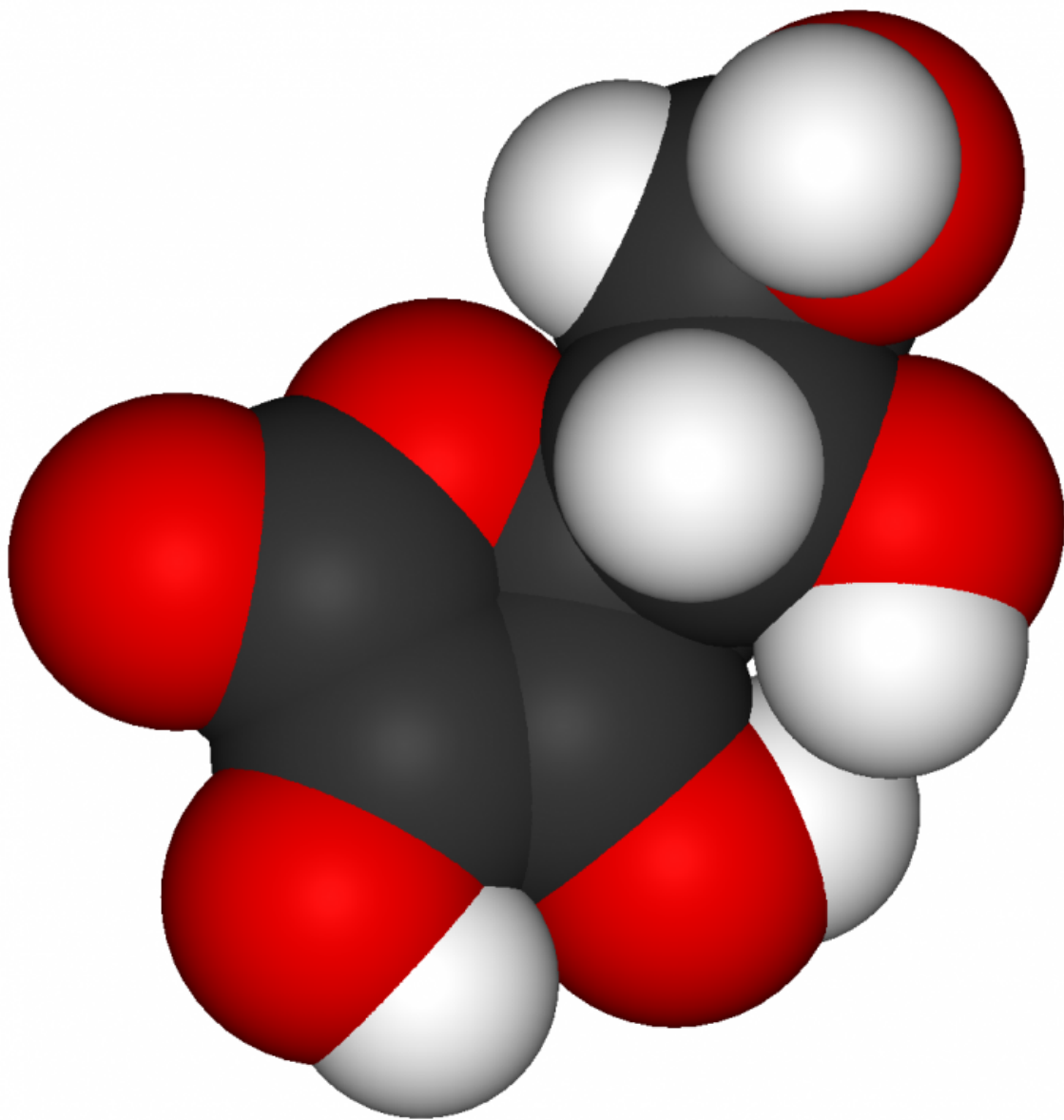


# How vitamin C could help over 50s retain muscle mass

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Model of a vitamin C molecule. Black is carbon, red is oxygen, and white is hydrogen. Credit: Public Domain

Vitamin C could be the key to better muscles in later life—according to new research from the University of East Anglia (UEA).

A study published today shows that older people who eat plenty of vitamin C—commonly found in [citrus fruits](#), berries and vegetables—have the best [skeletal muscle mass](#).

This is important because people tend to lose skeletal [muscle](#) mass as they get older—leading to sarcopenia (a condition characterised by loss of skeletal muscle mass and function), frailty and reduced quality of life.

Lead researcher Prof Ailsa Welch, from UEA's Norwich Medical School said: "As people age, they lose skeletal muscle mass and strength.

"People over 50 lose up to one percent of their skeletal muscle mass each year, and this loss is thought to affect more than 50 million people worldwide."

"It's a big problem, because it can lead to frailty and other poor outcomes such as sarcopenia, [physical disability](#), type-2 diabetes, reduced quality of life and death."

"We know that Vitamin C consumption is linked with skeletal muscle mass. It helps defend the cells and tissues that make up the body from potentially harmful free radical substances. Unopposed these free radicals can contribute to the destruction of muscle, thus speeding up age-related decline."

"But until now, few studies have investigated the importance of Vitamin C intake for older people. We wanted to find out whether people eating more Vitamin C had more muscle mass than other people."

The research team studied data from more than 13,000 people aged between 42-82 years, who are taking part in the EPIC (European Prospective Investigation into Cancer and Nutrition) Norfolk Study.

They calculated their skeletal muscle mass and analysed their vitamin C intakes from a seven-day food diary. They also examined the amount of vitamin C in their blood.

Dr. Richard Hayhoe, also from UEA's Norwich Medical School, said: "We studied a large sample of older Norfolk residents and found that people with the highest amounts of vitamin C in their diet or blood had the greatest estimated [skeletal muscle mass](#), compared to those with the lowest amounts.

"We are very excited by our findings as they suggest that dietary vitamin C is important for muscle health in older men and women and may be useful for preventing age-related muscle loss.

"This is particularly significant as Vitamin C is readily available in fruits and vegetables, or supplements, so improving intake of this [vitamin](#) is relatively straightforward.

"We found that nearly 60 percent of men and 50 percent of women participants were not consuming as much Vitamin C as they should, according to the European Food Safety Agency recommendations.

"We're not talking about people needing mega-doses. Eating a citrus fruit, such as an orange, each day and having a vegetable side to a meal will be sufficient for most people."

**More information:** 'Lower dietary and circulating vitamin C in middle and older aged men and women are associated with lower estimated skeletal muscle mass' is published in the *Journal of Nutrition* on August 27, 2020.

Provided by University of East Anglia

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