

# Vitamin C: Sources & Benefits

By [Alina Bradford, Live Science Contributor](#)



Vitamin C, also called ascorbic acid, is important to many functions in the body. For example, it is needed to grow and repair tissues throughout the body. Vitamin C is a popular remedy for the common cold, but research is mixed on whether it helps or prevents the sniffles.

## Sources of vitamin C

Dietary sources of vitamin C include many fruits and vegetables. Sources with the most vitamin C are fresh, raw cantaloupes, citrus fruits, kiwis, mangos, papayas, pineapples, strawberries, raspberries, blueberries, watermelon and cranberries, according to [National Institutes of Health](#) (NIH). Red and green peppers, spinach, cabbage, cauliflower, turnip greens and other leafy greens, tomatoes, potatoes, broccoli, winter squash and Brussels sprouts are other good sources of vitamin C.

## Benefits

The body uses vitamin C in many different ways. Vitamin C is needed by the body to form collagen. According to the NIH, the body also uses vitamin C to make skin, tendons, ligaments and blood vessels. It also uses this vitamin to repair and maintain cartilage, bones and teeth, to heal wounds and to form scar tissue.

Vitamin C may also prevent cancer by blocking the damage made by [free](#) radicals. “Vitamin C is a vital antioxidant that helps protect cells from damage caused by free radicals that we are exposed to in the environment such as air pollution, cigarette smoke and ultraviolet light from the sun,” said Dr. Sherry Ross, OB/GYN and Women’s Health Expert at Providence Saint John’s Health Center in Santa Monica, California.

Many people tout vitamin C as a cure-all for a wide range of diseases. Many of these have not been proven. “Health benefits of vitamin C that have been proposed but not scientifically proven include a lower risk of certain cancers, [cardiovascular disease](#), diabetes, age-related macular degeneration and cataracts,” said Ross.

A study by the [National Eye Institute](#), however, *did* find that an intake of 500 mg per day of vitamin C, along with beta-carotene, vitamin E and zinc supplements, slowed the progression of advanced age-related macular degeneration by about 25 percent. It also helped slow visual acuity loss by 19 percent for those who are already at high risk of developing the disease. The vitamins did not have significant effect on the development or progression of cataracts, though.

The medical community is split over the benefits of vitamin C on the heart. Some studies suggest that vitamin C may prevent heart attacks by slowing down hardening of the arteries by preventing LDL ("bad") cholesterol. Other studies show that vitamin C does not prevent heart attacks. A study by [Johns Hopkins](#) found that vitamin C has a “modest” effect on lowering [high blood pressure](#) and does not currently suggest supplements as a treatment option.

Vitamin C is often taken to prevent or cure the common cold. [Research shows](#) that most people taking high doses of Vitamin C still get the common cold just as often as those who don't take high doses. It may shorten the amount of time a person is sick, though, and may also lessen the symptoms. [Related: [Does Vitamin C Really Help Colds?](#)]

## Deficiency and Dosage

Vitamin C deficiency is fairly common. Smoking cigarettes can lower the amount of vitamin C in the body, so smokers are more prone to a deficiency, according to the [University of Maryland Medical Center](#). Often, doctors will suggest a vitamin C supplement to smokers to prevent or cure a deficiency.

Not getting enough of this vitamin can cause easy bruising, gingivitis and bleeding gums, dry and splitting hair, rough, dry, scaly skin, a decreased wound-healing rate, nosebleeds and a decreased ability to ward off infection, according to the University of Maryland Medical Center.

An extreme lack of vitamin C for long periods of time can cause scurvy. Symptoms of scurvy are skin that bruises easily, bleeding gums, [joint pain](#) and poor wound healing.

“An estimated 40 percent of men and 38 percent of women are getting insufficient amounts of vitamin C. If you're not eating your fruits and veggies, it's a good idea to supplement,” said Dr. Brian Dixon, an expert in molecular and cellular biology and executive director of Health and Science Education at [USANA Health Sciences](#).

The recommended daily allowance (RDA) for vitamin C varies, depending on age, gender and other factors. Typically, the RDA is 75mg for women and 90mg for men, according to [Oregon State University](#). Pregnant and nursing women should take 80mg to 120 mg, depending on age.

Most of the population can take substantially more than the RDA without any side effects since vitamin C is water soluble. This means that it is not stored by the body. It is filtered out and leaves the body in urine, according to the NIH. “However, some people taking more than 2,000 mg could experience some gastrointestinal upset. And those who are prone to form kidney stones should get clearance from their doctor before taking high doses of Vitamin C,” said Dixon.

Dr. Kristine Arthur, internist at Orange Coast Memorial Medical Center in Fountain Valley, California told Live Science, “You can take too much. (It) may lead to kidney stones, irregular heart beat and diarrhea.”



# Vitamin D Deficiency in Children

A true epidemic of vitamin D deficiency exists among this nation's children. The [American Academy of Pediatrics studied](#) almost 10,000 young people ages 1-21 from diverse ethnic backgrounds and geographic locations, and the results were startling—9% (7.6 million) are vitamin D deficient and an additional 61% (50.8 million) had insufficient levels of vitamin D in the blood.

## What does this mean for children's health?

Vitamin D deficiency brings not only serious consequences for the bones, but can also lead to a range of other health problems. Rickets, a children's disease that softens the bones, potentially causing fractures and deformity, is re-emerging in the U.S. Parathyroid hormone levels were also elevated among those in the study who were vitamin D deficient – an indicator that the bones lack the calcium and vitamin D needed to grow.

## What are the risk factors?

Researchers saw vitamin D deficiency among all ages and ethnic groups. They identified particular factors that correlated with the deficiency:

- Poverty
- Obesity
- Gender (girls are more likely to be deficient.)
- Television, video game, and/or computer use of more than 4 hours per day
- Milk consumption less than once a day
- Age (older children/adolescents are more often deficient.)
- Darker skin

The last risk factor places Latinos and African-Americans at greater risk. Greater amounts of melatonin in darker skin makes vitamin D absorption more difficult.

## What can be done?

With proper attention, vitamin D deficiency can be reversed but it will require a conscious effort on the part of parents and, as they get older, children themselves. For children and adolescents, 5 mcg (200 I.U.) are recommended per day. Ways to get your vitamin D:

- *Diet:* Milk is the best source if it is fortified with vitamin D, and the bonus is high amounts of calcium for optimum bone health. Vitamin D is also found in fatty fish, cod liver oil and other fortified products.
- *Supplements:* Most children's multivitamins contain vitamin D, so read the label.

# Vitamin C and Vitamin D Facts

Post Test – March 2019

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1. Vitamin C, also called \_\_\_\_\_, is important to many functions in the body.
2. Dietary sources of vitamin C include many \_\_\_\_\_ and \_\_\_\_\_.
3. Vitamin C is needed by the body to form \_\_\_\_\_.
4. Vitamin C is scientifically proven to cure a wide range of diseases.  
True or False?
5. An extreme lack of vitamin C can cause \_\_\_\_\_ which in turn may cause skin that bruises easily, bleeding gums, joint pain and poor wound healing.
6. A true epidemic of vitamin D \_\_\_\_\_ exists among this nation's children.
7. \_\_\_\_\_ is a children's disease that softens the bones, indicating that the bones lack calcium and vitamin D needed to grow.
8. Girls are more likely to be deficient in Vitamin D than boys.  
True or False?
9. Greater amounts of \_\_\_\_\_ in dark skin makes vitamin D absorption more difficult.
10. \_\_\_\_\_ is the best source of vitamin D (if it is fortified) and it is high in calcium for optimum bone health.

## February Quiz Answers

1. Energy 2. Cholesterol 3. False 4. Thiamin 5. False 6. Riboflavin
7. Whole Grain 8. True 9. Citrus 10. Soups



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