

Nutrition Matters

Nutrition Services, Community and Health Services

Omega-3 fat: Reel in the benefits!

One of the big nutrition stories these days is about omega-3 fats, which have a growing list of health benefits. Many Canadians could benefit from more of this nutrient.

Omega-3 players

Omega-3 fats are a type of unsaturated fat. There are different kinds of omega-3 fats and each has a different role in our bodies. The most common in the Canadian diet are the following:

1. **ALA** - alpha-linolenic acid - found in ground flaxseed, walnuts, soybean, canola and flaxseed oils, bread, some margarines, yogurt, cheese and milk beverages
2. **DHA** - docosahexaenoic acid – found in fish and seafood such as mackerel (pacific or jack), herring, salmon, trout, striped bass, sardines, whitefish, sablefish (black cod), oysters, omega-3 eggs, and milk or yogurt, where it has been added
3. **EPA** - eicosapentaenoic acid – found in most fish and seafood (the best sources are the same as DHA listed above)



Our bodies need all three forms of omega-3 fats (ALA, DHA and EPA). ALA gets converted into EPA and DHA in our bodies, but only in small amounts. EPA and DHA have the greatest health benefit, so we should also try to eat foods that are high in EPA and DHA.

O - Mega benefits

Omega-3 fats, particularly EPA and DHA, are very healthy for our hearts. Studies show that a person can greatly reduce their risk of dying from heart disease or stroke by eating fish at least twice a week.

Omega-3 fats may protect the heart by:

- making the blood less sticky which reduces the risk for a blood clot (often the first step in a heart attack)
- reducing the level of triglycerides (a type of fat in the blood that can increase the risk for heart disease or stroke)
- reducing inflammation of the arteries (inflammation can result in a higher risk for heart disease)
- helping to maintain a regular heart beat
- causing small reductions in blood pressure
- keeping the artery walls relaxed

One type of omega-3, DHA, helps to develop the brain and eyes of the fetus in pregnancy and in infants and children. DHA may also improve language skills and coordination in infants and children.

More potential benefits

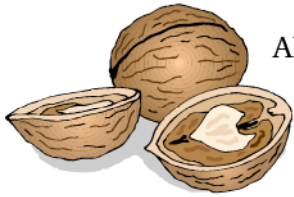
Some preliminary research suggests that omega-3 fat may help:

- reduce the risk of colon, breast and prostate cancer
- treat rheumatoid arthritis, Crohn's disease, ulcerative colitis and depression

More studies are required before we know if omega-3 fats really help in these areas.

How much omega-3 do you need?

Men should aim for 1600 mg of ALA per day and women 1100 mg per day. You can meet these requirements by eating a variety of foods rich in omega-3 fat, such as walnuts and ground flaxseed.



Although Health Canada has not established a requirement for DHA and EPA, health experts recommend eating 300-450 mg per day of EPA and DHA. This is equivalent to about two to three servings a week (one serving = 75 grams or two and a half ounces) of fish, especially fatty fish, rich in omega-3 fats.

ALA, DHA and EPA all play an important role in the body. DHA and EPA are found in fatty fish such as salmon and trout. ALA is found in plant sources, such as: canola oil, ground flaxseed and walnuts.

DHA and EPA provide the greatest health benefit, so aim for foods that provide more of these types of omega-3's.

How to get more omega-3 fat?

- Eat higher-fat fish such as salmon or mackerel at least two times per week. Aim for fresh, frozen or canned fish, but not the breaded, deep-fried kind. Breaded fish sticks and fillets may contain omega-3s but these products are often too high in unhealthy fats to be a good choice
- Try salmon and tuna sandwiches, fish chowder or fish cakes
- Try sardines or oysters on crackers
- Use soybean, flaxseed or canola oil and non-hydrogenated canola oil margarine
- Eat more nuts and seeds, particularly walnuts and ground flaxseed
- Add ground flaxseed to hot or cold cereal or yogurt
- Add walnuts to cereal or salads
- Have soybeans (edamame) as part of a meal or snack
- Try food products containing omega-3 fat such as some breads, yogurt, margarine, and milk and soy beverages
- Use omega-3 eggs
- Choose milk with added DHA (e.g. Dairy Oh!TM)



Food or supplements?

Foods that are high in omega-3 fat have many other nutritional benefits (e.g., fish contains high quality protein and is low in saturated fat). However, studies show that you can get similar omega-3 health benefits by taking fish oil or other omega-3 supplements. Most supplements contain about 500 mg of DHA and EPA combined.

Fish oil supplements are a good way to get the recommended levels of omega-3 fats for people who do not eat fish regularly or those who dislike fish.

People who are allergic to fish should consult with their doctor for specific advice about omega-3 supplementation.

If you are thinking about taking fish oil supplements or other omega-3 supplements, make sure you discuss it with your doctor. Other medications that you may be taking, such as blood thinners, need to be taken into consideration.



This chart lists the amount of omega-3 fat in various foods. The fish species listed have low to medium levels of mercury.

Type of Fish 75 g cooked	Omega 3 (DHA+EPA) mg
Anchovies, European, canned in oil	1541
Arctic char	675
Catfish (bullhead)	133
Bass, striped	725
Clam	214
Cod	119
Crab, blue	355
Flounder and sole	376
Haddock	179
Herring – Pacific	1594
Herring - Atlantic	1511
Mackerel - Atlantic	902
Mackerel - Pacific	1386
Mussels	587
Oysters, mollusks, eastern	840
Perch	243
Pollock – Atlantic (Boston bluefish)	406
Sablefish (black cod)	1340
Salmon – Atlantic – farmed	1611
Salmon – Atlantic – wild	1380
Salmon – canned Sockeye	1389
Sardines – canned in oil	787
Shrimp	236
Smelt, rainbow (capelin)	667
Trout – Rainbow	865
Tuna – light canned in water	202
Whitefish	1208
Whiting (hake)	388
Other DHA+EPA food sources	
Naturegg™ – Omega 3 egg (1 egg)	75
Naturegg – Break-Free Omega-3™ liquid egg (50g or 3.3 tbsp = 1 egg)	250
Dairy Oh!™ Homogenized milk (1 cup)	20
Dairy Oh!™ 1% or 2% milk (1 cup)	10
1 standard fish oil supplement (1000 mg)	500

Fish advisories for women, infants and children

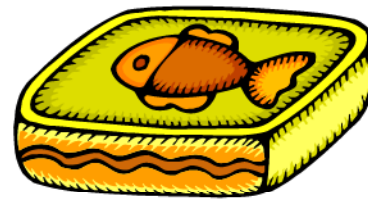
- Exposure to high amounts of mercury can be harmful, especially at certain stages of life. Women who are pregnant or breastfeeding, women who may become pregnant, and people feeding infants and children in particular need to pay close attention to making healthy fish choices
- Nearly all fish and shellfish contain mercury, but some types contain much higher levels than others and are more of a concern
- Due to high mercury levels, it is advised to limit certain fish including: barracuda, escolar, marlin, orange roughy, pickerel, pike, sea bass, shark, snake mackerel, swordfish, tilefish, tuna (fresh or frozen) and walleye
- Different types of canned tuna contain different levels of mercury. “Light” canned tuna is considered low in mercury. “White” (Albacore) canned tuna is higher in omega-3, but also higher in mercury. Choose “light” canned tuna more often than “white” canned tuna
- There are specific advisories for sport fish caught in Ontario, particularly for women and children. For more information, refer to the *Guide to Eating Ontario Sport Fish*. You can find a copy of the guide at www.ene.gov.on.ca/envision/guide or by calling 1-800-820-2716

For specific information on the types and amounts of fish that are safe and healthy to eat, see the fact sheet ***A guide to eating fish for women, infants & families*** online at www.york.ca/fishguide or call York Region Community and Health Services *Health Connection* at 1-800-361-5653 to obtain a copy.



Other things you should know

- Diets that are high in saturated and trans fat can reduce the benefits of a diet rich in omega-3 fat – another reason to limit saturated and trans fats as much as possible
- Because vegans or strict vegetarians do not eat fish, they need to pay special attention to their omega-3 fat intake. They should make sure they are getting enough omega-3 fat, particularly DHA and EPA, through foods or supplements
- Do not take more than a total of 3000 mg EPA and DHA per day, with no more than 2000 mg from a dietary supplement. High levels can result in an increased risk of bleeding
- Some studies show that a high intake of ALA may increase the risk for prostate cancer. However, the benefits in preventing heart disease are greater than the smaller risk for prostate cancer. Men at risk for prostate cancer (i.e., those who have a family history or high blood PSA levels) should consult with their doctor before taking larger doses of omega-3 fat through food or supplements



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