

Zinc Fact Sheet for Consumers



Many foods have zinc. Red meat, poultry, oysters and other seafood, and fortified breakfast cereals are good sources. Beans, nuts, whole grains, and dairy products have some zinc as well.

What is zinc and what does it do?

Zinc is a nutrient that people need to stay healthy. Zinc is found in cells throughout the body. It helps your immune system fight off invading bacteria and viruses. Your body also uses zinc to make DNA (the genetic material in cells) and proteins. During pregnancy, infancy, childhood, and adolescence the body needs zinc to grow and develop properly. Zinc also helps wounds heal and is important for the proper sense of taste.

How much zinc do I need?

The amount of zinc you need each day depends on your age. Average daily recommended amounts for different ages are listed below in milligrams (mg):

Life Stage	Recommended Amount
Birth to 6 months	2 mg
Infants 7–12 months	3 mg
Children 1–3 years	3 mg
Children 4–8 years	5 mg
Children 9–13 years	8 mg
Teens males 14–18 years	11 mg
Teens females 14–18 years	9 mg
Adult males	11 mg
Adult females	8 mg
Pregnant teens	12 mg
Pregnant adults	11 mg
Breastfeeding teens	13 mg
Breastfeeding adults	12 mg

What foods provide zinc?

Many foods contain zinc. You can get recommended amounts of zinc by eating a variety of foods including the following:

- Oysters, which have very high amounts of zinc.
- Meat, fish, poultry, seafood such as crab and lobsters, and fortified breakfast cereals are also good sources of zinc.
- Beans, nuts, whole grains, eggs, and dairy products provide some zinc.

What kinds of zinc dietary supplements are available?

Almost all multivitamin/mineral dietary supplements contain zinc. Zinc is also available alone or combined with calcium, magnesium, or other ingredients in dietary supplements.

Dietary supplements can have several different forms of zinc, such as zinc sulfate, zinc acetate, and zinc gluconate. It's not clear whether one form is better than the others.

Zinc is also found in some denture adhesive creams and over-the-counter products, including those labeled as homeopathic medications for colds.

Am I getting enough zinc?

Most people in the United States get enough zinc from the foods they eat.

2 • ZINC FACT SHEET FOR CONSUMERS

However, certain groups of people may have trouble getting enough zinc:

- People who have had gastrointestinal surgery, such as weight loss surgery, or people who have digestive disorders, such as ulcerative colitis or Crohn's disease. These conditions can decrease the amount of zinc that the body absorbs and increase the amount that is lost in urine.
- People who follow vegetarian or vegan diets because they do not eat meat, which is a good source of zinc. Also, beans and grains contain phytates that reduce the amount of zinc the body absorbs. Vegetarians and vegans might benefit from taking zinc supplements.
- People who are pregnant or breastfeeding because they need more zinc for their growing baby and to make breast milk.
- Older infants who are breastfed because breast milk does not provide enough zinc for infants over 6 months of age. Older infants should be given foods that have zinc, such as pureed meats.
- Children who have sickle cell disease, possibly because the medications they take can cause low levels of zinc. These children might benefit from taking zinc supplements.
- People who have alcohol use disorder, because alcohol reduces the amount of zinc the body absorbs and increases the amount that is lost in urine. Also, people with alcohol use disorder tend to consume lower amounts of nutrients, including zinc.

What happens if I don't get enough zinc?

Zinc deficiency causes diarrhea, slow growth, and loss of appetite in infants and children. Infants and children who have had a zinc deficiency may have reproductive problems when they become adults. In older children, zinc deficiency also causes hair loss and frequent infections.

Zinc deficiency at any age can cause a loss of taste and smell. In older adults, zinc deficiency can delay wound healing and cause problems with thinking, reasoning, and memory.

In lower-income countries, zinc deficiency during pregnancy can cause premature births and other complications. Babies may have low weight at birth and a higher risk of death.

Many of these symptoms can be signs of problems other than a zinc deficiency. If you have any of these symptoms, your health care provider can help determine if you might have a zinc deficiency.

What are some effects of zinc on health?

Scientists are studying zinc to better understand how it affects health. Here are several examples of what research on zinc has shown.

The common cold

Some studies suggest that zinc lozenges or zinc syrup speeds recovery from the common cold if you start taking them at the start of a cold. However, these products don't seem to affect

the severity of cold symptoms. More study is needed to determine the best dose and form of zinc for the common cold, as well as how often and how long it should be taken.

Pneumonia in children

Some studies in lower-income countries show that zinc supplements lower the risk of pneumonia in young children. Zinc doesn't seem to speed recovery or reduce the number of deaths from pneumonia.

HIV in children and adults

Many people with HIV have low zinc levels. This occurs because they have trouble absorbing zinc from food. They also often have diarrhea, which increases zinc loss. Some studies show that supplemental zinc decreases diarrhea and complications of HIV, but other studies do not show this. Zinc supplements do not appear to reduce the risk of death in people with HIV. More research is needed to determine whether zinc supplements might help people with HIV.

Childhood diarrhea

Children in developing countries often die from diarrhea. Studies show that zinc supplements help reduce the duration of diarrhea in these children, many of whom are zinc deficient or otherwise malnourished. The World Health Organization and UNICEF recommend that children with diarrhea take zinc for 10–14 days (20 mg/day, or 10 mg/day for infants under 6 months). It's not clear whether zinc supplements help treat diarrhea in children who get enough zinc, such as most children in the United States.

Age-related macular degeneration (AMD)

AMD is an eye disease that gradually causes vision loss. In large studies among older people with AMD who were at high risk of developing advanced AMD, those who took daily dietary supplements with zinc and other ingredients for 5 years had a lower risk of developing advanced AMD than those who did not take the supplements. The ingredients in the supplements were: 80 mg zinc plus vitamin E, vitamin C, copper, and either beta-carotene or lutein and zeaxanthin. People who have or are developing AMD should talk with their doctor about taking a dietary supplement called AREDS or AREDS2.

Type 2 diabetes

People with type 2 diabetes often have low zinc levels. Some research shows that zinc supplements might help lower blood sugar and cholesterol levels. But more research is needed to learn if zinc might be recommended for people with type 2 diabetes.

Can zinc be harmful?

Yes, too much zinc can be harmful. Signs of too much zinc include nausea, dizziness, headaches, upset stomach, vomiting, and loss of appetite. If you take too much zinc for a long time, you could have problems such as lower immunity, low levels of HDL ("good") cholesterol, and low copper levels. Taking

very high doses of supplemental zinc can reduce your body's absorption of magnesium.

Using large amounts of denture creams that contain zinc, well beyond what the label recommends, could lead to excessive zinc intake and copper deficiency. This can cause neurological problems, including loss of coordination, numbness, and weakness in the arms, legs, and feet.

The daily upper limits for zinc include intakes from all sources—foods, beverages, supplements, and medications. The chart below lists the amounts by age group. These upper limits do not apply to people who take supplemental zinc for medical reasons under the care of a doctor:

Life Stage	Upper Limit
Birth to 6 months	4 mg
Infants 7–12 months	5 mg
Children 1–3 years	7 mg
Children 4–8 years	12 mg
Children 9–13 years	23 mg
Teens 14–18 years	34 mg
Adults	40 mg

Does zinc interact with medications or other dietary supplements?

Yes. Zinc dietary supplements can interact or interfere with some medicines you might take. In some cases, medicines can lower zinc levels in your body. Here are several examples:

- Both quinolone antibiotics (such as Cipro) and tetracycline antibiotics (such as Achromycin and Sumycin) might reduce the amount of both zinc and the antibiotic that your body absorbs. To help avoid this interaction, take the antibiotic at least 2 hours before, or 4 to 6 hours after, taking a zinc supplement.
- Penicillamine is a drug used to treat rheumatoid arthritis and Wilson disease. Zinc supplements can reduce the amount of penicillamine that your body absorbs. To help avoid this interaction, take zinc supplements and penicillamine at least 1 hour apart.
- Thiazide diuretics, such as chlorthalidone (Hygroton) and hydrochlorothiazide (Esidrix and HydroDIURIL) increase the amount of zinc lost in urine. Taking thiazide diuretics for a long time might decrease the amount of zinc in your body.

Tell your doctor, pharmacist, and other health care providers about any dietary supplements and prescription or over-the-

counter medicines you take. They can tell you if the dietary supplements might interact with your medicines. They can also explain whether the medicines you take might interfere with how your body absorbs or uses other nutrients.

Zinc and healthful eating

People should get most of their nutrients from food and beverages, according to the federal government's *Dietary Guidelines for Americans*. Foods contain vitamins, minerals, dietary fiber, and other components that benefit health. In some cases, fortified foods and dietary supplements are useful when it is not possible to meet needs for one or more nutrients (for example, during specific life stages such as pregnancy). For more information about building a healthy dietary pattern, see the *Dietary Guidelines for Americans* and the U.S. Department of Agriculture's [MyPlate](#).

Where can I find out more about zinc?

For general information on zinc:

- Office of Dietary Supplements Health Professional Fact Sheet on [Zinc](#) and Consumer Fact Sheet on [Zinc in Spanish](#)
- [Zinc](#) and [Zinc in diet](#), MedlinePlus*

For more information on food sources of zinc:

- U.S. Department of Agriculture's (USDA's) [FoodData Central](#)
- Nutrient list for zinc (listed by [food](#) or by [zinc content](#)), USDA

For more advice on choosing dietary supplements:

- Office of Dietary Supplements [Frequently Asked Questions: Which brand\(s\) of dietary supplements should I purchase?](#)

For information about building a healthy dietary pattern:

- [MyPlate](#)
- [Dietary Guidelines for Americans](#)

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