

Omega-6 fatty acids: Make them a part of heart-healthy eating

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Omega-6 fatty acids - found in vegetable oils, nuts and seeds - are a beneficial part of a heart-healthy eating plan, according to a science advisory published in *Circulation: Journal of the American Heart Association*.

The association recommends that people aim for at least 5 percent to 10 percent of calories from omega-6 fatty acids. Most Americans actually get enough of these oils in the foods they are currently eating, such as nuts, cooking oils and salad dressings, the advisory reports.

Recommended daily servings of omega-6 depend on physical activity level, age and gender, but range from 12 to 22 grams per day.

Omega-6, and the similarly-named omega-3 fatty acids (found in fattier fish such as tuna, mackerel and salmon), are called polyunsaturated fatty acids (PUFA), and can have health benefits when consumed in the recommended amounts, especially when used to replace saturated fats or trans fats in the diet. Omega-6 and omega-3 PUFA play a crucial role in heart and brain function and in normal growth and development. PUFA are "essential" fats that your body needs but can't produce, so you must get them from food.

"Of course, as with any news about a single nutrient, it's important to remember to focus on an overall healthy dietary pattern - one nutrient or one type of food isn't a cure-all," said William Harris, Ph.D., lead author of the advisory. "Our goal was simply to let Americans know that foods containing omega-6 fatty acids can be part of a healthy diet, and can

even help improve your cardiovascular risk profile."

The American Heart Association's dietary recommendations suggest a broadly defined healthy eating pattern over time - with an emphasis on fruits, vegetables, high-fiber whole grains, lean meat, poultry, and fish twice a week. Diets rich in fruits, vegetables and whole grains have been associated in a large number of studies with reduced cardiovascular risk.

Linoleic acid (LA) is the main omega-6 fatty acid in foods, accounting for 85 percent to 90 percent of the dietary omega-6 PUFA.

There has been some debate within the nutrition community regarding the benefits of omega-6 based on the belief that they may promote inflammation, thus increasing cardiovascular risk. "That idea is based more on assumptions and extrapolations than on hard data," said Harris, a research professor for the Sanford School of Medicine at the University of South Dakota and director of the Metabolism and Nutrition Research Center at Sanford Research/USD

The linking of omega-6 intake to inflammation stems from the fact that arachidonic acid (AA), which can be formed from LA, is involved in the early stages of inflammation. However, the advisory explains that AA and LA also give rise to anti-inflammatory molecules.

For example, in the cells that form the lining of blood vessels, omega-6 PUFA have anti-inflammatory properties, suppressing the production of adhesion molecules, chemokines and interleukins — all of which are key mediators of the atherosclerotic process. "Thus, it is incorrect to view the omega-6 fatty acids as 'pro-inflammatory,'" Harris explained. "Eating less LA will not lower tissue levels of AA (the usual rationale for reducing LA intakes) because the body tightly regulates the synthesis of AA from LA."

The advisory reviewed a meta-analysis of randomized, controlled trials, and more than two dozen observational, cohort, case/control and ecological reports.

Observational studies showed that people who ate the most omega-6 fatty acids usually had the least heart disease. Other studies examined blood levels of omega-6 in heart patients compared with healthy people and found that patients with heart disease had lower levels of omega-6 in their blood.

In controlled trials in which researchers randomly assigned people to consume diets containing high versus low levels of omega-6 and then recorded the number of heart attacks over several years, those assigned to the higher omega-6 diets had less heart disease.

A meta-analysis of several trials indicated that replacing saturated fats with PUFA lowered risk for heart disease events by 24 percent. "When saturated fat in the diet is replaced by omega-6 PUFA, the blood cholesterol levels go down," Harris said. "This may be part of the reason why higher omega-6 diets are heart-healthy."

Source: American Heart Association

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