



PASS THE MILK, YOGURT AND CHEESE, PLEASE!

DAIRY FOODS ARE NATURALLY RICH IN CALCIUM, A MINERAL THAT IS A MAJOR COMPONENT OF BONES. OTHER FOOD SOURCES OF CALCIUM INCLUDE:

DAIRY



CERTAIN DARK GREEN VEGETABLES



FISH WITH BONES



FORTIFIED FOODS



HEALTHY BONE OR OSTEOPOROSIS?



The bone disks on the table show the four stages between a **HEALTHY BONE** and the bone disease known as **OSTEOPOROSIS**.

ACTIVITY

Measure the amount of calcium in bones at different stages of life.





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HERE'S WHAT TO DO AT THIS STATION:

- 1 Identify the importance of dairy in the daily diet.**

 - Dairy foods are naturally rich in calcium, the mineral that is a major component of bones. Other food sources of calcium include certain dark green vegetables, calcium-set tofu, fish with bones and fortified foods.
 - Eating a well-balanced and varied diet is also needed to build a strong skeleton. In addition to calcium, you need vitamin D, protein and many other nutrients to build and maintain a strong skeleton.
 - To build strong bones, you need to participate in weight-bearing activities such as running and jumping.

- 2 View the bone density discs on the table.**

Low bone density can cause your bones to become brittle and fragile. The bone disks on the table show the four stages between a healthy bone and the bone disease known as osteoporosis.

- 3 Complete the "Pass the Milk, Yogurt and Cheese, Please!" activity sheet.**



- 4 At home, complete the "Are You a Best Bone Builder?" worksheet and review the "Mix Up Your Movement" worksheet.**



Activity – Measure the amount of calcium in bones.

On the table, you will find a bag filled with corn meal, which represents the calcium in bones. You will measure the amount of calcium in the bones of a healthy skeleton at different ages and stages by following the directions below.

- A newborn baby has about ¼ cup of calcium in their bones. Measure ¼ cup of corn meal and place it in the bag labeled "newborn."
- A 10 year-old has about 4 cups of calcium in their bones. Measure 4 cups of corn meal and place it in the bag labeled "10 year-old."
- A 15 year-old has about 9 cups of calcium in their bones. Measure 9 cups of corn meal and place it in the bag labeled "15 year-old."
- An adult has about 11 cups of calcium in their bones. Measure 11 cups of corn meal and place it in the bag labeled "adult." *Interesting fact: An adult with osteoporosis may have as little as 6.5 cups of calcium in their bones.*



LESSON 2
THE "BUILD YOUR BODY" GROUPS - PROTEIN AND DAIRY
STUDENT WEEKLY WORKSHEET

ARE YOU A BBB (BEST BONE BUILDER)?

- 1. I spend at least 15 minutes each day walking (include the time you walk to school, your friend's house, around the mall, etc.).**
 - Yes (3 points)
 - No (0 points)
- 2. I practice or play a weight-bearing sport such as soccer, football, lacrosse, basketball, or running at least three times each week.**
 - Yes (3 points)
 - No (0 points)
- 3. Every day, I play actively for at least one hour (include the time you play at recess, during school PE, and with your family and friends).**
 - Yes (3 points)
 - No (0 points)
- 4. I get enough calcium in my diet.**
 - Every day (5 points)
 - At least five days each week (3 points)
 - Three to four days each week (1 point)
 - Two days or less each week (-3 points)

IT'S A FACT!

Your body can only build bone when you are young. By the time you reach the ripe old age of about 30, your skeleton will be as strong as it ever can be.

To build strong bones now, be sure to exercise your bones and take in plenty of calcium.

- Aim for 1,300 milligrams of calcium if you are between the ages of 9-18. Kids ages 4-8 need 1,000 milligrams each day. The calcium worksheet lists the calcium content of common foods.
- If you use dairy products, be sure to take in enough milk, yogurt and cheese servings for your age (2 ½ servings until age eight, three servings if you are nine or older).
- If you don't consume dairy products, you need three or more servings of calcium-rich foods such as calcium-fortified soy milk or calcium-fortified orange juice, canned fish with bones, almonds, dark leafy greens, tofu or other calcium-fortified foods.

IF YOU SCORED:

11-14 POINTS

Congratulations, you are a BBB!
You are on your way to building healthy bones for life.

7-10 POINTS

You might want to set a goal to get more calcium and exercise each day.

6 OR FEWER POINTS

You are not building the best bones for life. Getting enough calcium in your diet and weight-bearing exercise are both needed to build a healthy skeleton.

MORE ON BONE BUILDING

Eating a well-balanced and varied diet is also needed to build a strong skeleton. Vitamins A, D, and K, magnesium, protein and many other nutrients contribute to bone building and overall good health.



**NUTRITION
IN A BOX**



LESSON 2

THE “BUILD YOUR BODY” GROUPS - PROTEIN AND DAIRY

STUDENT WEEKLY WORKSHEET

CALCIUM CONTENT OF COMMON FOODS*

FOOD	MILLIGRAMS (MG) PER SERVING
Yogurt, plain, low fat 8 ounces	415
Mozzarella, part skim 1.5 ounces	333
Sardines, canned in oil, with bones 3 ounces	325
Yogurt, fruit, low fat 8 ounces	313-384
Orange juice, calcium-fortified 8 ounces	300-350
Cheddar cheese 1.5 ounces	307
Milk, nonfat 8 ounces	299
Soy milk, calcium-fortified 8 ounces	299
Milk, 2% milk fat 8 ounces	293
Milk, whole 8 ounces	276
Tofu, calcium-set ½ cup	253
Salmon, pink, canned, solids with bone 3 ounces	181
Cottage cheese, 1% milk fat 1 cup	138
Ready-to-eat cereal, calcium-fortified 1 cup	Check label*
Kale, raw, chopped 1 cup	100
Turnip greens, fresh, boiled ½ cup	99
Chinese cabbage, bok choy, raw, shredded 1 cup	74
Almonds, dry roasted 1 ounce (approx. 23)	70
Tortilla, corn one 6 inch diameter	46
Apricots, dried ½ cup	35
Tortilla, flour one 6 inch diameter	32
Sour cream, reduced fat 2 tablespoons	31
Bread, whole-wheat 1 slice	30
Broccoli, raw ½ cup	21

* CALCIUM CALCULATION - “ADD A ZERO”

Nutrition Facts food labels list calcium as a “percent daily value” (or % DV). Since the daily value is based on 1,000 milligrams, you can convert % DV of calcium to milligrams by simply adding a zero. For instance, a serving of yogurt that provides 25% DV for calcium contains 250 milligrams of calcium per serving.



LESSON 2
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STUDENT ACTIVITY SHEET



PASS THE MILK, YOGURT AND CHEESE, PLEASE!



DAIRY FACTS

- Dairy foods are best known for providing the calcium and vitamin D that are important for building a strong skeleton. It is important to consume adequate dairy foods when you are young because that is the critical time period when you are building your skeleton. Dairy foods also provide many other key nutrients such as protein, vitamin A, vitamin B12, riboflavin, niacin, potassium and phosphorus.
- Kids and teens between the ages of 10-14 require three cups from the dairy group each day. A one cup serving is equivalent to one cup of milk or yogurt and one and a half ounces of natural cheese (about one third cup grated cheese).
- To build strong bones, you also need to participate in weight-bearing activities such as walking, running and jumping.

1. On the back of each dairy photo card, you will see a nutrition facts label. Use the labels to answer the questions below.

a. Which two dairy foods contribute the most protein per serving?

b. Which photo card offers an option for someone who is allergic to cow's milk?

BONUS: Can you think of another reason a person might select this product over dairy?

c. Use the low-fat berry yogurt and the low-fat plain yogurt cards to answer the questions below.

- Which has more calcium? _____
- Which has more protein? _____
- List the grams of sugar in each type of yogurt.
Sweetened berry _____ Plain _____
- Overall, which type of yogurt is more nutritious? (circle) Berry Plain



2. List three calcium-rich foods that are good to eat for a snack.

1. _____
2. _____
3. _____

3. TRUE or FALSE - Dairy products such as butter, sour cream and cream cheese are not included in the MyPlate dairy category because they are relatively low in calcium.

4. The list below includes action steps for fitting in your three servings of daily dairy or other calcium rich foods. Check one or more that you would be willing to work on. You can also come up with your own action step.

- Drink 1% milk at school breakfast and/or lunch.
- Make a fruit yogurt smoothie to drink after sports practice.
- Sprinkle Parmesan cheese on a pasta dish.
- Eat a yogurt parfait (yogurt, fruit and granola) instead of ice cream.
- Choose non-dairy sources of calcium-rich food this week (e.g. tofu, kale, sardines, calcium fortified orange juice)
- Your own action step (describe):



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Answer Key

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- Kids and teens between the ages of 10-14 require three cups from the dairy group each day. A one cup serving is equivalent to one cup of milk or yogurt and one and a half ounces of natural cheese (about one third cup grated cheese).
- To build strong bones, you also need to participate in weight-bearing activities such as walking, running and jumping.

1. On the back of each dairy photo card, you will see a nutrition facts label. Use the labels to answer the questions below.

- a. Which two dairy foods contribute the most protein per serving?
Cottage Cheese
Greek Yogurt



- b. Which photo card offers an option for someone who is allergic to cow's milk?
Soy Milk

BONUS: Can you think of another reason a person might select this product over dairy? They are a vegetarian.

- c. Use the low-fat berry yogurt and the low-fat plain yogurt cards to answer the questions below.
- Which has more calcium? Low fat plain yogurt
 - Which has more protein? Low fat plain yogurt
 - List the grams of sugar in each type of yogurt.
 Sweetened berry 39 Plain 16
 - Overall, which type of yogurt is more nutritious? (circle) Berry Plain

2. List three calcium-rich foods that are good to eat for a snack. Many choices of various types of yogurt, cheese, milk, soy milk

1. soy milk
2. _____
3. _____

3. **TRUE** or FALSE - Dairy products such as butter, sour cream and cream cheese are not included in the MyPlate dairy category because they are relatively low in calcium.

4. The list below includes action steps for fitting in your three servings of daily dairy or other calcium rich foods. Check one or more that you would be willing to work on. You can also come up with your own action step.

- Drink 1% milk at school breakfast and/or lunch.
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- Your own action step (describe):



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STUDENT WEEKLY WORKSHEET



MIX UP YOUR MOVEMENT!

AIM FOR A TOTAL OF 60 MINUTES OF PHYSICAL ACTIVITY EACH DAY.



TO HELP YOU:	PICK ACTIVITIES THAT:	EXAMPLES:
Strengthen your heart (and also improve your endurance)	Keep you moving (and breathing a little hard) for at least fifteen minutes at a time	Riding your bike, jump rope games, dancing to music, inline skating, running, jogging, swimming, all games that involve running such as basketball, rugby, baseball, football, soccer, or playing tag
Build sturdy bones	Are "weight bearing," which means your body works against gravity	Walking, running, marching, hopping, skipping, karate, gymnastics, tennis, jump rope, all games that involve running such as basketball, rugby, baseball, football, soccer, or playing tag
Become stronger	Work your muscles	Tug-of-war, rope climbing, pumping higher on a swing, swinging bar to bar along play equipment, handstands, exercises such as sit-ups and push-ups
Move, reach and bend easier	Help you to stretch and become more flexible	Ballet and other dancing, gymnastics, stretching exercises, doing the splits, toe reaches, yoga
Enjoy moving your body and stay in good shape	Are FUN!	YOUR favorite activities, sports, and exercises!

