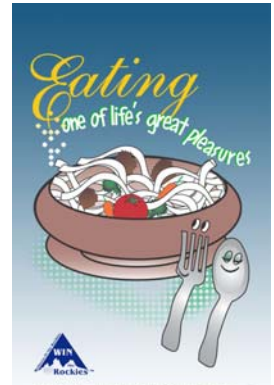


Calcium in Our Bones

Calcium Awareness Activity



Objectives:

1. Understand the amount of calcium in bones by making visual representations.
2. Explore the increase in calcium in the bones during the teen years.

Age:

10 years and older.

Length:

Approximately 15 minutes.

Supplies and Materials:

1. Ten pounds of white flour.
2. Five sets of measuring cups.
3. Clear plastic re-sealable bags in gallon sizes (at least 10 bags).
4. Instruction sheets, attached. Cut apart and provide one per group.
5. Markers that write on plastic bags.

Special Considerations:

Reading Assistance: Encourage groups to work as a team to complete their task.

Activity Directions:

1. Divide group into five teams.
2. Distribute the five assignments. Each group will take one slip of paper with *stage of life* information. They will measure flour and place in a re-sealable plastic bag. Double-bagging is suggested. Each group will label their bag with *stage of life* information. The five assignments are as follows:
 - $\frac{1}{4}$ cup flour = average calcium in a newborn's skeleton
 - $3\frac{1}{2}$ cups flour = average calcium in a ten year old kid's skeleton
 - 7 cups flour = average calcium in a fifteen year old teenager's skeleton
 - 11 cups flour = average calcium in an adult's skeleton
 - $6\frac{1}{2}$ cups flour = average calcium in a woman's skeleton with osteoporosis (30 to 40% bone loss)

3. Emphasize there is only a very small amount of calcium in flour. The flour used in this activity roughly represents the amount of calcium in bones, by weight, in the human body at different life stages.

4. Ask each group to share their bag and information. Have the groups present in order from earliest to latest life stage. Place them side-by-side to see the differences. Where appropriate, share the following information:

- * depending on diet, calcium in our bones increases and should double from 10 to 15 years of age
- * osteoporosis is a disease where the bones lose calcium and become weak causing bones to break more easily
- * consuming plenty of calcium (food and beverages), as well as being physically active for your whole life, helps prevent osteoporosis
- * some of the best dietary sources for calcium are low-fat dairy foods like milk, yogurt, and cheese



Take Home Tidbit

Take home slip says the following:

“Ask me about the bags of flour we made to show calcium in our bones at the WIN Kids Fun Day.”

Sources:

Miller, Gregory, Jarvis, Judith, and McBean, Lois. *Handbook of Dairy Foods and Nutrition*. Second Edition. National Dairy Council, 2000.

Wardlaw, Mary Kay. *BONES*. WIN Kids Lesson. Wellness IN the Rockies, University of Wyoming. 2002.

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