

Clinical Update

Vitamin K and prostate cancer – study supports benefits

An improved vitamin K2 status may reduce the risk of prostate cancer, suggest results from German scientists that build the science linking the vitamin to improved prostate health.

(Cancer Epidemiology, Biomarkers & Prevention, January 2009)

Scientists from the German Cancer Research Center report that an improved status of the vitamin was linked to a lower risk of both advanced-stage prostate cancer and high-grade prostate cancer.

According to the European School of Oncology, over half a million new cases of prostate cancer are diagnosed every year world wide, and the cancer is the direct cause of over 200,000 deaths. More worryingly, the incidence of the disease is increasing with a rise of 1.7% over 15 years.

Building the science

The study adds to a small but ever-growing body of science supporting the potential health benefits of vitamin K, most notable for bone and blood health, but also recently linked to improved skin health.

Last year, the same researchers reported that increased intakes of vitamin K2, but not K1, were associated with a 35% reduction in prostate cancer risk. The potential benefits of K2 were more pronounced for advanced prostate cancer.

The findings were based on data from the 11,319 men taking part in the European Prospective Investigation into Cancer and Nutrition (EPIC) Heidelberg cohort, and were published in the April 2008 issue of the *American Journal of Clinical Nutrition* (Vol. 87, pp. 985-992). A higher ratio of undercarboxylated osteocalcin (ucOC) to intact total osteocalcin (iOC) is indicative of poorer vitamin K status.

Study details

Nimptsch and her co-workers recruited 250 people with prostate cancer, and 494 healthy controls. Levels of ucOC and iOC were analysed from serum samples, and every 0.1 increment in the ratio was associated with a 38% increase in advanced-stage prostate cancer, and a 21% increase in high-grade prostate cancer. No relationship between ucOC/iOC and total prostate cancer was observed, they said.

There are two main forms of vitamin K: phylloquinone (vitamin K1) and menaquinones (vitamins K2). K1 is found in green leafy vegetables such as lettuce, broccoli and spinach, and makes up about 90% of the vitamin K in a typical Western diet.

K2 makes up about 10% of consumption and can also be obtained from the diet. Menaquinone-4 (MK-4) can be found in animal meat, while MK-7, MK-8, and MK-9 are found in fermented food products like cheese, and natto is a rich source of MK-7. A synthetic form of vitamin K, known as K3, does exist but is not recommended for human consumption.

The vitamin is less well known than vitamins A to E, but this increasing body of research, as well as increased marketing and advertising from supplement makers, is raising public awareness of vitamin K.

Source: www.nutraingredients.com

