Vitamin K May Reduce Insulin Resistance in Older Men

Vitamin K supplementation may significantly reduce insulin resistance in older men, according to new research from scientists at the USDA Human Nutrition Research Center at Tufts University in Boston. Reported in Diabetes Care, the study was an offshoot of a three-year, randomized, placebo-controlled, double-blind, controlled trial of vitamin K1 supplementation for bone loss.*

Three hundred and fifty-five men and women, aged 60-80 years, were randomly assigned to take 500 micrograms vitamin K1 per day, or placebo. Among female subjects, insulin resistance was not significantly affected by supplementation. But men who took the vitamin were significantly less prone to insulin resistance progression than men who received the inactive placebo. Insulin resistance was primarily measured by homeostasis model assessment, and secondarily through comparison of changes in plasma fasting insulin and glucose levels.

The scientists concluded that vitamin K supplementation "...may reduce progression of insulin resistance in older men."*

—Dale Kiefer


Pectin's Anticancer Mechanism Revealed

For the first time, researchers have identified the anticancer mechanism in pectin, a naturally occurring dietary fiber found in vegetables and fruits, particularly apples and citrus fruits. The research, published in the Journal of the Federation of American Societies for Experimental Biology,* substantiates a long-held hypothesis based on molecular evidence that modified pectin plays an important role in limiting the progression of some cancers.

The scientists used a combination of sophisticated tools including an atomic force microscope to view individual pectin molecules. The images revealed that a fragment released from pectin binds to galectin-3, a mammalian protein involved in cancer progression, thus inhibiting further tumor growth and metastasis.

Lead researcher Dr. Victor Morris says the next step is "to identify how pectin can be better used by the body... so it can exert its effect on cancer cells."

—Joanne Nicholas


Olive Oil/Green Tea Combo Fights Atherosclerosis

The combination of green tea polyphenols with extra-virgin olive oil offers heart-healthy benefits that exceed those of extra-virgin olive oil alone, according to a new report.¹ Previous research has shown that extra-virgin olive oil consumption increases beneficial high-density lipoprotein (HDL) levels and reduces lipid peroxidation, which may reduce the risk of cardiovascular disease.²³

For two months, atherosclerosis-prone mice received extra-virgin olive oil, extra-virgin olive oil with green tea polyphenols, or placebo. Mice that received the olive oil/green tea combination experienced an 18% decrease in susceptibility to lipid peroxidation, compared with placebo-treated mice.¹

Both extra-virgin olive oil and the extra-virgin olive oil/green tea polyphenol combination increased HDL levels and increased the rate at which HDL removed potentially harmful cholesterol from the bloodstream (a process known as macrophage cholesterol efflux). While olive oil increased cholesterol removal by 42%, olive oil/green tea boosted cholesterol efflux by 139%, compared with placebo.

Atherosclerotic lesion size diminished by 11% and 20% in the olive oil and olive oil/green tea groups, respectively.¹

—Dale Kiefer

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