

# Nutrition Matters

Nutrition Services, Community and Health Services

## Calcium: The 'non-dairy' way

### Why some people choose non-dairy sources of calcium

There are a variety of reasons people choose non-dairy sources of calcium including:

- An allergy to milk products
- Lactose intolerance
- Follow a vegan diet
- Religious or cultural practices
- Dislike of milk products

Whatever the reason, it is important to make sure you get enough calcium from other sources if you don't eat or drink milk products.

### The facts about calcium

Calcium is an important nutrient that helps build and maintain healthy bones. It also helps our muscles and nerve tissue work properly. When we don't get enough calcium from our food, it is taken from our bones and as a result, our bones may become weaker.

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

Osteoporosis affects both women and men. Eating enough calcium-rich foods every day will help ensure our bones get the calcium they need to stay strong and healthy.

Research has shown calcium may also help prevent certain types of cancer and control blood pressure.



### Calcium's friends

- **Vitamin D** is an important partner as it helps our bodies absorb and store calcium. There are only a few good food sources of vitamin D and our bodies can't make it from the sun for many months of the year. In Canada, vitamin D is added to milk and margarine. It is also found in small amounts in some yogurt, liver, fish and egg yolks. It is recommended men and women over 50, as well as breastfed infants, receive a

vitamin D supplement. Speak to your doctor or call a registered dietitian at EatRight Ontario to see if you should consider a vitamin D supplement.

- **Weight-bearing activities**, such as running, walking, stair-climbing and cycling, (done three or more times per week) can also help our bodies store calcium.

### Calcium's enemies

- **Tannins and oxalates** are components in food that hinder the absorption of calcium by the body. They are present in non-dairy food sources of calcium (e.g., spinach, kale). It is important to choose a variety of calcium containing foods.



- In addition, **too much sodium in the foods we eat** can increase risk of bone loss.
- Too much caffeine (more than 4 cups of coffee a day or 400 mg of caffeine) may result in bone loss, especially if you don't have enough calcium in your diet.

### How much calcium do we need?

Calcium needs change throughout life. The highest needs occur during stages of growth like adolescence. More calcium is also needed after age 50.

Life Stages	Age (years)	Calcium (mg/day)
Children	1-3	500
	4-8	800
Adolescence	9-18	1300
Adults	19-50	1000
	51+	1200

Although calcium is an important nutrient during pregnancy and breastfeeding, women do not need extra calcium during these times.

## Calcium in food

Here are some examples of non-dairy foods that are sources of calcium. For comparison, 1 cup of milk offers 302 mg of calcium.

Food/Beverage	Serving size	Calcium (mg)
Soy beverage, calcium fortified	1 cup (250 mL)	319
Orange juice, calcium fortified	1 cup (250 mL)	371
Tofu made with calcium sulphate	150g	231
Sardines, canned with bones	2.5 oz (75 g)	286
Salmon, canned with bones	2.5 oz (75 g)	208
Almonds	28-30 almonds	90
Baked beans, soy beans, white beans - cooked	½ cup (125 mL)	75 - 93
Figs, dried	10 medium	175
Spinach, cooked	½ cup (125 mL)	129
Bok Choy, boiled	½ cup (125 mL)	84
Rapini, boiled	½ cup (125 mL)	78
Okra, boiled	½ cup (125mL)	65

Adapted from Canadian Nutrient File, 2007

## To supplement or not

If you think your daily diet does not provide the recommended amount of calcium, you may need a supplement. For help picking calcium supplements ask your doctor, pharmacist or registered dietitian.

To help you choose a supplement, consider the following:

- 1) Look for the amount of **elemental calcium** on the label- that is the actual amount of calcium in the supplement.
- 2) Calcium carbonate and calcium citrate are two of the best forms of calcium in a supplement.
- 3) To improve absorption, take half of your calcium supplement in the morning and the other half in the evening.
- 4) Make sure your calcium supplement contains Vitamin D to help absorb the calcium.
- 5) Avoid supplements that contain bone meal, fossil shell, oyster shell or dolomite. These may also contain lead, which can be toxic.

## Hoisin broccoli and tofu stir-fry

2 tsp	vegetable oil	10 mL
1 tbsp	chopped ginger root	15 mL
1 tsp	minced garlic	5 mL
3 cups	small broccoli florets	750 mL
1 cup	sweet red pepper	250 mL
2 cups	bok choy, chopped	500 mL
1 cup	firm tofu, chopped	250 mL
1 tsp	corn starch	5 mL
½ cup	orange juice	125 mL
2 tbsp	hoisin sauce	30 mL
1 tbsp	toasted sesame seeds	30 mL

In a large non-stick skillet, heat oil over medium-high heat. Add ginger, garlic and tofu and stir-fry for 1 to 2 minutes. Add peppers, broccoli and bok choy and continue to stir-fry until broccoli is tender-crisp (2 to 3 minutes). In a small bowl or glass measuring cup, whisk together cornstarch, orange juice and hoisin sauce. Add to skillet; cook stirring for 1 to 2 minutes or until thickened and heated through. Season with pepper to taste. Serve over rice. If desired, sprinkle with sesame seeds.



Serves 4.

Per serving: 177 calories, 540mg calcium, 13.4g protein, 9.3g fat, 14.6g carbohydrate.

Recipe from: Dietitians of Canada, 2000