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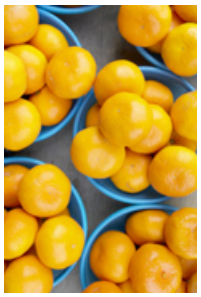
Common colds: Can vitamin C prevent or relieve them?



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You need a minimum amount of vitamins to stay healthy and well, and to build up your body's defence systems. Most people get enough vitamins in their daily diets. Vitamin C (ascorbic acid) is found in things like fruits and vegetables, especially in citrus fruits and berries. Medical conditions caused by a lack of vitamin C, such as scurvy in the Middle Ages, are extremely rare nowadays.

Despite this, many people take extra vitamin C supplements every day in the hope that it will protect them against illnesses - especially the common cold. Some of these supplements have more than 1g (1,000mg) of vitamin C in them - so-called mega-doses. That is more than 10 times the recommended daily dose. Because the body cannot store vitamin C, the excess vitamin usually leaves the body in urine within a few hours.

To find out whether taking large doses of vitamin C has more pros or cons, researchers from the Cochrane Collaboration looked for randomised controlled trials on this topic. In this kind of trial, people are divided into strictly comparable groups. You can read about how randomised controlled trials are done and why they are important here (URL: http://www.gesundheitsinformation.de/evidence-based-medicine.61.en.html) . The Cochrane Collaboration is an international network of researchers who systematically review trials that test the benefits of health care interventions. The Cochrane researchers analysed the results of 29 trials involving more than 11,000 children and adults. The dose used in most of the trials was 2,000 milligrams of vitamin C per day.

The review showed that, even at such high doses, vitamin C could not protect most of the people from getting colds. Even when adults and children had been taking vitamin C every day before getting ill, it made hardly any difference to how long their colds lasted. The effect was very small: overall, it reduced the length of participants' colds by less than one day per year. Their colds were a bit milder too. If adults took vitamin C once they already had a cold it did not make any difference at all.

The effect may be different in people who are exposed to short periods of really strenuous activity and/or extreme cold, like marathon runners or skiers. Previous research has shown that high doses of vitamin C could actually prevent this group of people from getting colds. Researchers have offered various theories to explain this. For example, vitamin C might have a protective effect against stress or stress-related infections in the lungs. But these theories have not been proven.

Adverse effects were not more common in people who took vitamin C than in people who took a placebo. The researchers consider vitamin C doses of up to several thousand milligrams per day to be safe. However, the German Institute for Risk Assessment says that getting 100 milligrams of vitamin C in your diet per day is enough.

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Glossary

vitamin C

Vitamin C is water-soluble. It is also called ascorbic acid. It is the vitamin that people need to have the most of every day. It occurs primarily in fresh fruit and vegetables. Vitamin C is one of the antioxidants. This means it protects cells from damage caused by particular aggressive atoms and molecules called free radicals. The food industry uses it frequently as a conservative. A major vitamin C deficiency leads to tiredness, irritability, and symptoms in bones, cartilage and teeth.

Cochrane Collaboration

The Cochrane Collaboration is an international network of thousands of researchers and others. They work together in teams called Cochrane Review Groups to answer questions about health care by doing systematic reviews of evidence. To achieve this, the members of the Collaboration have developed systems and methods for systematically finding and analysing the results of trials of health care interventions. The goal of the Cochrane Collaboration is to help patients, health care practitioners and others make more informed decisions about health care. You can read more about the Cochrane Collaboration at their website.

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Sources

IQWiG health information is based on research in the international literature. We identify the most scientifically reliable knowledge currently available, particularly so-called “systematic reviews”. These summarise and analyse the results of scientific research on the benefits and harms of treatments and other health care interventions. This helps medical professionals and people who are affected by the medical condition to weigh up the pros and cons. You can read more about systematic reviews and why these can provide the most trustworthy evidence about the state of knowledge here (URL: http://www.gesundheitsinformation.de/evidence-based-medicine.61.en.html) . The authors of the major systematic reviews on which our information is based are always approached to help us ensure the medical and scientific accuracy of our products.

German Institute for Risk Assessment (BfR). *Use of Vitamins in Foods*. Berlin: BfR. 2005. [Full text (URL: http://www.bfr.bund.de/cm/238/use_of_vitamins_in_foods.html)]

Hemilä H, Chalker E, . Douglas B. Vitamin C for preventing and treating the common cold. *Cochrane Database of Systematic Reviews* 2010, Issue 3. [Cochrane summary (URL: http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD000980/frame.html)]

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The German Institute for Quality and Efficiency in Health Care (IQWiG)

The German Institute for Quality and Efficiency in Health Care (IQWiG) was established by legislation to provide evaluations of the effectiveness, quality and efficiency of healthcare services. This includes the assessment of medicines as well as the publication of health information for consumers and patients.

Evidence basis of our health information

Our information is based primarily on systematic reviews of the effects of health care. Systematic reviews are necessary to gain an objective picture of health care. In order to do this, a clear question is formulated. Researchers then find all the relevant studies that could answer this question. They then evaluate those studies.

You can find a list of the evidence and other scientific literature on which this information is based at **www.informedhealthonline.org**

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