



# Dairy Foods for Healthy Bones

Dairy foods are excellent sources of several nutrients that work together to protect bones, including calcium. By enjoying three servings of milk, cheese and yogurt everyday as part of a healthy diet, children, teens and adults can reduce their risk for the bone-thinning disease, osteoporosis.

## **BUILDING STRONG, HEALTHY BONES**

Throughout life, calcium is essential for building and maintaining strong, healthy bones and teeth, and preventing osteoporosis. The childhood, teenage and young-adult years are especially critical for building the strongest bones possible, but we never outgrow our need for calcium, no matter what our age! Here's why:

- Children's bones are like bank accounts. Calcium is being deposited for later years.
- During the teenage years, children gain nearly half of their bone mass. By age 20, the average young person has developed nearly 98 percent of his or her skeleton.
- Up through about age 30, bones continue to get denser.
- After about age 30, bones don't gain density, but calcium helps to keep them strong.

## **CALCIUM DOES MORE THAN BUILD STRONG BONES...**

Ninety-nine percent of the body's calcium is stored in the skeleton. The other 1 percent is in the bloodstream. While 1 percent doesn't sound like much, it is essential for:

- Muscles to contract and relax
- The heart to beat
- Blood to clot
- Nerves to send messages to and from the brain

When there is not enough calcium in our diet, the body pulls calcium from the bones to keep blood levels normal. This increases our risk for developing osteoporosis.

## **HOW MUCH CALCIUM IN A CUP OF MILK?**

Milk and dairy foods are excellent sources of calcium. An 8-ounce cup of milk – one serving – provides about 300 milligrams of calcium. So do:

- 1 1/2 ounces of natural cheese, such as Cheddar, Mozzarella or Colby
- 6 to 8 ounces of yogurt, reduced-fat, low-fat or fat-free
- 3 slices of processed American cheese
- 1 cup of pudding made with milk

<b>If you're ...</b>	<b>You need...</b>
Age 2-3	500 mg
Age 4-8	800 mg
Age 9-18	1,300 mg
Age 19-50	1,000 mg
51 +	1,200 mg
Pregnant or breastfeeding (Age 18 or under)	1,300 mg
Pregnant or breastfeeding (Age 19-50)	1,000 mg

**A calcium-rich diet may also help reduce the risk for certain cancers, such as colon cancer, and lower blood pressure.**

## A CHOICE FOR EVERYONE

Reduced-fat, low-fat or fat-free plain and flavored milk, and other dairy foods all provide the same amount of bone-building calcium. The main difference is the number of calories and the amount of fat. So no matter what your taste preference or health concern, there is a milk, cheese or yogurt choice for everyone! For example, here is how different milks compare:

	<b>Fat-free</b>	<b>Low-fat</b>	<b>Reduced-fat</b>	<b>Low-fat Chocolate</b>	<b>Whole</b>
CALORIES	80	100	120	160	150
TOTAL FAT	0 g	2.5 g	5 g	2.5 g	8 g
CALCIUM	300 mg	300 mg	300 mg	300 mg	300 mg

Regardless of the fat and calorie level, it's important to balance "energy in" from all foods with "energy out" through regular physical activity.

## CHOOSE FOOD FIRST FOR CALCIUM

Nutrition experts recommend food first for the calcium we need. Calcium supplements provide only calcium. While they can correct a calcium deficiency, they do not correct poor dietary habits. Diets that are low in calcium are typically low in many other nutrients, too. Calcium-rich dairy foods provide protein, phosphorus, vitamins A and D, and other nutrients that work with calcium to help keep bones healthy. Drinking milk has been shown to be a marker for good nutrition among children. Multiple studies have demonstrated that milk drinkers have better diets overall, and higher intakes of specific nutrients than non-milk drinkers.<sup>1, 2, 3</sup>

## CALCIUM-FORTIFIED JUICE AND LEAFY GREENS FOR CALCIUM

Think of calcium-fortified juice as a supplement to, not a substitute for, the 3-A-Day™ of Dairy that we need each day. The reason – milk also provides **many other nutrients** not provided by juice.

Also, calcium-containing, nondairy foods, like salmon, green leafy vegetables, or pinto and red beans, generally provide less calcium per serving than milk and other dairy foods. One would need to eat 8 cups of spinach, nearly 5 cups of red beans and 2 1/4 cups of broccoli to get the same amount calcium as in one cup of milk – amounts not realistic for most children or adults!

## LACTOSE INTOLERANCE

Lactose intolerance does not mean dairy intolerance. Research shows that people who have difficulty digesting lactose, the sugar in milk, may be able to drink up to 2 cups of milk a day without problems when they follow these simple suggestions:

- Think small! Try smaller amounts of milk and milk products frequently throughout the day. Gradually build up to bigger servings at one time.
- Drink small amounts of milk with meals instead of on an empty stomach.
- Enjoy cheese. Hard cheeses, such as Swiss and Cheddar, are naturally low in lactose.
- Get some culture. Active cultures in yogurt make it easier to digest. Look for the words "active cultures" on the label.
- Choose lactose-reduced or lactose-free milk, or add over-the-counter enzyme drops to break down the lactose in plain or flavored milk.

1. Ballew C, S Keuster and C Gillespie. *Arch Pediatr Adolesc Med* 154:1148, 2000.  
2. Bowman SA. *J Am Diet Assn* 102:1234, 2002.  
3. Volek JS, AL Gomez, TP Scheett et al. *J Am Diet Assn* 103:1353, 2003.