

Healthy Bones

Building and keeping strong, healthy bones continues throughout your life. Bones have many important roles in the body. They support your body, protect organs, help muscles work, and store calcium.

What can I do to keep my bones strong and healthy?

Get enough calcium and vitamin D every day. Both of these nutrients help build strong, healthy bones.

Eat a variety of healthy foods every day, including vegetables and fruit.



Be active every day.

- Adults: Aim for at least 150 minutes of activity each week
- Children: Aim for at least 60 minutes of activity each day

Do activities to strengthen your muscles and bones at least 2-3 days each week. This includes walking, running, jumping rope, lifting weights, climbing stairs, dancing, tennis, squats, and push ups.

To learn more about being active, visit HealthyCanadians.gc.ca and search 'get active tip sheets'.

Calcium

How much calcium do I need each day?

Age	Calcium (mg)
4–8 years	1000
9–18 years	1300
19–50 years	1000
51–70 years:	Men 1000
	Women 1200
70+ years	1200

(mg = milligrams)

Try to meet your calcium needs by eating calcium-rich foods first

- Choose food sources of calcium from the list on the next page.
- Read labels. Choose foods with 15% or more Daily Value for calcium. Look for the words “fortified” or “added calcium.”
- Aim for 2–4 servings of milk and fortified alternatives daily.
- Fortified plant-based beverages (such as soy, almond, and rice beverages) are also sources of calcium. Look for the word “fortified” or “enriched” on the label. Soy beverages contain more protein than many other plant-based beverages.
- Add skim milk powder to food or drinks.
- Vegetables such as spinach, chard, broccoli, and beet or turnip greens contain some calcium. The calcium from vegetables is not as well absorbed as calcium from milk products. Vegetables contain compounds that lower how much calcium your body absorbs.



Food sources of calcium

(mg = milligrams)



Best Sources: About 300 mg or more	
Milk, lactose-reduced milk, buttermilk, and goat's milk	1 cup (250 mL)
Fortified soy beverage or other fortified plant-based beverage such as almond, rice, or cashew	1 cup (250 mL)
Hard cheese (cheddar, Gouda, mozzarella, or Swiss)	1 ½ oz (50 g)
Plain yogurt	¾ cup (175 mL)
Ricotta cheese	½ cup (125 mL)
Skim milk powder	⅓ cup (75 mL)
Tofu made with calcium	¾ cup (150 g)
Good Sources: About 200 mg	
Flavoured yogurt	¾ cup (175 mL)
Camembert or feta cheese	1 ½ oz (50 g)
Parmesan cheese	½ oz (15 g)
Pudding made with milk	½ cup (125 mL)
Salmon or sardines, cooked or canned with bones	2 ½ oz (75 g)
Soup made with milk	1 cup (250 mL)
Blackstrap molasses	1 Tbsp (15 mL)
Sources: About 100 mg	
Almonds, Brazil nuts	¼ cup (60 mL)
Almond butter	2 Tbsp (30 mL)
Bok choy, collard greens, or turnip greens, cooked	½ cup (125 mL)
Calcium-fortified orange juice	½ cup (125 mL)
Chia seeds	2 Tbsp (30 mL)
Cottage cheese	¾ cup (175 mL)
Seaweed	1 cup (250 mL)
Sesame butter (tahini)	2 Tbsp (30 mL)
White beans, navy beans, or soybeans, cooked	¾ cup (175 mL)

Nutrient amounts from Canadian Nutrient File, 2015.

Calcium Supplements

If you have not met your calcium needs with food, take a supplement for the balance.



- Look for the amount of **elemental** calcium on the label. This is how much calcium is in the supplement.
- Take a calcium supplement in a dose of 500 mg or less at one time. This will help you absorb more calcium. You may need to take the supplement 2 or more times in a day. For example, take one pill in the morning and one at night.
- Be sure not to take more calcium than you need.
- Calcium carbonate and calcium citrate are supplements that are well absorbed by your body.
- Most calcium supplements come in pills or chewable tablets. Some have vitamin D added to them; count this as part of your daily vitamin D intake.

Vitamin D

How much vitamin D do I need each day?

Age	Vitamin D supplement	Vitamin D from food
4–50 years	400 IU (10 µg)	At least 200 IU (5 µg)
50+ years	1000 IU (25 µg)	Enjoy foods with vitamin D

(IU = International Units, µg = micrograms)

Vitamin D supplements

Alberta Health Services recommends that all Albertans take a vitamin D supplement every day, year-round.

- Vitamin D can be found in most multivitamins, some calcium supplements, and as a supplement by itself. Any of these forms can help you meet your vitamin D needs.
- If your multivitamin doesn't meet your vitamin D needs, take a separate vitamin D supplement. Don't take more than one multivitamin to meet your vitamin D needs.
- Vitamin D supplements usually come in pill or liquid form.
- Vitamin D supplements come in two forms: vitamin D₂ or vitamin D₃. Both forms can meet your vitamin D needs. Choose vitamin D₂ if you're looking for a vegan form of vitamin D.
- **Don't take more than 2000 IU (50 µg) of vitamin D from supplements** unless your healthcare provider tells you to take more.

NOTE: Fish oils made from fish livers (such as cod liver oil) are high in vitamin A. Vitamin A can harm your liver if you take too much.

While these oils are high in vitamin D, using them long term is not recommended. Ask your healthcare provider before using fish liver oil.

Food sources of vitamin D



Best Sources: About 200 IU (5 µg) or more	
Arctic char*	2 ½ oz (75 g)
Pickled herring*	2 ½ oz (75 g)
Rainbow trout*	2 ½ oz (75 g)
Salmon*	2 ½ oz (75 g)
Good Sources: About 100 IU (2 ½ µg)	
Milk, lactose-reduced milk, or goat's milk, fortified	1 cup (250 mL)
Fortified soy beverage or other fortified plant-based beverage such as almond, rice, or cashew	1 cup (250 mL)
Halibut*	2 ½ oz (75 g)
Sardines*	2 ½ oz (75 g)
Skim milk powder	⅓ cup (75 mL)
Sources: About 50–100 IU (1–2 ½ µg)	
Eggs	2 large
Canned tuna	2 ½ oz (75 g)
Mackerel*	2 ½ oz (75 g)
Margarine	1 Tbsp (15 mL)
Yogurt with vitamin D	¾ cup (175 mL)

Nutrient amounts from Canadian Nutrient File, 2015.

***Note:** Vitamin D levels of fish vary greatly.

What about vitamin D from the sun?

Your skin can make vitamin D from the sun. However, Albertans make little or no vitamin D from October to March. It may not be safe to get all the vitamin D you need from the sun.

Other tips for healthy bones

Some medicines, such as steroids, can affect your bones. If you take these medicines, check with your healthcare provider to make sure you are getting enough calcium and vitamin D to keep your bones healthy.

Too much **alcohol**, **caffeine**, and **salt** can make bones weak.

Alcohol

- Adults are recommended to limit alcohol to:
 - 2 drinks per day for women
 - 3 drinks per day for men
 - a maximum of 10 drinks per week for women and 15 drinks per week for men
- One drink is 12 oz (355 mL) of beer, 5 oz (150 mL) of wine, or 1 ½ oz (45 mL) of liquor.

Caffeine

- Limit caffeine intake to no more than 400 mg per day. This is about 2–3 cups (500–750 mL) of coffee.
- Be aware of other sources of caffeine, such as coffee-based drinks, colas, tea, energy drinks, chocolate, and some medicines.

Salt

- Limit salt (sodium) intake to less than 2300 mg per day.
- Eat less processed and packaged foods. Choose fresh foods and foods with no salt added.
- Read labels. Choose foods with lower % Daily Value and smaller amounts of sodium.
- Prepare your own food so that you can control the amount of salt you eat.
- Add garlic, onion, herbs, spices, lemon juice, vinegar or salt-free seasonings to food instead of salt.

Tips for children and youth

Offer milk at meals or snacks

Children and youth need 2 cups (500 mL) of milk (skim, 1%, 2%) or fortified soy beverage every day.

9–18 year olds may drink more milk to help them get the nutrients they need.



If choosing soy beverage or another plant-based beverage (made from plants like almond, rice or coconut) as a milk alternative, read the Nutrition Facts table on the label and **choose one with:**

- at least 30% Daily Value (DV) of calcium and vitamin D
- less than 10 grams of sugar per 1 cup (250 mL)
- at least 6 grams of protein per 1 cup (250 mL)

Choose plain or unsweetened milk or soy beverages most often

Flavoured milks and soy beverages, such as chocolate, vanilla, and strawberry have the same amount of calcium and vitamin D as milk or fortified soy beverage, but contain added sugar.

Choose drinks without caffeine

Visit www.healthycanadians.gc.ca and search for “Caffeine and Kids” for more information.