

Calcium

The Non-Dairy Way



Region of Waterloo
PUBLIC HEALTH

Why non-dairy calcium sources?

People choose or need non-dairy sources of calcium for a variety of reasons. They may be allergic to milk products or dislike them. They may be a vegan, or have another reason for not choosing milk or milk products. 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 our muscles to contract, and our nerves to send messages.

The work of muscles and nerve tissue is very important, while bones are more of a storage spot for calcium. So, when we don't get enough calcium from our food, it is taken from our bones to keep our muscles and other tissues working properly.

Osteoporosis is a slow weakening of the bones, making them break more easily. As we get older, our risk of developing osteoporosis increases. Osteoporosis affects women and men.

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

How much calcium do we need?

The amount of calcium we need changes throughout our life. Very young children (1–3 years) need 700 mg per day, while older children (4–8 years) need 1000 mg. We need the most calcium in our teen years. That's when we **build up** our bones for life, by combining a calcium-rich diet with weight-bearing exercise like walking. 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, our needs go up to 1200 mg, to **protect** our bones and help prevent osteoporosis.

During pregnancy, the mother's body adapts so that she absorbs more of the calcium in her diet. She also uses calcium from her bones to create the baby's skeleton. After the baby is born, her body goes into repair mode so that her bones stay healthy.

This means she doesn't need to get more calcium than when she wasn't pregnant! The key to this process is to make sure she gets the amount of calcium recommended for her age 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, one cup of milk contains 322 mg of calcium.

Food/Beverage		Calcium
Orange juice with calcium	1 cup	310 mg
Fortified soy beverage	1 cup	321 mg
Tofu, firm, made with calcium sulfate	½ cup	303 mg
White beans, cooked	1 cup	170 mg
Salmon, canned with bones	½ cup	190 mg
Almonds	¼ cup	95 mg
Figs, dried	4 medium	54 mg
Bok choy, cooked	½ cup	84 mg
Broccoli, cooked	½ cup	33 mg

Source: Canadian Nutrient File, Health Canada, 2010.

Calcium's friends

Vitamin D helps our bodies absorb and store calcium from the foods we 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 our bodies to store calcium.

Calcium's enemies

Too much protein and salt in the foods we eat can cause our bodies to lose calcium.

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

To supplement or not

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

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
- Make sure your calcium supplement contains vitamin D to help absorb the calcium

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

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.



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

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

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Reproductive Health Program

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