Dear Alice,

My diet, which concentrates on fish, such as salmon, sea bass, etc., and shellfish, seems to have improved my HDL levels without increasing my LDL levels. Can you explain the relationship of high fish and shellfish diets on HDL/LDL levels in the bloodstream?

--Curious

Answer

Dear Curious,

Something's fishy about your lab results. The improvement in your cholesterol levels may be due to the foods you replaced with the fish, rather than the fish in and of itself. The fats found in some varieties of fish, omega-3 fatty acids, reduce triglyceride levels in the blood, but generally do not affect cholesterol levels.

However, you're still doing yourself a favor by feasting on fish. Eating fish offers many major health advantages. The primary benefit found from including fish oils in your diet is the lowered risk for sudden cardiac death. This means that fish eaters decrease their chance of dying suddenly from a heart attack (keep in mind that there are different types of heart attacks).

Two mechanisms explain how eating fish reduces the chance of heart attack. First, it seems that fish oil fatty acids reduce blood clotting by decreasing the stickiness of blood platelets. Second, omega-3 oils may play a role in stabilizing heart rhythms. It could be that the electrical impulses that go awry during some heart attacks are preserved in fish eaters. These protective qualities may work together, resulting in the reduced risk of sudden cardiac death that has been observed among fish consumers. Other possible health benefits of omega-3 fatty acids are their potential to help lower blood pressure and protect against some forms of stroke.
Remember, it is possible to have too much of a good thing. There are certain risks associated with eating too much fish. The main risk has to do with the toxicity of environmental contaminants, primarily mercury, which ends up in fish due to environmental pollution. Because of this, women who are pregnant or breastfeeding are often advised to avoid fish. In addition, there are various recommendations for eating fish to avoid consuming dangerous levels of mercury, as its toxicity can damage the brain, kidneys, and lungs. Mercury levels may be especially high in shark, swordfish, king mackerel, and tilefish.

But in moderate amount, fish can be beneficial, especially for people eating a western diet that is often low in omega 3s. Good sources of omega 3 include:

- Shrimp
- Salmon
- Mackerel (watch out for the higher mercury levels in king mackerel)
- Rainbow and lake trout
- Sardines
- Halibut
- Pollock
- Oysters
- Catfish
- Albacore, blue fin, and yellow fin tuna (including the canned type)
- Striped sea bass
- Turbot
- Swordfish (watch out for higher mercury levels)

Fish oil supplements, on the other hand, contain almost no toxic contaminants and thus are safe. However, they can cause gastric symptoms, so it is best to take them with food. People with low blood pressure or who are taking medication for low blood pressure should also be careful about eating too much fish, since the fish oil could lower blood pressure even more. In very high amounts, fish oils can have some anti-coagulant effects, causing nosebleeds in some people.

Eating these jewels of the sea even once or twice a week may lead to heart healthy benefits. Obviously an all-around healthy diet will provide even more protection from heart disease, and other maladies, too.

Alice!

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