcium that your body can absorb.³

When is the Best Time to Build Strong Bones?

Adolescence, the time between puberty and adulthood, is the best time in life for children to strengthen their bones. Developing stronger bones during adolescence will help lower the risk of getting osteoporosis later in life. Most of the thickness of your bones is built from infancy through the adolescent years. The years between 11 and 16 are very important for bone growth.⁴ About 85-90% of adult bone mass is built by age 18 in girls and 20 in boys.⁵ After adolescence, bone mass decreases as you age. So for the rest of your life it is very important to maintain your bone mass by getting enough calcium.

High Blood Pressure (Hypertension)

Blood pressure is the force of blood against the walls of your arteries. Arteries carry blood away from your heart and take it to the rest of your body. When blood pressure stays high over time, it is called high blood pressure. Another term for high blood pressure is hypertension.

Blood pressure is given as 2 numbers— one number, the upper number, is measured as the heart beats and the lower number as the heart relaxes between beats. Blood pressure is written using both of these numbers. For example, your doctor may say that “your blood pressure is 120 over 80.” A written report might show this as 120/80 mm Hg (millimeters of mercury). A blood pressure reading 130 over 85 is considered to be “prehypertension,” by the American Heart

² Bone Health and Osteoporosis: A Report of the Surgeon General. United States Department of Health & Human Services, 14 October 2004 <http://www.surgeongeneral.gov/library/bonehealth/>

³ “Conditions and Behaviors that Increase Osteoporosis Risk.” NIH, National Institutes of Arthritis and Musculoskeletal and Skin Disease. January 2009. Available at: http://www.niams.nih.gov/Health_Info/Bone/Osteoporosis/Conditions_Behaviors/bone_smoking.asp . Accessed: 5/29/09.

⁴ Duyff, RL. Complete Food and Nutrition Guide, 3rd Edition. Hoboken, New Jersey: John Wiley & Sons, 2006. 427-428

⁵ “Fast Facts on Osteoporosis.” National Osteoporosis Foundation, 2008. Available at: <http://www.nof.org/osteoporosis/diseasefacts.htm> . Accessed 5/29/09.

Association. A steady blood pressure reading of 140 over 90 or higher is called high blood pressure.⁶

The chart below is how the American Heart Association describes blood pressure⁷

Blood pressure (mm Hg)	Optimal	Prehypertension	Hypertension
(Top number) Systolic	less than 120	120-139	140 or higher
(Bottom number) Diastolic	less than 80	80-89	90 or higher

measured in *mm Hg = millimeters of mercury*

You could have high blood pressure and not even know it. **See your doctor if you think you are at risk.** To lower your risk of high blood pressure:

- reach and keep a healthy body weight.
- avoid having more than 2 alcoholic drinks each day.
- avoid cigarette smoking.
- plan activities that help you relieve stress.
- eat less than 2300 milligrams or 1 teaspoon of salt each day.
- exercise for 30 minutes most days of the week.⁸ Do not start an exercise plan without first consulting your health care professional
- have caffeine in moderation¹
- follow your MyPlate eating plan at www.choosemyplate.gov/myplate/index.aspx. Enter your information and you will get an eating plan that is for you.
- meet nutrient recommendations for calcium, potassium, and magnesium in Dietary Guidelines for Americans 2010 and MyPlate

Research has also shown that calcium may decrease blood pressure.⁹ Blood pressure is the force of blood against the walls of your arteries. Arteries carry blood away from your heart and take it to the rest of your body. When blood pressure stays above 140/90 mmHg for a long period of time, you have high blood pressure. High blood pressure is also called hypertension. Eating a diet of calcium-rich foods may lower hypertension.

⁶ “What is High Blood Pressure?” National Heart, Lung, and Blood Institute, . Available at: http://www.nhlbi.nih.gov/health/dci/Diseases/Hbp/HBP_WhatIs.html. Accessed 5/29/09.

⁷ “High Blood Pressure: AHA Recommendations.” 2002, American Heart Association, 23 October 2002. Available at: <http://www.americanheart.org/presenter.jhtml?identifier=4623>. Accessed: 5/29/09

⁸ “Exercise:a drug free approach to lowering blood pressure.”available at: Mayo Clinic.com <http://www.mayoclinic.com/health/high-blood-pressure/HI00024>. Accessed 5/27/09

⁹ “Calcium.” Linus Pauling Institute, Oregon State University, Micronutrient Information Center.(2009). Accessed 6/8/2009.

Kidney Stones

You may have heard that too much calcium in your diet can cause kidney stones. Taking calcium supplements may increase your risk for kidney stones, but calcium is not always to blame for kidney stones. Other things may cause kidney stones, such as not drinking enough water. Some studies have shown that calcium may actually prevent kidney stones.¹⁰

If you or someone you know has a history of kidney stones, it is very important to ask your doctor if you should eat calcium-rich foods or take calcium supplements.

Lead Poisoning

Some studies have shown that getting more calcium in your children's diet may lower their chances of getting lead poisoning. This may be because getting more calcium helps prevent lead from being absorbed into the body.¹¹

Colon Cancer

Some studies have shown that getting more calcium into your diet may lower your risk of getting colon cancer. This may be because calcium helps to get rid of waste that could harm the colon. It also may help reduce the growth of or return of colon cancer cells.¹

Amount Of Calcium Needed Each Day¹²

Individual Characteristics	Recommended Calcium Intake
Infants, Birth - 6 months	200 mg
Infants, 7 months - 1 year	260 mg
Children, 1-3 years	700 mg
Children, 4-8 years	1,000 mg
Children, 9-13 years	1,300 mg
Children 14-18 years	1,300 mg
Adults, 19-50 years	1,000 mg
Males, 51 -70	1,000 mg
Females 51-70	1,200 mg
>70 years old	1,200 mg
Pregnant and Nursing Teens	1,300 mg
Pregnant and Nursing Women	1,000 mg

¹⁰ Curhan, G. "Kidney Stones as a Systemic Disease." NIDDK Recent Advances & Emerging Opportunities: *Kidney, Urologic, and Hematologic Diseases*: NIH. 2008. Available at: http://www2.niddk.nih.gov/NR/rdonlyres/50132DD6-CA06-43B3-B43B-8D2BBB813A06/0/Advances2008_SP_KidneyStones.pdf. Accessed 6/8/09.

¹¹ "Lead and a Healthy Diet." 2001 United States Environmental Protection Agency. 2001 November. Available at: <http://www.epa.gov/lead/pubs/nutrition.pdf>. Accessed: 5/29/09

¹²"Kids and Their Bones: A Guide for Parents." NIH Osteoporosis National Resource Center. Available at : http://www.niams.nih.gov/Health_Info/Bone/Bone_Health/Juvenile/default.asp Accessed 11/1/11

Always include vitamin D in your calcium-rich diet. Vitamin D helps calcium move into your bones, teeth and blood, where it is needed.

Where Calcium Is Found

Dairy foods, calcium-fortified foods and calcium supplements are all rich sources of calcium. Some non-dairy foods and vegetables can provide calcium.

Dairy foods

All dairy foods contain calcium. Non-fat, low-fat, regular, and milk made from dry milk powder, and yogurt have about the same amount of calcium. Low-fat choices are best. Some dairy foods are:

- Milk
- Cheese
- Yogurt
- Ice cream

Non-Dairy Foods

Some non-dairy foods are rich in calcium. If you do not like the taste of milk or cannot have dairy foods, then non-dairy, calcium-rich foods make great choices.

Non-dairy foods that are calcium-rich are:

- Collards
- Kale
- Turnip greens
- Almonds
- Canned sardines and salmon with soft bones
- Enriched Soy or Rice Milk

Calcium-fortified Foods

Calcium-fortified or enriched foods are foods that have calcium added to them.

They are a great way to get more calcium into your diet. Many foods may have calcium added to them including:

- Breads
- Cereals
- Soy milk
- Ready-made pasta meals
- Juices

In fact, orange juice with calcium added has just as much calcium as milk.¹ Look for the words “calcium added” on the front of packages, like juice cartons, cereal boxes and soy milk labels. Just because it does not have the word “calcium” on the front of the package does not mean that a food is not fortified with extra calcium. Read the “Nutrition Facts” label to see how much calcium a food has. A

source of calcium is good if the %DV (percent daily value) is between 10% and 19%. If the %DV is 20% or greater it is high in calcium.¹

Is It Calcium-Rich?	% DV
Good	10% - 19%
High	20% or more

Supplements And Antacids

If you do not get enough calcium from foods, calcium supplements can help. Calcium supplements have a lot of calcium and do not cost much money. Supplements should not be taken in place of foods. Calcium-rich foods make better choices because of the other vitamins, minerals and nutrients you will gain from eating them.

Multivitamins often contain calcium. Some antacids are also a good way to get more calcium but check the label to see how much calcium they have. Two common kinds of calcium that you will see on a label are “calcium citrate” and “calcium carbonate.” Both kinds of calcium supplements are good sources. Calcium carbonate should be taken with food.

Supplements and antacids must be taken with caution. Do not take more than the recommended amounts.

Calcium Absorption

To get the most calcium from foods you eat, experts say that you should not eat more than 500 mg of calcium at a time.¹³ If you eat more than 500 mg at a time, you will still absorb calcium, but possibly not the total amount that you have eaten. Spread out the calcium-rich foods that you eat over your meals and snacks for the day. For example, instead of getting all of your calcium sources at a single meal, you could eat them at different times.

- At breakfast, eat a **cereal with calcium added** with **milk**.
- At lunch, take a **calcium and Vitamin D supplement** with your meal.
- For a snack, drink a glass of **juice with calcium added**.
- At dinner, drink a glass of **milk** with your meal.

Lactose Intolerance

Some people are lactose intolerant and others think that they may be lactose intolerant. To be lactose intolerant means that you cannot digest dairy products well because your body does not have enough of the enzyme, lactase. Lactase

¹³ “Dietary Supplement Fact Sheet: Calcium.” NIH Office of Dietary Supplements. Available at: <http://ods.od.nih.gov/factsheets/calcium.asp>. Accessed 5/27/09

breaks down lactose, the sugar in milk. Without enough lactase, you could experience symptoms like gas, bloating and nausea.

Studies have shown that many people who experience these symptoms can still get the recommended amount of calcium from dairy foods. To get enough calcium from dairy foods, experts recommend you can try:¹⁴

- enjoying dairy foods with other foods at mealtime.
- consuming dairy foods in smaller amounts at all 3 meals instead of a large amount of a dairy food at a sitting. Start consuming dairy slowly and be sure not to have too much at any time.
- slowly increasing the amount of dairy foods that you consume until you are meeting the recommended amount for your age.

If you are lactose intolerant, you still need to get the right amount of calcium based on the chart on page 4. To get the full amount that you need in a day, besides eating regular dairy foods, you can also get calcium from other sources. Here are some things you can do to meet your calcium needs:

- Choose lactose-free or lactose-reduced dairy foods. When buying lactose-free milk or other dairy products, choose non-fat or 1% low-fat products.
- Choose yogurt because it has some lactase in it.
- Look for the word sugar listed on the “Nutrition Facts” label. If there is 0% sugar, it is lactose-free.
- Think about buying pills that will help your body break down the lactose. After taking these pills, the body can handle most dairy foods without a problem.
- Eat dairy foods as part of a meal. Eat small amounts of dairy foods at a time. Slowly increase the amount of dairy foods that you eat.
- Choose multi-vitamins with calcium, calcium supplements or antacids.
- Choose foods with calcium added or non-dairy foods that are high in calcium. High in calcium means that the food has at least 200 mg of calcium in each serving which is 20% DV.

Calcium-Rich Foods

The chart below shows the average amount of calcium found in some calcium-rich foods. The amount of calcium listed is for the serving size that is shown. Always check the “Nutrition Facts” on the label to learn how much calcium is in a food. Compare products and choose those that are calcium-rich.

¹⁴ “Lactose Lesson: Don’t Ditch Dairy.” National Dairy Council. May 2000. Available at: <http://www.nationaldairycouncil.org/NationalDairyCouncil/Nutrition/Lactose/maldigestion.htm>. Accessed: 5/29/09

Calcium Hall Of Fame

Excellent Source of Calcium	Calcium In Milligrams
Calcium and Vitamin D Supplement (1 tablet)	500 mg
Antacid with Calcium (1 tablet) Check label amounts may vary	500 mg
Tofu, with Calcium Sulfate (½ cup)	434 mg
Yogurt, Plain Low-fat (1 cup)	415 mg
American Cheese, Processed (2 oz)	348 mg
Yogurt, Fruited Low-fat (1 cup)	345 mg
Sardines, with Bones (3 oz)	325 mg
Cheddar Cheese 1 ½ oz	306 mg
Milk (Whole, 1% Low-fat or Non-fat) 1 Cup	300 mg
Lactose-free Milk (Whole, 1% Low-fat or Non-fat) 1 Cup	300 mg
Orange Juice Fortified with Calcium ¾ cup	300 mg
Dry Milk, Non-fat (1 cup) Ice Cream 1 ½ Cups	283 mg
Soy Milk, Calcium-fortified 1 Cup	200 mg
Good Sources of Calcium	
Salmon with Bones, Canned (3 oz)	181 mg
Oatmeal, Instant, Plain, Calcium-fortified (1 cup cooked)	163 mg
Collards, Frozen, Boiled (1/2 cup)	138 mg
Cottage Cheese, Low-fat 2 Cups	138 mg
Turnip greens, Frozen, Boiled ½ Cup	125 mg
Almonds, Whole (1/3 cup)	118 mg
Frozen Yogurt, Vanilla (1/2 cup)	103 mg
Other Sources of Calcium	
Milk, Evaporated, 1% Low-fat (1 cup)	93 mg
Kale, Frozen, Boiled ½ Cup	90 mg
Macaroni and Cheese, from Box ¾ Cup	82 mg

Products with calcium added are appearing in stores all the time. Look on the labels of products like cereals, frozen waffles, canned pastas, breakfast bars and cottage cheese for the phrases: “**good source of calcium**” (100 mg to 199 mg per serving) “**excellent**” source of calcium” (200 mg or more per serving)

* All calcium values are taken from USDA data.

Questions Participants May Ask:

Q: How Much Should I Eat?

A: The USDA (United States Department of Agriculture) bases the amount of food from the Milk Group to eat on age. Recommended daily amounts are shown in the chart.¹⁵

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

In general, 1 cup of milk or yogurt, 1 ½ ounces of natural cheese, 2 oz (ounces) of processed cheese, 1½ oz of natural cheese or 1½ cup of ice cream can be considered as 1 cup from the milk group. Non-dairy sources of calcium include: ½ cup of tofu made with calcium and 1/3 cup of raw almonds are good sources of calcium and ½ cup of cooked kale, collard greens, turnip greens, or broccoli also have some calcium. These foods do not have as much calcium as dairy foods so you have to eat more of them. Serving sizes for other calcium-rich foods are listed in the chart above.

¹⁵ “How much food from the dairy group is needed daily.” choosemyplate. Available at: <http://choosemyplate.gov/food-groups/dairy-amount.html> Accessed: 1/17/14

Q: How Much Calcium-Rich Foods Should I Eat Each Day?

A: An easy way to make sure you meet your calcium needs each day is to eat 3 or more cups of calcium-rich foods, like dairy. To get enough calcium from non-dairy foods, that are not calcium-fortified, you will need to eat more of them each day. This is because non-dairy foods contain much less calcium than dairy foods, per serving. You should always read the “Nutrition Facts” label on a package to see how much calcium is in the food or drink. Using the chart on pages 7 and 8, you want to make sure that at the end of the day you have had enough calcium. If you do not get the recommended amount of calcium from foods, you may want to take a supplement.

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Q: How Can I Tell How Much Calcium Is In A Food?

A: Food labels show calcium as %DV. To find out how much calcium you are getting from 1 serving of a food, you must change the % to milligrams of calcium. To get the number of mg (milligrams) of calcium, add a “0” to the end of the % number. **This only works for calcium not other foods.** For example, milk has a 30% DV. This means that there are 300 milligrams of calcium in milk.

When reading food labels, check the serving size. For example, 1 serving of milk is 1 cup. If you drink 2 cups of milk, you would need to multiply the milligrams of calcium by 2 because you must double the serving size.

For example:

2 x 300 milligrams = 600 milligrams

Q: Can Our Bodies Absorb The Calcium In All Calcium-Rich Foods That We Eat?

A: Our bodies cannot absorb the calcium in all foods. For example, spinach and dry beans are rich in calcium, but the body cannot use most of the calcium in them. The phytic acid in dry beans and the oxalate in spinach lower the body’s ability to absorb calcium. They stick to the calcium in the spinach and the beans and make it hard for the body to absorb. However, this does not affect the calcium in other foods that you eat at the same time. Your body will be able to absorb calcium from other calcium rich foods that are in the meal with the beans and spinach.¹³

Q: What Does Vitamin D Have To Do With Calcium?

A: Vitamin D helps your bones use calcium. Vitamin D can often be found in milk and other dairy foods. Your body can make it if you go outside in the sun. Spending 5 to 30 minutes in the sun between 10:00 am and 3:00 pm at least twice a week without sunscreen may help you increase the vitamin D you get.¹⁶ You should still be sure to include foods with vitamin D in your daily diet.

Q: Are There Other Easy Ways To Add More Calcium To My Diet?

A: Add a spoonful of dry powdered milk to your favorite casserole, meatloaf or baked goods recipes. This adds calcium without changing the way that your recipe tastes.

People who do not eat dairy products or other calcium-rich foods need a calcium supplement. But you should not depend on supplements alone for meeting your nutrient needs.¹⁷

Q: Are All Dairy Foods High In Fat?

A: Many people worry that dairy foods have a lot of fat. You can eat dairy foods without eating a lot of fat. For example, non-fat milk is non-fat and high in calcium. In fact, many people cannot even taste the difference between whole or 1% low-fat milk. To cut some fat out of your diet, replace whole milk with non-fat or 1% low-fat milk. Low-fat cheeses, ice creams and yogurts also make good choices for a low-fat diet.

For Additional Reading:

Utah State University Extension Service. Milk Group 3-A-Day. 2006

North Dakota State University Extension Service. Get Your Calcium-Rich Foods. July 2005.

¹⁶ Dietary Supplement Fact Sheet: Vitamin D. NIH Office of Dietary Supplements . Updated: 12/11/2008. Available at: <http://ods.od.nih.gov/factsheets/vitamind.asp>. Accessed: 5/29/09.

¹⁷ Nutrition and Your Health: Dietary Guidelines For Americans 2005-Executive Summary, page VI. Available at: <http://www.health.gov/dietaryguidelines/dga2005/document/pdf/DGA2005.pdf>.

Calci-Yum!

Main Themes:

Nutrition & Diet

Cooking & Food Storage

Shopping

Budgeting

Safety & Sanitation

Materials Needed:

Activity 2

2 chicken bones in re-sealable plastic bags

Activity 3, Option 1

Blinded 1 quart of whole milk

Blinded 1 quart of 2% milk

Blinded 1 quart of 1% low-fat milk

Blinded 1 quart of non-fat milk

- **Do not keep milk at room temperature for more than 1 hour.**
- **Be sure to check the date on the milk. Make sure that the expiration date has not already passed.**

4 white Styrofoam cups or white paper/plastic cups per participant, labeled

Thermal bag or cooler with ice in it

- This activity works best if the milk is very cold
- Take the milk out of the refrigerator right before you leave on the day of the lesson. Put an icepack in a thermal bag or cooler. Keep the milk in the bag or cooler until you get to Activity 3.

Activity 3, Option 2

Nutrition Facts labels—whole, 2%, 1% low-fat, non-fat and 1% or 2% lactose-free milks, laminate for longer use.

- These will be used only if you are doing Option 2 of Activity 3. Option 2 may be used if you have many lactose intolerant people who are unwilling to try milk, or if you are teaching more than 1 class in a row and cannot bring milk to class.
- 8 oz tumbler

Activity 4

Handouts

Calcium-Rich Recipes—1 of each recipe per participant

Preparation Needed Prior To Lesson:

Chicken Bones

2 chicken bones—2 drumsticks or legs work well

1 medium-sized bowl with a lid

Vinegar, enough to cover 2 chicken bones

2 re-sealable plastic bags

1. About 3 to 4 days before the start of the class, take the chicken off of the 2 chicken bones. Make sure that you clean the bones thoroughly and get all of the chicken off of the bone or they will smell. Put 1 bone in the bowl.
2. Fill the bowl with vinegar until the whole chicken bone is covered. Place the lid on the bowl. Vinegar will take calcium out of the bone and make it rubbery.
3. Lay the other bone out to dry.
4. The day before the class, take the bone out of the vinegar and let it dry out as well.
5. Place the bone that was in vinegar in a re-sealable bag and label it “bone without calcium.” Place the other bone in a re-sealable bag and label it “bone with calcium.”

Blinded Milk Containers

Milk containers of whole, 2%, 1% low-fat and non-fat milk

Black marker or white paper with tape or white label sticker

1. Peel the labels off of the 4 milk containers. If you cannot get the labels off, take a black marker and color over the label or cover with white paper and tape or white label sticker.
2. With a black marker, write:
 - **A** on the whole milk
 - **B** on the 2% milk
 - **C** on non-fat milk
 - **D** on the 1% low-fat milk

Styrofoam or White Paper/Plastic Cups

1. For each participant, make up a set of 4 cups.
2. For each set, label 1 cup as **A**, label 1 cup as **B**, label 1 cup as **C**, and label 1 cup as **D**.

Time The Activities Are Expected To Take:

Before You Begin: 2 - 5 minutes

Activity 1: 10 minutes

Activity 2: 10 - 15 minutes

Activity 3, Option 1: 20 - 30 minutes

Activity 3, Option 2: 20 minutes

Activity 4: 10 minutes

Next Week's Goals: 5 minutes

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Lesson Plan:

Before You Begin (2 - 5 minutes)

1. Ask the participants if they worked on their goals from the last lesson. Ask them which goals they worked on and how or what they did to work on them. Try to get people to tell the class what they did. If they did not work on the goals, ask them to work on them before the next class.
2. Tell the participants what the objectives are for today's lessons.

Activity 1: "Calcium In Jeopardy?" (10 minutes)

1. Begin the class by telling the participants that they are going to learn about what foods have calcium in them. Tell the group you are going to play a game to see what they know about calcium.
2. Read each of the **Calcium Questions** listed below. Give participants 30 seconds per question to think about an answer.
3. After each question is read, ask for a volunteer or volunteers to give an answer. If the right answer is not given, ask if anyone else has an answer. If no one has the answer, then read the right answer as it is written on your handout.

Calcium Questions

1. Name a dairy food that you eat that is a good source of calcium.	Answer(s): Answers will vary. Any type of milk, cheese, ice cream, yogurt or food that fits in the dairy group of MyPlate— Not butter.
2. Name a product that can be fortified with calcium.	Answer(s): Juices, breads, cereals, canned pasta, soy milk, tofu, any non-dairy food that says on the label: "calcium added," "calcium-fortified," "with calcium," "good source of calcium," "excellent source of calcium," "calcium"
3. Lactose intolerance affects people and causes symptoms like nausea, gas and bloating. Think of at least 1 source of calcium that people	Answer(s): Lactose-free milk, most yogurts and hard cheeses, calcium-fortified juices, canned salmon or sardines with soft bones, calcium-

who choose not to eat dairy could eat.	fortified breads and cereals and collard greens.
4. True or False: Spinach and dry beans are good to eat if you need more calcium.	Answer: False. No, they are not. Spinach and dry beans are rich in calcium, but they have substances in them that keep calcium from being absorbed by the body.
5. Does whole milk or non-fat milk have more calcium in it?	Answer(s): Whole and non-fat milk have about the same amount of calcium in them. Both milks have about 300 mg of calcium in 1 cup. ¹⁸ The only difference is that whole milk has more fat in it than non-fat milk.
6. How much calcium-rich foods should you have each day?	Answer(s): We know that MyPlate tells you that based on your age you should eat 3 cups of calcium-rich foods each day. A cup of a calcium-rich food is 1 cup of milk, $\frac{3}{4}$ cup of calcium-fortified juice, 1 cup of yogurt, 2 oz of American cheese, $1\frac{1}{2}$ oz of cheddar cheese.
7. How much calcium do you need each day?	Answer(s): The amount of calcium that you need each day depends on your age. Adults between 19 and 50 years old should get 1000 mg of calcium each day. After age 50, women should get 1200 mg and men should get 1,000 mg. Children between 9 and 18 years of age need 1300 mg.
8. How much calcium do you need each day?	Answer(s): The amount of calcium that you need each day depends on your age. Adults between 19 and 50 years old should get 1000 mg of calcium each day. After age 50, women should get 1200 mg and men should get 1,000 mg. Children between 9 and 18 years of age need 1300 mg.

¹⁸ Nutrients in Dairy Products. Dairy Council of California. 18 July 2008. Available at: <http://www.dairycouncilofca.org/Milk-Dairy/NutritionMain.aspx>. Accessed: 5/29/09

After you have finished the questions, remind participants that you can consume many different sources to meet your daily calcium needs, not just dairy.

Activity 2: “Don't Be Chicken, Let's Talk About Calcium” **(10 - 15 minutes)**

1. Tell the participants that they are going to learn about the importance of getting enough calcium in their daily diets.
2. Pass around both of the chicken bones so that everyone can see them. Tell the participants that the bone that bends easily is that way because it has less calcium.
3. Have a talk about calcium. While participants are passing around the brittle bone, ask them what the bone makes them think of? Answers will vary.
4. Ask participants if they know what happens if you do not get enough calcium.

Participants will most likely say that you can get osteoporosis. Osteoporosis is a disease where the bones become very weak and brittle. Sometimes they become so weak that they may break.

If they do not bring up other risks of not getting enough calcium, be sure to raise them.

Other reasons you need to get enough calcium in your diet are to:

- *help your blood clot;*
- *allow your muscles to contract every time you move;*
- *help your nerves carry messages through your body;*
- *lower your risk of high blood pressure;*
- *possibly lower the risk of getting kidney stones;*
- *possibly lower the risk of lead poisoning in children;*
- *possibly lower your risk of colon cancer.*

*Calcium may **help lower high blood pressure**. Blood pressure is the force of blood against the walls of your arteries. Arteries carry blood away from your heart and take it to the rest of your body. When blood pressure stays above 140/90 mmHg for a long period of time, you have high blood pressure. High blood pressure is also called hypertension. Eating a diet of calcium-rich foods may lower hypertension.*

*New research has shown that calcium may **prevent you from getting kidney stones**. Sometimes eating too much calcium or taking calcium supplements can also cause kidney stones. Calcium is not always to blame though. If you or someone you know has a history of kidney stones, you should ask your doctor if you should eat calcium-rich foods or take calcium supplements.*

*Other research has shown that calcium may help to **prevent lead poisoning in children** by keeping lead from being absorbed.¹¹ And studies have shown that calcium may lower your risk of colon cancer. It can reduce the growth or return of polyps in your colon that can turn into colon cancer.¹⁹*

5. Continue the discussion about osteoporosis. Ask the participants what else they know about osteoporosis.

Answers may vary. Make sure each point below is brought up.

- *Anyone can get osteoporosis.*
- *Women who have already gone through menopause are at the greatest risk.*
- *Your chances of getting osteoporosis increase with age.*
- *Bones that are weak can break more easily. Some older people cannot recover or struggle to recover from a broken bone.*

Ask if anyone is willing to share a story about his or her own or someone else's experience with osteoporosis.

Ask the participants what they could do in their everyday lives to prevent this disease.

Answers will vary. Make sure each point below is brought up.

- *Eat at least 3 servings of calcium-rich foods every day.*
- *Exercise daily.*
- *Make sure you get enough vitamin D.*
- *Drink no more than 2 or 3 alcoholic drinks each day,²*
- *Do not smoke. Smoking lowers the amount of calcium that your body can absorb.³*

6. Ask the class if they know when is the best time to build strong bones?

Middle school and high school age (adolescence) is the best time to add the most strength to their bones.

¹⁹ Colorectal Cancer Research from the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial: NCI Fact Sheet. National Cancer Institute. 11 July 2005. Available at: <http://www.cancer.gov/cancertopics/factsheet/ColorectalPLCO>. Accessed: 5/29/09.

7. Thank the class for sharing what they know. Tell them that the rest of today's lesson will be talking about foods that contain high amounts of calcium.

Activity 3: “Do You Know Your Milks?”

Option 1 (20 - 30 minutes)

1. Tell the class that most people know that milk is as an important source of calcium. Many people also think that all milk and dairy products are high in fat.
2. Ask the class to name as many different kinds of milk as they can.

Some choices they may give are whole, 2%, 1% low-fat or non-fat and lactose-free milk.

3. Ask the participants, “Who avoids dairy foods?”

Show of hands

Ask the participants, who raised their hands (if any) why they avoid dairy foods.

Answers will vary.

Be sure to tell participants that most people think that if they are lactose intolerant that they cannot have any dairy at all. Tell participants that research has shown some people with lactose intolerance can have some dairy foods if they:

- eat dairy foods with other foods at mealtime.
- have dairy foods in smaller amounts at all 3 meals instead of a large amount of a dairy food at a sitting. They should start consuming dairy slowly and be sure not to have too much at any time.
- slowly increase the amount of dairy foods consumed until they are meeting the recommended amount for their age without getting a reaction.¹⁴

Ask the participants if they have children or other family members at home for whom they provide food.

Remind participants of the reasons why it is so important for people of all ages to get enough calcium. At all ages, calcium is needed to:

- build strong bones and teeth;
- keep your gums healthy;
- help your blood clot;

- allow your muscles to contract every time you move;
 - help your nerves carry messages through your body;
 - lower your risk of osteoporosis;
 - lower your risk of high blood pressure;
 - possibly lower the risk of getting kidney stones;
 - possibly lower the risk of lead poisoning in children;
 - possibly lower your risk of colon cancer.
4. Tell participants that adolescence, the time between puberty and adulthood, is the best time in life for building strong bones. Having stronger bones will help lower the risk of getting osteoporosis later in life. Most bones are strengthened during the growth spurt that happens during puberty.⁴ By age 18, often your bones are the thickest and strongest they will be.⁵ After adolescence, bone mass decreases as you age. So for the rest of your life, it is very important to maintain your bone mass by continuing to consume enough calcium.
 5. Have a discussion with the class about servings of dairy foods and food labels. Ask the participants if anyone read labels on foods before buying them.

Do not be surprised if no one does.

Go around the room and ask each participant how many servings of dairy foods they think they have each day.

Answers will vary.

Remind the class that dairy foods are an important source of calcium. They are not the only source. For example, some non-dairy foods and fortified foods can provide calcium in your diet. Tell the class that for this activity, we will only be talking about the dairy foods.

Tell the class that MyPlate tells you that based on your age you should eat between 2 to 3 cups of calcium-rich foods each day. But to get the recommended amount of calcium your body needs, you should try to eat at least 3 cups. Eating cereal with milk for breakfast or drinking an 8 ounce glass of milk with dinner are easy ways to have 2 cups. Using your glass from the food model set show the class what an 8 ounce glass looks like.

6. Ask participants, if they remember how much calcium they need each day.

Answers will vary. Make sure the following is said. The amount of calcium that you need each day depends on your age. Adults between 19 and 50 years of age should get 1000 mg of calcium each day. After age 50, women should

get 1200 mg a day and men should get 1000mg a day. If you are 9-18 years of age, you need to get 1300 mg of calcium a day.

Tell participants that they should eat a variety of calcium-rich foods to meet your daily calcium needs, in addition to dairy. Calcium-fortified foods, salmon or sardines with the bones, green leafy vegetables like collard greens, almonds and tofu made with calcium are examples of non-dairy calcium-rich foods.

7. Ask the class how much calcium is in 1 serving of milk.

Answers will vary.

Tell the class that the amount of calcium in a food is listed on the label as % DV (percent Daily Value). Explain to the class that they can change the percent of calcium into milligrams of calcium by adding a “0” to the end of the number in milligrams. For example, if the label says that there is 30% calcium in 1 serving, then there are 300 milligrams of calcium in that serving. Let them know that **this method only works for calcium** and not the other nutrients like Vitamin A, Vitamin C, and iron.

Even though there are different types of milk, most have 300 milligrams of calcium per serving.

8. Ask the class if they know what makes whole milk different than 1% or 2% milk.

Answers will vary. If no one says it, point out that whole milk has much more fat in it than 1% low-fat or 2% milk. Non-fat milk has even less fat than 1% low-fat or 2% milk. Urge participants to drink 1% low-fat or non-fat milk or 1% lactose-free milk.

Tell the class that they now are going to take a taste test.

9. Pour the milk labeled **A** into the cups labeled **A**. Pour the milk labeled **B** into the cups labeled **B**. Pour the milk labeled **C** into the cups labeled **C**. Pour the milk labeled **D** into the cups labeled **D**.
10. Give each participant 1 set of cups(A,B,C,and D). **DO NOT tell them which milk is which.**
11. Tell each participant to taste each milk sample.

12. Ask for a volunteer. If any participant chooses not to taste the milk, ask if he or she would be willing to volunteer to record the results of a vote you will be taking.
13. Tell the class they will be voting on which type of milk they tasted in each glass. Ask them to raise their hands if they thought milk **A** was whole milk. The volunteer should record the results on the chalkboard or a piece of paper. Take another vote to find out how many people thought milk **A** was 2% milk. Take a third vote to see how many people thought milk **A** was 1% low-fat milk. Take a last vote to see how many people thought milk **A** was non-fat milk. Repeat the vote with each of the other 3 milks.
14. Reveal what the milks really are.
 - A = whole milk
 - B = 2% milk
 - C = non-fat milk
 - D = 1% low-fat milk
15. Ask the participants if anyone was surprised by what kind of milk each sample really turned out to be.
16. Ask the participants which milk they drink and use for cooking at home. Ask if what they drink is different from what they use for cooking.
17. Tell the group that it can be hard to taste a difference between types of milk. Re-state that non-fat milk and 1% low-fat milk are good sources of calcium and have little or no fat in them. Whole milk has the same amount of calcium in it as these milks, but has a lot more fat. Tell participants that whole milk has 8 g (grams) in 1 cup compared to 1% milk, which has 3 g of fat in 1 cup and non-fat milk, which has no fat in 1 cup.

Tell participants that if they are unwilling to change from whole milk to 1% low-fat or non-fat milk right away, they can first switch to 2%. After a period of time, they can try mixing 1% low-fat or non-fat milk with the 2% milk. Later, they can try to drink the 1% low-fat or non-fat milk alone. This same process of slowly switching can be used for people who are drinking 2%, but want to switch to non-fat. Let participants know that they can also use the 1% low-fat or non-fat milks in recipes.
18. Ask them what ideas they have for how they would be willing to use non-fat or 1% low-fat milk.

Answer will vary. Some ideas you can offer are that non-fat and 1% low-fat milks can be used on cereal or to make chocolate milk, pudding, mashed potatoes, soups and many other recipes, or to drink plain.

19. If there is milk left over after the activity, ask the group if anyone would like to take it home with him or her. Tell participants that only those with a short traveling distance should take it, especially if it is a hot day. Make sure you remind them to put it in the refrigerator as soon as they get home.

Option 2 (20 minutes)

In the event that many of the participants in the class are not willing to drink milk or if you are teaching many lessons in a row and cannot bring milk to the class, you can choose to do Option 2 instead of Option 1.

1. Remind the class that dairy foods are an important source of calcium. They are not the only source. For example, some non-dairy foods and fortified foods can provide calcium in your diet. For this activity, we will only be talking about the dairy foods. Ask the class how many people think that all milk and dairy products are high in fat.

Show of hands.

2. Ask the class to name as many different kinds of milk as they can.

Some choices they may give are whole, 2%, 1% low-fat or non-fat milk and whole, 2%, 1% low-fat, or non-fat lactose-free milk, dry powdered milk, soy milk and rice milk.

3. Ask the participants if any of them avoid dairy foods.

Show of hands

If participants avoid dairy foods, ask why they do.

Answers will vary. Be sure to tell participants that most people think that if you are lactose intolerant you can not have any dairy at all. Tell participants that research has shown most people can have some dairy foods if they:

- *enjoy dairy foods with other foods at mealtime.*
- *consume dairy foods in smaller amounts at all 3 meals instead of a large amount of a dairy food at a single sitting. They should start consuming dairy slowly and be sure not to have too much at any time.*

- *slowly increase the amount of dairy foods consumed until they are meeting the recommended amount for their age.*¹³

Ask the participants if they have children or other family members at home, for whom they provide food. Remind participants of the reasons why it is so important for people of all ages to get enough calcium. At all ages, calcium is needed to:

- build strong bones and teeth;
- keep your gums healthy;
- help your blood clot;
- allow your muscles to contract every time you move;
- help your nerves carry messages through your body;
- lower your risk of osteoporosis;
- lower your risk of high blood pressure;
- possibly lower the risk of getting kidney stones;
- possibly lower the risk of lead poisoning in children;
- possibly lower your risk of colon cancer.

Tell participants that adolescence, the time between puberty and adulthood, is the best time in life for building strong bones. Having stronger bones will help lower the risk of getting osteoporosis later in life. Most bones are strengthened during the growth spurt that happens during puberty.⁴ By age 18, often your bones are the thickest and strongest they will be.⁵ After adolescence, bone mass decreases as you age. So for the rest of your life, it is very important to maintain your bone mass by continuing to consume enough calcium.

4. Divide the class into 4 groups. Assign 1 group to look at whole milk, another group to 1% low-fat milk, 1 group to non-fat milk, and 1 group to lactose-free milk. If participants have a kind of milk that they like to drink, let them be in that group.
5. Pass out a milk label to each group matching the type of milk that they are looking at.
6. Discuss the labels with the class. Ask the class if anyone ever read the labels on foods before buying them.

Show of hands.

Go around the room and ask each participant how many servings of dairy foods they think they eat each day.

Answers will vary.

Remind the class that dairy foods are an important source of calcium. Tell the class that MyPlate tells you that based on your age, you should eat between 2 to 3 cups of calcium-rich foods each day. But to get the recommended amount of calcium your body needs, you should try to eat at least 3 cups. Eating cereal with milk for breakfast or drinking an 8 ounce glass of milk with dinner are easy ways to have 2 cups. Using your glass from the food model set, show the class what an 8 ounce glass looks like.

7. Ask participants if they remember how much calcium they need in a day.

Answers will vary. Make sure the following is said. The amount of calcium that you need each day depends on your age. Adults between 19 and 50 years old should get 1000 mg of calcium each day. After age 50, women should get 1200 mg a day and men should get 1000mg a day. If you are 9 – 18 years of age, you need 1300 mg each day.

Tell participants that they should eat a variety of calcium-rich foods to meet your daily calcium requirements, in addition to dairy. Calcium-fortified foods, salmon or sardines with the bones, green leafy vegetables like collard greens, almonds and tofu made with calcium are examples of non-dairy calcium-rich foods.

8. Tell the class that food labels for all kinds of calcium-rich foods show calcium as a % DV (percent Daily Value).

Explain to the class that they can change the percent of calcium into milligrams of calcium by adding a zero to the end of the number in milligrams. For example, if the label says that there is 30% calcium in 1 serving, then there are 300 milligrams of calcium in that serving. Let them know that **this method only works for calcium** and not the other nutrients like Vitamin A, Vitamin C, and iron.

9. Ask each group to look at the label they are using. Have each group tell the class what % DV and how many mg of calcium are in the type of milk that they are looking at.

Answers should not vary. Even though there are different types of milk, most have 300 milligrams of calcium per serving.

10. Ask each group what is the serving size on their milk label.

Answers should not vary. Most serving sizes are 1 cup for milk, which is 8 oz (ounces).

Using your tumbler from the food model set, show the class what an 8 oz serving looks like.

11. Ask each group how much fat is in 1 serving of their milk type.

Answers will vary.

12. Ask the class for reactions to the different amounts of fat.

Whole milk has much more fat than 1% low-fat milk. Non-fat milk has even less fat. Urge participants to use 1% low-fat or non-fat milk or 1% lactose-free milk.

13. Tell the group that it can be hard to taste a difference between 1% low-fat milk and whole milk. Re-state that non-fat milk and 1% low-fat milk are good sources of calcium and have little or no fat in them. Whole milk has the same amount of calcium in it as these milks, but has a lot more fat. Ask them when or how they would be willing to use non-fat or 1% low-fat milk.

Answer will vary. Some ideas you can offer are that non-fat and 1% low-fat milks can be used on cereal or to make chocolate milk, pudding, mashed potatoes, soups and many other recipes, or to drink plain.

Activity 4: “Increasing Calcium In Recipes” (10 minutes)

1. Make a pile of each of the **Calcium-Rich Recipes** handouts. Ask the participants to take copies of the recipes that they want to make at home.
2. Ask each participant which calcium-rich recipes they chose. Ask them which ingredients made the recipes good sources of calcium.

Answers should include the following ingredients: dry milk powder, any kind of cheese, evaporated milk, cream soup, tofu with calcium and yogurt

3. Go around the room asking participants to tell the class their favorite recipes they make at home. After a participant names his or her favorite recipe, have him or her tell the group how it could be made calcium-rich, if it does not already have any calcium in it, or if it already has calcium in it, how it could be made even richer in calcium. Have the group offer more ideas.

Answers will vary. You can suggest adding a spoonful of dry powdered milk to casseroles, meatloaf or other dishes. Add calcium-fortified tofu to stir fry. Add calcium-fortified juices to fruit salads. Add a slice of cheese to sandwiches or hoagies. Add collards to stews and stir fry. Add dry powdered milk to macaroni and cheese.

Next Week's Goals: (5 minutes)

1. Ask the participants to name 1 thing that they learned in today's class that they will use. Make sure that each learning objective is mentioned, and if not, be sure to re-state that objective. Remind them to work on meeting their new goals they set today before the next class. Let them know that they will be asked what changes they made at the next class.
2. Invite comments, suggestions or questions.
3. Thank the participants for coming and tell them what the next lesson will be about.

For The Teacher: What Makes This Lesson Behaviorally Focused?

- Activity 1 is not a behaviorally focused activity. It gives the participants a chance to think about what they know about calcium. They talk about their answers to the questions with the group. Each person is asked to share what they have learned about calcium. This activity starts the discussion and gets the participants interested in the topic of calcium.
- Activity 2 is behaviorally focused because participants are asked what they would be willing to do in their everyday lives to increase the amount of calcium they are getting.
- Option 1 of Activity 3 is behaviorally focused. This activity gives participants a chance to taste different types of milk. They are asked when they would be willing to use 1% low-fat or non-fat milk.
- Option 2 of Activity 3 is behaviorally focused because participants are asked if they ever read the nutrition facts labels on foods. They are asked when they would be willing to use 1% low-fat or non-fat milk.
- Activity 4 is behaviorally focused. In the first part of the activity, participants are asked to choose a calcium-rich recipe that they want to make at home.

Later in the activity, participants are asked to think of ways that they would be willing to add calcium to their own recipes.

- In Next Week's Goals, the participants are invited to name 1 thing that they learned during the class that they will use. They choose the behaviors that they will work on during the next week.



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Cheesy Macaroni Lasagna

Makes 4 Servings

Ingredients:

- 1¾ cup canned chunky tomato sauce
- ⅓ cup dry milk powder
- ½ cup water
- ¼ tsp. black pepper
- 2 cups cooked macaroni, drained
- 1½ cups 1% low-fat cottage cheese
- ¾ cup shredded reduced-fat mozzarella cheese
- ¼ cup grated non-fat Parmesan cheese
- Cooking Spray

Directions:

1. Set oven to 350° F.
2. Spray skillet with cooking spray.
3. Combine tomato sauce, dry milk powder and water in a bowl.
4. Add black pepper to the tomato sauce mixture. Stir until mixed.
5. Cook the tomato sauce mixture in the skillet, over medium heat, for 5 minutes.
6. Spoon sauce mixture into bottom of baking dish. Only use enough sauce to cover the bottom of the dish.
7. Spread half of the macaroni over the bottom of the baking dish. Make a second layer over the top of the macaroni using half of the cottage cheese and half of the mozzarella cheese.
8. Spoon half the sauce that is left over the mozzarella cheese. Add another layer with the rest of the macaroni. Place another layer of cottage cheese and mozzarella cheese on top.
9. Spoon the rest of the sauce over top. Sprinkle Parmesan cheese over the top.
10. Bake in the oven for 1 hour.

Food Facts Per Serving:

Calories: 336

Fat: 7 grams

Calcium: 363 milligrams

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HAMBURGER CASSEROLE

Makes 4 servings

Ingredients:

- 8 oz 85% lean ground beef
- 2 ¼ cups evaporated skim (non-fat) milk
- ¼ teaspoon black pepper
- ¼ teaspoon salt
- 3 cups cooked rice
- 4 slices (4 oz) reduced-fat American cheese
- Cooking spray
- ½ medium-sized onion, chopped
- ½ green pepper, chopped

Directions:

1. Set oven to 350° F.
2. Boil rice in a pot of 1 cup milk and 1 cup water until cooked.
3. Spray skillet with cooking spray. Place onions, peppers and meat in skillet. Add salt and pepper.
4. Brown the meat in the skillet, over medium heat, until it is no longer pink. Season to your liking. Some ideas for seasoning are garlic, paprika or ginger.
5. Add cooked rice to the skillet. Mix.
6. Pour mixture into a small baking dish. Pour 1 cup of milk over the mixture. Place cheese slices on top.
7. Bake for 40 minutes. If the casserole looks dry while baking, add ¼ cup of milk over top.

Food Facts Per Serving:

Calories: 430

Fat: 12 grams

Calcium: 365 milligrams

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CHICKEN BROCCOLI SKILLET

Makes 4 servings

Ingredients:

- ½ cup onions, chopped
- 3 cups frozen cut broccoli
- 8 oz can cream of chicken soup
- ⅓ cup dry milk powder
- ¼ cup water
- ¼ teaspoon black pepper
- 2 cups cooked rice
- 8 oz chicken breast, without the skin and bones
- 2 cups fresh or canned sliced mushrooms
- Cooking spray

Food Facts Per Serving:

Calories: 357
Fat: 6.5 grams
Calcium: 179 milligrams

Directions:

1. Spray skillet with cooking spray.
2. Brown chicken and onion in the skillet over medium heat.
3. Add mushrooms and broccoli to the chicken. Stir to mix.
4. Cook in skillet for 5 minutes, over medium heat.
5. In a bowl, combine chicken soup, dry milk powder, water and pepper.
6. Add soup mixture to chicken mixture. Stir to mix.
7. Cook over low heat for 10 minutes more.
8. Serve over rice.

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“MAKE-YOUR-OWN” YOGURT FRUIT SHAKE

Makes 4 servings

Food Facts Per Serving:

Calories: 216

Fat: 2.5 grams

Calcium: 220 milligrams

Ingredients:

3 containers (6 oz each) low-fat yogurts of your choice, like peach, banana strawberry, blueberry or vanilla

3 cups of 1 or 2 kinds of fresh or frozen or canned fruit of your choice, sliced, like bananas, strawberries, peaches, pineapple, papayas, mangoes, grapes and oranges—Look for what is in season!

¼ cup dry crunchy cereal, if you like

Directions:

1. Place yogurt and fruit(s) in a blender.
2. Cover and blend on high speed for about 30 seconds or until smooth.
3. Pour into glasses or bowls.
4. Sprinkle dry cereal over top.
5. Serve right away.



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RICE PUDDING DESSERT

Food Facts Per Serving

Calories: 171

Fat: 0 grams

Calcium: 203 milligrams

Makes 4 servings

Ingredients:

½ cup uncooked rice (not instant)

½ teaspoon salt

3 tablespoons sugar

¼ teaspoon cinnamon or nutmeg

2½ cups non-fat milk

½ cup raisins (optional)

Directions:

1. Combine all ingredients in a pot. Stir.
2. Cook covered on medium-low heat. Stir often.
3. Continue to cook until almost all of the milk is absorbed. This should take about 45 minutes.
4. Serve warm or cold.
5. To make this into a breakfast cereal, add more milk, to your liking.

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