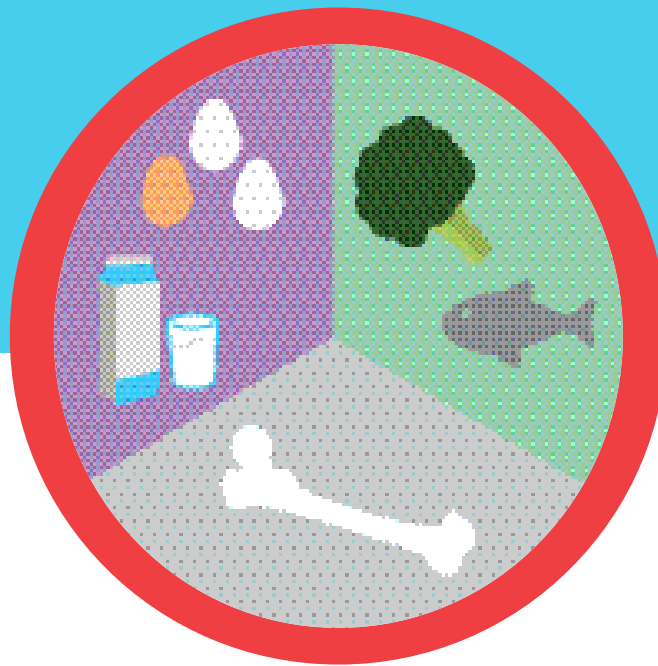


CALCIUM, VITAMIN D AND BONE HEALTH

INFORMATION FOR OLDER ADULTS, FAMILIES,
AND CAREGIVERS



READ THIS PAMPHLET TO LEARN:

- About the Importance of Calcium and Vitamin D.
- Sources of Calcium and Vitamin D.
- How to Prevent Osteopenia and Osteoporosis.



Sinai Health System

HEALTHY AGEING AND GERIATRICS

BONE HEALTH

Calcium and Vitamin D are essential to ensure bones stay healthy and strong as we age.

WHAT IS CALCIUM?

Calcium is a mineral that the body needs to maintain strong bones. Calcium also helps build strong teeth, maintain proper functions of the heart, muscles and nerves, and can help prevent **osteoporosis** from occurring (see page 3).

Calcium is obtained from food we eat, such as dairy products, spinach, soy, and some fish. You can also get calcium through nutritional supplements.

WHAT IS VITAMIN D?

Vitamin D is important for managing bone health. It is a vitamin that helps build strong bones by increasing the absorption of calcium. Vitamin D also helps improve muscle function and can reduce the risk of falls.

You can receive your daily dose of Vitamin D through sun exposure during the summer months. It is difficult to receive your recommended amount of Vitamin D from your diet. Your health care provider may suggest adding a supplement to your diet.

WHAT CAN HAPPEN IF I DON'T GET ENOUGH CALCIUM & VITAMIN D?

If you do not get enough Calcium in your diet you are at risk of developing osteopenia, osteoporosis (see below), muscle pain, spasms, tingling, or numbness in your hands and feet.

WHAT IS OSTEOPENIA?

Osteopenia (also called low bone mass) refers to early signs of bone loss. You can have a lower bone density than normal but not be classified as having osteoporosis. This means you have a greater risk of developing osteoporosis over time if your bone density continues to worsen.

WHAT IS OSTEOPOROSIS?

Osteoporosis is a disease characterized by low bone mass and deterioration of bone tissue. This can lead to fragile bones and risk of fractures.

To find out if you have osteopenia or osteoporosis, your doctor or nurse practitioner may recommend a Bone Mineral Density (BMD) test to check your bone health.

You can reduce your risk of developing osteoporosis and osteopenia by maintaining a healthy diet and getting enough exercise. Ensuring you are getting the correct amount of Calcium and Vitamin D each day will help you maintain your bone density.

RECOMMENDED DIETARY AMOUNTS OF CALCIUM AND VITAMIN D

You should be receiving the recommended amount of Calcium and Vitamin D each day. The recommended amount of each for older adults are listed below:



Ages 50-70 = 600 IU
Ages 70 & Older = 800 - 2000 IU



1,200 mg (equivalent of 3 servings of milk or milk alternatives)

WHERE DO I GET CALCIUM AND VITAMIN D?


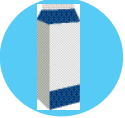
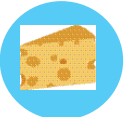




You will receive most of your Calcium from balanced meals you eat every day. The chart on page 5 outlines some common foods that are high in Calcium.

Although you will also get Vitamin D from some foods you eat, the main source of Vitamin D comes from sun exposure. During the winter, it is more difficult to fulfill our body's Vitamin D needs. It is difficult for adults to get sufficient Vitamin D from diet alone, so it is recommended to add a supplement to your daily diet.

While Calcium supplements may be recommended for older adults, taking too much can result in toxicity and lead to increased risk for adverse health effects including kidney stones, interfere with iron and zinc absorption, or cause constipation. Always speak to your health care provider before taking any Calcium supplements.

FOODS HIGH IN CALCIUM

Just 3 cups of milk a day can give you all the Calcium you need.

Food	Serving Size	Calcium Per Serving (mg)
 Yogurt	175 g (3/4 cup)	292-332 mg
 Milk	250 mL (1 cup)	291-322 mg
 Hard Cheese	50 g (1 1/2 oz)	252-386 mg
 Fish (Salmon, Sardines, Rainbow Trout)	75 g (2 1/2 oz)	179-208 mg
 Broccoli	125 mL (1/2 cup)	95 mg
 Almonds	60 mL (1/4 cup)	93 mg
 Beans	175 mL (3/4 cup)	93-141 mg

For a full list of foods high in calcium, visit Osteoporosis Canada's website at www.osteoporosis.ca under the "Calcium Requirements" section.

EXERCISES TO MAINTAIN HEALTHY BONES

Exercise is very important to maintain strong bones and prevent osteoporosis. It can reduce the risk of fractures, help maintain balance, and build muscle strength as well. Many exercises emphasize strength and balance training.

Older adults should aim to exercise for **30 minutes per day**. There are many exercises or daily activities you can incorporate into your routine to stay healthy and active.



TYPES OF EXERCISES FOR MAINTAINING HEALTHY BONES

Strength Training can involve using free weights, weight machines, or exercise bands. They help make bones and muscles work together by lifting or pushing against resistance. Even walking is a very simple form of strength training.

Balance Training exercises help challenge your balance to help you stay stable and reduce your risk of falling. Even walking is a simple form of balance training.

Weight Bearing Aerobic Exercises are recommended to increase your heart rate and can involve walking, jogging, step aerobics, dancing, and stair climbing.

STAYING PHYSICALLY ACTIVE

You can incorporate the activities listed below into your routine to stay healthy and active:

- Walking
- Light Jogging
- Dancing Classes
- Water Aerobics
- Chair Exercises
- Yoga
- Stretching Exercises
- Gardening
- Walking your dog
- Taking the Stairs instead of the Elevator

Did you know? Ontario has over 2,000 free exercise and falls prevention classes for older adults aged 65 and older.

Visit ontario.ca/healthcareoptions to find the closest exercise and falls prevention class in your community.

Call the Seniors' INFOLine at 1-888-910-1999 to be provided with information about falls prevention classes in your community and other provincial government services and programs.

SUGGESTED RESOURCES

OSTEOPOROSIS CANADA

Learn more about osteoporosis and what you can do to prevent it from happening. Osteoporosis Canada also has resources on foods high in Calcium, a Calcium calculator, and exercises to maintain healthy bones.



www.osteoporosis.ca

DIETITIANS OF CANADA - EATING GUIDELINES TO PREVENT OSTEOPOROSIS

Dietitians of Canada provides tips on foods that are high in Calcium and/or Vitamin D to prevent osteoporosis.



www.dietitians.ca/Your-Health/Nutrition-A-Z/Calcium/Food-Sources-of-Calcium.aspx

EAT RIGHT ONTARIO - BONE HEALTH

Eat Right Ontario offers a number of articles on keeping your bones strong and lowering your risk of osteoporosis.



www.eatrightontario.ca/en/Articles/Bone-Health

PUBLIC HEALTH AGENCY OF CANADA (PHAC): PHYSICAL ACTIVITY GUIDELINES:

PHAC supported the Canadian Society of Exercise Physiology (CSEP) guidelines on physical activity for older adults.



www.csep.ca/en/guidelines/guidelines-for-other-age-groups

EXERCISE AND FALLS PREVENTION PROGRAMS

Older adults (aged 65 and older) can join one of 2,000 free classes across Ontario to help maintain balance and strength to prevent falls.



Call 211 or the Local Health Integration Network at 310-2222 (No Area Code Needed)



www.ontario.ca/page/exercise-and-falls-prevention-programs

RELEVANT RESOURCES IN OUR SERIES

- Living Longer, Living Well – Your Guide to Healthy Ageing
- Preventing Falls at Home

ADDITIONAL HEALTH RESOURCES IN OUR SERIES:

- General Tips for Memory Problems
- How to Prevent and Manage Delirium
- Managing Constipation
- Improving Urinary Incontinence
- Managing Sleep in Older Adults
- Recognizing and Managing Hearing Loss
- Safe Medication Use for Older Adults
- Substitute Decision Makers and Powers of Attorney
- Elder Abuse
- Managing Caregiver Stress

ADDITIONAL COMMUNITY RESOURCES IN OUR SERIES:

- Meals on Wheels
- Community Transportation Options
- How to Register for Wheel-Trans
- Driving Assessment Services
- Funding for Mobility Aids from the Assistive Devices Program

Visit www.sinaigeriatrics.ca/healtheducation for additional resources for older adults, families and caregivers.

This information is to be used for informational purposes only and is not intended as a substitute for professional medical advice, diagnosis or treatment. Please consult your health care provider for advice about a specific medical condition. A single copy of these materials may be reprinted for non-commercial personal use only.

We would like to thank the following for their support of our Education Resources to Support Healthy Ageing Initiative:



The Ben and
Hilda Katz
Foundation



Mon Sheong Foundation and the Ben and Hilda Katz Foundation have generously provided funding to support printing and translation of our Education Resources to Support Healthy Ageing.

The Ministry of Seniors Affairs supported this initiative with funding through its Seniors Community Grant Program.

Adapted from “Calcium, Vitamin D and Bone Health” in 2016 with permission from the University Health Network Patient and Family Education Program.

Author: Healthy Ageing and Geriatrics Program, Sinai Health System
Modified: 08/2019