



Patient Guidelines for the Prevention of Osteoporosis in Women

Postmenopausal women have an increased risk of osteoporosis. As well, this risk can be increased further by factors such as family history, smoking, diet, early menopause, chemotherapy, long term corticosteroids and some hormonal therapies that lower estrogen.

The following guidelines are provided to reduce the risk of bone loss during and after treatment. If your bone density scan at the start of treatment indicates that you are at increased risk of osteoporosis you may be advised to use medications such as bisphosphonates (eg. alendronate (Fosamax®) in addition to following the guidelines below.

Calcium & Vitamin D:

Calcium and vitamin D are essential for strong bones. A daily dose is the sum of what you consume from food sources and from supplements. The recommended daily intake for calcium is 1200 mg. A daily supplement of 1000 IU of vitamin D is recommended for bone health and the prevention of cancer, in all women.

Food sources of Calcium:

Food Source	Portion Size	Calcium (mg)
Cheese (Swiss)	50 g (2 oz)	440
Cheese (Cheddar/Mozzarella)	50 g (2 oz)	390
Milk (skim, 1 or 2% MF or whole)	250 ml (1 cup)	300
Buttermilk, or Chocolate milk	250 ml (1 cup)	300
Yogurt, plain	175 ml (3/4 cup)	300
Milk powder, dry	45 ml (3 Tbsp)	280
Fortified Beverages (soy, rice, orange juice)	250 ml (1 cup)	300
Blackstrap Molasses	15 ml (1 Tbsp)	180
Parmesan Cheese	15 ml (1 Tbsp)	90
Sardines, with edible bones	24 gm	90
Cottage cheese, 2% MF	125 ml (1/2 cup)	80
Figs, dried, uncooked	3	80
Orange, raw	1 medium	50
Broccoli, frozen, boiled, drained	250 ml (1 cup)	50

Adapted from the Manual of Clinical Dietetics, 6th Edition (p.746-747), by American Dietetic Association et al, 2000.

Calcium intake from all sources should not exceed 2000 mg per day.

Food sources of vitamin D:

Food Source	Portion size	Vitamin D (IU)
Fish, herring	100 gm (3 oz)	900
Fish, mackerel or salmon	100 gm (3 oz)	650
Fish, sardines or tuna	100 gm (3 oz)	250
Milk or Soy Beverage, fortified	250 ml (1 cup)	90
Margarine, fortified	5 ml (1 tsp)	55
Egg	1 large	25

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Vitamin D intake from all sources should not exceed 4000 IU per day.

Vitamin and Mineral Supplements:

If you can't meet the recommended amounts with food alone, consider a supplement. Calcium carbonate is the least expensive calcium supplement and is well tolerated by most people when taken with food. The absorption of calcium from supplements is most efficient at doses of 500 mg or less. Some calcium supplements also include vitamin D (check the label for the exact amount). A standard multivitamin and mineral supplement provides approximately 175 mg of calcium and 400 IU of vitamin D and other nutrients.

Protein:

Adequate protein is required to maintain bone health. Include one of the following protein rich foods at each meal: meat, fish, poultry, beans, lentils, nuts, eggs, milk, yogurt and cheese.

Caffeine and salt:

Excess caffeine and salt can have a negative effect on bone. Caffeine is found in coffee and also tea, chocolate (cocoa) and some soft drinks. For optimal bone health limit coffee to less than 4 cups per day.

Foods high in salt generally include processed foods such as canned soups, snack foods, crackers, pastas and sauces. Check the nutrition label on processed foods and limit salt to less than 2100 mg per day.

Physical Activity:

Being physically active maintains optimal bone health and decreases the risk of a bone fracture by improving bone mass and increasing muscular strength, coordination and balance and thereby reducing falls. Physical activity that is weight bearing is best, examples include walking, dancing, aerobics, skating and weight lifting.

Smoking:

Smoking is related to poor bone and general health. If you smoke, ask your doctor for assistance to stop smoking.