Elementary school children learn to be crazy about calcium!

The Situation
Consuming milk and milk products provides health benefits. People who have diets rich in milk and milk products can reduce their risk of low bone mass throughout life. Foods in the milk group provide nutrients, including calcium, potassium, vitamin D, and protein.

However, milk consumption among children has been decreasing over time, and many kids now drink more soda than milk. More than 85 percent of girls and 60 percent of boys ages nine to 18 fail to get the recommended amount of calcium per day.

Our Response
University of Idaho extension educators developed and presented a program “Crazy about Calcium!” to teach elementary-age children the importance of eating dairy products and ways to increase dairy intake. Students learned that dairy products contain nutrients that are important for bone density, dental health, blood clotting, and muscle contraction. They saw models of the amount of calcium in their bones at different ages, and viewed photographs of microscopic images of a healthy bone and an osteoporotic bone. Students determined the recommended dairy intake for their ages, and learned a simple method to track their daily dairy intake. They engaged in age-appropriate activities, such as word searches and word unscrambles to solidify their learning. The Idaho Dairy Council donated bookmark/rulers with child-oriented graphics, which were very well received by the students.

Throughout the class students were encouraged to incorporate a variety of dairy products in their diets, and to consume the recommended number of servings for their age. They planned sample menus featuring appropriate amounts of dairy products.

Ninety-seven sessions of “Crazy about Calcium!” were taught in one Franklin County and seven Bingham County elementary schools and on the Fort Hall Indian Reservation. Over 2300 students from kindergarten to fifth grade participated. Students represented a variety of ethnicities. Sixteen percent of the students were Hispanic, 13 percent were Native American, 1 percent was Black, and 1 percent was Asian.

Program Outcomes
Third-, fourth-, and fifth-grade students (n=932) completed a seven-question quiz before the program and immediately after the program. Results included the following:

Crazy about Calcium! Quiz Results

<table>
<thead>
<tr>
<th>Question</th>
<th>Before Class</th>
<th>After Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Kids today get too much calcium in their diets.</td>
<td>57</td>
<td>76</td>
</tr>
<tr>
<td>2. Where is most of the calcium found in your body?</td>
<td>59</td>
<td>89</td>
</tr>
<tr>
<td>3. Which food has more calcium?</td>
<td>71</td>
<td>93</td>
</tr>
<tr>
<td>4. An easy way to make sure you get enough calcium daily is to:</td>
<td>86</td>
<td>87</td>
</tr>
<tr>
<td>5. How many servings of dairy should you eat every day?</td>
<td>63</td>
<td>87</td>
</tr>
<tr>
<td>6. Which activity makes your bones strong?</td>
<td>95</td>
<td>96</td>
</tr>
<tr>
<td>7. What will you do to keep your bones strong?</td>
<td>XXX</td>
<td>82</td>
</tr>
</tbody>
</table>
As can be seen from the table, students increased their knowledge on each of the questions. Question seven was only asked after the class. Eighty-two percent of the students were able to state something specific that they would do to keep their bones strong, either through the consumption of high-calcium foods or by doing weight-bearing physical activity. Anecdotally, the educators have seen many of the students in community settings since this presentation. Almost all self-report that they are eating calcium-rich foods, playing actively, and exercising.

The Future
University of Idaho extension educators will continue school enrichment nutrition education programs to educate, encourage, and motivate children to eat a variety of healthy foods. Various educational methods such as group discussion, hands-on activities, games, and theme-based children’s literature will continue to be used.

FOR MORE INFORMATION

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