

Iowa's Dairy Story Dairy Nutrition Lesson

Objectives:

1. To emphasize the importance of 3 servings of dairy products a day.
2. Realize what the calcium in dairy products does for your bones.
3. Learn diverse benefits dairy products provide the body.
4. Identify reasons for osteoporosis.

Iowa Core Curriculum Met:

Science Standards

- Content Standard 2: Students can understand concepts and relationships in life science.

Literacy Standards

- Content Standard 1: Students can comprehend what they read in a variety of literary and informational texts.

Health Literacy

- Essential Concepts and/or skill: Obtain, interpret, understand and use basic health concepts to enhance personal, family and community health.

Duration: 10-15 minutes

Supplies Needed:

Dairy nutrition video

Teaching the Lesson:

Introduction

1. What food group have you been studying lately to prepare for today?
 - a. Dairy Food Group
2. What is the main nutrient in this group that you need for healthy bones?
 - a. Calcium
3. Milk and other dairy products are good sources of calcium and they are great to drink or eat anytime.

So, now that we know calcium is important, let's look at how much calcium your body needs.

How much Calcium do you Need?

1. Your body cannot make calcium so you need to get it from foods every day.
2. How much calcium do you need to get daily for your age group?
 - a. 1,300 mg which is three servings of dairy per day; 1 serving = 8 ounce (1 cup) glasses of milk a day or its equivalent (1.5 oz cheese, 1 cup yogurt, 2 cups cottage cheese).

Bone Models

1. Baby: When born, baby has $\frac{1}{4}$ cup calcium in the body; bones soft/pliable
 - a. What do babies eat for the first 6 months? Milk
 - i. Babies can't sit or stand because their bones aren't strong enough to support them, but as they drink milk, the nourishment helps their bones become stronger.
2. Ages 10 and 15: How do we get taller? Our bones grow in two ways. They get longer so we become taller, and our bones also become denser.
 - a. If we drink milk and consume dairy products daily and get the calcium you need, by age 10 you have $3\frac{1}{2}$ cups, and at 15 years old you have 7 cups of calcium.
 - b. (these students are about 8-11 years old) This time in your life is a crucial time to be getting adequate amounts of calcium daily.
3. Adult: It is important that you get your 3 servings of dairy food every day.
 - a. An adult has about 11 Cups of calcium if they have been getting their calcium daily and have healthy bones.
4. Osteoporosis:
 - a. Does anyone know what Osteoporosis is? A disease that causes a decrease in bone mass. As a result, bones become weak and may break. A person that has Osteoporosis might have only $6\frac{1}{2}$ Cups of calcium in their body which is less than what they had at age 15.

Iowa's Dairy Story

In order for you to be able to have dairy foods, there are many components to provide us with fresh, nutritious foods every day. This story tells explains the process of how dairy foods make it from the farm to your plate.

1. Farmers provide clean, dry bedding for cows to rest on and provide access to fresh feed and water 24 hours a day
2. Veterinarian makes regular visits to ensure cows are healthy.
3. Cows must have a calf before able to milk. They are milked 2-3 times per day, producing 7-8 gallons of milk each day!
4. Milk is immediately cooled to 45°F and stored in a bulk tank.

5. A refrigerated truck transports the milk from the farm to the processor. It is tested before and after transport for antibiotics and bacteria. If it tests positive, it is discarded.
6. At the plant, it is tested again and then pasteurized; heated to 160°F for 15 seconds to destroy any bacteria.
7. Milk is used to make our favorite dairy foods: yogurt, cheese, ice cream, etc.
8. It takes two days for dairy foods to travel from farm to processor to you. Fast, Fresh, Local!