PATIENT & CAREGIVER EDUCATION

Calcium Supplements

This information explains calcium supplements and how to take them.

Calcium is a mineral that you need to build and maintain healthy bones. If you don't get enough calcium from your diet, your body will take it from your bones. This can cause osteoporosis.

Osteoporosis

Osteoporosis develops when you lose bone tissue, which makes your bones more likely to fracture (break). Osteoporosis is most common in females who have gone through menopause (a permanent end of your monthly periods). It can develop in anyone, including males, due to medication or illness. Some risk factors for osteoporosis include:

- Having a thin build
- Being of Northern European or Asian descent
- Having fair skin
- Going through menopause early (before the age of 45)

- Taking certain steroid medications for longer than 3 months
- Not getting enough physical activity
- Not getting enough calcium in your diet (or from dietary supplements)
- Smoking
- Drinking too much alcohol (more than 2 drinks per day for females or 3 drinks per day for males)
- Taking aromatase inhibitors (medications that stop the production of estrogen and are used to treat breast cancer)

Vitamin D

Vitamin D is a vitamin that helps your body absorb calcium. Your body makes vitamin D after being exposed to the sun. Vitamin D is also found in some foods.

It can be hard to get enough vitamin D from just sunlight and foods. Your doctor or clinical dietitian nutritionist might tell you to take vitamin D supplements. These can be prescription or over-the-counter vitamin D supplement pills or calcium supplements with vitamin D added.

Recommended Daily Intakes of Calcium and Vitamin D

Getting enough calcium in your diet helps prevent osteoporosis. Calcium is measured in milligrams (mg) that you need per day.

- If you're between the ages of 19 and 50, you need 1,000 mg of calcium every day.
- If you're female and are age 51 or older, you need 1,200 mg of calcium every day.
- If you're male and are between the ages of 51 and 70, you need 1,000 mg of calcium every day.
- If you're male and are age 70 or older, you need 1,200 mg of calcium every day.

Vitamin D is measured in international units (IU) that you need per day.

- If you're between the ages of 19 and 70, you need 600 IU of vitamin D every day.
- If you're over 70 years of age, you need at least 800 IU of vitamin D every day.

If you have osteoporosis, you might need more calcium, vitamin D, or both. Talk with your doctor or clinical dietitian nutritionist about how much you need per day. Don't take

more than your daily recommended amount of calcium. Taking too much can be harmful to your health.

Sources of Calcium

Food

The best way to get calcium is through the food you eat. Dairy products are a good source of calcium. If you're lactose intolerant, try lactose-free dairy products or Lactaid® pills. You can also try calcium-fortified orange juice and other foods. Check food labels to see the amount of calcium in foods.

The table at the end of this resource lists some foods and drinks that are high in calcium.

Calcium supplements

You may find it hard to get enough calcium from your diet alone. Your doctor or clinical dietitian nutritionist may suggest that you take a calcium supplement. You don't need a prescription for this. Your doctor or clinical dietitian nutritionist will tell you how much you should take.

Types of Calcium Supplements

There are several types of over-the-counter calcium supplements, including calcium carbonate and calcium citrate. These supplements are taken orally (swallowed). All calcium should be taken with food.

Don’t buy calcium tablets that are made from bone or dolomite. These may contain lead or other harmful metals. Certain health-food store preparations have this problem. Most calcium supplements that you buy in a pharmacy have been tested for this.

Calcium carbonate

Calcium carbonate is absorbed best if you take it with meals. OsCal® and Caltrate® are 2 brands of calcium carbonate supplements. Other forms of calcium carbonate include:

- Some antacids, such as Tums®. If you take Tums, you don’t need to take it with a meal.
- Viactiv®, which is a flavored soft chew.
- A liquid form that you can usually get from a pharmacy, but you may need to order it in advance.

Calcium citrate

Calcium citrate is another type of calcium supplement. Some people may absorb calcium citrate better than calcium carbonate. This is true for older people and people with low stomach acid (for example, people who have pernicious anemia).

Calcium citrate absorbs best if you take it 30 minutes before a meal. One brand of calcium citrate is Citracal®,

which is available in most pharmacies.

If you have any of the following side effects with calcium carbonate, take calcium citrate instead:

- Abdominal (belly) pain
- Gas
- Constipation (having fewer bowel movements than usual)

Taking Calcium Supplements

- If you're taking more than 500 mg of calcium supplements per day, take it in divided doses. This will help your body absorb it better. For example, if you take 1,000 mg of calcium each day, take 500 mg in the morning and 500 mg in the evening.
- Talk with your doctor or clinical dietitian nutritionist before taking calcium supplements if you:
  - Have a history of hypercalcemia (too much calcium in your blood)
  - Take diuretics (water pills) or antacids for indigestion
  - Have ever had kidney stones
  - Have had problems with your parathyroid glands
  - Have a history of heart disease, including heart attack or stroke

- If you're taking a bisphosphonate medication for osteoporosis (or for other reasons), take your calcium supplement at least 30 minutes after you take it. If you're not sure if the medication that you're taking is a bisphosphonate, talk with your doctor.
    - Some examples of bisphosphonate medications are alendronate (Fosamax®) and risedronate (Actonel®). Remember, calcium supplements don't replace other medications you take to treat osteoporosis.
- Calcium supplements can cause constipation. If you have this side effect, increase the amount of liquids and fiber in your diet. If that doesn't work, talk with your healthcare provider about taking a stool softener or laxative. You can also try to get more calcium from foods instead of taking supplements.

Calcium-Rich Foods and Drinks

The following table includes some foods and drinks that are rich in calcium.

Food	Portion size	Calcium in portion (mg)	Calories in Portion
Parmesan cheese	1½ ounces	503	167

Cheddar cheese	1½ ounces	307	171
Milk, low-fat	1 cup (8 ounces)	305	102
Yogurt, plain, nonfat	1 cup (8 ounces)	265	150
Soy milk, plain, calcium-fortified	1 cup (8 ounces)	301	80
Sardines, canned in oil, with bones, drained	2 sardines	92	50
Collards, cooked	½ cup	134	31
Bok choy (Chinese cabbage), raw	1 cup	74	9
Almonds	¼ cup	96	207
Figs, fresh	2 medium figs	35	74
Mineral water (such as San Pellegrino® and Perrier®)	1 cup (8 ounces)	33	0

For more information on foods that are rich in calcium, talk with your clinical dietitian nutritionist.

Additional Resources

National Institutes of Health (NIH) Osteoporosis and Related Bone Diseases National Resource Center

800-624-BONE (800-624-2663)
www.bones.nih.gov/health-info/bone/osteoporosis

National Osteoporosis Foundation
202-223-2226
www.nof.org

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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