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Fish Oil, Flaxseed, and Fatty Acids: How to supplement your diet for optimal heart health

The evidence is clear: fish oil and plant sterols can have a positive impact on the cardiac health of heart patients. Fish oil, derived from fatty fish like wild salmon, albacore tuna, and sardines and rich in beneficial omega-3 fatty acids, has been shown to lower blood pressure and protect against arrhythmia, while plant sterols (also known as phytochemicals and found in, yes, plants) decrease LDL (“bad”) and overall cholesterol levels. Flaxseeds also are an important source of omega-3 fatty acids. An Italian study found that participants reduced their risk of death by 40% in the first few months following a heart attack when they took a daily 850-milligram fish oil capsule, while plant sterols have been consistently linked to 5 - 14% drops in cholesterol.

The trick, of course, is how to get these important nutrients into your diet: through food or supplements? Fish oil capsules are commonly prescribed to European heart patients, along with statins and other medications familiar to Americans, but in the United States, the Food and Drug Administration classifies fish oil as a “dietary supplement”, meaning that it is only evaluated to determine that it is not “unsafe” and has not been evaluated for effectiveness. Plant sterols can be consumed as a supplement and are also routinely added to foods such as margarine and salad dressings, but it is up to the consumer to read the labels. You’ll want to be careful about eating foods that are advertised to include plant sterols — if that food is high in trans fats, then you could be getting a lot more than you bargained for in fat and calories. Dr. Penny Kris-Etherton, Distinguished Professor of Nutrition at Penn State University says, “Foods or supplements are both okay as a source of plant sterols, but be sure to pay attention to the amount of plant sterol that a food provides as well as the number of calories you will consume when you get plant sterols from foods versus supplements.” If you are on a strict low-calorie diet, a 4-calorie capsule might be preferable to two 200-calorie servings of yogurt — definitely worth a conversation with your doctor.

If you prefer finding these nutrients on your dinner plate, then the issue is all in amounts. The American Heart Association recommends at least two servings of fatty fish each week, or about 6 - 7 ounces, to receive those all-important omega-3 fatty acids. If you adhere to a vegetarian diet, then the AHA urges eating tofu, soybeans, canola oil, walnuts, and flaxseeds. However, not all omega-3 fatty acids are the same: those found in fatty fish (eicosapentaenoic acid [EPA] and docosahexaenoic acid [DHA]) have been shown to be effective against heart disease, specifically arrhythmia and high blood pressure, while plant-derived omega-3 fatty acids (alpha-linolenic acid [ALA]) have not yet been identified to offer the same benefits — although they can significantly lower cholesterol. Guidelines for flaxseed have not been established, but most nutritionists suggest one teaspoon of ground flaxseed daily, which can be added to yogurt, oatmeal, or smoothies; the same amount of flaxseed oil can be used in salad dressings or drizzled

over cooked vegetables.

Plant sterols pose somewhat more of a problem if you want to get them fresh at meals. While fruits and vegetables contain them in small amounts, you need about 2 to 3 grams daily — since the average person consumes about 0.25 grams per day, and vegetarians up to 0.4 grams daily, it's easy to see why people are turning to supplements. A plant sterol-enriched margarine will give you the recommended amount in a couple of teaspoons each day. You can also look into adding a powdered supplement to smoothies or other foods.

Finally, not a fan of the taste of fish or fish oil? Don't worry — check in your local health food store and you're likely to find capsules infused with lemon oil to mask that fishy aftertaste, or you could even opt for children's chewables in a variety of fruity flavors.

Ask the Nutritionist:

We spoke with Dr. Penny Kris-Etherton, Distinguished Professor of Nutrition at Pennsylvania State University, about fish oil and plant sterols and how they can benefit women with heart disease:

Q: Why should women be adding fish oil and plant sterols into their diets?

A: Fish oil is protective against heart disease. Fish oil supplements (and fatty fish) decrease major coronary events in individuals with coronary disease. One study conducted with women who had coronary disease reported a protective effect against major coronary events in response to one of the major fatty acids in fish oil (i.e. EPA). Fish oil is recommended to decrease elevated triglyceride levels, a risk factor for heart disease. Plant sterols inhibit cholesterol in the intestine and, in turn, decrease total and LDL cholesterol levels in the circulation.

Q: Studies have shown that plant sterols may potentially pose an increased risk of atherosclerosis; do the benefits of phytosterols outweigh the risks?

A: The benefits of plant sterols far outweigh any risks. First, they target a major risk factor for heart disease, LDL cholesterol. There is a rare genetic condition known as sitosterolemia where individuals hyper-absorb plant sterols and, as a result, are at increased risk for heart disease. Plant sterols should not be taken by persons with sitosterolemia.

Q: Do these supplements provide different benefits for women than they do for men?

A: The supplements provide the same benefits for women as they do for men. Fish oil protects against arrhythmia (and sudden death) and decreases triglyceride levels. Plant sterols decrease total and LDL cholesterol levels.

Q: What is the best way to get fish oil into your diet — through eating certain types of fish or through fish oil capsules?

A: Both strategies are acceptable. The key is to consume adequate amounts of long chain omega-3 fatty acids. When consuming fish it is important to pay attention to advisories from the FDA

and State and Local organizations about environmental contaminants.

Resources:

AHA: Fish 101

<http://www.americanheart.org/presenter.jhtml?identifier=3071550>

AHA: Phytochemicals and Cardiac Disease

<http://www.americanheart.org/presenter.jhtml?identifier=4722>

Ask the Expert: Omega-3 Fatty Acids

<http://www.hsph.harvard.edu/nutritionsource/questions/omega-3/index.html>

Plant Sterols and Stanols

http://my.clevelandclinic.org/healthy_living/cholesterol/hic_plant_sterols_and_stanols.aspx

Fish oil: low-key, but real

<http://articles.latimes.com/2008/may/05/health/he-skeptic5>

Ground flaxseed: Better than whole?

<http://www.mayoclinic.com/health/flaxseed/AN01258>

Getting Fortified in the Fight against Cholesterol

http://www.vancouversun.com/story_print.html?id=3241768&sponsor=