

Calcium

The Non-Dairy Way



Why non-dairy calcium sources?

There are many reasons to choose or need non-dairy sources of calcium. You may be allergic to milk products, dislike the taste, or be vegan. Whatever the reason, it is important to make sure you get enough calcium from other sources.

The facts about calcium

Calcium is an important mineral which helps build and maintain healthy bones and teeth. It also helps your muscles to contract and your nerves to send messages. Bones are a storage spot for calcium. If you don't get enough calcium from your food, it is taken from your bones to keep your muscles and other tissues working properly.

Osteoporosis is a slow weakening of the bones, making them more likely to break. As you get older, your risk of developing osteoporosis increases. Osteoporosis affects both women and men.

Eating calcium-rich foods everyday will help your bones get the calcium they need to stay strong and healthy.

How much calcium do you need?

The amount of calcium you need changes throughout your life. Very young children (1–3 years) need 700 mg per day, while older children (4–8 years) need 1000 mg.

The most calcium is needed in your teen years. That's when your bones are built up for life. By combining a calcium-rich diet with weight-bearing exercise, like walking, you can **build** strong bones. The dietary reference intakes (DRIs) for calcium say that teens from 9–18 years of age need 1300 mg of calcium every day.

Adult men and women (19–50 years) need 1000 mg of calcium to **maintain** their bones. In menopause, a woman's needs go up to 1200 mg, to **protect** her bones and help prevent osteoporosis.

Pregnant women absorb calcium from food and supplements better than women who are not pregnant. This means pregnant women (19+) still need only 1000 mg of calcium per day.

If the mother doesn't get enough calcium during pregnancy her growing baby will take what it needs from the mother's bones. After the baby is born your body will fix any bone mass lost during pregnancy within several months.

The key to this process is to make sure you get enough calcium before, during and after pregnancy.

Getting your calcium from food

Here are some examples of non-dairy foods that are sources of calcium. For comparison, 250 mL (one cup) of milk contains 322 mg of calcium.

Food/Beverage		Calcium
Orange juice with calcium	250 mL (1 cup)	310 mg
Fortified soy beverage	250 mL (1 cup)	321 mg
Tofu, firm, made with calcium sulfate	150 g or 175 mL (¾ cup)	347 mg
White beans, cooked	175 mL (¾ cup)	119 mg
Salmon, canned with bones	125 mL (½ cup) or 75 g (2½ oz)	208 mg
Almonds	60 mL (¼ cup)	95 mg
Figs, dried	4 medium	54 mg
Bok choy, cooked	125 mL (½ cup)	84 mg
Broccoli, cooked	125 mL (½ cup)	33 mg

Source: Canadian Nutrient File, Health Canada, 2010.

Calcium's friends

Vitamin D helps your body to absorb and store calcium from the foods you eat. It is added to some soy beverages, milk and margarine. It is also found in liver, fish and eggs.

When done three or more times per week, weight bearing activities such as running, walking, stair climbing and cycling can also help your body to store calcium.

Calcium's enemies

Too much protein and salt in the foods you eat can cause your body to lose calcium.

Alcohol, smoking, caffeine and a lack of exercise can also cause our body to store less of the calcium you eat.

To supplement or not

If you think that your diet is too low in calcium, you may need a calcium supplement. For help with calcium supplements, ask your doctor, your pharmacist or a registered dietitian.

Sesame, Bok Choy and Carrot Stir-Fry

1 tsp.	Dark sesame oil
4 cloves	Garlic, minced
3	Carrots, sliced
½ cup	Green onions, chopped
5 cups	Bok choy, cut into ½-inch pieces
¼ cup	Vegetable stock
2 tsp	Ginger root, minced
1 tsp	White sugar
2 tbsp	Sesame seeds, toasted
3 cups	Quinoa* or rice, cooked

In a large skillet or wok, heat oil over medium heat. Add garlic, carrots and green onions. Stir-fry for 3 minutes. Add bok choy and stir-fry for another 2 minutes. Stir in vegetable stock, ginger and sugar. Reduce heat and simmer for 5 minutes. Sprinkle sesame seeds over stir-fry. Spoon over quinoa. Makes 2 servings.

**Quinoa is a grain; you may find it in a bulk food store.*

Per serving: **324 mg calcium**, 602 calories, 22g protein, 15g fat, 101g carbohydrate, 14g fiber.

Recipes from: CalciYum, by David & Rachelle Bronfman, Toronto, Bromedia Inc. 1999.

This document is available in accessible formats upon request.

Supplement hints:

- Look for the amount of **elemental calcium** on the label—that is the actual amount of calcium in the supplement
- Chewy supplements or the tablets that dissolve in water get into your body the easiest
- Calcium carbonate or calcium citrate are two of the best forms of calcium in a supplement. Calcium carbonate needs to be taken with food (needs stomach acid to break down) but calcium citrate does not
- Make sure your calcium supplement contains vitamin D to help absorb the calcium
- Only take 500 mg of calcium supplement at a time. Your body cannot absorb more than this at one time

AVOID supplements that contain bone meal, fossil shell, oyster or dolomite. These may also contain lead, which can be toxic.

Lazy Day Lasagne

9–12	Lasagna noodles
2 cups	Cooked white or navy beans, or 1 can (540ml) drained and rinsed
8 oz.	Tofu, firm, crumbled
4 cups	Collard greens, finely chopped, lightly steamed
2 cans (540ml each)	Pasta sauce
3 cloves	Garlic, minced
3 ½ cups	Soy cheese, shredded

Preheat oven to 350°F (180°C)

In boiling salted water, cook lasagna noodles for 8–10 minutes or until tender but firm; drain. Rinse under cold running water; drain and set aside. In a large bowl, mash beans. Add tofu; mix well. Stir in collards, pasta sauce and garlic. Pour tomato mixture to coat bottom of baking dish. Layer with noodles, then sauce, then soy cheese. Repeat layering until ingredients are used up. The top layer should be soy cheese. Bake uncovered in preheated oven for 45 minutes. Makes 8–9 servings.

Per serving: **420 mg calcium**, 487 calories, 30g protein, 15g fat, 59g carbohydrate, 8g fiber

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Region of Waterloo Public Health

Reproductive Health Program