

# MAINTAINING STRONG BONES

Strong bones are important for your long term well being. They help to prevent brittle or thin bones. By following a physical activity plan and making healthy food choices, you can build and maintain a healthy body.

## HEALTH NOTES



### For more Information

Visit [kp.org/healthliving/mas](http://kp.org/healthliving/mas)

- Learn about healthy bones in our Health Encyclopedia
- Find out how much calcium you are getting each day with our online health calculator

### Physical activity for bone health

Physical activity plays a large part of preventing and treating brittle bones. We recommend four types of activity for good bone health:

#### Weight-bearing activities

- brisk walking
- dancing
- stair climbing
- low-impact aerobics

#### Flexibility activities

- stretching
- pilates

#### Resistance (strength training)

- light weights (one to five pounds)
- resistance bands

#### Balance activities

- yoga

Avoid activities that involve bending forward, twisting, and reaching. These movements can put too much stress on the spine and cause more injury to the bones.

### Calcium: what you need to know

During your life, your need for calcium will change. In childhood, adolescence, and during pregnancy, the body demands more calcium to help fast-growing bone tissue and teeth. Your bone density (mass) and strength will grow until you reach your middle to late 20s. After that, the body loses bone tissue faster than it can form new bone. Postmenopausal women and older men have the fastest rates of bone loss. This may be caused by a lack of vitamin D and medicines that make it hard for your body to absorb calcium. Older adults also need to consume more calcium. National nutrition surveys show that most people, especially females, do not consume enough calcium to maintain healthy bones.

## Sources of calcium

The best sources of calcium come from dairy products. Just one cup (8 ounces) of milk can give you 300 milligrams (mg) of calcium. By adding ¼ cup of shredded cheese to a salad, baked potato, or snack, you gain 200 mg of calcium. Choose low fat or fat-free items such as skim milk or low fat cheeses or yogurt to reduce calories.

Other sources of calcium:

- fruits
- tofu
- vegetables
- calcium-fortified products such as cereal, orange juice, soy milk

\*Foods high in oxalates (spinach) and phytates (legumes, peas, wheat bran) may lower calcium absorption. To reduce phytates in beans, soak them in water for several hours, drain and cook in fresh water.

Easy ways to get your daily calcium:

- Cook cereals in low fat milk instead of water.
- Enjoy a cup of hot chocolate.
- Top yogurt with crunchy breakfast cereals.
- Make vegetable dips with yogurt or cottage cheese.

- Add tofu to soups, salads, and spaghetti sauce

If you are lactose intolerant:

- Try Lactaid® milk, tablets, or drops.
- Eat or drink smaller amounts of milk or milk products at a time.
- Eat foods with active cultures, like yogurt or cottage cheese.
- Choose hard cheeses, like cheddar, that are low in lactose.

## Vitamin D

Vitamin D helps your body absorb and use calcium. Good dietary sources include:

- eggs,
- saltwater fish, such as salmon, mackerel, and sardines, or
- foods that have added vitamin D, such as fortified milk and cereal.

You can get 100 I.U. of vitamin D from one 8-ounce glass of milk. Also, check the label on your multivitamin or consider adding one to your daily routine. Many multivitamins have 400 I.U. of vitamin D and it is one of the best ways to make sure you are getting enough of the vitamin.

**Calcium content of various foods\***

Food	Serving size	Calcium (mg)
Skim, low fat, or whole milk	1 cup	300
Skim deluxe milk	1 cup	500
Soy milk, fortified	1 cup	280
Lactose reduced milk	1 cup	250
Buttermilk	1 cup	316
Skim milk yogurt	8 oz	452
Low fat yogurt, plain	8 oz	415
Low fat yogurt, with fruit	8 oz	345
American pasteurized processed cheese	1 oz	174
Cheddar cheese	1 oz	204
Cottage cheese 1%	½ cup	70
Cottage cheese 4%	½ cup	65
Edam cheese	1 oz	207
Feta cheese	1 oz	140
Fontina cheese	1 oz	156
Monterey cheese	1 oz	212
Mozzarella cheese, part skim	1 oz	207

Calcium content of various foods*		
Food	Serving size	Calcium (mg)
Muenster cheese	1 oz	203
Parmesan cheese	2 tbsp	195
Ricotta cheese, part skim	½ cup	337
Ricotta cheese, whole	½ cup	260
Swiss cheese	1 oz	272
Ice cream, 10% fat	½ cup	88
Ice milk	½ cup	88
Sherbet	½ cup	51
Frozen yogurt	½ cup	250
Egg	1 (yolk)	28
Fortified juice, with calcium	1 cup	300
Hot chocolate, with calcium	1 envelope	250
Salmon, with bones	4 oz	294
Sardines, with bones	3 oz	372
Shrimp	1 cup	147
Almonds, whole	12-15 nuts	38
Sesame seeds, hulled	2 tbsp	20
Lima beans, cooked	½ cup	30
Soybeans, cooked	½ cup	73
Tofu	4 oz	145
Acorn squash, baked	½ medium	61
Bok choy, cooked	½ cup	80
Broccoli, cooked	½ cup	89
Cabbage, cooked	½ cup	25
Collard greens, cooked	½ cup	152
Kale, cooked	½ cup	47
Mustard greens, cooked	½ cup	138
Spinach, raw**	½ cup	28
Spinach, cooked**	½ cup	122
Swiss chard, cooked	½ cup	51
Turnip greens	⅔ cup	184
Dates	10	27
Orange	1	52
Pineapple juice	1 cup	42
Rhubarb, cooked, sweetened**	½ cup	174
Bread, whole wheat	1 slice	25
Cereal bars, with calcium	1	200
Tortilla, corn	1	42

\* Data from USDA Handbook 8-1, 8-9, 8-11, 8-12, 456 and Bowes & Church's Food Values of Portions Commonly Used.

\*\* Contains oxalic acid which may reduce calcium absorption.

**Kaiser Permanente recommends the following calcium and vitamin D intakes**

<b>Age</b>	<b>Calcium (mg a day)</b>	<b>Vitamin D (IU a day)</b>
1-3	700	600
4-8	1,000	600
9-18	1,300	600
19-50	1,000	1,000
51 +	1,200	1,000
Pregnant and breastfeeding (18 years and under)	1,300	600
Pregnant and breastfeeding (19 and older)	1,000	600

Note: Calcium intakes greater than 2,000 mg per day are not recommended. Vitamin D intakes greater than 2,000 IU per day are not recommended.

Talk to your doctor about your need for supplements or other medicines to help keep your bones strong.

The information presented here is not intended to diagnose health problems or to take the place of professional medical care. If you have persistent medical problems, or if you have further questions, please consult your doctor or member of your health care team. Kaiser Permanente does not endorse any brand names. Similar products may be used.