-Nutrition

What you need to know about antioxidants C-1

Too much can be an anti to the body

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I have a friend who takes large doses of vitamin E because he says the vitamin is an antioxidant that prevents cancer, heart disease, and aging? Is he right? What are antioxidants? —Gerdeny_od@gmail.com



Antioxidants are substances that counteract the harmful effects of free radicals on the cells of the body. Free radicals are highly reactive atoms or groups of atoms that injure cells—they oxidize proteins and lipids that are inside the cell and damage the nucleus. Free radicals are believed to contribute to such disorders as cancer, heart disease, diabetes, Alzheimer's disease, Parkinson's disease, eye diseases such as cataracts, and age-related macular degeneration and some other conditions associated with aging.

Free radicals such as hydrogen peroxide and singlet oxygen, which are by-products of the normal metabolic activities of cells, are internally generated. But some, such as cigarette smoke, air pollution, and sunlight, are derived from the environment.

List and sources of antioxidants

Antioxidants include some vitamins such as vitamin E (tocopherol), vitamin C (ascorbic acid), vitamin A (retinol), beta-carotene, lycopene, a variety of minerals like zinc, iron, copper, manganese, selenium, and thousands of phytochemicals (plant chemicals).

Antioxidants are present in varying amounts in the food we eat. Fruits and vegetables, in particular, because of their phytochemical contents, are excellent sources of antioxidants. There is good evidence that a diet with lots of vegetables and fruits lowers risks of certain diseases.

Coffee is also a good source of antioxidants. In fact, a study has shown that coffee is the main source of antioxidant for Americans. This is probably because Americans drink a lot of coffee.

Nowadays, aside from the diet, antioxidants, often in mega doses, can also be sourced from supplements in the form of tablets and capsules.

Antioxidant supplements do not confer health benefits and could be detrimental

To date, clinical trials have not established the presumed beneficial effects on cancer, heart disease, and other degenerative disorders of megadoses of antioxidants, such as vitamins E and C and beta-carotene. On the contrary, results of some studies suggest that taking high doses of these antioxidants may have adverse effects. For example, one study showed that there were significantly more deaths from coronary heart disease among those who took beta carotene supplements. Another clinical trial on a combination of beta carotene and vitamin A was terminated after four years because it appeared that smokers among those

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who were taking the supplements had a higher incidence of lung cancer and a higher death rate. A study, published in the Oct. 12, 2011 issue of the Journal of the American Medical Association, showed that there were 17 percent more cases of prostate cancer among men who took vitamin E supplements than among those who did not take supplements. More recently, at least a couple of studies have shown that antioxidants may interfere with the action of drugs that are used to improve cholesterol levels.

In brief, high-dose supplements of antioxidants may be linked to health risks in some cases: high doses of beta-carotene may increase the risk of coronary heart disease, and of lung cancer in smokers; high doses of vitamin E may increase the risks of prostate cancer and one type of stroke; and, antioxidant supplements may interact with some medicines.

All told, the body needs antioxidants to get rid of free radicals, but they should be sourced from the diet, from fruits and vegetables, in particular. They should not be sourced from dietary supplements. In fact, people should not take antioxidant supplements. They do more harm than good.