

Daily Calcium Needs

Target Audience: *Upper Elementary to Adult*

Education Setting: *Display – Interactive or Static (Adaptable for classroom)*

Objectives:

- Demonstrate the calcium content of a variety of foods.
- Illustrate daily calcium needs at various life stages.
- Compare calcium content to calcium needs.

Materials Needed:

- Cotton balls (about 350)
- Clear re-sealable plastic bags (of various sizes)
- Marker or labels for bags
- Food models or pictures of:
1 cup milk, 1 cup yogurt, ½ cup broccoli, an orange, a slice of cheese pizza, a corn tortilla

Set-up:

1. Label one bag “Calcium needs for 9 to 18 year olds.” Add 130 cotton balls.
2. Label one bag “Calcium needs for 19 to 50 year olds.” Add 100 cotton balls.
3. Label the other six bags “A,” “B,” “C,” “D,” “E,” and “F.” Add cotton balls to bags according to chart on page 2.
4. See photo on page 2 for example.

Background Information:

Each cotton ball represents 10 mg of calcium.

Lesson Activity:

Depending on setting, choose how to display bags:

Interactive: Create a matching game by having students match the appropriate bag of cotton balls to the food model or food picture.

Static: Create a display board with bags posted next to corresponding food picture.

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Recommendations:

<u>Age (years)</u>	<u>Mg Calcium</u>
1-3	500
4-8	800
9-18	1,300
19-50	1,000
50+	1,200

Discuss:

- Point out the calcium recommendations for students ages 9-18. Compare this to the calcium recommendations for adults ages 19-50.
- Explain that the calcium needs for 9-18 year olds is high because this is the time when bones are in their most active growth phase. Most bone growth occurs from age 11 to 16; and 85-90 percent of adult bone mass is acquired by age 18 in girls and age 20 in boys.
- Compare the calcium content of different foods. Compare “Calcium needs” bags to calcium content of foods to determine how food choices can help students meet their calcium needs.
- Show that 1,300 milligrams of calcium a day is equivalent to at least four 8-ounce glasses of milk.
- Remind students that we cannot live on calcium alone. Also, we should choose food over supplements to provide the nutrients we need to function. No one food – or food group – supplies them all. That is why we need a variety of foods from all Five Food Groups every day.

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Calcium content of foods:

Bag	Food	Portion Size	Mg Calcium	# Cotton Balls
A	Milk	1 cup	300	30
B	Yogurt	1 cup	400	40
C	Cheese Pizza	1 slice	220	22
D	Broccoli	½ cup	50	5
E	Orange	1 medium	50	5
F	Corn Tortilla	1	40	4

Reinforce:

- Ask students to develop a plan to reach their recommended calcium needs. Plan at least three things that could be done to boost calcium intake.
- Ask students to share what they learned from the activity.
- Provide age-appropriate recipes from www.3aday.org to encourage dietary calcium consumption.

Recommended Supplemental Resources:

- The Bone Bulletin
- 33 Tasty Snack Ideas
- Calcium – Are you getting enough?
- Bone up on Dairy
- Food Models, including Leader Guide

To order a set, visit: www.westerndairyassociation.org or call: 303-451-7711 or 800-274-6455

Daily Calcium Needs Display:

