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# **7 Impressive Ways Vitamin C Benefits** Your Body

Vitamin C is an essential vitamin, meaning your body can't produce it. Yet, it has many roles and has been linked to impressive health benefits.

It's water-soluble and found in many fruits and vegetables, including oranges, strawberries, kiwi fruit, bell peppers, broccoli, kale, and spinach.

The recommended daily intake for vitamin C is 75 mg for women and 90 mg for men (1).

While it's commonly advised to get your vitamin C intake from foods, many people turn to supplements to meet their needs.

Here are 7 scientifically proven benefits of taking a vitamin C supplement.

## **1.** May reduce your risk of chronic disease

Vitamin C is a powerful antioxidant that can strengthen your body's natural defenses (2).

Antioxidants are molecules that boost the immune system. They do so by protecting cells from harmful molecules called free radicals.

When free radicals accumulate, they can promote a state known as oxidative stress, which has



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been linked to many chronic diseases (3 °).

Studies show that consuming more vitamin C can increase your blood antioxidant levels by up to 30%. This helps the body's natural defenses fight inflammation ( $4^{\circ}$ , 5).

#### SUMMARY

Vitamin C is a strong antioxidant that can boost your blood antioxidant levels. This may help reduce the risk of chronic diseases like heart disease.

## 2. May help manage high blood pressure

Approximately one-third of American adults have high blood pressure (6<sup>e</sup>).

High blood pressure puts you at risk of heart disease, the leading cause of death globally (7<sup>e</sup>).

Studies have shown that vitamin C may help lower blood pressure in both those with and without high blood pressure.

An animal study found that taking a vitamin C supplement helped relax the blood vessels that carry blood from the heart, which helped reduce blood pressure levels (8 $^{\circ}$ ).

Moreover, an analysis of 29 human studies found that taking a vitamin C supplement reduced systolic blood pressure (the upper value) by 3.8 mmHg and diastolic blood pressure (the lower value) by 1.5 mmHg, on average, in healthy adults.

In adults with high blood pressure, vitamin C supplements reduced systolic blood pressure by 4.9 mmHg and diastolic blood pressure by 1.7 mmHg, on average (9 °).

While these results are promising, it's not clear whether the effects on blood pressure are long term. Moreover, people with high blood pressure should not rely on vitamin C alone for treatment.

#### SUMMARY

Vitamin C supplements have been found to lower blood pressure in both healthy adults and those with high blood pressure.



### **3. May lower your risk of heart disease**

Heart disease is the leading cause of death worldwide (7<sup>e</sup>).





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Many factors increase the risk of heart disease, including high blood pressure, high triglyceride or LDL (bad) cholesterol levels, and low levels of HDL (good) cholesterol.

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For example, an analysis of 9 studies with a combined 293,172 participants round that after 10 years, people who took at least 700 mg of vitamin C daily had a 25% lower risk of heart disease than those who did not take a vitamin C supplement ( $10^\circ$ ).

Interestingly, another analysis of 15 studies found that consuming vitamin C from foods — not supplements — was linked to a lower risk of heart disease.

However, scientists were unsure whether people who consumed vitamin-C-rich foods also followed a healthier lifestyle than people who took a supplement. Thus, it remains unclear whether the differences were due to vitamin C or other aspects of their diet (11<sup>®</sup>).

Another analysis of 13 studies looked at the effects of taking at least 500 mg of vitamin C daily on risk factors for heart disease, such as blood cholesterol and triglyceride levels.

The analysis found that taking a vitamin C supplement significantly reduced LDL (bad) cholesterol by approximately 7.9 mg/dL and blood triglycerides by 20.1 mg/dL ( $12^{\circ}$ ).

In short, it seems that taking or consuming at least 500 mg of vitamin C daily may reduce the risk of heart disease. However, if you already consume a vitamin-C-rich diet, then supplements may not provide additional heart health benefits.

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Vitamin C supplements have been linked to a reduced risk of heart disease. These upplements may lower heart disease risk factors, including high blood levels of LDL pad) cholesterol and triglycerides.

# 4. May reduce blood uric acid levels and help prevent gout attacks

Gout is a type of arthritis that affects approximately 4% of American adults (13<sup>e</sup>).

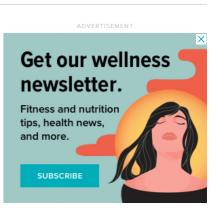
It's incredibly painful and involves inflammation of the joints, especially those of the big toes. People with gout experience swelling and sudden, severe attacks of pain (14<sup>®</sup>).

Gout symptoms appear when there is too much uric acid in the blood. Uric acid is a waste product produced by the body. At high levels, it may crystallize and deposit in the joints.

Interestingly, several studies have shown that vitamin C may help reduce uric acid in the blood and, as a result, protect against gout attacks.

For example, a study including 1,387 men found that those who consumed the most vitamin C had significantly lower blood levels of uric acid than those who consumed the least ( $15^{\circ}$ ).

Another study followed 46,994 healthy men over 20 years to determine whether vitamin C intake was linked to developing gout. It found that people who took a vitamin C supplement



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had a 44% lower gout risk (16 <sup>©</sup>).

Additionally, an analysis of 13 studies found that taking a vitamin C supplement over 30 days significantly reduced blood uric acid, compared with a placebo (17<sup>e</sup>).

While there appears to be a strong link between vitamin C intake and uric acid levels, more studies on the effects of vitamin C on gout are needed.

#### SUMMARY

Vitamin-C-rich foods and supplements have been linked to reduced blood uric acid levels and lower risk of gout.

# 5. Helps prevent iron deficiency

Iron is an important nutrient that has a variety of functions in the body. It's essential for making red blood cells and transporting oxygen throughout the body.

Vitamin C supplements can help improve the absorption of iron from the diet. Vitamin C assists in converting iron that is poorly absorbed, such as plant-based sources of iron, into a form that is easier to absorb (18 <sup>o</sup>).

This is especially useful for people on a meat-free diet, as meat is a major source of iron.

In fact, simply consuming 100 mg of vitamin C may improve iron absorption by 67% (19\*).

As a result, vitamin C may help reduce the risk of anemia among people prone to iron deficiency.

In one study, 65 children with mild iron deficiency anemia were given a vitamin C supplement. Researchers found that the supplement alone helped control their anemia ( $20^{\circ}$ ).

If you have low iron levels, consuming more vitamin-C-rich foods or taking a vitamin C supplement may help improve your blood iron levels.

#### SUMMARY

Vitamin C can improve the absorption of iron that is poorly absorbed, such as iron from meat-free sources. It may also reduce the risk of iron deficiency.

## 6. Boosts immunity

One of the main reasons people take vitamin C supplements is to boost their immunity, as vitamin C is involved in many parts of the immune system.

First, vitamin C helps encourage the production of white blood cells known as lymphocytes and phagocytes, which help protect the body against infection (21<sup>o</sup>).





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Third, vitamin C is an essential part of the skin's defense system. It's actively transported to the skin, where it can act as an antioxidant and help strengthen the skin's barriers (22).

Studies have also shown that taking vitamin C may shorten wound healing time (23°, 24°).

What's more, low vitamin C levels have been linked to poor health outcomes.

For example, people who have pneumonia tend to have lower vitamin C levels, and vitamin C supplements have been shown to shorten the recovery time ( $25^{\circ}$ , 26).

#### SUMMARY

Vitamin C may boost immunity by helping white blood cells function more effectively, strengthening your skin's defense system, and helping wounds heal faster.

# 7. Protects your memory and thinking as you age

Dementia is a broad term used to describe symptoms of poor thinking and memory.

It affects over 35 million people worldwide and typically occurs among older adults (27<sup>e</sup>).

Studies suggest that oxidative stress and inflammation near the brain, spine, and nerves (altogether known as the central nervous system) can increase the risk of dementia (28<sup>°</sup>).

Vitamin C is a strong antioxidant. Low levels of this vitamin have been linked to an impaired ability to think and remember  $(29^{\circ}, 30^{\circ})$ .

Moreover, several studies have shown that people with dementia may have lower blood levels of vitamin C ( $31^\circ$ ,  $32^\circ$ ).

Furthermore, high vitamin C intake from food or supplements has been shown to have a protective effect on thinking and memory as you age  $(33^\circ, 34^\circ, 35^\circ)$ .

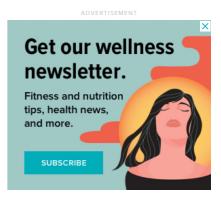
Vitamin C supplements may aid against conditions like dementia if you don't get enough vitamin C from your diet. However, additional human studies are needed to understand the effects of vitamin C supplements on nervous system health (36 <sup>©</sup>).

#### SUMMARY

Low vitamin C levels have been linked to an increased risk of memory and thinking disorders like dementia, while a high intake of vitamin C from foods and supplements has been shown to have a protective effect.







## Unproven claims about vitamin C

While vitamin C has many scientifically proven benefits, it also has many unfounded claims supported by either weak evidence or no evidence at all.

Here are some unproven claims about vitamin C:

- **Prevents the common cold.** While vitamin C appears to reduce the severity of colds and recovery time by 8% in adults and 14% in children, it does not prevent them (37).
- Reduces cancer risk. A handful of studies have linked vitamin C intake to a lower risk of several cancers. However, most studies have found that vitamin C does not affect the risk of developing cancer (38<sup>®</sup>).
- Protects against eye disease. Vitamin C has been linked to reduced risks of eye diseases like cataracts and age-related macular degeneration. However, vitamin C supplements have no effect or may even cause harm (39<sup>o</sup>, 40<sup>o</sup>, 41<sup>o</sup>).
- May treat lead toxicity. Although people with lead toxicity appear to have low vitamin C levels, there is no strong evidence from human studies that show vitamin C can treat lead toxicity (42 °).

#### SUMMARY

Although vitamin C has many proven benefits, it has not been shown to prevent the common cold, reduce cancer risk, protect against eye diseases, or treat lead toxicity.

### The bottom line

Vitamin C is a water-soluble vitamin that must be obtained from the diet or supplements.

It has been linked to many impressive health benefits, such as boosting antioxidant levels, lowering blood pressure, protecting against gout attacks, improving iron absorption, boosting immunity, and reducing heart disease and dementia risk.

Overall, vitamin C supplements are a great and simple way to boost your vitamin C intake if you struggle to get enough from your diet.

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