

EAT WELL
TIPS FOR
MEN WITH
PROSTATE
CANCER

Part 4:
Osteoporosis

Nourish

EXTRA

CANADA'S NUTRITION COMPANION
FOR ONCOLOGY PATIENTS
AND CAREGIVERS



A Silent Disease

Osteoporosis is a condition in which bones gradually become weaker and can break more easily. This can occur over many years without any symptoms. According to *Osteoporosis Canada*, at least 1 in 5 men will suffer from an osteoporotic fracture during their lifetime.

Men with prostate cancer, especially those receiving androgen deprivation therapy (ADT), are at an increased risk of developing this condition. ADT blocks the production of male hormones (androgens) that the cancer uses to grow. Therefore, men receiving ADT therapy can lose bone faster.

A bone fracture can lead to many complications resulting in a downward health spiral.

Check Your Bone Health

Talk to your doctor about getting a bone density scan. This painless and quick x-ray exam determines whether you have osteoporosis, how advanced it is, and if medication is needed. Once bone loss has occurred, it cannot be reversed, but it can be slowed. So it is never too late to support your bone health!



Menu for Bone Health

Breakfast

OVERNIGHT OATS

(see back panel recipe)

This fatty fish contains an impressive amount of vitamin D

Lunch

LEAFY GREEN SALAD

- 1 cup kale
- 1 cup baby spinach
- 1 cup cooked quinoa
- ¼ cup roasted sliced almonds
- 1 hardboiled egg
- 30 g feta cheese
- salad dressing

Dinner

SALMON

- 100 g grilled salmon
- 1 cup collard greens
- 1 cup cooked rice

Substitute with 1 can of sardines or mackerel. Don't be afraid to eat the bones. They are easy to chew and high in calcium.

Collard greens and spinach contain a good amount of calcium

Menu Total = 1300 mg of calcium, 400 IU of vitamin D.
By adding 400 IU vitamin D supplement you can reach the recommended amount of 800 IU.

Eat a Variety of Foods

If you have questions or concerns about a nutrient deficiency, please consult your doctor and/or dietitian. When possible, try to get nutrients from eating a variety of foods over choosing supplements, with Vitamin D being an exception. Be sure to inform your healthcare team of all vitamin, mineral, and herbal supplements you are taking throughout your treatment, as they may interfere with cancer therapy.

How Much Calcium and Vitamin D Do I Need?

Age Range for Men (years)	Calcium Recommended mg/per day	Calcium Maximum mg/per day	Vitamin D Recommended IU/per day	Vitamin D Maximum IU/per day
19-50	1000*	2500	600	4000
51-70	1000*	2000	600	4000
71+	1200	2000	800	4000

Recommended dietary allowance (RDA) and tolerable upper intake level (UL) for men, Government of Canada: Vitamin D and calcium: Updated dietary reference intakes. Date modified: 2020-07-28

* 1200 mg/per day when receiving ADT therapy.

Calcium

Adequate calcium intake can slow bone loss and decrease the risk of fracture. It is quite easy to get enough calcium through food alone (as you will see in our sample menus). Too much calcium from taking supplements can be harmful.

Vitamin D

Vitamin D is needed for calcium absorption. Our skin can produce some vitamin D through sun exposure and you can consume vitamin D-containing foods, but it is a challenge to reach the recommended amount (as seen in our sample menus). Health Canada recommends that adults age 51 and older take a supplement of 400 IU daily in addition to consuming vitamin D through foods.

Protein

Eating enough protein is also important for bone health. Make sure to include at least one of the following protein rich foods with every snack and meal: meat, poultry, fish, legumes (e.g., beans and lentils), soy foods (e.g., tofu and tempeh), nuts/seeds and nut/seed butters, eggs, and dairy (e.g., yogurt and cheese). Talk to a registered dietitian if you think you are not getting enough protein or you are losing weight.

Vegan Menu for Bone Health

Breakfast

SMOOTHIE

- 1 cup fortified oat/rice /nut beverage
- 2 Tbsp tahini
- 1 cup kale
- 1 banana
- 1 cup strawberries

A source of protein

Lunch

STIR FRY

- 100 g marinated tofu stir fried with ½ cup* bok choy
- ½ cup* spinach
- 1 cup* noodles of choice topped with 1 Tbsp roasted sesame seeds

*quantity refers to cooked food

Dinner

SOUP

- 2 cups [white bean soup](#) prepared with navy beans, vegetables, and dark leafy greens

Add a scoop of vegan protein powder to up the protein

Menu Total = 1200 mg of calcium, 100 IU of vitamin D.

You will need to take **more** than the recommended 400 IU vitamin D supplement to meet your daily requirement.

Some Food Sources of Calcium	Portion size	Calcium
Yogurt, Greek, plain, 2% M.F.	175 ml (¾ cup)	300 mg
Sardines, with edible bones	1 can (105 g)	400 mg
Cheese (cheddar, mozzarella)	30g (1 oz)	200 mg
Milk (skim, 1%, 2%, whole)	250 ml (1 cup)	300 mg
Fortified plant-based beverages (soya, rice, nuts, oat)	250 ml (1 cup)	300 mg
Yogurt, plain	175ml (¾ cup)	200-300 mg
Tofu, firm	85g (¼ package or about ½ cup)	75-200 mg
White beans, cooked	250 ml (1 cup)	170 mg
Spinach or collard greens, boiled	125 ml (½ cup)	130 mg
Almonds, raw or roasted	60 ml (¼ cup)	100 mg
Orange, raw	1 medium	50 mg
Figs, dried	3 whole	40 mg

Some Food Sources of Vitamin D	Portion size	Vitamin D
Fish, salmon, Atlantic, wild caught, cooked	85 g (3 oz)	275 IU
Fish, tuna, light, canned in oil	1 can (175g)	150 IU
Fish, sardines, canned in oil	1 can (105g)	100 IU
Milk (skim, 1%, 2%, whole)	250 ml (1 cup)	100 IU
Fortified plant-based beverages (soya, rice, nuts, oat)	250 ml (1 cup)	90 IU
Yogurt, Greek, plain, 2% M.F.	175 ml (¾ cup)	60 IU
Egg, large, cooked	1	30 IU

Canadian Nutrient File (CNF)

CHECK THE LABELS!

The nutrition facts table does not always indicate the amount of calcium and vitamin D in a serving of food. Look at the percentage of the daily value (%DV) instead. 5% or less of the %DV is considered low and 15% or more is high, meaning the food is a good source of this nutrient.



Snack ideas

- ✓ Handful of nuts or seeds with dried fruits
- ✓ Cooked edamame
- ✓ 1 orange with a handful of almonds
- ✓ ½ cup yogurt with granola
- ✓ Cheese with crackers
- ✓ 1 cup of milk or fortified plant-based beverage with a few digestive cookies

A great source of protein and some calcium

Of all the nuts, almonds are among the highest in calcium

Check the nutrition facts to see if the beverage is a source of protein, calcium, vitamin D (>15% DV)



Stop Smoking and Reduce Alcohol

Smoking and regular alcohol consumption are known to increase the risk of osteoporosis. Alcohol intake also increases the risk of falls and is often associated with poor nutrition.



Get Moving

Being physically active is a proven strategy to achieve optimal bone health and decrease the risk of bone fractures. It helps improve bone mass and increases muscular strength, as well as coordination and balance. Exercise is recommended for everyone, even for people who have sustained a fracture.



Experts recommend 4 types of physical exercise:

Strength training: at least 2x/week	Aerobic exercise at least 150 min/week	Balance exercises every day	Flexibility/Posture awareness every day
--	---	------------------------------------	--

If you have some physical limitations or have sustained a spine fracture, it is recommended to meet with a physiotherapist or kinesiologist prior to exercising. If you are new to exercising, talk with your doctor first before starting any programs.

Contact your local *Osteoporosis Canada* chapter for programs in your area. Bonefit.ca can help you find trainers who specialize in bone health.

MYTH BUSTERS

DO I NEED TO AVOID MILK OR DAIRY FOODS?

No. There is not enough evidence to suggest that milk or dairy consumption is linked to the development of or worsened outcomes in prostate cancer. Milk and other dairy foods are sources of calcium, vitamin D, and protein, which help to maintain bone health and decrease chances of fractures and falls. Choose lower fat products and enjoy in moderation.

IS IT SAFE FOR ME TO EAT SOY FOODS?

Yes. The hormone-like component (isoflavones) found in natural soy is not associated with cancer development and will not interfere with your treatment. Natural soy foods such as fortified soy beverage, tofu, and edamame can be sources of protein, calcium, and fibre. Avoid regular use of soy-based protein powders as they are a concentrated form of soy.

CAN I DRINK CAFFEINATED COFFEE AND TEA?

Yes, there is no need to cut out caffeine. Aim to drink no more than 3 cups of coffee per day.

RESOURCES

- osteoporosis.ca
- prostatecentre.com
- procure.ca
- lifestyle.truenth.ca

RECIPES

- ellicsr.ca
- cookforyourlife.org
- nourishonline.ca

AUTHORS

Stéphanie Pasaman, Dt.P.
Registered Dietitian
CHUM
Montreal, Quebec

Karmen More, RD
Registered Dietitian
Princess Margaret Cancer Centre
Toronto, Ontario

We thank Karina Austin, RD, BC Cancer Victoria, British Columbia, Kerry Grady, Osteoporosis Canada, Toronto, Ontario, and Carla Michaud, RD, Northeast Cancer Centre, Sudbury, Ontario, for reviewing this publication.

Nourish Extra is a publication of the *Nourish: Canada's Nutrition Companion for Oncology Patients and Caregivers* series: Information relating to nutrition and cancer and advice from registered dietitians who are working in oncology centres across Canada. **Nourish is a free publication which is available in print and online.** www.nourishonline.ca  [nourishonline](https://www.facebook.com/nourishonline)  [nutritionandcancer](https://www.instagram.com/nutritionandcancer)

Disclaimer: The information in this publication is not intended as medical advice nor should it replace advice, expertise and information given by a member of your healthcare team.

© 2023 Communication ebmed Inc. www.ebmed.ca

Nourish Extra was made possible through an educational grant provided by Astellas Pharma Canada Inc.



Endorsed by

OSTEOPOROSIS

Does your prostate worry you?

PROCURE
PROSTATE CANCER SUPPORTIVE CARE

1 855 899-2873 | procure.ca



Prostate Cancer Supportive Care

1-844-483-1449 | pccsprogram.ca

PEACHES AND CREAM

Overnight Oats

Preparation Time: **5** minutes Servings: **1**

INGREDIENTS

- | | |
|----------------------|-------------------------|
| 1/3 cup rolled oats | 2 Tbsp Greek yogurt |
| 1 tsp chia seeds | 1/2 cup peaches, sliced |
| 3/4 cup milk | 1 tsp oil |
| 2 Tbsp almond butter | 1 tsp maple syrup |

PREPARATION

1. In a jar, combine oats, chia seeds, milk, and almond butter. Cover and refrigerate for at least 2 hours or overnight.
2. Sauté peaches in oil.
3. Top oats with yogurt, peaches, and maple syrup.