# **Getting Enough Calcium and Vitamin D**

#### British Columbia Specific Information

Calcium is important to building strong, healthy bones and your body needs vitamin D to absorb calcium. The amount of calcium and Vitamin D you need each day depends on your age and if you are male or female. Fortified food is the best source of vitamin D and calcium.

For more information about vitamin D, including a list of what foods contain vitamin D, see <u>HealthLinkBC File #68e Food Sources of Calcium and Vitamin D</u>. You may also call **8-1-1** to speak to a registered dietitian, Monday to Friday 9:00 a.m. to 5:00 p.m., or you can <u>Email a</u> <u>HealthLinkBC Dietitian</u>.

# **Topic Overview**



Why is it important to get enough calcium and vitamin D?

Your body needs vitamin D to absorb <u>calcium</u>. Calcium keeps your bones and muscles including your heart—healthy and strong.

People who do not get enough calcium and vitamin D throughout life have an increased chance of having thin and brittle bones (<u>osteoporosis</u>) in their later years. Thin and brittle bones break easily and can lead to serious injuries. This is why it is important for you to get enough calcium and vitamin D as a child and as an adult. It helps keep your bones strong as you get older and protects against possible breaks.

Your body also uses vitamin D to help your muscles absorb calcium and work well. If your muscles don't get enough calcium, then they can cramp, hurt, or feel weak. You may have long-term (chronic) muscle aches and pains. Getting enough vitamin D helps prevent these problems.

Children who don't get enough vitamin D may not grow as much as others their age. They also have a chance of getting a rare disease called <u>rickets</u>, which causes weak bones.

## What is the recommended daily amount of calcium and vitamin D?

Your body needs vitamin D to absorb calcium, but you do not have to take calcium and vitamin D at the same time. For the best absorption of calcium, make sure you get enough vitamin D.

**Vitamin D recommendations vary from province to province.** Talk with your doctor about how much vitamin D you need.

Age	Recommended calcium intake (milligrams a day)	Recommended vitamin D intake (international units a day)
Infants 0–6 months	200*	400
Infants 7–12 months	260*	400
1–3 years	700	600
4–8 years	1,000	600
9–18 years	1,300	600
19-50 years	1,000	600
Males 51–70 years	1,000	600
Females 51– 70 years	1,200	600
71 and older	1,200	800

Health Canada recommendations for calcium and vitamin D by age footnote1

\*Adequate intake rather than recommended dietary allowance (RDA)

Talk with your doctor about how much and what sources of supplements are right for your child. Although breastfed babies get the best possible nutrition, they do need vitamin D supplements. Vitamin D for babies is usually a liquid supplement that you add to a bottle of breast milk with a dropper or drip into your baby's mouth.

Women who are pregnant or breastfeeding need the same amount of calcium and vitamin D as other women their age.

Health Canada and Osteoporosis Canada recommend that Canadian adults over the age of 50 take daily vitamin D supplements.<sup>footnote1</sup>

#### Who may not get enough calcium and vitamin D?

Many foods are fortified with calcium and vitamin D, and your body uses sunshine to make its own vitamin D. From age 9 through 18, girls need more calcium from foods to meet the daily recommended intake. If they cannot get enough calcium from foods, a calcium supplement may be needed.

Many Canadians don't get enough vitamin D from food and sunshine only. If you are diagnosed with osteoporosis, it's more important to get enough calcium and vitamin D. Talk to your doctor about how you can get the right amount through supplements and what you eat.

Things that reduce how much vitamin D your body makes include:

- Limited sun exposure. This can be due to sunscreen use or living at a high latitude (which includes most of Canada).
- Dark skin, such as many people of African descent have.
- Age, especially if you are older than 65.
- Digestive problems, such as <u>Crohn's</u> or <u>celiac</u> disease.
- Liver and kidney disease.

### How can you get more calcium and vitamin D?

Calcium is in foods such as milk, cheese, and yogurt. Vegetables like broccoli, kale, and Chinese cabbage have calcium. You can get calcium if you eat the soft edible bones in canned sardines and canned salmon. Foods with added (fortified) calcium include some juices, soy drinks, and tofu. The food label will show how much calcium was added.

Calcium supplements are available as citrate or carbonate. Calcium carbonate is best absorbed when it is taken with food. Calcium citrate can be absorbed well with or without food. Spreading calcium out over the course of the day can reduce stomach upset and helps your body absorb the calcium better. Try not to take more than 500 milligrams (mg) of calcium supplement at a time.

Vitamin D is in foods such as salmon, tuna, and mackerel. These are some of the best foods to eat when you are trying to get more vitamin D. Other foods that have vitamin D, but in small amounts, include cheese, egg yolks, and beef liver. You can also get vitamin D from fortified foods such as milk, orange juices, yogurts, margarines, and soy beverages.

The most common kind of vitamin D found in supplements in Canada is cholecalciferol (D3).

# Are there any risks from taking calcium and vitamin D?

It is possible to get too much calcium and vitamin D. Older women who take calcium supplements need to be careful that they do not take too much.

The amount of calcium and vitamin D you get every day from all sources—including food, sunshine, and supplements—should not be more than the amount shown by age in the table below for "upper level intake." Upper level intake **does not mean** that most people need this amount or should try to get it. It means this is the maximum amount of calcium or vitamin D that is safe to take.

Health Canada recommendations for upper level intake of calcium and vitamin D by age footnote1

Age	Upper level calcium intake (milligrams a day)	Upper level vitamin D intake (international units a day)
Infants 0–6 months	1,000	1,000
Infants 7–12 months	1,500	1,500
1–3 years	2,500	2,500
4–8 years	2,500	3,000
9–18 years	3,000	4,000
19–50 years	2,500	4,000
51 and older	2,000	4,000

If you get too much calcium, you may get kidney stones, and if you get too much vitamin D, your kidneys and tissues may be damaged.<sup>footnotel</sup> Too much calcium can cause constipation. Too much vitamin D can cause hypercalcemia which could lead to nausea and vomiting, constipation, and weakness.

Getting too much vitamin D increases the amount of calcium in your blood. If this happens, you can become confused and have an irregular heart rhythm.

Calcium and vitamin D may interact with other medicines. A drug interaction happens when a medicine you take changes how another medicine works. One medicine may make another one less effective, or the combination of the medicines may cause a side effect you don't expect. Some drug interactions are dangerous.

Before you start taking calcium and/or vitamin D, tell your doctor about all of the medicines you take, including over-the-counter drugs, herbs, and pills. Also tell your doctor about all of your current medical problems.

#### **Related Information**

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