Food, Not Pills, May Be Best Rx For Lycopene's Cancer Protection

Q. I hear lycopene helps prevent cancer and heart disease. Should I be taking a lycopene supplement?

A. Evidence that lycopene has significant health benefits is mounting. But whether lycopene supplements are as beneficial as whole-food sources is debatable. New animal research suggests you should focus on foods first.

The Lure of Lycopene. Lycopene is the red-pigmented carotenoid found abundantly in tomatoes, but also present in watermelon and pink grapefruit. As a powerful antioxidant, lycopene helps neutralize harmful free radicals, which are implicated in cancer, heart disease, macular degeneration and other age-related illnesses. People who eat foods rich in lycopene have higher blood levels of the phytonutrient—and perhaps less risk of disease.

In a notable Harvard study of nearly 48,000 men, for example, those who ate more than two servings of tomato sauce a week were up to 36% less likely to develop prostate cancer over a 12-year period than men who ate less than one serving a month. Other studies have documented the protective effect of lycopene-rich diets against cancers of the digestive tract, cervix, breast and lung, and mental and growth retardation, have been virtually eliminated in the U.S.

Iodine Levels Dropping. However, government studies suggest that a growing percentage of the U.S. population consumes less iodine than it did 20 years ago—a trend of concern, say some experts.

According to a study by Joseph Hollowell, M.D., M.P.H., of the University of Kansas Medical Center in Kansas City, the percentage of Americans with markers for low iodine intake more than quadrupled between the 1970’s and 1990’s, though the number is still small.

According to Hollowell, the drop is mainly due to the declining use of iodine in the production of bread and milk over the last two decades. Also, many people are cutting down on salt to help prevent high blood pressure and heart disease, so they take in less iodine. Moreover, soil is gradually losing its natural iodine due to overuse of land and heavy rains and floods.

Food vs. Supplements. Although table salt is a simple and inexpensive way to get iodine, it is certainly not a good solution for people trying to cut down on salt for health reasons. Another option is a multivitamin/mineral supplement. Most contain 150 micrograms of iodine, the Daily Value for adults.

Food and water are not always reliable sources, since iodine occurs in highly variable amounts depending on the region of the country it comes from. Seaweed is rich in iodine, as is seaweed, kelp and nori, but sea salt, ironically, is not, despite that common misconception. Any sea salt that contains iodine has had it added.

EN's Bottom Line. Choose iodized salt. And if you’re watching your sodium intake and don’t eat much seafood, EN recommends a multi with iodine.

Diets rich in lycopene may also be heart-protective. In the latest Harvard study of more than 28,000 women, those with the highest blood lycopene levels were almost half as likely to develop heart disease over five years as women with the lowest levels. Research also suggests that lycopene may aid blood pressure and bone health.

Pills vs. Food. Despite the spotlight on lycopene, it may not be protective on its own. It may only be a marker for other active substances in tomatoes or it may work together with other phytonutrients to confer health benefits. If so, then the race to supplement with lycopene pills may be misguided, as was recently suggested by Ohio State University researchers.

In their animal study, 194 rats were treated with drugs to induce prostate cancer and then fed whole tomato powder, pure lycopene or a placebo for 14 months. The animals fed tomato powder were 26% less likely to die than the placebo-controlled rats. But the lycopene-supplemented rats fared only slightly better than the controls.

“Research suggests that consuming tomato products rather than a supplement is the best way to achieve the proposed health benefits attributed to tomatoes,” says Steven K. Clinton, M.D., Ph.D., one of the study’s authors. Moreover, single carotenoid supplements might not even be safe, as shown when smokers taking beta-carotene experienced increased lung cancer risk.

EN’s Bottom Line. For the best lycopene boost, EN recommends eating cooked tomato products (e.g., tomato sauce, paste, soup, juice, even ketchup) daily. Heat breaks down cell walls so that more lycopene is released. And because lycopene dissolves in fat, it’s best absorbed when eaten with small amounts of fat, such as olive oil. If you do supplement, look for a brand that contains whole tomato extract, such as Lyc-O-Mato (an ingredient in many dietary supplements), rather than isolated lycopene, to ensure you get the whole phytonutrient package.
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