

IMPACT



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Got Calcium? A Nutrition Education Curriculum for 3rd and 4th Graders

The Situation

Most children do not meet calcium recommendations. The most recent "Continuing Survey of Food Intakes by Individuals 1994-1996," revealed that only about 38% of males and 20% of females aged 6 to 11, 32% of males ages 12 to 19, and 12% of similar aged females, consume 100% of the "Adequate Intake for Calcium." The calcium recommendation for individuals 4-8 years old is 800 mg/day and for individuals 9 to 18 years old is 1,300 mg/day. It is estimated that the prevalence of thin or porous bones (osteoporosis) could increase dramatically unless children increase their calcium intake.

Our Response

Develop a calcium education curriculum for youth called "Got Calcium?" and test its effectiveness. Four lessons were developed for 3rd and 4th grade students that were taught weekly. The topics that were covered included:

- Lesson 1: Bone Up on Calcium (covers the functions of calcium and foods high in calcium).
- Lesson 2: Making Bones Strong (discusses the major bones in the body and exercises that make bones strong).
- Lesson 3: Hunt for Calcium in Meals and Snacks (teaches students how to use the food label to determine which foods are good or excellent sources of calcium).
- Lesson 4: Boost Your Calcium Intake (covers how to select high calcium meals and snacks).

Evaluation tools included: Pre- and post-surveys, calcium taste test evaluations, physical activity surveys, food label activity and calcium-intake surveys.

Lessons were taught weekly over a four-week time period to third and fourth grade students. Two hundred and thirty children completed the lessons and evaluation tools. Chi-square analysis was conducted to determine frequency and t-tests were run to determine if significant changes ($p < 0.05$) occurred in knowledge on the pre- and post-surveys.



Program Outcomes

- Changes in knowledge: Results for the pre- and post-surveys showed a significant increase ($p < 0.05$) in the number of children who learned the importance of calcium in the diet and those that could identify high calcium foods.

- Changes in eating behaviors: Of the four different calcium snacks (flavored milk, cheese, fruit smoothie, and yogurt) tested by youth, flavored milks were rated the highest.
- Physical activity surveys indicated that the majority of youth (>50%) rated walking, riding their bike, skipping, and jumping rope as their favorite activities.
- Approximately 70% of students were able to use the food label and correctly identify a food as being a good or excellent source of calcium.
- Calcium-intake surveys showed that 60-90% of the students used dairy products (milk, cheese, and yogurt) as their main way to meet calcium requirements; however, 30-40% were willing to try tofu, almonds, and salmon.



For More Information

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