

MILK

and Calcium

Should I take calcium supplements or drink milk?

RECOMMENDATION: Make sure to get enough calcium by including low-fat milk, soymilk or other calcium-rich foods in your diet.

What's the evidence?

For Prostate Cancer *Prevention*?

Milk and calcium do not increase prostate cancer risk:

- Early studies of large groups of men suggested that high calcium - more than 1500 milligrams (mg) per day - was linked to a higher risk of prostate cancer.¹
 - This caused some men to worry about drinking milk and other dairy products that are high in calcium.
- However, despite mixed results found in many recent studies, there is little proof of a link between calcium, milk and dairy products and prostate cancer risk.²

For Prostate Cancer *Treatment*?

Milk and calcium do not increase prostate cancer progression or recurrence:

- There has been little research on the effects of dietary milk, dairy and calcium in men after a prostate cancer diagnosis.
- A recent large study followed 3,918 patients for up to 22 years after diagnosis and found that having milk or dairy was not linked to prostate cancer growth or return.³
 - However, there was a small but higher risk for getting advanced prostate cancer for men who drank the most whole ('homo' or full fat) milk and a small reduced risk for men who drank skim (no-fat) milk, suggesting that the higher fat content was to blame.
- Men on hormone therapy (Androgen Deprivation Therapy or ADT) have a higher risk for osteoporosis, so getting enough calcium and vitamin D is important to prevent bone loss and fractures.⁴

Calcium is needed for everyone's good health including men diagnosed with prostate cancer

Calcium facts:

- Calcium is the most abundant mineral in the body, mostly found in bones and teeth.
 - While best known for bone building and health, calcium also helps the heart and nerves work properly and helps with blood clotting.
- Having enough calcium can lower the risks of osteoporosis, colon polyps, colorectal cancer and kidney stones, and can help control blood pressure and cholesterol.
- 1% of calcium in the body is found in the blood and is controlled by vitamin D.
 - When you don't have enough calcium, vitamin D causes the intestines, kidneys and bones to increase calcium blood levels.
 - If you have too much calcium, the amount of vitamin D in your blood lowers.
 - Too much calcium from supplements can be unhealthy and might even increase the risk of heart disease.

Eating balanced diets that include a variety of calcium rich foods including milk or enriched soymilk is important for overall health and prevention of osteoporosis

The bottom line: Eat calcium-rich food and don't overdo the supplements!

About half of Canadian men aged 50 to 70 do not get enough calcium each day.

- It's easy to add extra calcium to your diet by drinking a couple of cups of skim milk or soymilk every day or having a serving of yogurt.
- While milk, dairy products and milk alternatives like soymilk are our main dietary calcium sources, other healthy calcium-rich foods include broccoli, almonds and tofu - so be sure to have a varied diet with lots of vegetables, beans, whole grains and nuts.
- If you take calcium supplements, take no more than 500 mg at one time and with meals to be sure it gets absorbed and to reduce side effects like gas or constipation.

Approximate calcium content for various foods in milligrams (mg)

| Food item | Serving/amount | | Calcium content |
|-------------------------------|----------------|--------|-----------------|
| Milk, enriched soymilk | 1 cup | 250 ml | ~ 300 mg |
| Yogurt | ¾ cup | 175 ml | 294-332 mg |
| Hard cheese | 1.5 oz | 50 g | 360-400 mg |
| Tofu | ½ cup | 126 g | 200-330 mg |
| Orange juice, enriched | ½ cup | 125 ml | 155 mg |
| Salmon, canned with bones | 2.5 oz | 75 g | 171-211 mg |
| Almonds | ¼ cup | 40 g | 116 mg |
| Kale, cooked | ½ cup | 125 ml | 95 mg |
| Cottage cheese | ½ cup | 125 ml | 73 mg |
| Lentils & beans | ¾ cup | 175 ml | 25-150 mg |
| Oranges | 1 medium | | 65 mg |
| Bread, whole grain/multigrain | 1 slice | | 33-58 mg |
| Broccoli, cooked | ½ cup | 125 ml | 33-50 mg |

Health Canada, Canadian Nutrition File, 2010: www.healthcanada.gc.ca/cnf

Try to get the recommended amounts of calcium each day

The Recommended Dietary Allowance (RDA) for calcium is based on amounts needed to maintain bone health and prevent bone fractures:

| Age (years) | RDA |
|-----------------------------|----------------|
| 51 to 70 | 1000 mg |
| 70 and older | 1200 mg |
| <i>Upper limit all ages</i> | <i>2000 mg</i> |

Health Canada 2010: www.hc-sc.gc.ca/fn-an/nutrition/vitamin/vita-d-eng.php

- Antacids like Roloids® or Tums® can add 200 to 600 mg per pill of extra calcium to your diet.
 - If you take antacids regularly, talk about lower calcium options with your doctor or pharmacist.
- Men on ADT should make sure they get enough calcium in their diets to prevent osteoporosis.
- Talk to your doctor about taking calcium and vitamin D supplements if you are on ADT.
- Having too much calcium from supplements might lower vitamin D blood levels too much.
 - To avoid this, take at least 400 IU of vitamin D per day if you take calcium supplements.

Are you eating enough calcium?

Try the **Calcium Calculator** on the BC Dairy Association website: <http://bcdairyfoundation.ca/interactive/calcium-calculator>

- If you aren't getting enough it's best to eat more calcium-rich foods and not overdo supplements.
- While dairy products and milk alternatives like soymilk are our main calcium sources, others include broccoli, almonds and tofu.

1. Giovannucci, E. et al. A Prospective study of calcium intake and incident and fatal prostate cancer. *Cancer Epidemiology Biomarkers & Prevention*. 2006 15:203-210.
2. Huncharek M, et al. Dairy products, dietary calcium and vitamin D intake as risk factors for prostate cancer: A meta-analysis of 26,769 cases from 45 observational studies. *Nutrition & Cancer*. 2008; 60(4):421-41.
3. Pettersson A, et al. Milk and dairy consumption among men with prostate cancer and risk of metastases and prostate cancer death. *Cancer Epidemiology Biomarkers & Prevention*. 2012; 21(3):428-36.
4. Holzbeierlein J. Managing complications of androgen deprivation therapy for prostate cancer. *Urologic Clinics of North America*. 2006; 33(2):181-90.

This information is not meant to replace advice from your doctor or dietitian.



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