



## CALCIUM: AN IMPORTANT NUTRIENT THAT BUILDS STRONGER BONES



Bone is living tissue, constantly renewing itself. Although bone is strong and relatively flexible, everyday wear and tear causes tiny structural defects, much like those that occur in the foundations of a building over time. In our bodies, there are two groups of special cells that perform the work of a “maintenance crew.” Osteoclasts excavate any areas of damaged or weakened bone and then

osteoblasts fill in the crevices with material that hardens to form new bone. This two-part process is called bone remodelling, and the cycle of remodelling is completed every three to four months in a healthy young adult.

As we age, the two groups of cells that form the maintenance crew become less efficient in working together – the osteoclasts remove old bone faster than the osteoblasts are able to rebuild it. In addition, calcium, like many nutrients, is absorbed less effectively as we age. In people who have relatively healthy bones, adequate calcium intake can help the remodelling process stay balanced. Studies of older adults show that adequate calcium intake can slow bone loss and lower the risk of fracture.

For those over 50, Canada’s Food Guide recommends 3 servings of milk and alternatives (2 servings for adults under age 50) – yogurt, cheese, calcium-fortified beverages, puddings, custards, etc. This essentially means that, if you are over 50, you need the equivalent of one good serving of dairy at each meal.

Take your pick: have a glass of milk (go ahead and have chocolate milk if you prefer), have soup that’s made with milk (like cream of mushroom soup), main courses made with cheese such as lasagna, or have yogurt with fruit for dessert. A 3 cm cube of hard cheese has as much calcium as a cup of milk. Skim milk products provide as much calcium as whole milk with the added advantage of less fat and cholesterol. Dairy products are an excellent source of calcium and are also a good source of protein.

If you are intolerant to dairy products or if you prefer to avoid dairy, there are other alternatives food sources that are high in calcium. These include:

- Calcium-fortified soy, almond and rice beverages (check the nutrition labels)
- Calcium-fortified orange juice (check the nutrition labels)
- Canned salmon or canned sardines. (When you eat the bones that have been softened by the canning process, these foods are excellent sources of calcium.)

CALCIUM CONTENT OF SOME COMMON FOODS	SERVING SIZE	CALCIUM*
Buttermilk	1 cup/250mL	186 mg
Fortified orange juice	1 cup/250mL	300 mg
Fortified almond, rice or soy beverage	1 cup/250mL	300 mg**

CALCIUM CONTENT OF SOME COMMON FOODS	SERVING SIZE	CALCIUM*
Milk – whole, 2%, 1%, skim, chocolate	1 cup/250mL	300 mg***
Milk, evaporated	1/2 cup/125 mL	367 mg
Milk – powder, dry	1/3 cup/75 mL	270 mg
Yogurt – plain, 1-2% M.F.	3/4 cup/175 mL	332 mg
Almonds, dry roast	1/2 cup/125 mL	186 mg
Beans – white, canned	1 cup/250 mL	191 mg
Cheese – Blue, Brick, Cheddar, Edam, Gouda, Gruyere, Swiss	1 ¼"/3 cm cube	245 mg
Cheese – Mozzarella	1 ¼"/3 cm cube	200 mg
Drinkable yogurt	4/5 cup/200 mL	191 mg
Frozen yogurt, vanilla	1 cup/250 mL	218 mg
Fruit-flavoured yogurt	3/4 cup/175 mL	200 mg
Ice cream cone, vanilla, soft serve	1	232 mg
Kefir (fermented milk drink) – plain	3/4 cup/175 mL	187 mg
Molasses, blackstrap	1 Tbsp/15 mL	180 mg
Salmon, with bones – canned	1/2 can/105 g	240 mg
Sardines, with bones	1/2 can/55 g	200 mg

CALCIUM CONTENT OF SOME COMMON FOODS	SERVING SIZE	CALCIUM*
Soybeans, cooked	1 cup/250 mL	170 mg
Beans – baked, with pork, canned	1 cup/250 mL	129 mg
Beans – navy, soaked, drained, cooked	1 cup/250 mL	126 mg
Collard greens – cooked	1/2 cup/125 mL	133 mg
Cottage cheese, 1 or 2%	1 cup/250 mL	150 mg
Figs, dried	10	150 mg
Instant oatmeal, calcium added	1 pouch/32 g	150 mg
Soy flour	1/2 cup/125 mL	127 mg
Tofu, regular – with calcium sulfate	3 oz/84 g	130 mg
Beans – baked, plain	1 cup/250 mL	86 mg
Beans – great northern, soaked, drained, cooked	1 cup/250 mL	120 mg
Beans – pinto, soaked, drained, cooked	1 cup/250 mL	79 mg
Beet greens – cooked	1/2 cup/125 mL	82 mg
Bok choy, Pak-choi – cooked	1/2 cup/125 mL	84 mg
Bread, white	2 slices	106 mg
Chickpeas (garbanzo beans)	1 cup/250 mL	77 mg

CALCIUM CONTENT OF SOME COMMON FOODS	SERVING SIZE	CALCIUM*
Chili con carne, with beans – canned	1 cup/250 mL	84 mg
Cottage cheese – 2%, 1%	1/2 cup/125 mL	75 mg
Okra – frozen, cooked	1/2 cup/125 mL	89 mg
Processed cheese slices, thin	1	115 mg
Turnip greens – frozen, cooked	1/2 cup/125 mL	104 mg
Artichoke – cooked	1 medium	54 mg
Beans, snap – fresh or frozen, cooked	1/2 cup/125 mL	33 mg
Broccoli – cooked	1/2 cup/125 mL	33 mg
Chinese broccoli (gai lan) – cooked	1/2 cup/125 mL	46 mg
Dandelion greens – cooked	1/2 cup/125 mL	74 mg
Edamame (East Asian dish, baby soybeans in the pod)	1/2 cup/125 mL	52 mg
Fireweed leaves, raw	1/2 cup/125 mL	52 mg
Grapefruit, pink or red	1	27 mg
Hummus	1/2 cup/125 mL	50 mg
Kale – cooked	1/2 cup/125 mL	49 mg
Kiwifruit	1	26 mg

# CALCIUM CONTENT OF SOME COMMON FOODS

## SERVING SIZE

## CALCIUM\*

Mustard greens – cooked	1/2 cup/125 mL	55 mg
Orange	1 medium	50 mg
Parmesan cheese, grated	1 Tbsp/15 mL	70 mg
Rutabaga (yellow turnip) – cooked	1/2 cup/125 mL	43 mg
Seaweed (agar) – dried	1/2 cup/125 mL	35 mg
Snow peas – cooked	1/2 cup/125 mL	36 mg
Squash (acorn, butternut) – cooked	1/2 cup/125 mL	44 mg

\*Approximate values.

\*\*Added calcium may settle to the bottom of the container; shake well before drinking. \*\*\*Calcium-enriched milk – add 100 mg per serving.

The calcium in soy beverage is absorbed at the rate of 75% of milk. The calcium in some foods such as sesame seeds, rhubarb, Swiss chard and spinach is not well absorbed, because of very high oxalate content, which binds the calcium. Therefore these foods have not been included.