

NUTRITION for Bone health

What is the role of nutrition for Bone Health?

Eating well helps to keep your bones strong. When we don't eat well, bone loss occurs faster. Eating well will also give you the energy your body needs to maintain a healthy weight and function well which is also important for bone health.

What is eating well for bone health?

To eat well for your bones:

1. Eat a variety of healthy foods (described below),
2. Get enough calcium and protein,
3. Take a vitamin D supplement.
4. Limiting sodium, caffeine and alcohol will also help.

Check out "[Am I Eating Well for My Bones?](#)"

A variety of healthy foods includes vegetables, fruits, whole grains, and protein rich foods which provide our bones with important nutrients. Our bones depend on many nutrients like protein, calcium, magnesium, phosphorous, potassium, Vitamin A, D and K, boron, and zinc to build and maintain strong bones. These nutrients (and more!) are found in whole foods. Use the [Eat Well Plate](#) to help plan your meals and snacks. Aim for vegetables and/or fruit, whole grain and protein foods at each meal or snack. We call these balanced meals or snacks.

What is calcium and what does it do for my bones?

Calcium is a mineral that is used for different biochemical processes in the body and stored in our bones. The main role of calcium is to build and maintain strong bones and teeth. Studies of older adults show that getting adequate calcium intake can slow bone loss and maybe slightly reduce the risk of fracture.

How much Calcium do I need?

Osteoporosis Canada recommends:

Age	Recommended calcium from food and supplements
19 – 50 years	1000 mg (milligrams) per day
Men 51 – 70 years Women 51 - 70 years	1000 mg per day 1200 mg per day
Over 70 years	1200 mg per day

Four very important points to consider:

1. Our bodies cannot absorb more than 500 mg at one time. Spread out your calcium intake throughout the day.
2. It is best to get your calcium from food sources first. Foods have important nutrients in them not found in supplements. If you are unable to get enough calcium in your diet, then you may benefit from a supplement.
3. There is no benefit to getting more calcium than the recommended amount. In fact, too much calcium can cause harm (increased risk of kidney stones and possibly heart disease).

How do I calculate my calcium intake?

Add up your calcium intake from foods.

1. Use this [list of calcium rich foods](#) to help you. Also use the Nutrition Facts label on these food products to find out the amount of calcium in the food you eat. The amount of calcium will be listed in milligrams (mg) given a serving size. Make sure to adjust the amount of calcium for the serving size you enjoy.
2. If you eat 3 balanced meals most days (described above), give yourself 300 mg of calcium as a base amount. Small amounts of calcium are found in many vegetables, fruits, whole grains and nuts and seeds.
3. Add up the additional amount of calcium from calcium rich foods and balanced meals.

Use [My Nutrition for bone Health Discovery Checklist](#) to help you.

You can also use an online [Calcium Calculator](#).

Do I need a calcium supplement?

You may need a calcium supplement if you don't get enough calcium from food. Before considering a supplement, calculate your daily intake of calcium from food sources. Take only as much supplemental calcium as needed to meet your recommended intake. Multivitamin/mineral supplements often contain calcium. It is important to remember that calcium supplements can change the way some medicine works. Your pharmacist can tell you the best times of the day to take your medicine and supplements. It may be harmful to take too much calcium from supplements and so the recommended daily maximum should not be exceeded. Talk to your health provider before taking a calcium supplement.

If I need a calcium supplement, how do I choose?

There are many forms of calcium. Calcium carbonate and Calcium citrate are the most common and well researched forms.

- Calcium carbonate must be taken with food.
- Calcium Citrate can be taken with or without food. Use a citrate form if you are taking a medication to reduce stomach acid or to prevent gastric reflux. Use a citrate form if you have any nutrient malabsorption issues or Irritable Bowel Disease.

To maximize absorption, do not take more than 500 mg of calcium at one time.

When choosing any supplement, look for an eight-digit NPN number (Natural product number) on the label, to ensure that Health Canada has reviewed the product. Expensive or "boutique" mineral supplements are generally not needed nor recommended by our clinic.

What about Vitamin D? What does Vitamin D do for my bones?

Vitamin D increases the absorption of calcium and is necessary for normal bone mineralization.

Where can I get vitamin D?

There are three main sources of Vitamin D:

Sunlight • Your skin makes some Vitamin D from sunlight. Albertans make little or no vitamin D from October to March. SPF (sun protective factor), clothing, pigmented skin and glass all reduce the amount of vitamin D that is made from sun exposure.

Food • Some foods contain vitamin D. These include fish, milk, fortified plant-based beverages, margarine, and eggs. However, the amount of vitamin D found in food is low and even with a balanced diet, most of us are unable to get enough vitamin D from food sources.

Supplements • Vitamin D supplements are recommended for all Albertans, year-round. Supplements are available in many forms such as tablets, soft gels, chewable, sprays and liquid drops. Multivitamins are often a source of vitamin D.

How much Vitamin D do I need to take?

Osteoporosis Canada recommends:

Recommended Vitamin D Supplement
400 – 1000 IU (10 – 25 ug) per day

Can I take too much Vitamin D?

It is not recommended to take more than 2000 IU of vitamin D a day from supplements unless your health provider tells you to take more. Based on some Calgary research findings, taking 4000 IU of vitamin D daily or higher may be harmful to bone health. For adults with risk factors for severe vitamin D deficiency, a blood test to check vitamin D levels may be helpful before deciding about treatment. Your health care provider may have specific recommendations for you.

As with calcium and when choosing any supplement, look for an eight-digit NPN number (Natural product number) on the label, to ensure that Health Canada has reviewed the product.

Why is protein important for my bones?

Protein helps build and repair bones. Protein helps you maintain and build muscle mass and body weight, which are important for bone health and to prevent falls.

What foods contain protein?

Protein is found in many animal products (meat, poultry, fish, and eggs), dairy products (milk, cheese, yogurt), plant-based products (beans, lentils, chickpeas, tempeh, tofu, soy beverage), and nuts and seeds.

A list of protein rich foods can be found [here](#).

How much protein do I need?

How much protein you need depends on age, health, body weight and physical activity goals. For most of us, including a source of protein at all meals and snacks will help you meet your needs. Use the [Eat Well Plate](#) to help you. Like calcium, spread your protein intake throughout the day. Your body can not absorb large amounts at one time. Ask a dietitian if you are unsure.

Want some recipes ideas to support your bone health? Each recipe here includes a variety of nutrients for bone health with a boost of calcium and protein. Ideas for creating balanced meals are also included but don't be afraid to be creative! Each recipe can be adapted to different tastes and food preferences. These recipes have been tested as part of our research project called '[Bites for Bones](#)'.

More recipe ideas that aim to support bone health can be found at [Osteoporosis Canada](#), and [Dairy Farmers of Canada](#).

Try these recipes if you are looking for ways to prepare or cook [Vegetables/Fruit](#) or [Pulses](#) like chickpeas, lentils, dry peas and beans.

Interested in cooking classes? Practice skills of health eating using basic ingredients and kitchen equipment at [South Health Campus Wellness Kitchen](#), and [Cook with Osteoporosis Canada](#) offers free virtual cooking demos and cook-a-longs.

Interested in nutrition classes? Search for your nutrition class of interest [here](#).

Interested in credible, evidence-based nutrition information? Search for your nutrition topic of interest [here](#). For example, heart health recommendations, ideas to increase protein or cut down on salt. These are evidence based and updated regularly. If you are not finding what you are looking for try using google scholar as your search engine.

How are you doing with nutrition and bone health?

Compare your usual eating habits with the suggestions for nutrition for bone health. Find out what to continue doing. Discover the [eating habits](#) you can begin to change. Find out if you are meeting your nutrition and bone health needs by using [Osteoporosis Canada's Nutrient Calculator](#).

What other factors affect my bones?

Too much caffeine, sodium and alcohol can harm your bones.

Limit Caffeine – No more than 400 mg caffeine per day. More than 400 mg of caffeine in a day may be linked to higher rates of bone loss. Sources of caffeine include coffee-based drinks, energy drinks, teas, colas and chocolate. Each 8 oz cup of coffee can have up to 150 mg of caffeine. Learn more about caffeine and caffeine sources [here](#).

Limit Sodium – No more than 2300 mg sodium per day. Too much sodium likes to grab on to calcium, stopping it from being absorbed. Most of the sodium we eat comes from processed and packaged foods and restaurant foods. Sodium also comes from the salt we eat at the table or in cooking. Tips: use less processed and packaged foods, read labels, and choose foods lower in sodium. Limit salt added to cooking or at the table. Get the [facts on sodium](#) . Use the [sodium calculator](#) to find out how much sodium you eat.

Limit Alcohol – No more than 1-2 drinks per day. More than 2 drinks a day increases your risk of breaking a bone. Drinking less alcohol is better for your health. One drink is 5 oz of wine, 12 oz beer, cider or cooler or 1 ½ oz shot of spirits/distilled alcohol.