



LifeExtension®

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Late-breaking brief news items to life extensionists, as well as anyone interested in living a longer healthier life.

In The News



Essential Fatty Acids and Prostate Cancer

Last year alone, over 170,000 men were diagnosed with prostate cancer; over 35,000 died from it. While prostate cancer affects thousands and in many instances results in death, research suggests that fish oils may reduce the risk of the deadly cancer.

Although few human studies have been conducted due to intake assessment difficulties, certain fatty acids have been associated with a

reduced risk of prostate cancer. Experimental studies suggest that long-chain omega-3 polyunsaturated fatty acids may indeed reduce the risk.

In a population-based case-control study in Auckland, New Zealand, researchers examined the relationship between prostate cancer risk and EPA and DHA in erythrocyte biomarkers. The study took place in 1996-1997, and involved 317 prostate cancer cases and 480 age-matched community controls. A 41% prostate cancer risk reduction was observed in those with high erythrocyte phosphatidylcholine levels of EPA; DHA saw a 38% risk reduction. The results support evidence from in vitro experiments for a reduced risk of prostate cancer associated with dietary fish oils, possibly acting via inhibition of arachidonic acid-derived eicosanoid biosynthesis (Br J Cancer 1999 Dec;81[7]:1238-42).

Omega-3 fatty acids can be obtained from fish, flax and perilla seed oil. Fish oil directly provides EPA and DHA to the body, while perilla and flax contain alpha linolenic acid that the body enzymatically converts to EPA and DHA. There are numerous health benefits associated with maintaining adequate essential fatty acid intake. The brain, for instance, requires huge amounts of DHA to properly function. It is not clear if men with existing prostate cancer should consume large amounts of supplemental fish oil. The use of a COX-2 inhibiting drug such as Lodine, Celebrex or Vioxx may be more effective in treating existing prostate cancer than fish oil. (See the Prostate Cancer Overview chapter in Disease Prevention and Treatment or log on to www.lef.org to learn how to use COX-2 inhibiting drugs to suppress excess arachidonic synthesis.)

A New Sensation!

Vitamin K may be the answer to one of the most vexing problems of aging: hardening blood vessels. The older a person gets, the more likely it is that their blood vessels will harden up at the same time their bones go soft. Does one have to do with the other? The answer is yes. They both share a common, underlying mechanism that controls calcium. And that mechanism depends on the vitamin known as vitamin K.

Vitamin K has special powers over calcium, a mineral that leaves bones and builds up in arteries with age. Researchers have discovered over a hundred special proteins in the body that chaperone calcium. Vitamin K makes them all tick by enabling them to latch onto the mineral. Once they've gotten ahold of it, they either escort it out or, in the case of bone, deposit it like mortar. Arteries want calcium out; bones want it in.

Osteocalcin is the most famous vitamin K protein-it chaperones calcium into bone. But there are other less known proteins that take calcium out of soft tissue like arteries. The one thing they all have in common is vitamin K. They must be activated by K to work. Studies are beginning to show just how important vitamin K is for maintaining these proteins.

Researchers looking at data from 72,327 nurses have reported that people getting the most vitamin K have a 30% lower risk of hip fracture than those getting the least. Other studies back up this data for other parts of the skeleton. Despite the need for vitamin K, researchers at Tufts University say the RDA for vitamin K is not even in the ballpark. Currently set at 1 microgram per kilogram of body weight (about 65 micrograms for a 140 pound woman), the RDA falls way short of the 45 milligrams necessary to stop bone loss in adult women. Even higher doses may be necessary to keep calcium out of arteries. Researchers in Japan had to use high doses of vitamins K and E to keep rats from getting heart disease. Their research follows years of the scientific argument that hypertension, which often precedes heart attack and stroke, is essentially a calcium problem that can be treated with vitamin K.

Vitamin K has been virtually ignored by everyone, including multi-vitamins manufacturers. Most supplements do not contain vitamin K at all; almost none contain enough for the serious K consumer. Even food has come under fire for not containing as much as everyone thought. Although vitamin K is fat-soluble, it is the only such vitamin the body doesn't store. Instead, it recycles it. But according to some research, drugs interfere, and gut flora doesn't contribute as much as previously thought.

Am J Clin Nutr 69:74-9.

Booth SL, et al. 1998. Dietary intake and adequacy of vitamin K1. J Nutr 128:785-88.

Feskanich D, et al. 1999. Vitamin K intake and hip fractures in women: a prospective study.

Internat J Vit Nutr Res 69:23-6. Vitamin K, new anti-aging sensation

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