

Should I use Single Nutrient Supplements?

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Advertisements, popular articles, books and other means of trumpeting the benefits of various nutrients for preventing feared diseases such as cancer, osteoporosis, heart disease and diabetes are certainly catching people's attention. This is shown by the latest statistics indicating that over 50 percent of the U.S. population consume nutritional supplements. Some of them supply only a single nutrient or two.

To many people, this seems reasonable. After all, if zinc fights illnesses such as colds, why not take a zinc supplement? If calcium prevents osteoporosis, why not take a calcium supplement? If selenium prevents cancer, why not take a selenium supplement? And so on.

Unfortunately, scientists are finding that single-nutrient supplements often do not prevent the problems thought to arise from lack of the nutrient. Often, in those cases, people are not getting enough of other nutrients they need to effectively use the nutrient of concern. It's more likely that a nutritional deficiency will cause illness when people lack two or more nutrients that depend on each other to function in the body.

Research at the Grand Forks Human Nutrition Research Center has revealed some potential combinations that make signs of a mild nutrient deficiency much more severe. The most recent occurred with a diet marginal in copper and deficient in zinc. This diet was low in red meat, whole grains, green vegetables and milk.

Postmenopausal women fed such a diet for three months showed changes that could increase risk of heart attack and osteoporosis if left uncorrected for an extended period of time. These changes included increases in blood cholesterol and in the incidence of abnormal heart rhythms, more calcium lost through the urine and biochemical changes in blood indicating decreased bone formation. The women either didn't exhibit these changes or had much less severe changes when only one of these essential trace elements was low in their diet.

The lack of zinc also induced changes associated with copper deficiency, including changing the body's natural antioxidant defense. Giving the women extra copper could not completely overcome these changes, which indicated that the body needs zinc to use copper optimally. The women needed adequate amounts of both nutrients to return their antioxidant systems to normal.

While inadequate intakes of individual nutrients can contribute to some chronic diseases associated with aging, the likelihood of this is much greater when intakes of two elements contributing to the same disease are inadequate. Other low-nutrient combinations include boron and vitamin D, selenium and vitamin E, folic acid and vitamin B₁₂, and calcium and other nutrients involved in bone formation, such as copper and zinc. In these cases, supplementing with just one of the missing nutrients is not likely to give the desired health outcome.

This further supports the view that it's best to get the nutrients you need through eating a healthful diet that provides all nutrients in appropriate amounts. The publication "Dietary Guidelines for Americans," from the U.S. Departments of Agriculture and Health and Human Services, is a good source of information on a

healthful diet. This publication can be viewed and downloaded from the www.usda.gov/cnpp, or purchased by calling the Federal Consumer Information Center toll-free at (888)878-3256.

For those who insist on insurance, avoid single-nutrient supplements and choose a balanced multivitamin-multimineral supplement instead.