

Omega-3 Fats

and Heart Disease



The type of fat you eat can increase your risk for heart disease. For example, eating polyunsaturated and monounsaturated fats affect your cholesterol levels in a way that can reduce your risk of heart disease. One very important group of unsaturated fats are the omega-3 fats.

Omega-3 fats are polyunsaturated fats with a type of structure that makes them different from other polyunsaturated fats. There are three types of omega-3 fats that are important to our health: alpha-linolenic acid (ALA), docosahexaenoic acid (DHA), and eicosapentaenoic acid (EPA). The interesting thing is that we can only get ALA from foods that we eat, such as flaxseeds, canola oil, and walnuts. However, our bodies can make DHA and EPA from ALA or we can get these omega-3 fats directly from foods like fish.

Eating omega-3 fats has been shown to reduce the risk of heart disease and lower rates of death from heart disease. They also play an important role in brain and eye development in small children and may relieve symptoms of rheumatoid arthritis, depression, and anxiety. Because of all of these benefits, Canada's Food Guide recommends eating two servings of fish a week. Currently, Canadians are eating less than this amount.

How do omega-3 fats impact heart disease?

Eating omega-3 fats, mostly DHA and EPA, reduces your risk for heart disease and fatal heart attacks by: lowering triglyceride levels in your blood, decreasing the build up of plaque in blood vessels, making your blood less sticky, and slightly lowering blood pressure. Studies have found that groups of people who eat more

“Eating omega-3 fats has been shown to reduce the risk of heart disease and lower rates of death from heart disease.”

omega-3 fats from fish and fish oil are less likely to die of a heart attack. In fact, in a 2006 review article in the Journal of the American Medical Association, they found that just a small amount of DHA and EPA, about 1 to 2 servings of fish a week, can lower your risk of dying from a heart attack by up to 25%.

What amount of omega-3 fats do I need?

Adult women should get at least 1.1 g/day and men 1.6 g/day of omega-3s. This amount includes all three omega-3 fats - ALA, DHA, and EPA. However, the American Heart Association says that people with heart disease should have 1 g/day of just DHA and EPA since DHA and EPA show more benefits for your heart than ALA.

Five easy ways to get your omega-3s

5

1. Have fish on Friday.
2. Pack a tuna or salmon sandwich for lunch.
3. Cook with canola oil.
4. Have a handful of walnuts as a snack.
5. Add a tablespoon of ground flaxseed to your cereal or yogurt.

Sources of omega-3 fats

The best sources of DHA and EPA are fish, especially fatty fish such as salmon, herring, sardines, trout, and mackerel. In fact, one 3 oz (85 g) serving of salmon has almost 2 g of DHA and EPA. The best sources of ALA are flaxseeds, canola oil, soybean oil, and walnuts. For example, one tablespoon of canola oil has 1.3 g of ALA.

The Bottom Line

While omega-3 fats are heart healthy, they are only part of the solution to preventing heart disease. Following Canada's Food Guide, being physically active, staying smoke-free, and managing stress are your best ways to reduce your risk. With that in mind, adding more omega-3 fats into a healthy eating pattern by having two servings of fish a week, as recommended in Canada's Food Guide, could reduce your risk for heart disease even more. Women of childbearing age should consume only those fish lower in mercury.*

* For more information on this topic visit Health Canada's Mercury and Human Health Information Sheet at http://www.hc-sc.gc.ca/iyh-vsv/viron/merc_e.html.

Omega-3 fats in food

Some Sources of ALA

(per tablespoon or 15 mL)

Flaxseed oil	2.2 g
Canola oil	1.3 g
Walnuts	0.7 g
Olive oil	0.1 g

Some Sources of DHA and EPA

(per 3 oz or 85 g)

Salmon	1.8 g
Herring	1.8 g
Trout	1.0 g
*Tuna	0.7 g
Cod	0.2 g

* (white, canned in water)

I don't like fish. Are fish oil supplements okay to take instead?

In most cases, fish oil supplements are a safe alternative if you don't eat fish. The side-effects of taking fish oil capsules are usually a fishy aftertaste and upset stomach. Also, as a rule, you shouldn't take more than 3 g of omega-3 fats per day. Fish oil supplements are not recommended for people with ventricular tachycardia or who have implantable cardioverter defibrillators.

Are omega-3s in my orange juice?

Omega-3 fats are now in a number of foods where you wouldn't normally find them such as orange juice, yogurt, eggs, and cheese. In some cases fish oil is added to the product, which can change the taste. In other foods, algae (a good source of omega-3 fats) is added to the food, which doesn't have the fishy taste that fish oil can leave. In omega-3 eggs, the chickens are fed a diet high in flaxseed. In all cases, these foods tend to be more expensive. Whether or not they are worth the extra money depends on how much omega-3 fat you're currently getting and how much omega-3 fat the food provides. Read the Nutrition Facts table on the food label to see how much you're getting in the different foods. **HH**

Recipe

Orange-Glazed Salmon over Sautéed Spinach*

Try this quick and tasty recipe to increase your omega-3s this week.

- 1 orange, washed, grated, and juiced
- 25 mL (2 Tbsp) honey
- 15 mL (1 Tbsp) brown sugar
- 15 mL (1 Tbsp) canola oil, divided
- 1 mL (1/4 tsp) red pepper flakes
- 4 – 85 g (3 oz) salmon fillets
- 250 g (8 oz) fresh spinach, trimmed
- 15 mL (1 Tbsp) lemon juice
- 0.5 mL (1/8 tsp) freshly-ground black pepper

1. Combine juice from orange, honey, brown sugar, 10 mL (2 tsp) oil, and red pepper flakes.
2. Arrange salmon in a dish just big enough to hold them. Pour orange juice mixture over the fillets. Marinate in fridge for 30 minutes, turning once to coat. Discard marinade.
3. Grill salmon skin side up, over medium heat for 5 to 7 minutes. Turn and cook for another 5 to 7 minutes, until fish flakes easily.
4. Just before salmon is done, sauté spinach in 5 mL (1 tsp) oil until wilted. Season with lemon juice and pepper.
5. Spoon spinach onto plates. Top with salmon. Sprinkle with grated orange peel.

Makes 4 servings

Per serving:

Calories 300 Total fat 14 g Omega-3 fats 2.7g
Fibre 2 g Protein 26 g Sodium 115 mg

*Taken from www.canolainfo.org

References:

Institute of Medicine. (2002) *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fatty Acids, Cholesterol, Protein, and Amino Acids*. Washington, D.C.: The National Academies Press.

Jenkins, D.J.A. et al. (2008) Fish-oil supplementation in patients with implantable cardioverter defibrillators: a meta-analysis. *Canadian Medical Association Journal*, 178(2), 157-64.

Kris-Etherton, P.M., Harris, W.S., & Appel, L.J. (2002) Fish Consumption, Fish Oil, Omega-3 Fatty Acids, and Cardiovascular Disease. *Circulation*, 106, 2747-2757.

Mozaffarian, D. & Rimm, E.B. (2006) Fish Intake, Contaminants, and Human Health. Evaluating the Risks and the Benefits. *Journal of the American Medical Association*, 296, 1885-1899.

Wang, C. et al. (2006) n-3 Fatty acids from fish or fish-oil supplements, but not alpha-linolenic acid, benefit cardiovascular disease outcomes in primary- and secondary- prevention studies: a systematic review. *American Journal of Clinical Nutrition*, 84, 5-17.

