

Nutrition for Bone Health

Presented by **Summerville Family Health Team** in
collaboration with MPH Nutrition and Dietetics
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SUMMERVILLE
Family Health Team

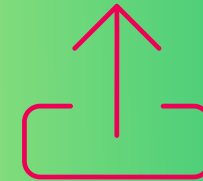


Agenda

- **Myth vs. Fact Quiz**
- **Why Bone Health Matters**
- **Understanding Osteoporosis**
- **Role of Nutrition in Bone Health**
 - **Calcium, Vitamin D, Protein, and other nutrients**
- **Grocery Shopping and Affordable Food Tips**
- **Nutrition Label Reading Activity**
- **Food Demonstration Video**
- **Questions and Answers Session**



Myth VS. Fact Quiz





WHY Bone Health Matters

“Over 2.3 million Canadians live with osteoporosis...”

Why it's important

- Strong bones help us stay active and independent.
- Fractures (bone breaks) from osteoporosis can lead to:
 - Serious health issues
 - Lower quality of life
 - Loss of independence

(Morin et al., 2023)

Understanding Osteoporosis

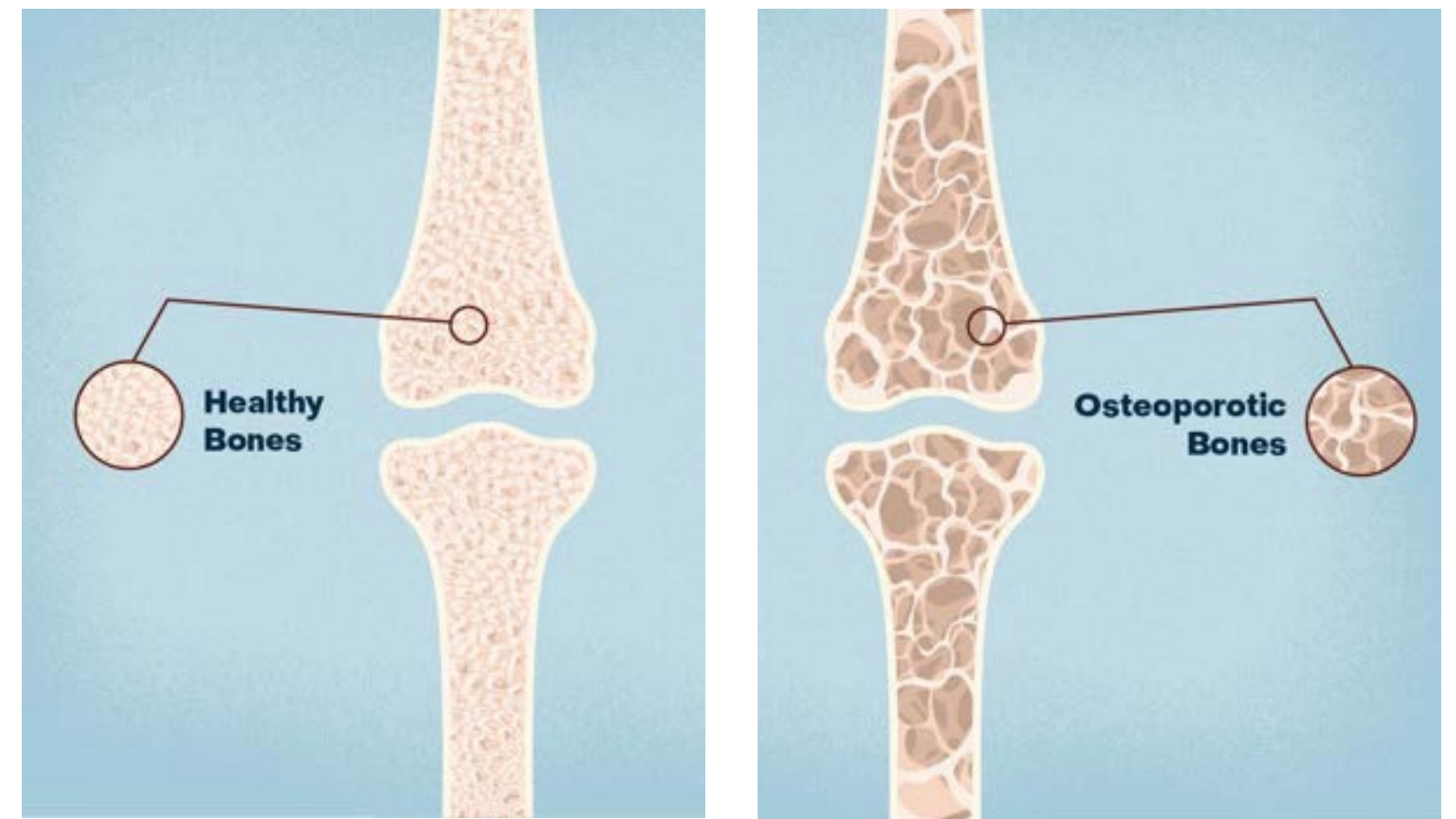
WHAT is Osteoporosis?

- A condition where bones become weak and brittle
- Bones lose density and strength, making them easier to break

WHO is at Risk?

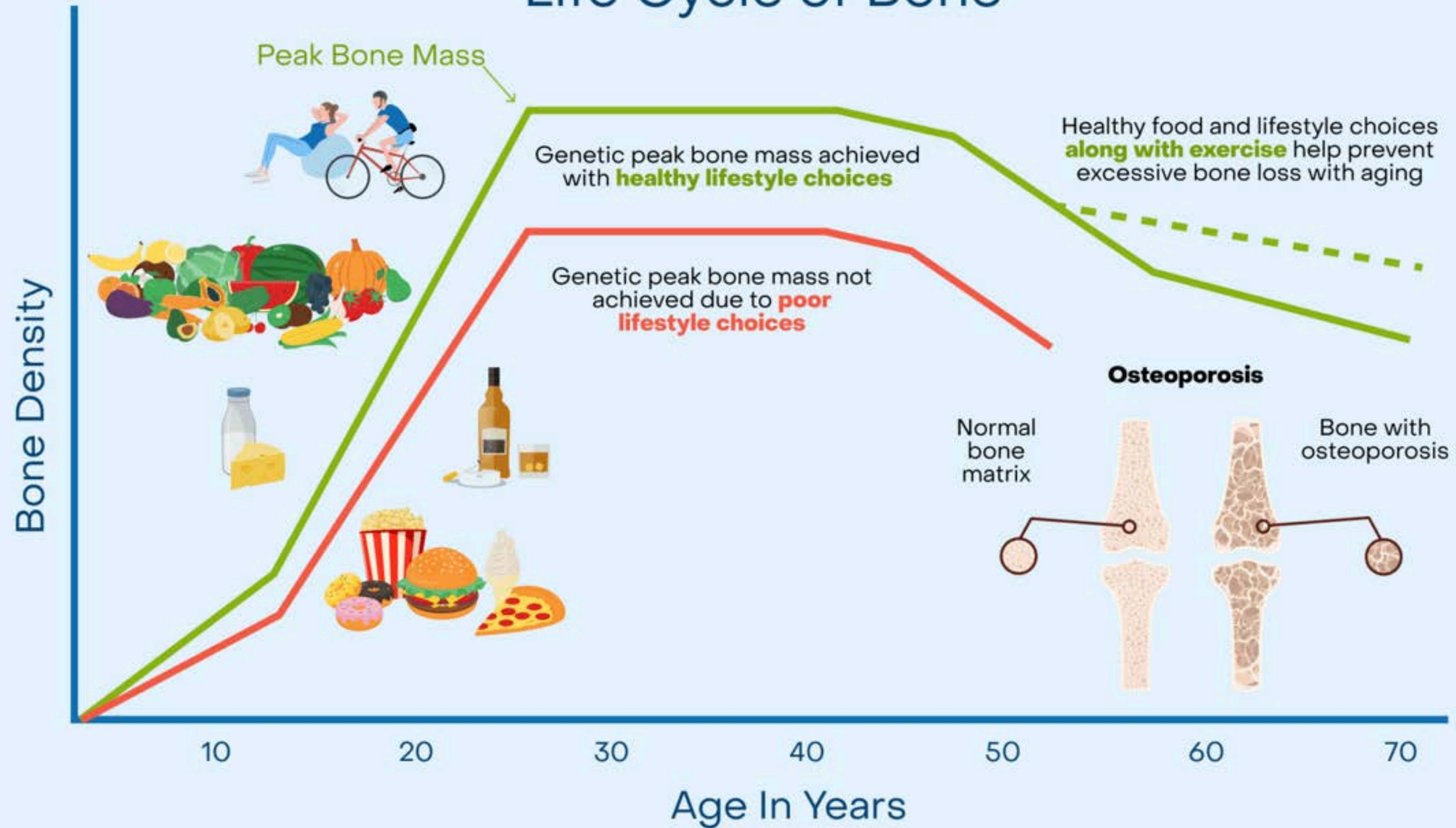
- Men and women over 50
- Family history, smoking, inactivity, and certain medications can increase risk

“The Silent Thief”



(National Osteoporosis Foundation, 2018)

Life Cycle of Bone



Preventing Osteoporosis

Steps for strong bones:

- Get enough calcium, vitamin D, and protein
- Exercise regularly (impact/strength).
- Avoid smoking
- Limit alcohol
- Talk to a healthcare provider about bone health
- Bone density tests as recommended





Role of Nutrition in Bone Health

Key Nutrients:

- Calcium, Vitamin D, and protein are essential for building and maintaining strong bones
- Many other nutrients are also important for bone health (ex. magnesium and vitamin K)

Preventative Focus:

- Nutritional habits now can reduce risks and slow bone loss—at any age!

Calcium

WHAT is Calcium?

- A mineral that keeps bones and teeth strong
- Helps muscles, nerves, and the heart function properly

WHY is Calcium Important?

- Supports bone health and prevents bone loss as we age
- Reduces the risk of fractures from weak bones



(National Osteoporosis Foundation, 2018)

How Much Calcium Do You Need Each Day?

Ages 19 to 50

1,000 mg

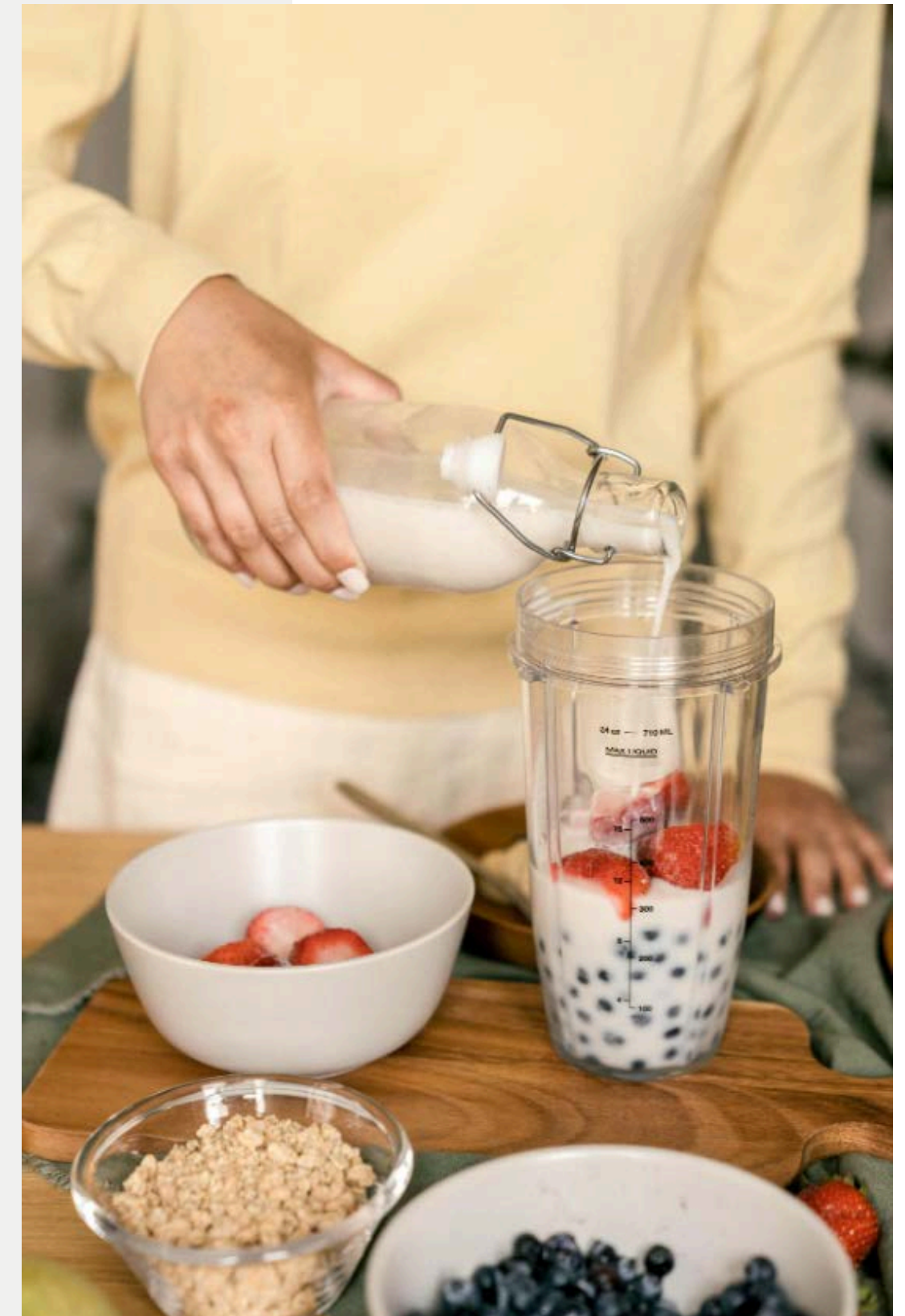
Ages 51 to 70

**Men: 1,000 mg
Women: 1,200 mg**

Ages 71 and older

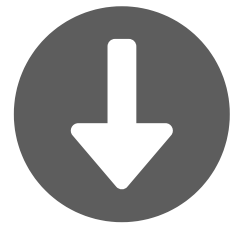
1,200 mg

(mg = milligrams)



(Government of Canada, 2023)

What Happens If You Get...



Too Little Calcium?

- Weak, brittle bones (osteoporosis)
- Increased risk of bone breaks
- Muscle pain, spasms, or tingling
- Numbness in hands and feet



Too Much Calcium?

- Too much from **supplements** can cause kidney stones and other issues (such as heart problems but research is still *unclear*)
- Upper limit is **2,500 mg** per day for adults **aged 19-50**, and **2,000 mg** per day for adults **over 50**



Where You Can Find Calcium

Our bodies cannot make calcium, so we need to get it from:

- Foods
- Drinks
- Supplements (when needed)

Note:

- Best to get calcium from food (when possible)
- Take no more than **500 mg** of calcium at one time, whether from food or supplements
- If taking calcium supplements, avoid taking them with calcium-rich foods

(National Institutes of Health, 2024;
National Osteoporosis Foundation, 2018)



Where You Can Find Calcium

- **Dairy**

- Milk, cheese, yogurt, kefir, paneer

Fortified means when extra vitamins or minerals are added to a food product.

- **Leafy greens**

- Kale, bok choy, broccoli, nappa cabbage

- **Fortified foods**

- Milk alternative beverages (soy, almond, oat cashew), fortified orange juice, tofu (made with calcium)

- **Seafood**

- Sardines/salmon (canned with bones)



(National Institutes of Health, 2024a; National Osteoporosis Foundation, 2018)

Calcium Absorption

Absorption depends on the food.

- Some foods (ex. spinach, rhubarb, Swiss chard) have compounds (oxalates/phytates) that **reduce calcium absorption**
- Calcium from broccoli, kale, bok choy, and cabbage is easily absorbed
- **Eating a variety of foods helps with calcium absorption**



(National Institutes of Health, 2024a;
National Osteoporosis Foundation, 2018)

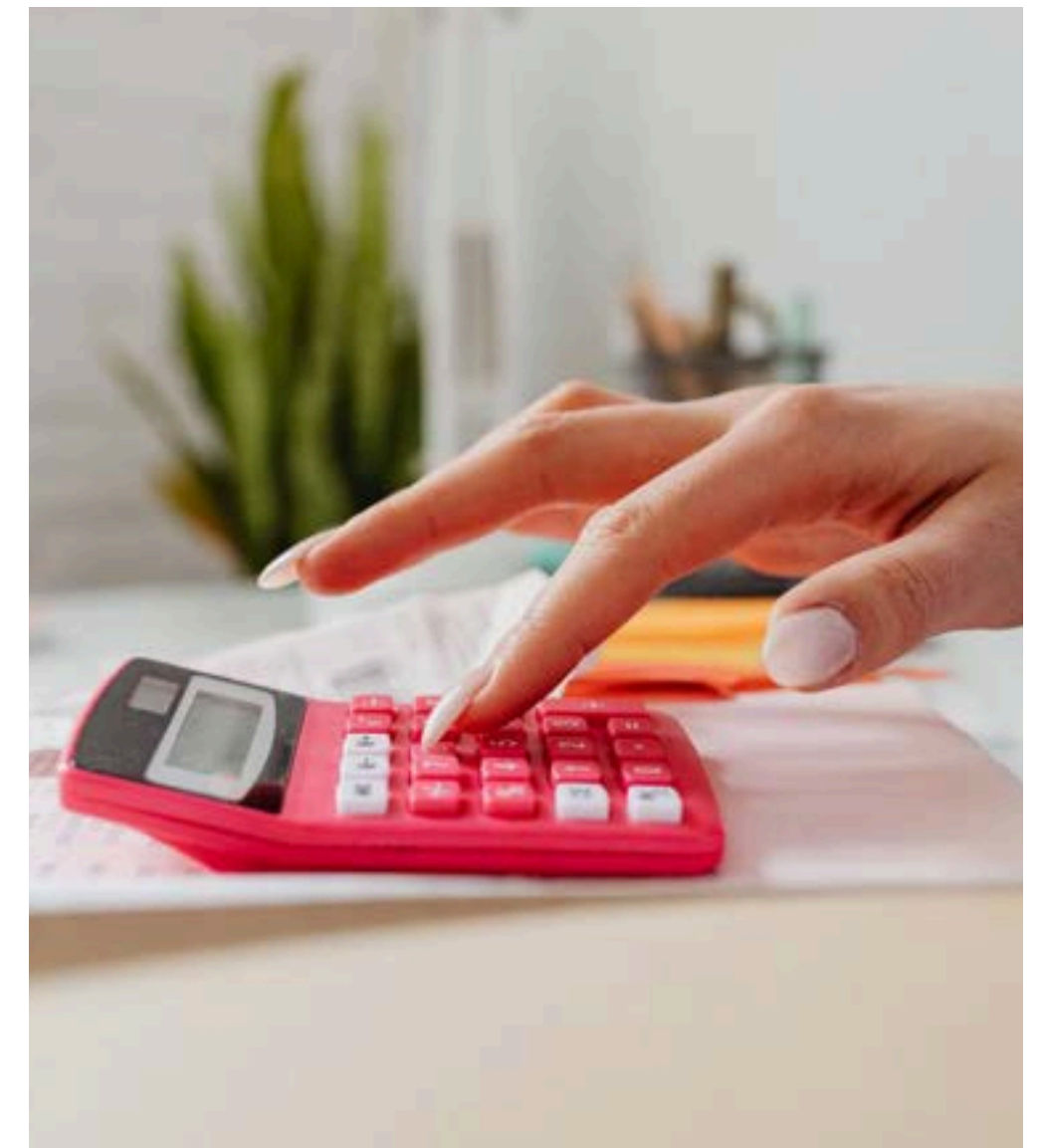
Calcium Rule of 300

Use this method to calculate your calcium intake from food before considering a supplement:

1. Count the servings of **dairy** or **fortified juice** you have daily
2. **Multiply** the number of **servings** by **300**
3. **Add 300** to account for the rest of your diet

Example:

- 1 cup of milk or yogurt, 1.5 slices of cheese, or 1 cup of fortified orange juice = **300 mg per serving**
- Add another serving if needed to reach your daily goal
- **Take calcium supplements only if your diet doesn't meet your recommended daily amount (RDA)**



(Osteoporosis Canada, 2020)

Calcium Rule of 300 Example



1 cup 2% milk

300 mg



3/4 cup plain yogurt

300 mg



1.5 slices cheese

300 mg



Estimated total from
other foods with smaller
amounts of calcium

300 mg

Total calcium

1200 mg

- This should be enough (hits the recommended daily amount 1,000–1,200 depending on age and sex).
- **No need for supplements.**



For more information about calcium counting, check out:

[Osteoporosis Canada's website](#) to use their calcium calculator or learn more about the rule of 300.

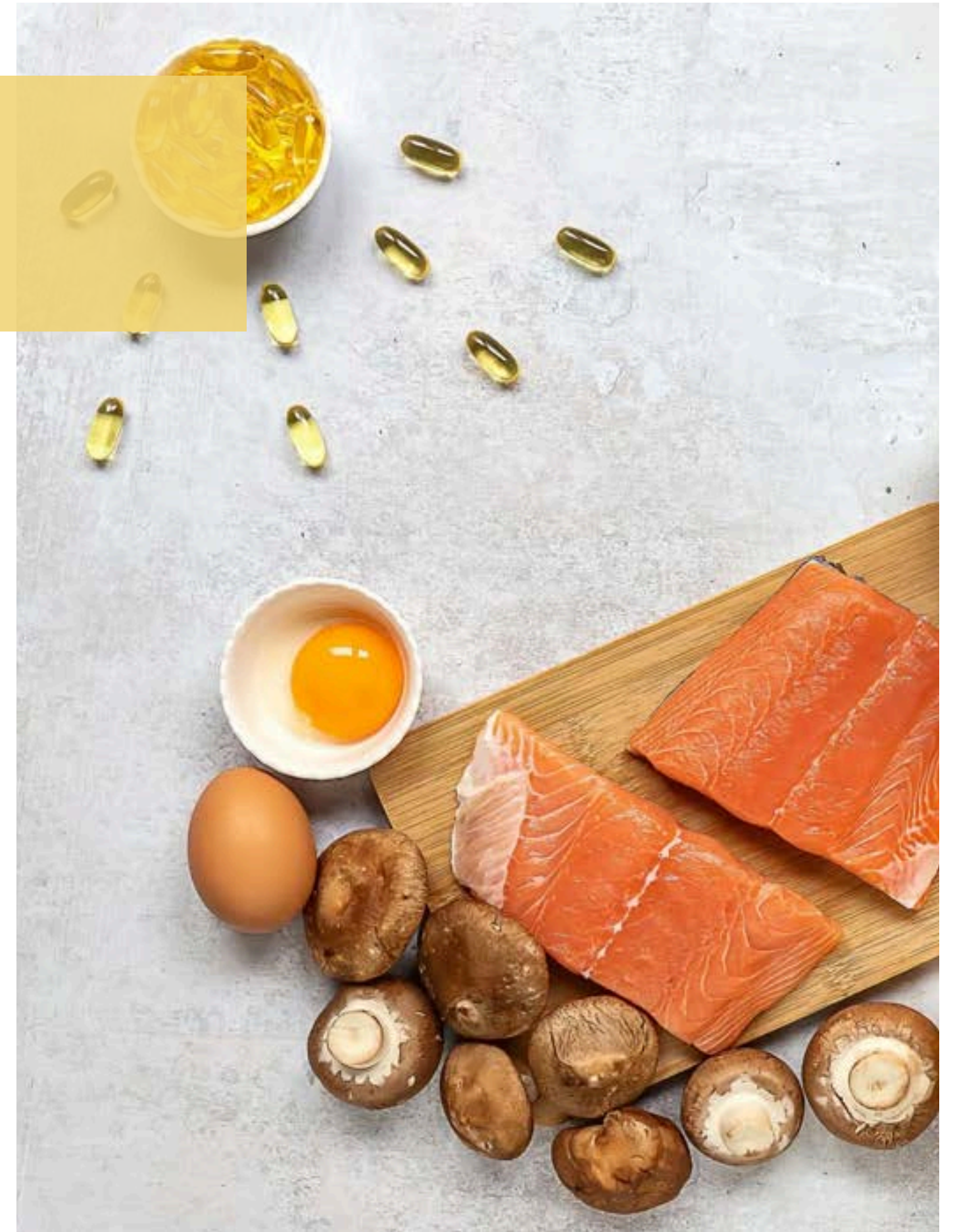
Vitamin D

What is Vitamin D?

- Helps your body use calcium to build and maintain strong bones

Why is Vitamin D Important?

- Like a “**key**” that unlocks calcium’s full benefits, helping strengthen your bones
- Supports muscle function and balance, reducing risk of falls and fractures



How Much Vitamin D Do You Need Each Day?

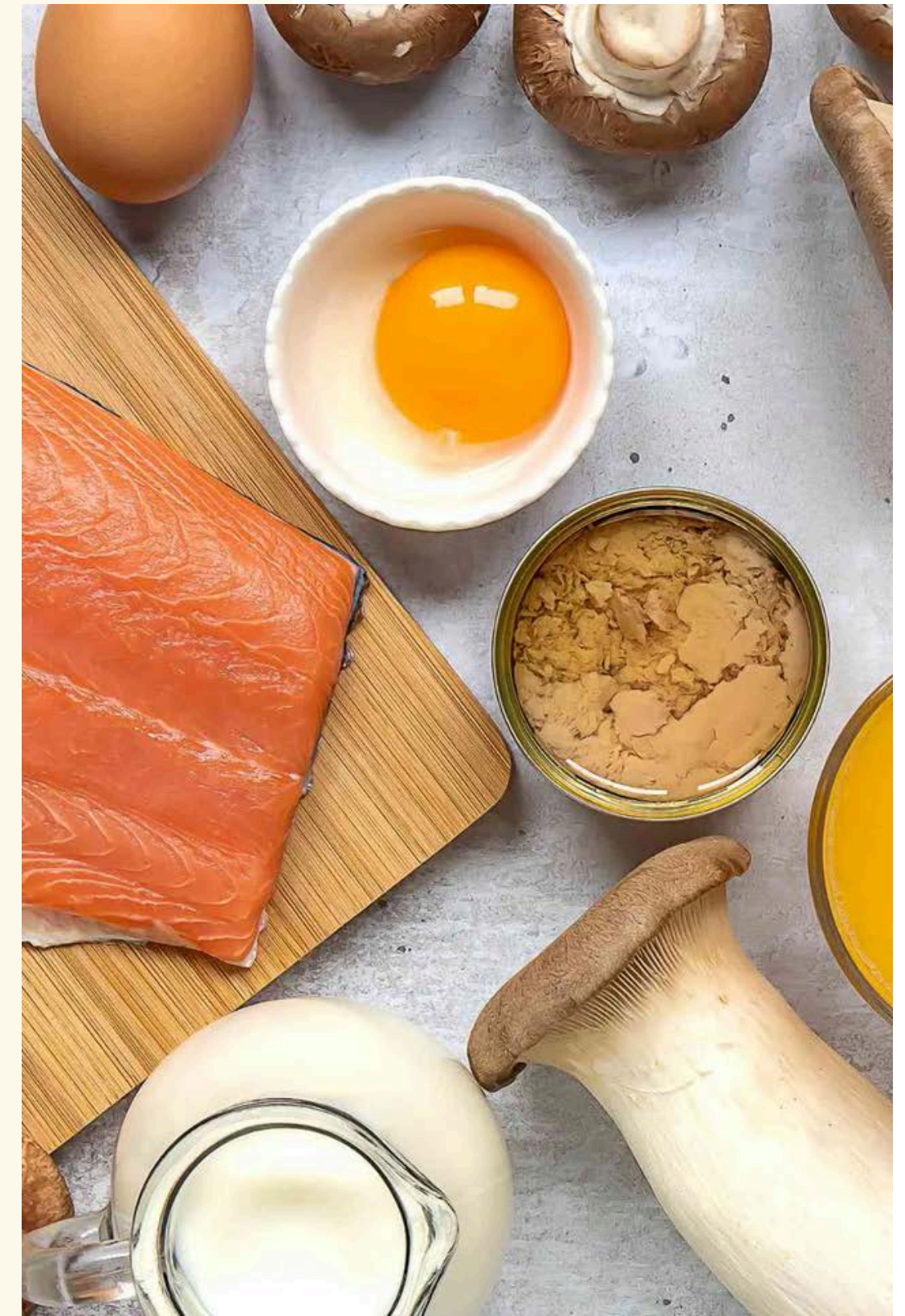
Ages 19 to 70

600 IU

Ages 71 and older

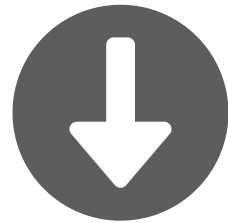
800 IU

(IU = International Units)



(Government of Canada, 2023)

What Happens If You Get...



Too little vitamin D

- Thin and weak bones
- Mood changes, like depression
- Muscle weakness, aches, or cramps



Too much vitamin D

- Can cause a buildup of calcium in blood, leading to:
 - Nausea and vomiting
 - Weakness
 - Kidney problems (ex. calcium stones)

Maximum safe daily dose for vitamin D (UL) = 4,000 IU



(National Institutes of Health, 2024b;
National Osteoporosis Foundation, 2018)

Where You Can Find Vitamin D

- **Food Sources**

- Fortified Milk
- Egg Yolks
- Fatty Fish
- Fortified Foods (ex. cereals, juices, plant-based milks)

- **Note:** It's hard to get enough vitamin D from food alone. Unless you're eating fatty fish or fish with bones every day, you probably won't get enough, so taking a supplement can help...



(National Osteoporosis Foundation, 2018)

Where You Can Find Vitamin D

- **Supplements**

- Most need a supplement or multivitamin
- Adults over 51 should take **400 IU** of vitamin D daily (in addition to food sources)
- A common and safe dose for most adults is **1,000 IU per day** (taken with food for better absorption)

- You can get a **blood test** to know how much vitamin D you need

- There is a fee for this



(Health Canada, 2022;
National Osteoporosis Foundation, 2018)

Where You Can Find Vitamin D

“The Sunshine Vitamin”



(National Osteoporosis Foundation, 2018)

- **Sunlight**
 - Skin makes vitamin D when exposed to sunlight
- **Things that can affect our ability to make it:**
 - Age
 - Skin colour
 - Location
 - Season
- **Sun safety matters!**
- **Even with sun exposure, some people may still have low vitamin D levels**

Magnesium

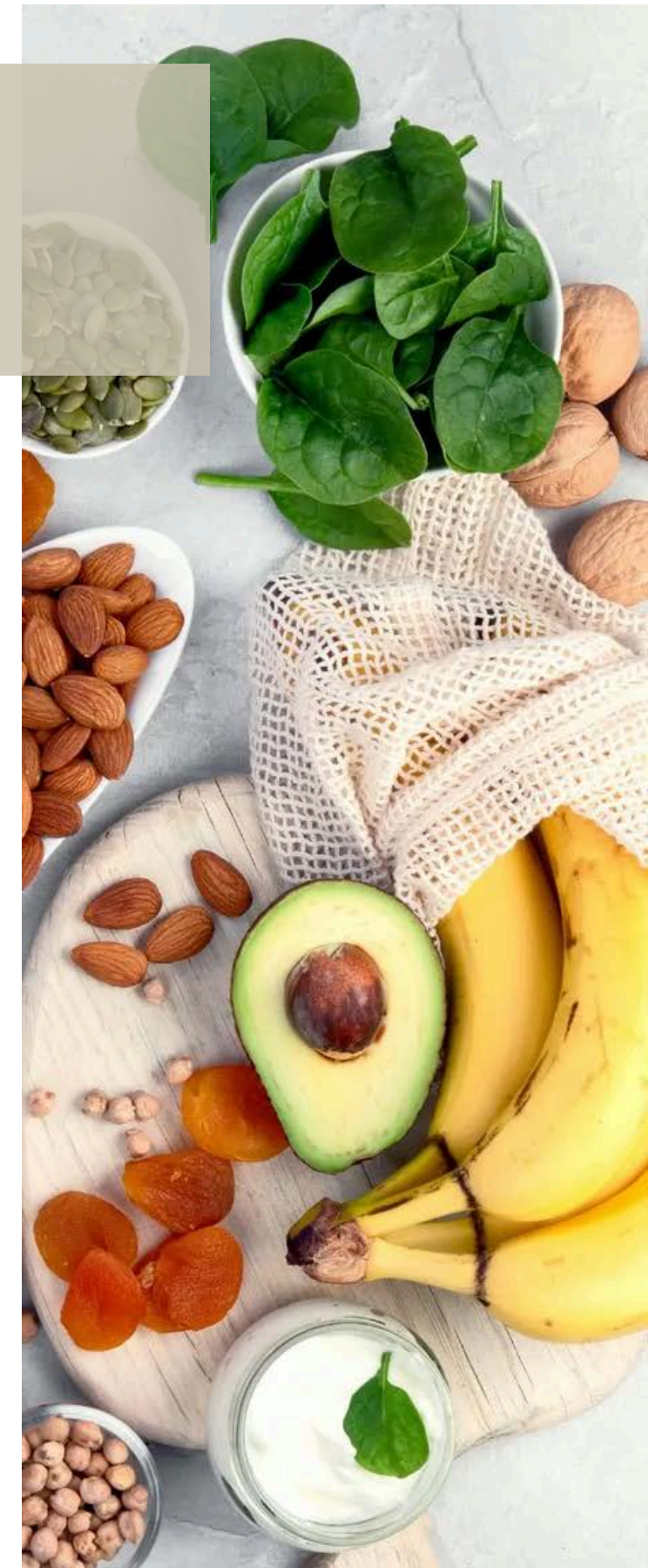
- Over half of the magnesium in our body is stored in our bones
- Helps our body use calcium and vitamin D

Recommended Daily Allowance:

(From both diet and supplements)

Females: ≥ 30 : 320mg daily

Males: ≥ 30 : 420mg daily



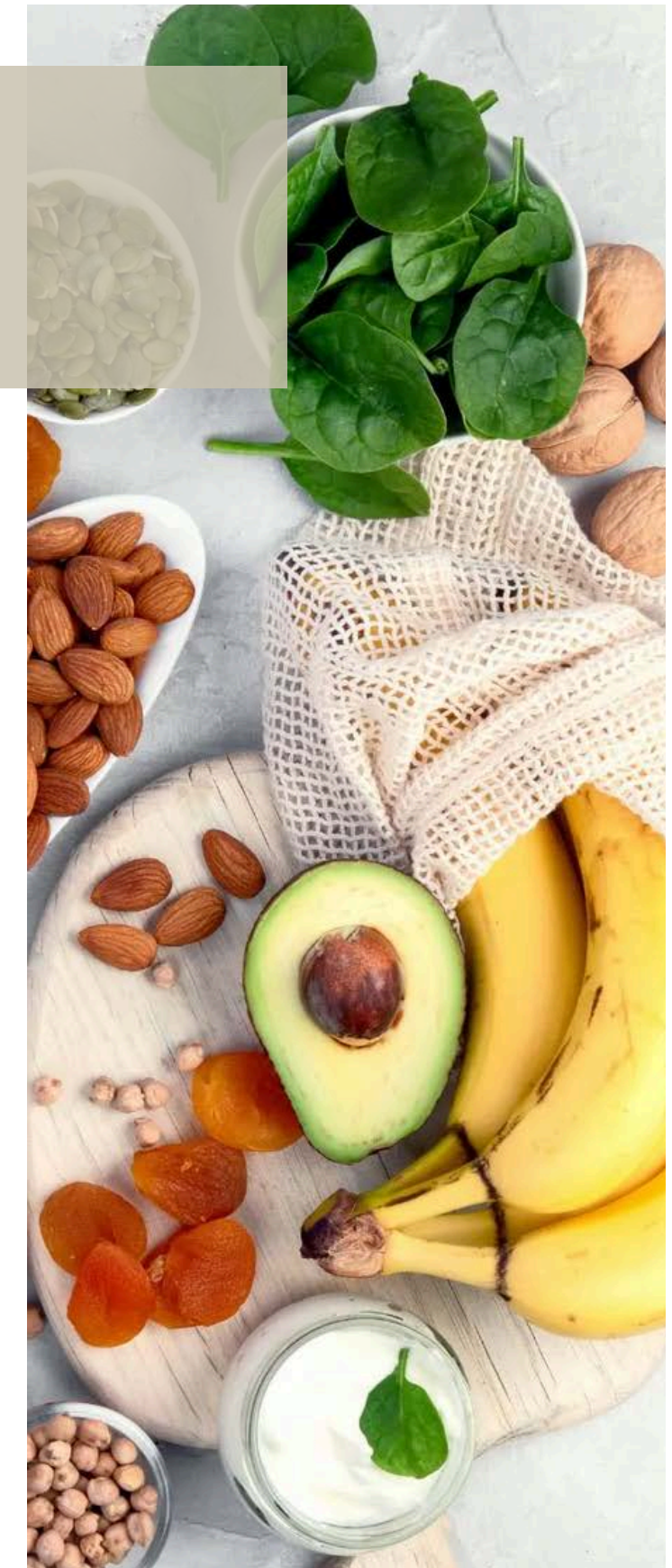
(Osteoporosis Canada, 2024; Public Health Agency of Canada, Chronic Diseases, 2024)

Food Sources

Magnesium is available in:

- Plant based-food ★★★★★
- Animal based-foods
- Beverages

Over 34% of Canadians over 19 consume magnesium below the Estimated Average Requirement. If your dietary magnesium is insufficient, talk to your doctor about supplements.



(Health Canada, 2012; Osteoporosis Canada, 2024; Public Health Agency of Canada, Chronic Diseases, 2024)



Magnesium Food Sources

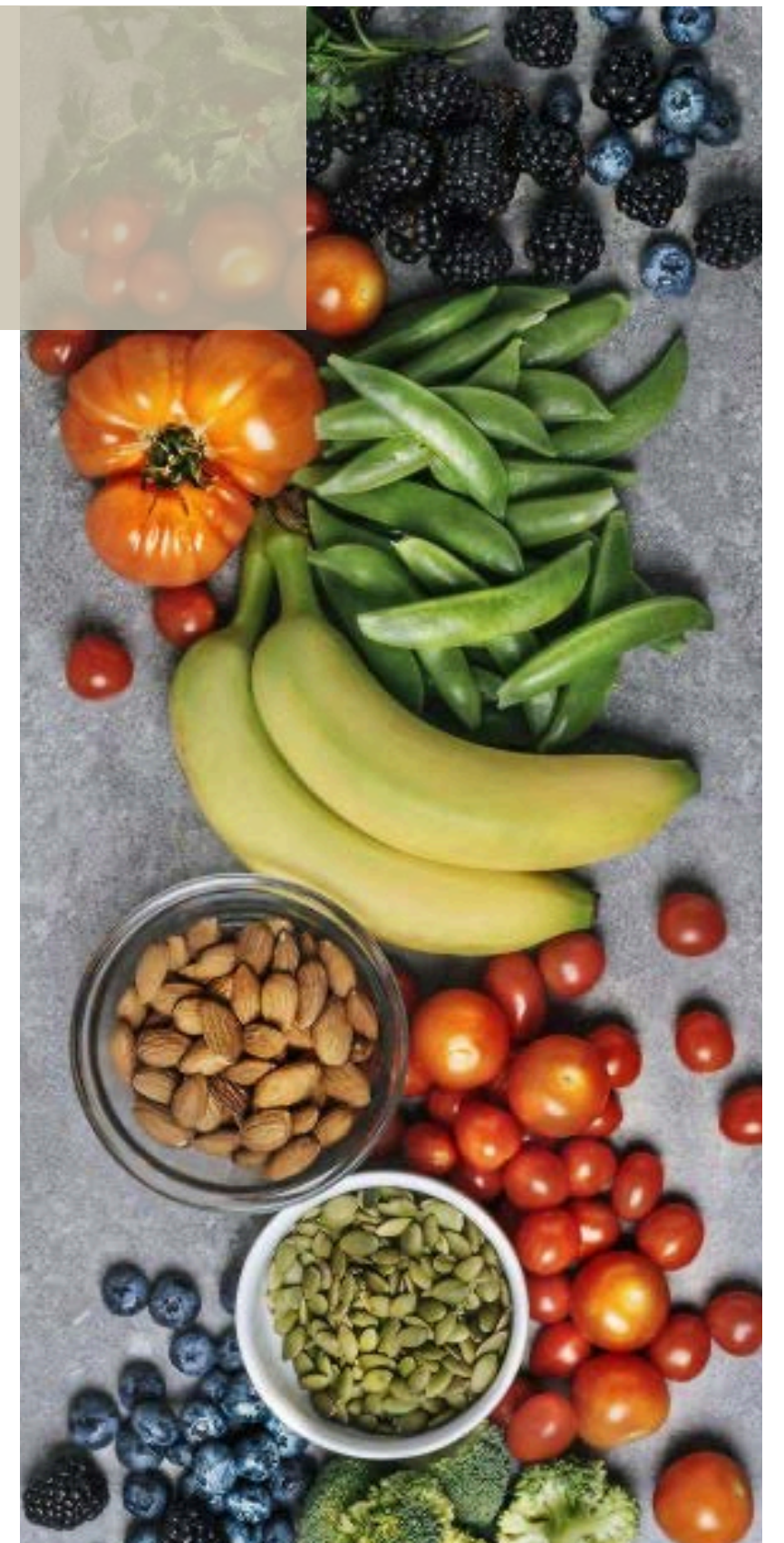
(National Institutes of Health, Dietary Supplement Fact Sheets, 2022;
Osteoporosis Canada, 2024)



Vitamin K

- Vitamin K controls how calcium is used in the body, helping it bind effectively to bones.
- Blood clotting
- 2 types of vitamin K
 - Vitamin K1
 - Vitamin K2 (Emerging area of research in bone health)

Recommended Daily Allowance:
(From both diet and supplements)
Females: ≥ 19 : 90ug daily
Males: ≥ 19 : 120ug daily



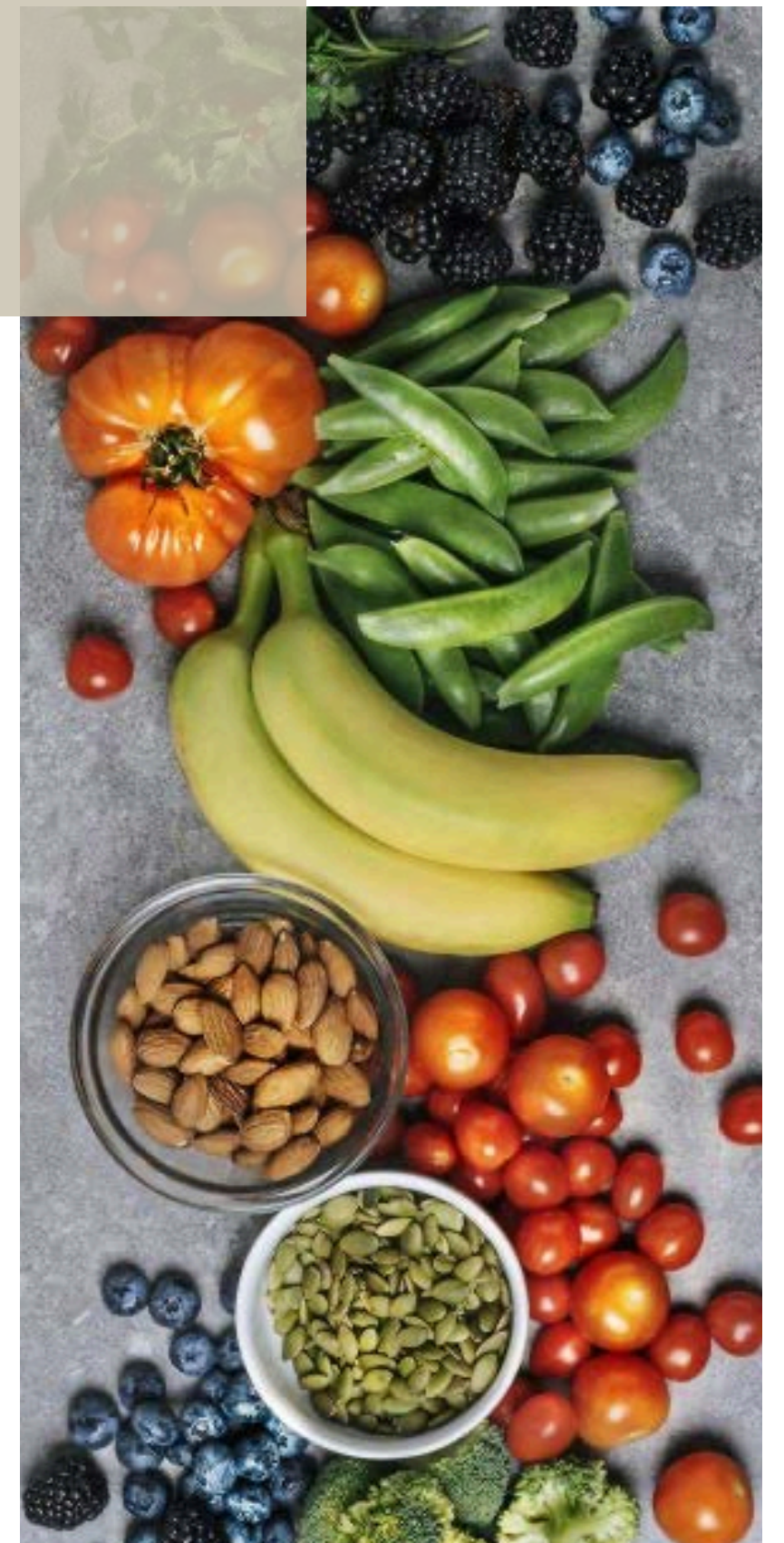
(Osteoporosis Canada, 2024; Public Health Agency of Canada, Chronic Diseases, 2024)

Food Sources

Vitamin K is found in many foods, including:

- Plant based-food (Vitamin K1)
- Plant and animal based-foods (Vitamin K2)

You can get enough vitamin K just by having **one serving** of green leafy vegetables a day.



(Osteoporosis Canada, 2024; Public Health Agency of Canada, Chronic Diseases, 2024)



Vitamin K Food Sources

(National Institutes of Health, Dietary Supplement Fact Sheets, 2022;
Osteoporosis Canada, 2024)

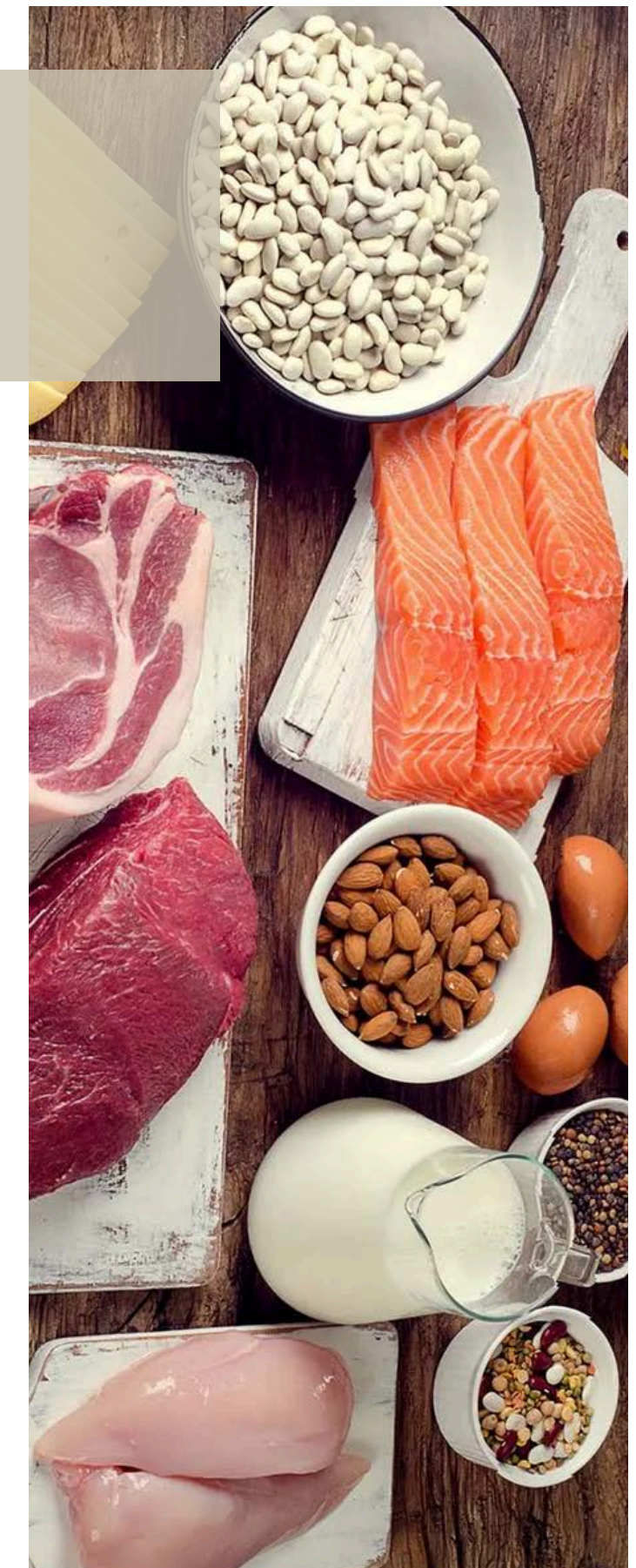


Protein

- Energy source
- Important role in bone and muscle health
- Forms the structure in our bones that holds calcium
- Spreading out your protein throughout the day helps your body use it better
 - It supports muscle repair, keeps your bones healthy, and helps your body work well overall

Suggested Daily Intake for older Adults

- Minimum of 1.0 g/kg/day
 - Meals: 20–35 g
 - Snacks: 5–10 g

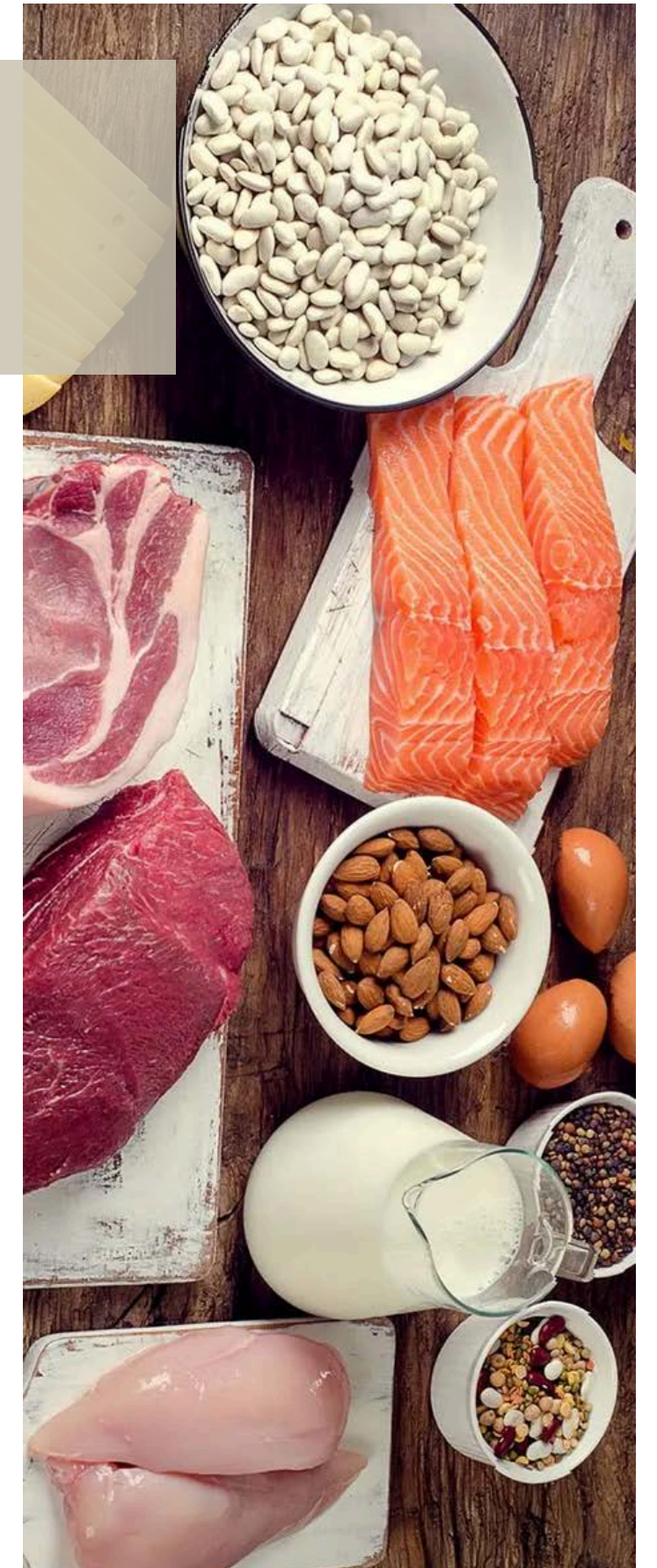


Food sources

Protein is found in many foods, including:

- Plant based-food
- Animal based-foods

Only a few vegetarian and vegan foods have all the protein building blocks your body needs. To stay healthy, eat a variety of plant-based foods.



(Osteoporosis Canada, 2024; Public Health Agency of Canada, Chronic Diseases 2024)



Protein Food Sources

(National Institutes of Health, Dietary Supplement Fact Sheets, 2022;
Osteoporosis Canada, 2024)



Bone-healthy Meals Examples



Canada's Food Guide Plate Model

(Health Canada, 2019;
Osteoporosis Canada, 2024)



Breakfast

2 eggs, 2 slices of whole wheat toast, 1 avocado & 1 cup of fortified orange juice



Lunch

Palm sized grilled chicken, 1 cup of sweet potato, 1 cup of kale & 25 gr cheese



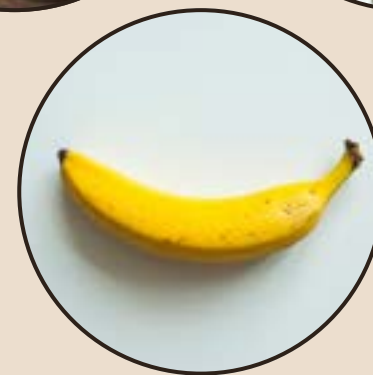
Dinner

Palm sized salmon, 1 cup of quinoa & 1 cup of steamed broccoli & edamame



Snack

- 1 cup of soy milk
- Handful of pumpkin seeds
- Handful of almond
- Greek yogurt with granola & berries
- 1 unit of banana
- 2 units of kiwi
- Half a cup of black berries





Low-Cost Grocery Shopping Tips For Bone Health

Fact: Healthy eating doesn't have to be expensive!

This section overviews some simple tips to help you shop for affordable foods that support strong bones.



Tip #1 Shop In The Frozen Section

Frozen foods are just as nutritious as fresh and very often are more affordable

Need an example?

- Shitake mushrooms (**43 IU Vit D** per 1 cup)
- frozen kale (**100 mg Calcium** precooked and then frozen)



Tip #2 Foods In Season Are Our Friends

Seasonal food costs less than food not in season, especially when bought at farmers markets

Need an example?

- eggs in the fall (**40 IU Vit D** per egg)
- nappa cabbage in the fall (**40mg Calcium** per cup uncooked)



Tip #3 Buy In Bulk!

Look for shelf-stable **bulk foods** at your local supermarket or bulk-food grocery store

Need an example?

- fortified cereal such as “Kelloggs Special K Original” (**80 IU’s Vit D** per 1 1/4 cup serving)
- dried lentils (**40mg Calcium** per cup when cooked)



Tip #4 Choose Plant Proteins

Plant protein sources are often more affordable than meat sources

Need an example?

- fortified plant milk such as “Earths Own” (**110 IU Vit D** per cup)
- tofu (**50mg Calcium** per 1/2 cup)

A collection of various open cans of food, including beans, corn, peas, sardines, and soups, arranged on a wooden surface. The cans are of different sizes and colors, and the food inside is visible. The background is a light green gradient.

Tip #5 Shop More Canned Items

Canned foods last a long time and are more affordable than fresher foods

Need an example?

- canned sardines (**335 IU Vit D** per 106 g can packed in oil)
- canned white beans (**65 g Calcium** per 1/2 cup)



Tip #6 Choose Whole Foods

Whole foods are less processed than packaged, so they often have more nutrients

Need an example?

- trail mixes containing roasted almonds and soynuts (high in **Calcium** and **Magnesium**) along with prunes (high in **Magnesium**) are higher in bone-supporting nutrients than candied trail mixes
- fresh cuts of meat are higher in protein than processed deli meats



Understanding Food Labels

Reading food labels is essential for making nutritional choices that support strong and healthy bones.

Understanding what you eat can help you to choose the best foods for your goal.

What nutrients should I look for?



Mandatory

Calcium

Protein

Sodium*

Voluntary

Vitamin K

Vitamin D

Magnesium

How to Use Nutrition Facts to Check a Food's Nutritional Value

1. Check the portion size: Nutrition info on the label is for a set amount. If you eat more or less, adjust the values.

2. Look for bone-healthy nutrients: Key nutrients for bones might not always be listed, but you can still make good choices with what's shown.

Nutrition Facts Valeur nutritive	
Per 1 cup (250 mL) pour 1 tasse (250 mL)	
Calories 110	% Daily Value* % valeur quotidienne*
Fat / Lipides 0 g	0 %
Saturated / saturés 0 g + Trans / trans 0 g	0 %
Carbohydrate / Glucides 26 g	
Fibre / Fibres 0 g	0 %
Sugars / Sucres 22 g	22 %
Protein / Protéines 2 g	
Cholesterol / Cholestérol 0 mg	
Sodium 0 mg	0 %
Potassium 450 mg	13 %
Calcium 30 mg	2 %
Iron / Fer 0 mg	0 %

*5% or less is a little, 15% or more is a lot
*5 % ou moins c'est peu, 15 % ou plus c'est beaucoup



3. Check % Daily Values (DV): This shows how much of each nutrient is in one serving compared to the daily recommended amount.

Comparing similar products

Nutrition Facts Valeur nutritive

Per 1 cup (250 mL)
pour 1 tasse (250 mL)

	% Daily Value* / % valeur quotidienne*
Calories 40	
Fat / Lipides 3 g	4 %
Saturated / saturés 0.3 g	2 %
+ Trans / trans 0 g	
Carbohydrate / Glucides 1 g	
Fibre / Fibres 1 g	4 %
Sugars / Sucres 0 g	0 %
Protein / Protéines 1 g	
Cholesterol / Cholestérol 0 mg	
Sodium 150 mg	7 %
Potassium 40 mg	1 %
Calcium 400 mg	30 %
Iron / Fer 0.2 mg	1 %



Nutrition Facts Valeur nutritive

Per 1 cup (250 mL)
pour 1 tasse (250 mL)

	% Daily Value* / % valeur quotidienne*
Calories 95	
Fat / Lipides 3 g	4 %
Saturated / saturés 0.3 g	2 %
+ Trans / trans 0 g	
Polyunsaturated / polyinsaturés 0.8 g	
Monounsaturated / monoinsaturés 1.5 g	
Carbohydrate / Glucides 1 g	
Fibre / Fibres 1 g	4 %
Sugars / Sucres 0 g	0 %
Protein / Protéines 1 g	
Cholesterol / Cholestérol 0 mg	
Sodium 150 mg	7 %
Potassium 40 mg	1 %
Calcium 300 mg	23 %
Iron / Fer 0.4 mg	2 %



Nutrition Claims

Nutrient Content Claims

- “Source of Calcium”: $\geq 5\%$ DV
- “Good source of” or “high in” Calcium: $\geq 15\%$ DV
- “Very high in” or “rich in” Calcium: $\geq 25\%$ DV
- “Little” or “few” or “Low in” sodium ($< 140\text{mg}$ /serving size or $< 5\%$ DV).

Health Claims

- Disease risk reduction claims
- Function claims



Food Label Activity

Making the best choice



Almond Milk

Nutrition Facts		Valeur nutritive	
Per 1 cup (250 mL) / pour 1 tasse (250 mL)			
Calories 35		% Daily Value *	
		% valeur quotidienne *	
Fat / Lipides 3 g			4 %
Saturated / saturés 0.3 g			2 %
+ Trans / trans 0 g			
Polyunsaturated / polyinsaturés 0.8 g			
Monounsaturated / monoinsaturés 2 g			
Carbohydrate / Glucides 1 g			
Fibre / Fibres 1 g			4 %
Sugars / Sucres 0 g			0 %
Protein / Protéines 1 g			
Cholesterol / Cholestérol 0 mg			
Sodium 130 mg			6 %
Potassium 40 mg			1 %
Calcium 300 mg			23 %
Iron / Fer 0.1 mg			1 %
Vitamin A / Vitamine A 100 µg			11 %
Vitamin D / Vitamine D 2 µg			10 %
Vitamin E / Vitamine E 1 mg			7 %
Riboflavin / Riboflavine 0.4 mg			31 %
Vitamin B ₁₂ / Vitamine B ₁₂ 1 µg			42 %
Phosphorus / Phosphore 175 mg			14 %
Magnesium / Magnésium 15 mg			4 %
Zinc 1 mg			9 %

*5% or less is a little, 15% or more is a lot
 * 5% ou moins c'est peu, 15% ou plus c'est beaucoup



Nutrition Facts		Valeur nutritive	
Per 1 cup (250 mL) / pour 1 tasse (250 mL)			
Calories 30		% Daily Value *	
		% valeur quotidienne *	
Fat / Lipides 2.5 g			3 %
Saturated / saturés 0.2 g			1 %
+ Trans / trans 0 g			
Carbohydrate / Glucides 1 g			
Fibre / Fibres 1 g			4 %
Sugars / Sucres 0 g			0 %
Protein / Protéines 1 g			
Cholesterol / Cholestérol 0 mg			
Sodium 180 mg			8 %
Potassium 30 mg			1 %
Calcium 300 mg			23 %
Iron / Fer 0.4 mg			2 %
Vitamin A / Vitamine A 100 µg			11 %
Vitamin D / Vitamine D 5 µg			25 %
Riboflavin / Riboflavine 0.4 mg			31 %
Vitamin B ₁₂ / Vitamine B ₁₂ 1 µg			42 %
Zinc 1 mg			9 %

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Almond Milk

Nutrition Facts		Valeur nutritive	
Per 1 cup (250 mL)		pour 1 tasse (250 mL)	
Calories 35		% Daily Value *	
		% valeur quotidienne *	
Fat / Lipides 3 g		4 %	
Saturated / saturés 0.3 g		2 %	
+ Trans / trans 0 g			
Polyunsaturated / polyinsaturés 0.8 g			
Monounsaturated / monoinsaturés 2 g			
Carbohydrate / Glucides 1 g			
Fibre / Fibres 1 g		4 %	
Sugars / Sucres 0 g		0 %	
Protein / Protéines 1 g			
Cholesterol / Cholestérol 0 mg			
Sodium 130 mg		6 %	
Potassium 40 mg		1 %	
Calcium 300 mg		23 %	
Iron / Fer 0.1 mg		1 %	
Vitamin A / Vitamine A 100 µg		11 %	
Vitamin D / Vitamine D 2 µg		10 %	
Vitamin E / Vitamine E 1 mg		7 %	
Riboflavin / Riboflavine 0.4 mg		31 %	
Vitamin B ₁₂ / Vitamine B ₁₂ 1 µg		42 %	
Phosphorus / Phosphore 175 mg		14 %	
Magnesium / Magnésium 15 mg		4 %	
Zinc 1 mg		9 %	

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Nutrition Facts		Valeur nutritive	
Per 1 cup (250 mL)		pour 1 tasse (250 mL)	
Calories 30		% Daily Value *	
		% valeur quotidienne *	
Fat / Lipides 2.5 g		3 %	
Saturated / saturés 0.2 g		1 %	
+ Trans / trans 0 g			
Carbohydrate / Glucides 1 g			
Fibre / Fibres 1 g		4 %	
Sugars / Sucres 0 g		0 %	
Protein / Protéines 1 g			
Cholesterol / Cholestérol 0 mg			
Sodium 180 mg		8 %	
Potassium 30 mg		1 %	
Calcium 300 mg		23 %	
Iron / Fer 0.4 mg		2 %	
Vitamin A / Vitamine A 100 µg		11 %	
Vitamin D / Vitamine D 5 µg		25 %	
Riboflavin / Riboflavine 0.4 mg		31 %	
Vitamin B ₁₂ / Vitamine B ₁₂ 1 µg		42 %	
Zinc 1 mg		9 %	

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* 5% ou moins c'est peu, 15% ou plus c'est beaucoup

*1mcg Vit D = 40UI

Whole Grain Oats Cereal

Nutrition Facts

Per 1 cup (27 g)

	Cereal Only	Plus 125 mL 2% p.s. Milk
Calories	100	160
	% Daily Value*	
Fat 2 g [†]	3 %	6 %
Saturated 0.4 g + Trans 0 g	2 %	10 %
Carbohydrate 20 g		
Fibre 3 g	11 %	11 %
Sugars 1 g	1 %	7 %
Protein 4 g		
Cholesterol 0 mg		
Sodium 170 mg	7 %	10 %
Potassium 100 mg	3 %	7 %
Calcium 50 mg	4 %	15 %
Iron 3.5 mg	19 %	19 %
Vitamin A 0 µg	0 %	6 %
Vitamin D 0 µg	0 %	7 %
Niacin 1.25 mg	8 %	16 %
Vitamin B ₆ 0.15 mg	9 %	12 %
Folate 30 µg DFE	7 %	9 %
Pantothenate 0.45 mg	9 %	16 %
Phosphorus 125 mg	10 %	20 %
Magnesium 40 mg	10 %	12 %
Zinc 0.75 mg	7 %	11 %

[†]Amount in cereal



Nutrition Facts

Per 1 cup (37 g)

	Cereal Only	Plus 125 mL 2% p.s. Milk
Calories	140	200
	% Daily Value*	
Fat 2 g [†]	3 %	6 %
Saturated 0.4 g + Trans 0 g	2 %	10 %
Carbohydrate 30 g		
Fibre 3 g	11 %	11 %
Sugars 12 g	12 %	18 %
Protein 3 g		
Cholesterol 0 mg		
Sodium 200 mg	9 %	11 %
Potassium 100 mg	3 %	7 %
Calcium 150 mg	12 %	23 %
Iron 5 mg	28 %	28 %
Vitamin A 0 µg	0 %	6 %
Vitamin D 0 µg	0 %	7 %
Niacin 1.75 mg	11 %	19 %
Vitamin B ₆ 0.225 mg	13 %	15 %
Folate 40 µg DFE	10 %	11 %
Pantothenate 0.6 mg	12 %	18 %
Phosphorus 125 mg	10 %	18 %
Magnesium 40 mg	10 %	12 %
Zinc 0.5 mg	5 %	11 %

[†]Amount in cereal

Whole Grain Oats Cereal

Nutrition Facts

Per 1 cup (27 g)

	Cereal Only	Plus 125 mL 2% p.s. Milk
Calories	100	160
% Daily Value*		
Fat 2 g†	3 %	6 %
Saturated 0.4 g + Trans 0 g	2 %	10 %
Carbohydrate 20 g		
Fibre 3 g	11 %	11 %
Sugars 1 g	1 %	7 %
Protein 4 g		
Cholesterol 0 mg		
Sodium 170 mg	7 %	10 %
Potassium 100 mg	3 %	7 %
Calcium 50 mg	4 %	15 %
Iron 3.5 mg	19 %	19 %
Vitamin A 0 µg	0 %	6 %
Vitamin D 0 µg	0 %	7 %
Niacin 1.25 mg	8 %	16 %
Vitamin B ₆ 0.15 mg	9 %	12 %
Folate 30 µg DFE	7 %	9 %
Pantothenate 0.45 mg	9 %	16 %
Phosphorus 125 mg	10 %	20 %
Magnesium 40 mg	10 %	12 %
Zinc 0.75 mg	7 %	11 %

†Amount in cereal



Nutrition Facts

Per 1 cup (37 g)

	Cereal Only	Plus 125 mL 2% p.s. Milk
Calories	140	200
% Daily Value*		
Fat 2 g†	3 %	6 %
Saturated 0.4 g + Trans 0 g	2 %	10 %
Carbohydrate 30 g		
Fibre 3 g	11 %	11 %
Sugars 12 g	12 %	18 %
Protein 3 g		
Cholesterol 0 mg		
Sodium 200 mg	9 %	11 %
Potassium 100 mg	3 %	7 %
Calcium 150 mg	12 %	23 %
Iron 5 mg	28 %	28 %
Vitamin A 0 µg	0 %	6 %
Vitamin D 0 µg	0 %	7 %
Niacin 1.75 mg	11 %	19 %
Vitamin B ₆ 0.225 mg	13 %	15 %
Folate 40 µg DFE	10 %	11 %
Pantothenate 0.6 mg	12 %	18 %
Phosphorus 125 mg	10 %	18 %
Magnesium 40 mg	10 %	12 %
Zinc 0.5 mg	5 %	11 %

†Amount in cereal

BEST CHOICE

Food Demo

Tips!

- **Wanna customize?** Swap in any vegetables, milk, or cheese of **your choice**.
- **No skillet?** Pour batter into a greased **muffin tin** for mini frittatas. Bake at 220°C (425°F) for 10–12 minutes.
- **No oven?** Cover skillet and cook on stovetop, low-medium for 10–15 minutes until set.
- **Meal prepping?** Store in the fridge up to 3 days or freeze portions for later (for up to 3 months).
- **Recipe cost:** \$11.20 (1.40-1.85/portion)



Additional Resources

https://drive.google.com/drive/folders/1WuGzEEP1fs4YKfniBbuAknQdaotv34O6?usp=share_link

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Bite into Bone Health

Essential Nutrients for Healthy Bones

Calcium
Calcium is essential for building and maintaining strong bones. Our bones act as a calcium bank, so if we don't get enough calcium, we take it from the bones. This can lead to weak bones, which increases the risk of fractures.

Vitamin D
Vitamin D helps us absorb calcium from the diet, which supports strong bones. It also enhances muscle function, which helps with balance and reduce the risk of falls.

Vitamin K
Vitamin K controls how calcium is used in the body, helping it bind effectively to bone. Getting enough vitamin K can help prevent osteoporosis and fractures.

Magnesium
Over half of the magnesium in our bones is in our bones. Magnesium helps with calcium and vitamin D, making it easier to maintain strong bone health.

Protein
Protein supports strong muscles and provides the framework in our bones that holds them together. Low protein intake can cause weak muscles and bones, increasing the odds of falls and fractures.

Osteoporosis
Healthy Bone

Sources:
National Institutes of Health, Dietary Supplement Fact Sheets (2020)
Osteoporosis Canada (2020)
Public Health Agency of Canada, Check, Please! (2016)

LOW COST FOODS FOR BONE HEALTH

Did you know? Eating healthy doesn't have to be expensive! Use this guide when shopping for affordable foods that support bone health.

TIP #1 SHOP IN THE FROZEN SECTION
Frozen foods are just as nutritious as fresh foods and very often are more affordable.
Examples: frozen UV exposed mushrooms (Vitamin D) or frozen kale or collard greens (Calcium)

TIP #2 CHOOSE SEASONAL FOODS
Seasonal food costs less than food not in season, especially when bought at farmers markets.
Examples: eggs (Vit D) and brussels sprouts in the fall season (Calcium)

TIP #3 BUY IN BULK
Look for shelf-stable bulk foods at your local supermarket or bulk-food grocery store.
Examples: fortified cereal (Vit D) or dried lentils (Calcium)

UNDERSTANDING FOOD LABEL TO STRENGTHEN YOUR BONES

Reading food labels is essential for making nutritional choices that support strong and healthy bones. Understanding what you eat, can help you to choose the best foods for your goal.

WHAT NUTRIENTS SHOULD I BE LOOKING FOR?

Calcium: essential for building and maintaining bone.
Vitamin D: helps our body absorb calcium and phosphorus.
Protein: helps maintain and repair bone tissue.

Phosphorus: crucial for making bones strong.
Magnesium: helps calcium use and converts vitamin D into its active form.
Vitamin K: helps to bind calcium to bone.

Choose foods with 15% or more of Daily Value (DV) for nutrients to help your nutritional goals.

DID YOU KNOW?

Excessive sodium intake can lead to increased calcium loss through urine. Focus on choosing foods with 5% or less of the daily value.

Nutrient content claims provide vital information about specific nutrients in foods. They help you choose beneficial options, such as "Good source of calcium," and identify choices with reduced nutrients, such as "Low sodium."

Milk and dairy products are the best source of calcium and vitamin D. They boost their nutritional value and play a key role by helping to absorb calcium and promoting strong bones.

Calcium and Vitamin D For Bone Health

Visuals generated with Canva

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Calcium (Ca)

- A mineral that keeps bones strong.
- Our bodies cannot make calcium, so we need to get it from foods, drinks and supplements (when needed).

Vitamin D (D)

- Helps your body use calcium.
- It is like a "key" that unlocks the benefits of calcium for your bones.

How much calcium you need each day (RDA)

Ages 19 to 50	1,000 mg
Ages 51 to 70	Men: 1,000 mg Women: 1,200 mg
Ages 71 and older	1,200 mg

(mg = milligrams)

How much vitamin D you need each day (RDA)

Ages 19 to 70	600 IU
Ages 71 and older	800 IU

(IU = International Units)

What happens if you get...

Too little calcium (Ca)

- Increased risk of osteoporosis.
- A disease that weakens bones, making them easy to break.
- Muscle pain, spasms, or tingling.
- Numbness in hands and feet.

Too much calcium (Ca)

- Kidney stones.
- Abnormal heartbeat.

Where you can get calcium (Ca)

Get most of your calcium from foods, like:

- Dairy.
- Fish.
- Green leafy vegetables.

What happens if you get...

Too little vitamin D (D)

- Thin and weak bones.
- Mood changes, like depression.
- Muscle weakness, aches, or cramps.

Too much vitamin D (D)

- Body takes calcium from bones and removes it through the kidneys, which can weaken bones over time.

Where you can get vitamin D (D)

- Found in very few foods, like:
 - Fortified milk, orange juice, cereal.
 - Eggs.
 - Fatty fish.
- Most people can benefit from a supplement.

Turn over the page for more information. →

THANK YOU
For listening

Questions?



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