

Growing up healthy with Calcium and Vitamin D

Why are calcium and vitamin D important parts of my child's healthy diet?

Calcium is a mineral that keeps your child's bones and teeth strong. It also helps their heart, muscles, and nerves work properly. Calcium from food and supplements is stored in the bones and released into the bloodstream when other parts of the body need it.

Vitamin D helps your child's body use calcium from food or supplements. It moves calcium from the blood to the bones.

Getting enough calcium and vitamin D is important to keep your child strong and healthy!

How much calcium and vitamin D does my child need each day?

Age (years)	Calcium (mg)	Vitamin D (IU)
1 to 3	700	600
4 to 8	1000	600
9 to 18	1300	600

Health Canada (2015)

Calcium is available in many foods, but getting vitamin D from food alone is challenging. You can also get vitamin D from sunlight or a supplement. However, it is difficult to get enough vitamin D from the sunlight all year round in Canada because there is less sunlight during October to April. Your Registered Dietitian will tell you if your child needs to take a vitamin D supplement.

Which foods contain calcium and vitamin D?

Milk and dairy products often contain the highest amounts of calcium and vitamin D. However, many other foods contain these nutrients as well. This includes legumes (such as kidney beans, chick peas and lentils), leafy greens, nuts, oranges, broccoli and some fish.

Some children cannot have milk or dairy products due to an allergy or intolerance*.

Soy, almond, and coconut beverages are good alternatives, since they are often fortified with calcium and vitamin D to match the amount in cow's milk.

Fortified means when extra vitamins or minerals are added to a food product.

- * For more information on lactose intolerance or milk allergies see page 7.



It is important to read the nutrition label to make sure the products you buy are fortified. Calcium and vitamin D will be written on the label as a % Daily Value.

What is % Daily Value?

The % Daily Value tells you if there is a little or a lot of a nutrient, such as calcium or vitamin D, in one serving.

Daily values are based on the recommended amount of nutrients you should get each day (for example, 100% is the recommended amount needed each day).

Compare the % Daily Value listed on the label to 100% to see how much of the nutrient is in one serving.

% Daily Value
Here are some common examples of % Daily Values for calcium and vitamin D converted to IU and mg.
Vitamin D 25% is about 60 IU 35% is about 80 IU 45% is about 100 IU
Calcium 20% is about 200 mg 30% is about 300 mg 40% is about 400 mg

Common foods that contain calcium and/or vitamin D

Food Item	Amount	Calcium (mg)	Vitamin D (IU)
Dairy & Alternatives			
Cultured almond “yogurt”	¾ cup	400	0
Cultured coconut “yogurt”	¾ cup	350	0
Goat Milk (whole, enriched)	1 cup	345	100
Cheese (firm such as cheddar, Swiss, gouda)	1 ½ oz	336	8
Fortified soy beverage	1 cup	321	87
Milk (such as skim, 1%, 2%, whole, buttermilk, lactose free varieties)	1 cup	309	103
Skim milk powder	4 tbsp	302	103
Fortified coconut beverage	1 cup	300	70
Fortified almond beverage	1 cup	300	100
Cheese (soft/semi-soft such as blue, feta, mozzarella)	1 ½ oz	266	10
Yogurt (fruit flavoured or plain)	¾ cup	229	64
Greek yogurt (plain)	¾ cup	200	0
Pudding (made with milk)	½ cup	168	53
Yogurt drink (flavoured)	1 bottle (93 ml)	80	60
Ice cream (dairy-based)	½ cup	80	5
Cottage cheese	½ cup	73	0
Goat Cheese (soft)	1 ½ oz	70	8

Food Item	Amount	Calcium (mg)	Vitamin D (IU)
Meat & Alternatives			
Sardines	2.5 oz	318	78
Tofu (made with calcium)	5 oz	234	0
Salmon – with bones, canned	2.5 oz	158	410
Legumes such as kidney beans, chick peas or lentils (cooked or canned)	¾ cup	100	0
Almonds	¼ cup	95	0
Egg	1	22	26
Fish (such as salmon, halibut, char, carp)	2.5 oz	11	504
Tuna, canned, light	2.5 oz	8	36
Vegetables & Fruit			
Fortified orange juice	1 cup	310	100
Collards (cooked)	½ cup	141	0
Kale (raw)	1 cup	96	0
Kale (frozen, cooked)	½ cup	95	0
Orange	1 medium	62	0
Sweet potato (baked, skin removed)	½ cup	40	0
Broccoli (raw)	1 cup	44	0
Broccoli (cooked)	½ cup	33	0
Grapefruit	½ fruit	27	0
Kiwi	1 medium	26	0
Other			
Blackstrap molasses	1 tbsp	179	0
Chia seeds (dry)	1 tbsp	68	0
Fortified margarine	2 tsp	2	51

Tips to increase calcium and vitamin D in your child's diet:

- Drink milk or a calcium and vitamin D fortified beverage with meals.
- Add skim milk powder to smoothies, cereals, casseroles, baked goods, sauces, and other recipes.
- Offer yogurt as a snack and add sliced almonds.
- Sprinkle grated cheese on cooked vegetables or serve cheese slices with raw vegetables.
- Offer pudding made with milk for dessert or use it as a dip for fruit.

Dairy-free tips:

- Offer a calcium and vitamin D fortified beverage at meals.
- Add kale, chia seeds and/or tofu to a fruit smoothie (the colour and texture of the fruit will hide these new ingredients!).
- Add beans to chili, soup, pasta and casserole recipes.
- Make tuna or salmon sandwiches for lunches and snacks.
- Have eggs for breakfast or send a hard boiled egg to school for lunch.
- Offer a handful of almonds for an after-school or evening snack.
- Make chia seed pudding for dessert or snack.



Give your child calcium-rich foods or calcium supplements throughout the day, not just at one meal or snack. Our bodies cannot absorb large amounts of calcium at one time.

Vitamin D can be taken all at once since our bodies are able to absorb large amounts at one time.

Lactose intolerance and milk allergies

Some children cannot have dairy products due to lactose intolerance or an allergy to milk. If you are concerned about that your child may have lactose intolerance or an allergy to milk, speak with your doctor or Registered Dietitian before avoiding dairy products.

Lactose intolerance

Lactose intolerance is not the same as having a milk allergy.

Children who are lactose intolerant do not produce enough of an enzyme called lactase which is needed to fully digest lactose. Lactose is a type of sugar in dairy products. If a child has lactose intolerance and eats or drinks dairy products, they will have trouble breaking down the lactose.

Lactose intolerance can cause symptoms such as:

- stomach pain
- bloating
- gas
- diarrhea
- vomiting

Some children may tolerate a small amount of lactose in their diet. If this applies to your child, try adding calcium-rich foods that contain smaller amounts of lactose such as yogurt or hard cheeses such as cheddar, swiss or mozzarella to your child's meals and snacks. Lactose free milk is a helpful alternative to regular cow's milk for children who are lactose intolerant.

Milk allergy

A child with a milk allergy has an immune system reaction when they have the protein found in dairy products. An immune system reaction happens when the body thinks it is being attacked by something harmful and tries to fight against it. The difference between a milk allergy and lactose intolerance can be difficult to determine because they share many of the same symptoms.

In addition to the symptoms listed above, a milk allergy may also cause:

- rashes
- difficulty breathing
- coughing
- hives
- swelling

If you are unsure if your child has lactose intolerance or a milk allergy, ask your doctor for more information.

How can you increase your child's intake of calcium and vitamin D?

Suggestions from your Registered Dietitian:

More information on Calcium and Vitamin D:

Eat Right Ontario – Calcium for kids (and parents too)!

[https://www.eatrightontario.ca/en/Articles/Bone-Health/Calcium-for-kids-\(and-parents-too\)!.aspx](https://www.eatrightontario.ca/en/Articles/Bone-Health/Calcium-for-kids-(and-parents-too)!.aspx)

Eat Right Ontario - All you need to know about vitamin D

<https://www.eatrightontario.ca/en/Articles/Nutrients-%28vitamins-and-minerals%29/What-you-need-to-know-about-Vitamin-D.aspx>

Dietitians of Canada - Food Sources of Vitamin D

<http://www.dietitians.ca/Downloads/Factsheets/Food-Sources-of-Vitamin-D.aspx>

Dietitians of Canada - Food Sources of Calcium

<http://www.dietitians.ca/Downloads/Factsheets/Food-Sources-of-Calcium.aspx>

Conversion:

1 cup = 250 ml, $\frac{3}{4}$ cup = 175 ml, $\frac{1}{2}$ cup = 125 ml, $\frac{1}{4}$ cup = 60 ml

1 tablespoon (tbsp) = 15 ml, 1 teaspoon (tsp) = 5 ml

1 ounce (oz) = 30 grams, 2 $\frac{1}{2}$ oz = 75 grams