



November is the  
National Osteoporosis Month

# **Bone Health 101**

*Your Guide to a  
Healthy Bone Diet*

**FRESH PERSPECTIVE  
NUTRITION**

JENIFER THARANI, MS, RD



# Guide Content

Osteoporosis Facts

Why Should You Care about Bone Health?

Key Nutrients for Bone Health

Meet Jenifer!

Next Steps

**FRESH PERSPECTIVE NUTRITION**



COPYRIGHT © 2018 · JENIFER THARANI, MS RD

# Osteoporosis Facts

- **Osteopenia** is when your bones are weaker than normal not weak enough that it could lead to fractures and falls.
- **Osteoporosis** is a condition that causes bones to become fragile and prone to fracture. It is particularly characterized by thin and porous bones.
- Osteoporosis is often called the '**silent disease**' because bone loss occurs without symptoms or pain unless one has experienced fractures and falls.
- The most common sites of osteoporotic fracture are the wrist, shoulder, hip and spine.
- Osteoporosis affects both men and women.
- A person normally builds more bone than he or she loses until about age 30. After age 35, bone breakdown overtakes bone buildup, which causes a gradual loss of bone mass. Once this bone loss reaches a certain point, a person develops osteoporosis.
- Nutrition and exercise can play a significant role in keeping bones healthy!

# Why Should You Care?

- **Menopause and Osteoporosis:** There is a direct relationship between the lack of estrogen after menopause and the development of osteoporosis. Women can lose up to 20% of their bone density in the five to seven years after the menopause as bone breakdown overtakes the building of new bone. All women over the age of 65 may consider getting a bone mineral density test done.
- Research suggests that women with osteoporosis are much more likely to suffer from depression and anxiety than their bone-healthy peers as Osteoporosis can result in **lowered self-esteem** associated with disfigurement, reduction or loss of mobility, and decreased independence.
- **Having grandchildren is one of the great pleasures in life!** But keeping up energetic toddlers takes energy and good bone health. Hip fractures and wrist fractures affect your ability to live by yourself, play with your grandchildren - whatever it is that you like to do.
- If you're living a **dairy-free lifestyle**, whether by choice or by need (i.e. lactose intolerance, dairy allergy, etc.), you may be at a **higher risk of calcium deficiency** unless you are conscious about including adequate quantities of non-dairy calcium rich foods in your diet.
- **Vitamin D aka "the sunshine vitamin" deficiency** is frequently overlooked or unknown unless people are proactive about getting vitamin D levels checked annually. Insufficient vitamin D levels may lead to decreased calcium absorption in bones. Therefore, it is important to maintain adequate blood levels of vitamin D by supplementing with vitamin D3 supplement, eating foods rich in vitamin D, and enjoying outdoor activities, especially in summer.

# Nutrients for Healthy Bones

## Calcium

- Calcium, plays an important role in preventing osteoporosis. In people who have healthy bones, adequate calcium intake on a daily basis is necessary to maintain bone health. For older adults, studies have shown that adequate calcium intake can slow bone loss and lower the risk of fracture.
- It also plays a vital role in muscle contraction (think of our heart, a muscle!), hormonal secretion, learning and memory, nerve function, and blood flow.
- Due to calcium's important role in so many of our body functions, it is quite tightly regulated in our blood. As a result, in case of calcium deficiency caused due to inadequate intake of calcium from foods, it can be leached from our bones.

## Calcium Recommendations

### Women

- Under age 50 need a total of 1,000 milligrams (mg) of calcium\* every day.
- Women age 50 and older (or any women who is not menstruating) need a total of 1,200 mg of calcium\* every day.

### Men

- Under age 71 need a total of 1,000 mg of calcium\* every day.
- Age 71 and older need a total of 1,200 mg of calcium\* every day.

\*This includes the total amount of calcium you get from both food and supplements. Calcium is better absorbed from foods than supplements.



# Nutrients for Healthy Bones

## Dietary Sources of Calcium

To meet recommended calcium daily, consume at least 4 servings per day of milk and alternatives if you are over 50, and 3 servings per day if you are under 50. **Lower-fat dairy products contain just as much calcium as full-fat ones.**

One serving is equal to approximately:

- 8 oz. or one cup of low-fat or fat-free milk = 300 mg of calcium
- 6 oz. of low-fat or fat-free yogurt = 300 mg of calcium
- 1.5 oz. of low-fat cheese = 300 mg of calcium

## Thinking about eating only plant based foods or a dairy-free lifestyle? No Worries!

Non-dairy sources of calcium include green, leafy vegetables (**but not spinach - keep on reading to learn more**), oranges, beans and lentils, soybeans, tofu, tempeh, almonds, dried fruit like figs, black strap molasses, and canned fish with the bones in.

### Estimated calcium per cup of cooked) vegetable

- Collard Greens - 256 mg
- Broccoli Rabe - 200 mg, Broccoli - 60 mg
- Turnip Greens - 200 mg
- Kale - 175 mg
- Bok Choy - 160 mg
- Okra - 120 mg
- Mustard Greens - 120 mg



# Nutrients for Healthy Bones

## Nutrient Pairings to keep in mind for maximizing calcium absorption and preventing its losses

Eat calcium rich **foods alongside vitamin D and magnesium-rich foods.**

Avoid taking calcium or eating calcium-rich foods alongside **iron and zinc** (both of these minerals compete with calcium absorption).

**Spinach and other foods with oxalates:** Your body doesn't absorb calcium well from foods that are high in oxalates (oxalic acid) such as spinach, rhubarb, beet greens, sesame seeds, and certain beans.

These foods contain other healthy nutrients, but they just shouldn't be counted as sources of calcium.

**Beans (legumes):** While beans contain calcium, magnesium, fiber and other nutrients, they are also high in substances called phytates.

Phytates interfere with your body's ability to absorb the calcium that is contained in beans. You can reduce the phytate level by soaking beans in water for several hours and then cooking them in fresh water or using canned beans in your salads, soups, etc.





# Nutrients for Healthy Bones

## Nutrient Pairings to keep in mind for maximizing calcium absorption and preventing its losses

You may also want to **decrease the amount of caffeine (tea, coffee, and soda pop) and alcohol** in your diet as well, as both of these increase the excretion of calcium through your washroom breaks (both ways)!

**Salty foods:** Eating foods that have a lot of salt (sodium) causes your body to lose calcium and can lead to bone loss. Try to limit the amount of processed foods and salt added to the foods you eat each day. Aim to get 2,400 mg or less of sodium per day.

**100% Wheat bran plus Milk/Yogurt:** Wheat bran contains high levels of phytates which can prevent your body from absorbing calcium. 100% wheat bran is the only food that appears to reduce the absorption of calcium in other foods eaten at the same time. For example, when you have yogurt and 100% wheat bran cereal together, your body can absorb some, but not all, of the calcium from the yogurt. The wheat bran in other foods like breads is much less concentrated and not likely to have a noticeable impact on calcium absorption. If you take calcium supplements, you may want to take them two or more hours before or after eating 100% wheat bran.





# Nutrients for Healthy Bones

## Vitamin D

Vitamin D is calcium's best friend. It helps to increase the absorption of calcium, ultimately building stronger bones.

## Vitamin D Recommendations

- Healthy adults between 19-50 years of age, including pregnant or breastfeeding women, require 1000 IU daily.
- Those over 50 or younger adults at high risk (with osteoporosis, multiple fractures, or conditions affecting vitamin D absorption) should receive 1000-2,000 IU daily. The dosage may change based on blood levels of vitamin D.

## Sources of Vitamin D

- Dietary sources include oily fish, such as salmon, sardines and mackerel, eggs, fortified fat spreads, fortified breakfast cereals, and fortified beverages like kefir.
- Exposure to sunshine
- Vitamin D3 supplement





# Nutrients for Healthy Bones

In addition to calcium and vitamin D, there are other nutrients that appear to be important for bone health. Some examples are:

- **Magnesium:** Sources include spinach, beet greens, okra, tomato products, artichokes, plantains, potatoes, sweet potatoes, collard greens and raisins.
- **Vitamin K:** Sources include dried plums (prunes) and certain dark green leafy vegetables like kale, collard greens, spinach, mustard greens, turnip greens and Brussels sprouts.
- **Vitamin C:** Sources include red peppers, green peppers, oranges, grapefruits, broccoli, strawberries, Brussels sprouts, papaya and pineapples.
- **Potassium:** Sources include avocados, prunes, tomato products, raisins, potatoes, sweet potatoes, spinach, papaya, orange and its juice, bananas and plantains.

Our bodies do best when provided with nutrient dense, whole foods at meals and snacks. Try to eat 1-2 servings of fruit (1.5 cups) and 2 cups of vegetables every day for bone and overall health.





# Get a Quick Boost of Calcium and Vitamin D

## Ingredients

- 1 apple or a peach
- 1 cup plain unsweetened Kefir
- 5-6 unsalted almonds
- 4-5 walnuts
- 1/2 tsp chia seeds

## Directions

- Blend apple with Kefir and almonds
- Pour the smoothie into a glass and top it with whole chia seeds and walnuts



# Meet Jenifer



## My mission is **simple**.

I want to educate and motivate you to live your healthiest life while loving every minute of it. I believe that eating healthy does not have to be boring, time consuming or expensive. **Eating should be an enjoyable experience!**

I help you optimize your health and manage medical conditions through nutrition coaching and empower you to take charge with a customized **nutrition care toolbox**. I use a habit-based framework coupled with a fresh perspective to help you build new habits, nourish your body and design a lifestyle you can embrace and love without following a fad diet, you dread!

**“Complete Wellbeing” is a Marathon and Not a Sprint.** Whether your goal is to lose weight, to lower your cholesterol or to adapt a healthy lifestyle, permanent results require permanent commitment. The secret to permanently committing to living a healthy lifestyle? **Loving and embracing it.**

Coaching Philosophy “Stick to the basics, patronize local foods, exercise often but don’t forget self-care.”

**FRESH PERSPECTIVE NUTRITION**





*Will you become a part of my  
Nutrition & Wellness Circle at  
"Integra Health"?*

- I would love to learn more about you and your health struggles.
- I would love to share healthy recipe ideas and meal planning inspiration with you **and**
- I would love to be your accountability partner and personal support in your healthy & happy lifestyle journey.

**If you answered YES to my question, let's connect over a 15 minute free call to chat about your struggles and health goals!**

**Know that I am here for you!**

**Click Here to Book Your  
Free 15 Minute Call**

- This guide provided you with information on key nutrients for strong and healthy bones. I hope it was helpful.
- If you need help with starting a healthy lifestyle or managing health conditions with nutrition and lifestyle changes, book a free 15 minute call to discuss your struggles and issues and see we are a good fit for each other.

**FRESH PERSPECTIVE NUTRITION**



# Additional Resources

**Exercise Recommendations for healthy bones** - <https://osteoporosis.ca/bone-health-osteoporosis/exercises-for-healthy-bones/>

**Calcium Calculator App** - <https://bcdairy.ca/nutritioneducation/articles/the-calcium-calculator-now-a-mobile-app>

**List of all calcium rich foods** - <https://cdn.nof.org/wp-content/uploads/2017/04/25-TIPS-Calcium-rich-Foods.pdf>

## References

- J Am Coll Nutr. 2000 Apr;19(2 Suppl):119S-136S. The bioavailability of dietary calcium. Guéguen L1, Pointillart A.
- <https://osteoporosis.ca/about-the-disease/>
- <https://www.nhs.uk/live-well/healthy-body/food-for-strong-bones/>
- <https://www.nof.org>
- <https://osteoporosis.ca/about-the-disease/fast-facts/>

## Disclaminer

This information is being provided to you for educational and informational purposes only. The content provided herein are suggestions only and not meant to replace your individual health care providers' recommendations. This information is to be used at your own risk based on your own judgment.

Please feel free to contact me at [dietitian@freshperspectiverd.com](mailto:dietitian@freshperspectiverd.com) if you have any questions.

**FRESH PERSPECTIVE NUTRITION**

