

Mega Multivitamins and Prostate Cancer

Higher Doses Linked to Higher Death Risk

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May 15, 2007 -- Men who take too many multivitamins may be increasing their risk of dying from prostate cancer, according to new research from the National Cancer Institute.

Taking a multivitamin more than seven times a week was associated with a 30% increased risk of advanced prostate cancer and a doubling of the risk of death from the disease in the study.

Regular multivitamin use (one to six times a week) did not appear to increase cancer risk, and excessive vitamin use was not associated with an increased risk of early, or localized, prostate cancer.

But there was also no evidence to suggest that taking multivitamins at any dosage helped prevent prostate cancer.

NCI researcher Michael F. Leitzmann, MD, PhD, tells WebMD that more research is needed to confirm the association and understand how vitamin and other dietary supplements affect cancer risk.

“Based on our findings, we would recommend that men adhere to recommendations for dietary supplements and consult with their physician before taking supplements in excessive doses,” he says.

More Questions About Safety

The new research is one of several recent studies suggesting a potential downside to vitamin supplementation in people who are generally well-nourished.

An analysis of 47 studies assessing antioxidant supplementation, published earlier this year, found a slight increase in deaths among people who took beta-carotene, vitamin E, or vitamin A supplements.

Christian Glud, MD, who co-authored the analysis, tells WebMD that there is little evidence of a benefit for antioxidant supplementation and mounting evidence of potential harm.

“The idea that you can prevent disease by taking an antioxidant supplement is very attractive,” he says. “People want to believe it, and there is a great deal of marketing devoted to making them believe it.”

In the latest study, Leitzmann, co-author Karla Lawson, PhD, and NCI colleagues followed slightly more than 295,000 men enrolled in a diet and health study for five years.

During this time, 8,765 men in the study were diagnosed with localized prostate cancer (cancer that hasn't spread beyond the prostate) and 1,476 with advanced prostate cancer (cancer that has spread beyond the prostate).

No link was seen between multivitamin use and localized prostate cancer.

The increase in advanced and fatal cancers was seen in men who took multivitamins more than seven times a week. The link was strongest among men with a family history of prostate cancer and men who also took selenium, beta-carotene, or zinc supplements.

Because the researchers had information on the use of some individual supplements but not others, they were not able to identify individual vitamins or doses associated with increased risk.

The study appears in the May 16 issue of the *Journal of the National Cancer Institute*.

Good Free Radicals?

In an editorial accompanying the study, Gluud and colleague Goran Bjelakovic, both of Copenhagen University Hospital, offer an intriguing hypothesis on the role of free radicals and antioxidant supplements in the promotion and prevention of disease.

The thinking has been that antioxidant vitamins protect against diseases like cancer and heart disease by reducing the free radicals that are thought to promote these conditions through oxidative stress.

But Gluud and Bjelakovic suggest that free radicals may do some good by targeting and killing harmful cells, such as those that cause cancers to grow.

“Antioxidant supplements [which decrease free radicals] may actually cause some harm,” they write. “Our diets typically contain safe levels of vitamins, but high-level antioxidant supplements could potentially upset an important physiologic balance.”

Though just a theory at this point, Gluud tells WebMD that it is one that deserves further study.

SOURCES: Lawson, K.A. *Journal of the National Cancer Institute*, May 16, 2007; vol 99: pp 754-764. Michael F. Leitzmann, MD, PhD, researcher, Cancer Epidemiology and Genetics, National Cancer Institute, Bethesda, Md. Christian Gluud, MD, DrMedSci, Copenhagen University Hospital, Denmark. Bjelakovic, G. *The Journal of the American Medical Association*, Feb 28, 2007; vol 297: pp 842-857.

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