

Crunch! Carrots May Cut Cancer Risk

(HealthDayNews) -- There's more good news from the garden: A compound in carrots may be a potent cancer fighter, reducing malignancies in rats by a third, a European study claims.

"One of the natural pesticides in carrots is responsible for the cancer-preventing effect of carrots," said lead researcher Kirsten Brandt, a senior lecturer at the University of Newcastle upon Tyne, in England. "We now have identified a compound which seems to have an effect that can explain this benefit."

Nutrition experts have long recommended that people eat carrots because of their apparent ability to prevent cancer, but, until now, the particular compound driving this effect was not known. Epidemiological studies have shown that individuals with the highest carrot consumption can lower their risk of cancer by up to 40 percent.

Now, Brandt's team says that falcarinol, a compound that protects the vegetable from fungal diseases, may be the prime reason carrots are so unfriendly to cancers. One previous study had suggested that might be the case, but results were inconclusive.

To find out if falcarinol really does prevent cancer, Brandt's team studied 24 rats with precancerous tumors that mimicked human colorectal cancer. The rats were assigned to three groups, and each group was given a different diet.

After 18 weeks, Brandt's group found that rats that ate carrots along with their ordinary feed, as well as a second group that had falcarinol added to their feed, were one-third less likely to develop cancerous tumors compared with rats that were not given either,

according to the report in the February issue of the Journal of Agricultural and Food Chemistry.

Brandt said the exact mechanism behind falcarinol's anti-cancer activity remains unknown. The researchers also don't know if the results seen in rats would be seen in humans. "But, it is encouraging that the data fits with what we have seen in humans," Brandt said.

These findings reinforce the message that people should eat five servings of fruit and vegetables everyday, she said.

"We have now tested carrots," she added. "But there are a lot of other vegetables that we have not tested, which might have the same properties. There are lots of other similar compounds in other vegetables."

However, whether the beneficial effect of falcarinol is diluted or eliminated when carrots are cooked or juiced is unknown. That needs to be tested, Brandt said.

The researchers were intrigued that the vegetable's natural pesticides may be the real cancer-fighters, not vitamins or other nutrients. According to Brandt, the discovery may answer the longstanding question, "Why is it that eating vegetables is so much better for your health than just taking a vitamin pill with the same amount of vitamins and minerals?"

In addition, the finding might be important in developing new cancer treatments, she said. However, Brandt believes the quickest benefit can be achieved by simply developing carrots that have more falcarinol. "We might be able to double the intake of falcarinol, and that might have large benefits for public health," she said.

Another expert, Vicky Stevens, a research scientist at the American Cancer Society, remains cautious. "It is a little difficult to know where this is going to go in relation to humans," she said "It is worthy of further research."

Stevens believes falcarinol might be just one weapon in the vegetable anti-cancer armamentarium. "We don't expect that there

is going to be one single magic bullet. It is still important to consider the rest of the carrot, and other vegetables," she said.

"Perhaps the single most significant implication of this study is that it reaffirms dietary common sense in our era of dietary silliness," said Dr. David L. Katz, an associate clinical professor of public health and director of the Prevention Research Center at Yale University School of Medicine.

Katz noted that some of the popular "low-carb" diets actually banish carrots because they have a high glycemic (sugar) index. "Brandt helps reveal the folly of this oversimplified and rigid interpretation of what constitutes good food," he said.

"We may have to wait to know for sure that falcarinol can help prevent cancer in humans," Katz said. "But we needn't wait to derive likely health benefits from eating carrots often -- and I, for one, don't intend to."

More information

The American Cancer Society can tell you more about diet and cancer.

By Steven Reinberg

SOURCES: Kirsten Brandt, Ph.D., senior lecturer, University of Newcastle upon Tyne, United Kingdom; David L. Katz, M.D., M.P.H., associate clinical professor, public health, and director, Prevention Research Center, Yale University School of Medicine, New Haven, Conn.; Vicky Stevens, Ph.D., research scientist, American Cancer Society, Atlanta; Feb. 9, 2005, Journal of Agricultural and Food Chemistry

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