

Calcium

Calcium is a key building block in the body for people of all ages. Calcium helps to:

- Build bone
- Keep teeth healthy
- Maintain normal blood clotting
- Make your heart and muscles work as they should

Most bone is built when you are a child or young adult. After the bone-building period ends, bone must be maintained. The main way to build and maintain bone and support the other roles of this mineral is to eat foods rich in calcium.

How much calcium do I need?

Calcium needs are based on a person's age and stage of life.

Infants

- 0–6 months, 200 mg
- 6–12 months, 260 mg

Children

- 1–3 years, 700 mg
- 4–8 years, 1,000 mg
- 9–13 years, 1,300 mg

Adolescents

- 14–18 years, 1,000 mg

Men

- 19–70 years, 1,000 mg
- 70+ years, 1,200 mg

Women

- 19–50 years, 1,000
- 51+ years, 1,200

Sources of Calcium

Milk and milk products are the best sources of calcium because they often also have

vitamin D and lactose (milk sugar) to help your body absorb and use calcium.

250-300 Calcium

- 3 oz. sardines, canned
- 1 cup milk
- 1 cup yogurt*
- 8 oz. calcium-fortified juice *
- 8 oz. soymilk
- 1 cup mac and cheese, homemade
- 1 cup hot chocolate, made with milk
- 1 oz. Swiss cheese
- 1/6 slice of 9" quiche
- 1/3 cup non-fat dry milk powder
- 5 oz. tofu

200-250 mg Calcium

- 1 oz. cheddar cheese
- 1/8 slice pizza of 15" pie

150-200 mg Calcium

- 1 oz. mozzarella cheese
- 1 cup cottage cheese
- 1 cup mac and cheese, from box*
- 1 cup cream soup, made with milk

100-150 Calcium

- ½ cup bok choy or greens, cooked
- 1 cup broccoli or kale, cooked
- 3 oz. herring, canned
- ½ cup oysters
- ¾ cup soybeans
- 1 oz. (25-30) almonds, whole
- 2 tbsp. parmesan cheese
- ½ cup ice cream or frozen yogurt
- ½ cup custard or pudding
- 1 cup sherbet
- 2 pancakes (4" diameter)
- 1 waffle (7" diameter)
- 1 Tbsp. blackstrap molasses

*Calcium content varies by brand. Always check the food label.

Daily Servings of Dairy

Milk and dairy products are an easy way to meet your calcium needs. We suggest these servings for your age group:

- 1–3 years, 1-2 servings
- 4–8 years, 2-4 servings
- 9–18 years, 2-3 servings
- 19-50 years, 2-3 servings
- Pregnant/Nursing women, 4 servings
- 51–70, 2-3 servings
- 70+ years, 3-4 servings

If you have trouble digesting milk or dairy products, or are lactose intolerant:

- Eat dairy as part of a meal or snack. Try not to eat it by itself.
- Choose yogurt, kefir and cheese, which have less lactose and may not cause the same symptoms as milk.
- Try Lactaid[®], an over-the-counter product that you can be taken before eating dairy to help with digestion.
- Try Lactaid[®] milk products (milk, yogurt) which are lactose-free.

Dairy-Free Calcium Options

- Stir-fry tofu with vegetables. You can use tofu instead of meat or with meats in casseroles, one-pot meals, soups and pasta dishes.
- Add 1 cup of dark green vegetables (spinach, kale and broccoli) to your day.
- Eat 1 ounce of almonds (1/4 cup or 24 almonds) everyday as a snack.
- Add kidney beans, black-eyed peas, or white beans to your soups, stews, rice, or other dishes for a boost of calcium and fiber.

- Drink calcium fortified orange juice or plant-based milks such as soy, almond, coconut or rice milk. Be sure to check the nutrition label because calcium and vitamin D content varies by brand.
- Other foods, such as cereals, may also have calcium added. The nutrition facts label lists the percent of calcium in the product based on 1000 mg of calcium.

Calcium Supplements

If you're not meeting your daily calcium needs through what you eat, you may want to take a calcium supplement. Calcium supplements come from many sources of calcium, such as:

- calcium carbonate,
- calcium citrate,
- calcium gluconate, or
- calcium lactate.

Calcium gluconate and calcium lactate cost more and contain less calcium per pill so you would have to take more pills to get the same amount of calcium. This handout compares calcium carbonate and calcium citrate supplements and lists the best time to take them.

Calcium Citrate (Citracal[®])

This can be taken any time during the day. It does not need stomach acid to be absorbed. It is gentle on the stomach.

Calcium Carbonate (Tums[®], Oscal[®], Caltrate[®], Viactiv[®], CalBurst[®])

These must be taken with meals or snacks to be absorbed best. These need stomach acid for it to absorb. Do not take with antacids. These may cause gas, constipation, and bloating.

Calcium is absorbed the best when it is taken with meals. Do not take more than 600 mg of calcium at one time. Do not take more than 15000 mg of calcium. High amounts of calcium may cause kidney stones in some people. If you are taking medicine to decrease stomach acid, or use antacids daily, you should take calcium citrate instead of calcium carbonate.

Calcium Supplements

Supplement	Calcium (mg)	Vit D (IU)	Amount
Caltrate [®] 600+D	600	800	2 tablets 2 chews
Citracal [®] + D	630	500	2 tablets
Citracal [®] Petites+D	400	500	2 tablets
One-a-Day [®] Women One-a-Day [®] 50+	500	1000	1 tablet
One-a-Day [®] Prenatal	300	400	1 tablet
One a Day [®] Men's	210	700	1 tablet
Os-Cal [®] 500+ D	500	200	1 tablet
Os-Cal [®] Ultra	600	500	1 tablet
Tums [®]	500	0	1 tablet
Tums EX [®]	750	0	1 tablet
Tums Ultra [®]	1000	0	1 tablet
Viactiv [®]	500	500	1 chew

Vitamin D

Vitamin D helps your body absorb and use calcium. We get vitamin D from sunlight. Some foods (fortified milk, fish oils, egg yolks, liver) provide a small source. Most people need at least 600 IU (international units) of vitamin D, although some experts advise higher amounts (800 IU or 1000 IU). Many calcium tablets also have vitamin D. Be sure to check this before taking more vitamin D. Do not take more than 4,000 IU per day unless your doctor prescribes it.

Osteoporosis

Osteoporosis is a disease where bones become weak and brittle and affects men and women. When you take in less calcium than what your body needs, your body takes calcium from your bones. This weakens bones and can lead to bone fractures. This is most common in women over the age of 35 who are no longer menstruating. After age 65 women **and men** tend to lose bone mass at the same rate. White men and women are at greater risk than black men and women. Other risk factors include smoking and an inactive lifestyle. Signs of osteoporosis include bone pain, fractures, and shrinking in height.

Although there is no cure for osteoporosis, there are steps you can take to prevent or to slow its progress:

- Eat a balanced diet rich in calcium and vitamin D.
- Take part in weight-bearing exercises, such as squats, curls and overhead presses. Before starting any exercise program, consult with your healthcare provider.
- Maintain a healthy lifestyle without smoking or drinking too much alcohol.
- Get a bone density test to assess your bone health.

Calcium-Rich Recipes

Yogurt Popsicles

(60 mg calcium per serving)

- 8 oz. plain yogurt
 - 6 oz. of 100% fruit juice
1. Mix all ingredients together.
 2. Pour into popsicle molds.
 3. Freeze in store bought molds or in 3 oz. paper cups, using wooden sticks or spoons as handles.

Fruit Smoothie

(280 mg of calcium per serving)

- 1 cup milk or plant-based milk
- ½ to ¾ cup of fresh or frozen fruit
- ¼ tsp. vanilla
- 1-2 ice cubes

1. Place all items in blender.
2. Blend at high speed until mixture is frothy.

Fruit Nog

(560 mg calcium per serving)

- 8 oz flavored yogurt
- ¼ tsp. vanilla
- 1 cup milk or plant-based milk
- 1 cup fresh strawberries or orange sections
- 2-3 ice cubes

1. Place all ingredients except ice in blender.
2. Blend at high speed until mixture is frothy.
3. Add ice cubes one at a time and blend.

Teach Back

What is the most important thing you learned from this handout?

What changes will you make in your diet/lifestyle, based on what you learned today?

Who to Call

If you are a UW Health patient and have more questions, please contact UW Health at one of the phone numbers listed below. You can also visit our website at www.uwhealth.org/nutrition.

Nutrition clinics for UW Hospital and Clinics (UWHC) and American Family Children's Hospital (AFCH) can be reached at: **(608) 890-5500**.

Nutrition clinics for UW Medical Foundation (UWMF) can be reached at: **(608) 287-2770**.

If you are a patient receiving care at UnityPoint – Meriter, Swedish American or a health system outside of UW Health, please use the phone numbers provided in your discharge instructions for any questions or concerns.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 5/2020 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#178