

# Nutrition for Healthy Bones (for Adults)



---

## Nutrition Information Contacts:

Dial – A – Dietitian

(604) 732-9191 or 1-800-667-3438

[www.dialdietitian.org](http://www.dialdietitian.org)

BC Dairy Foundation

(604) 294-3775 or 1-800-242-6455

[www.bcdairyfoundation.ca](http://www.bcdairyfoundation.ca)

Dietitian, Osteoporosis Program, BC Women's

(604) 875-2267

# Calcium and phosphorous are important minerals for bone.

## *How much do I need?*

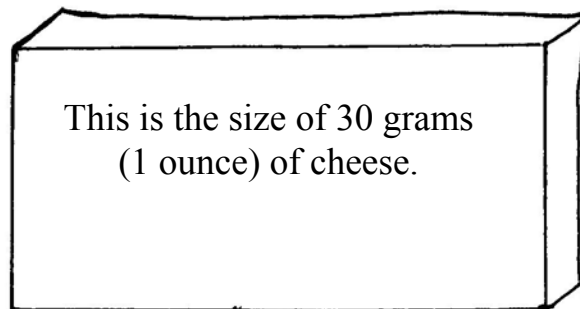
- ▶ Adults under 50 need 1000 mg\* calcium a day
- ▶ Adults 50 and over and those who have gone through menopause before age 50 need 1200-1500 mg\* calcium a day
- ▶ Individuals should not exceed 2500 mg calcium from diet plus supplement a day.

\* sometimes your doctor or dietitian may prescribe a higher amount.

## *How do I make sure I am getting enough?*

Dairy products and fortified or enriched soy beverages are rich sources of calcium and phosphorous. **Three choices** from the list below gives you **900mg calcium** and meets your phosphorous needs. Eating a varied diet based on Canada's Food Guide gives you an added 200-300mg calcium per day.

- ▶ 250ml (1 cup) milk or soy beverage labeled as fortified or enriched; skim, 1% or 2% unless doctor or dietitian tells you otherwise
- ▶ 175ml (3/4cup) plain or vanilla yoghurt or 250ml (1 cup) fruit flavoured yoghurt; low fat unless doctor or dietitian tells you otherwise
- ▶ A piece of hard cheese such as cheddar or edam 1 ½ times the size this diagram shows♥
- ▶ A piece of soft cheese such as mozzarella or brie 2 times the size this diagram shows♥



♥ Discuss your cholesterol level with your doctor or dietitian before choosing cheese as a calcium source.

If you are not able to include 3 of these choices, look at:

- ▶ **The Calcium Calculator** [www.bcdairyfoundation.ca](http://www.bcdairyfoundation.ca), 604 294-3775 or 1-800-242-6455
- ▶ **BC Healthfile #68e Food Sources of Calcium and Vitamin D** ([www.dialadietitian.org](http://www.dialadietitian.org), 604-732-9191 or 1-800-667-3438 outside lower mainland).

Subtract the amount of calcium you get daily in food from the amount recommended for your age. You will need to increase your intake through food and/or supplement by this amount.

# Answers on Calcium Supplements

## *If I need a calcium supplement what will help my body use it?*

- ▶ Take calcium carbonate and calcium phosphate with food. Other forms can be taken anytime.
- ▶ Take 500 – 600 milligrams (mg) or less at a time.
- ▶ Vitamin D and calcium do not have to be taken at the same time.
- ▶ If on medications, ask your pharmacist whether calcium can be taken with them.
- ▶ There is not a significant difference in the absorption of different kinds of calcium supplements. Select a supplement you like, chewable, or liquid if you don't like swallowing large tablets.

## *What can happen if I take a large amount of calcium supplement?*

Constipation and bloating are the most common side effects. To avoid these, drink plenty of fluids, eat a diet rich in fibre, include physical activity and don't take more calcium tablets than needed.

## *How do I know how much calcium my supplement provides?*

Read labels carefully for the amount (**mg**) of **calcium**, **elemental calcium**, or calcium with the source in brackets such as **calcium (carbonate)** a supplement contains.

Example: Tablet contains 1000 mg calcium carbonate providing **400 mg calcium**.

## *How do I know that my supplement is pure and provides what the label says?*

Make sure the label has an **NPN** (natural product number).

## **How do I know how much calcium a packaged food is providing?**

Food labels may list the amount of calcium as a percentage of the Daily Value (DV) or Recommended Daily Intake (RDI).

<b>Nutrition Facts</b> <b>Per 250 ml (1 cup) serving</b>	A DV or RDI of 1100 mg calcium is used on labels, so to calculate the amount of calcium the product contains, multiply the RDI/DV by 30%  Example: 1100 mg x 30% = 330 mg
Percentage of Daily Value (DV) or percentage of Recommended Daily Intake (RDI)	
Calcium 30%	

## Vitamin D allows calcium to be taken to the bone.

### *How much do I need and how do I make sure I am getting enough?*

In most of Canada the skin makes vitamin D when it is exposed to sunlight from April through September (if sunscreen is not worn). Vitamin D is in very few foods and the amount from sunlight can be too little. So, most people need a supplement all year long. Check your vitamin D needs below and refer to the table of vitamin D sources.

## Food and Supplement Sources of Vitamin D

<b>Food / Supplement</b>	<b>Serving</b>	<b>Vitamin D (IU)</b>
Vitamin D tablets	1 tablet	400/1000 strengths
multivitamins (from drug stores)	usually 1 tablet	usually 400, some brands with 600 and 800
multivitamins (from other sources)	varies	varies
some calcium supplements	varies	varies
cow's milk, fortified/enriched Soy/Rice beverage	250ml (1 cup)	90
margarine	15ml (1 Tbsp)	90
Fish: go to <a href="http://www.dialadietitian.org">www.dialadietitian.org</a> – Nutritional Information – Bone Health – BC Health File #68e: Food Sources of Calcium and Vitamin D		

## Are other nutrients useful in treating osteoporosis?

Many nutrients are involved in bone building. They include protein, vitamins C and K and the minerals magnesium, boron, and silica. Following Canada's Food Guide with a variety of foods will give good intakes of these nutrients. Whether taking supplements of any of these nutrients is useful for osteoporosis is not clear. Research is being done on their role in bone health. Before starting supplements of any of the above, discuss their safety and possible side effects with a dietitian or doctor.

**Vitamin A:** Do not take more than 2,500 IU a day through supplements. Research suggests that high intakes lead to bone loss and fractures. Supplement sources of Vitamin A include multivitamins and halibut and cod liver oil. Multivitamins may also contain carotene which is not harmful to bone.

**Magnesium:** Be careful. Taking over 350-500mg a day may cause loose stools or diarrhea.

## Are there things I should do beyond getting adequate nutrients for my bones?

- ***Should I give up all caffeine?*** No, as long as you get enough calcium each day you can enjoy caffeinated beverages, just keep your caffeine intake to under 400 mg each day. Approximate caffeine amounts for 8 ounce (250 ml) portions are: Brewed Coffee -135mg, Instant Coffee - 95mg, Medium Brew Tea - 50mg, Green Tea - 30mg. Cola contains 45-65mg per 355ml can.
- ***Is it okay to drink alcoholic beverages?*** If you drink alcoholic beverages do so in moderation. Excessive alcohol has a negative impact on bone health.
- ***Is it okay to go on a weight loss diet?*** Dieting can lead to bone loss especially on strict diets causing rapid weight loss. If you would like to lose weight, discuss this with your doctor or dietitian. It is best to take a healthy approach using Canada's Food Guide and regular physical activity.
- ***Should I avoid foods high in fibre?*** No. You may have heard that fibre "binds" calcium to make it "unavailable" to your body, but the small amount of calcium that may be lost is not as important as the benefits of fibre for regularity and heart health.
- ***Should I avoid foods containing oxalates?*** No. Foods with high levels of oxalate such as spinach, rhubarb, beet greens and swiss chard are rich in vitamins and minerals. The calcium that is in these foods is not well absorbed but oxalate in them will have little affect on calcium absorption from foods eaten with them.

---

### References:

- ▶ Osteoporosis Society of Canada: Clinical practice guidelines for the diagnosis and management of osteoporosis.
- ▶ National Osteoporosis Foundation: Clinician's guide to the prevention and treatment of osteoporosis.
- ▶ Canadian Nutrient Files