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AMA's Position on Nutritional Supplements:

Supplements Shown to Provide Valuable Health Benefits



Vitamins for Chronic Disease Prevention in Adults

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Context Although vitamin deficiency is encountered infrequently in developed countries, inadequate intake of several vitamins is associated with chronic disease.

Objective To review the clinically important vitamins with regard to their biological effects, food sources, deficiency syndromes, potential for toxicity, and relationship to chronic disease.

Data Sources and Study Selection We searched MEDLINE for English-language articles about vitamins in relation to chronic diseases and their references published from 1966 through January 11, 2002.

Data Extraction We reviewed articles jointly for the most clinically important information, emphasizing randomized trials where available.

Data Synthesis Our review of 9 vitamins showed that elderly people, vegans, alcohol-dependent individuals, and patients with malabsorption are at higher risk of inadequate intake or absorption of several vitamins. Excessive doses of vitamin A during early pregnancy and fat-soluble vitamins taken anytime may result in adverse outcomes. Inadequate folate status is associated with neural tube defect and some cancers. Folate and vitamins B₆ and B₁₂ are required for homocysteine metabolism and are associated with coronary heart disease risk. Vitamin E and lycopene may decrease the risk of prostate cancer. Vitamin D is associated with decreased occurrence of fractures when taken with calcium.

Conclusions Some groups of patients are at higher risk for vitamin deficiency and suboptimal vitamin status. Many physicians may be unaware of common food sources of vitamins or unsure which vitamins they should recommend for their patients. Vitamin excess is possible with supplementation, particularly for fat-soluble vitamins. Inadequate intake of several vitamins has been linked to chronic diseases, including coronary heart disease, cancer, and osteoporosis.

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Take Multivitamins Urges American Medical Association

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Reversing a long-standing anti-vitamin policy, The Journal of the American Medical Association today is advising all adults to take at least one multivitamin pill each day.

Scientists' understanding of the benefits of vitamins has rapidly advanced, and it now appears that people who get enough vitamins may be able to prevent such common chronic illnesses as cancer, heart disease and osteoporosis, according to Drs. Robert Fletcher and Kathleen Fairfield of Harvard University, who wrote the new guidelines. The last time JAMA made a comprehensive review of vitamins, about 20 years ago, it concluded people of normal health shouldn't take multivitamins because they were a waste of time and money. People can get all the nutrients they need from their diet, JAMA advised, adding that only pregnant women and chronically sick people may need certain vitamins.

That was at a time when knowledge about vitamins was just beginning to expand. The role that low levels of folate, or folic acid, play in neural tube defects, for instance, was not known, nor was its role as a major risk factor for heart disease.

Researchers hope JAMA's endorsement will encourage more people to reap health benefits of a daily multivitamin.

Health experts are increasingly worried that most American adults do not consume healthy amounts of vitamins in their diet, although they may be getting enough to ward off such vitamin-deficiency disorders as scurvy, beriberi and pellagra.

Almost 80 percent of Americans do not eat at least five helpings of fruits and vegetables a day, the recommended minimum amount believed to provide sufficient essential nutrients. Humans do not make their own vitamins, except for some vitamin D, and they must get them from an outside source to prevent metabolic disorders.

"It's nice to see this change in philosophy that's saying we can make public-health recommendations based on this really compelling set of data," said Dr. Jeffrey Blumberg, chief of antioxidant research at Tufts University's Jean Mayer USDA Human Nutrition Research Center on Aging.

Blumberg said the JAMA recommendations underscore a growing concern among nutrition experts that the recommended daily allowances, or RDAs, for many vitamins are set too low.

RDAs essentially were established to prevent symptoms of vitamin-deficiency disorders, he said. But evidence is growing that higher levels of many vitamins are necessary to achieve optimum health, he said. The National Academy of Sciences, which sets RDAs, is revising its recommendations based on the new evidence.

Even people who eat five daily servings of fruits and vegetables may not get enough of certain vitamins for optimum health, Fletcher said. Most people, for instance, cannot get the healthiest levels of folate and vitamins D and E from recommended diets, he said.

"All of us grew up believing that if we ate a reasonable diet, that would take care of our vitamin needs," Fletcher said. "But the new evidence, much of it in the last couple of years, is that vitamins also prevent the usual diseases we deal with every day - heart disease, cancer, osteoporosis and birth defects."

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