

Osteoporosis Prevention

Calcium and Vitamin D

Calcium is needed to help maintain bone mass and reduce the risk of bone fractures. Adequate calcium intake slows but does not stop bone mass loss after menopause. Adequate calcium intake enhances the positive effects of exercise and osteoporosis drugs on bone mass.

Calcium

Calcium is best absorbed when obtained through food. If calcium intake does not meet the recommended amount, take a calcium supplement. Supplements should be taken in small doses (250-500 mg) throughout the day and not with fiber or iron supplements. Consider the amount of dietary calcium consumed in your diet before determining the amount necessary to take as a supplement.

The most common types of calcium supplements are the following:

- Calcium carbonate (Viactiv, Os-Cal, Tums) best absorbed if taken with food.
- Calcium citrate (Citracal) is well absorbed with meals or on an empty stomach.

The following daily amounts of calcium are recommended:

- Pregnancy 1200 mg
- Premenopausal women 1000 mg
- Postmenopausal women using ERT 1200 mg
- Postmenopausal women not on ERT 1500 mg
- All women older than age 65 1500 mg

Sources of Calcium

Eat a variety of calcium-rich foods every day. Here is a partial list of good sources. Brands may vary. Therefore it is best to read the labels.

| Food (mg of Calcium) | |
|-------------------------------------|-----|
| Skim milk, 1 cup | 300 |
| Whole milk, 1 cup | 300 |
| Low fat yogurt, 1 cup | 330 |
| Swiss cheese, 1 oz. | 270 |
| Ricotta cheese, part skim, 1/2 cup | 300 |
| Mozzarella cheese, part skim, 1 oz. | 200 |
| Pizza, cheese, 1/2 of 10 inch pizza | 360 |
| American cheese, 1 oz. | 175 |
| Parmesan cheese, 1 tbsp | 70 |
| Provolone cheese, 1 ounce | 215 |
| Cottage cheese, low fat, 1/2 cup | 80 |
| Ice cream or ice milk, 1 cup | 175 |

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Sources of Calcium

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| Bass, halibut, trout, clams, oysters, lobster – 3 oz. | 40-70 |
| Salmon, canned with bones, 3 oz. | 200 |
| Sardines, canned with bones, 3 oz. | 370 |
| Tofu made with calcium sulfate, 1/2 cup | 250 |
| Tofu made without calcium sulfate, 1/2 cup | 125 |
| Orange juice, calcium fortified, 8 oz. | 200-300 |
| Soy beverage, calcium fortified, 8 oz. | 200-300 |
| Oatmeal, instant, fortified, 1 package | 165 |
| Broccoli, 1/2 cup | 90 |
| Collard, turnip, beet greens, 1/2 cup | 100-150 |

Vitamin D

Vitamin D raises calcium blood levels through several pathways, helping to maintain blood calcium levels. Without adequate vitamin D, a woman is at increased risk for osteoporosis. Vitamin D is synthesized from the skin's exposure to the ultraviolet rays in sunlight. Approximately 15 minutes of sun exposure daily is needed. For individuals at risk of inadequate sun exposure, vitamin D can be obtained through meals or supplements.

The recommended daily dose for vitamin D is:

400 IU daily for women of all ages

600-800 IU daily for women over age 70 and during times of limited sun exposure.

Good sources of Vitamin D include eggs yolks, liver and oily fish (e.g., herring, salmon), and milk fortified with Vitamin D. Dietary requirements can usually be met with a daily multivitamin/mineral supplement. Multivitamins almost always provide the necessary 400 IU of Vitamin D.

Exercise

Exercise is beneficial at all ages. Early in life, exercise promotes higher peak bone mass. It is recommended to do regular weight-bearing and muscle-strengthening exercise to reduce the risk of falls and fractures and improve overall health. Exercise may also have a modest effect on slowing the decline in bone mass, provided there is adequate calcium and Vitamin D.

Weight-Bearing Exercise

Weight-bearing exercise in which bones and muscles work against gravity as the feet and legs bear the body's weight includes walking, jogging, stair climbing, dancing and tennis.

Muscle Strength-Training

Muscle strength-training improves muscle mass and bone strength. Strength-training can be performed as little as twice a week and need not involve special equipment other than simple weights.

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The recommended minimum exercise for healthy women is 30 minutes of moderate intensity physical activity performed on most, preferably all, days of the week. Some exercise is better than none.

Avoidance of Tobacco Use and Alcohol Abuse

The use of tobacco is detrimental to the skeleton as well as to overall health.

Moderate alcohol intake has no known negative effect on bone, however, alcoholism is detrimental to bone health and requires treatment.

For more information on prevention of osteoporosis contact:

National Osteoporosis Foundation

1-877-868-4520 toll free

www.nof.org