

## OMEGA-3 FATS

### What are Omega-3 fats?

Omega-3 fatty acids, also known as "omega-3 fats", are important nutrients for our health. Omega-3 fats refer to three fats. They are:

- Alpha-linolenic acid (ALA)
- Docosahexaenoic acid (DHA)
- Eicosapentaenoic acid (EPA)

### Why are omega-3 fats important?

Research on the many health benefits of omega-3 fats is growing. Most North Americans do not eat enough omega-3 fats to enjoy the health benefits they offer. ALA is the most common omega-3 fat eaten by North Americans. The research suggests that DHA and EPA are the most important omega-3 fats for health. Some of the important roles of omega-3 fats are described below:

***Pregnancy and breastfeeding and early childhood*** - DHA is important in the development of the fetal brain and eyes during pregnancy. DHA continues to be important for development that occurs after birth. Breastfed babies can get DHA through breast milk, if the mother includes good sources in her diet. Some infant formulas contain added DHA. These formulas have not been proven to have any benefit over formulas that do not contain DHA.

***Heart disease*** - DHA and EPA lower the risk of heart attack and stroke. They do this by:

- improving abnormal heart rhythm that can lead to sudden death
- preventing formation of hard deposits (plaques) along the inner wall of the artery, reducing the chances of blockages in the artery
- reducing triglycerides in the blood. Triglycerides are a form of fat carried through the bloodstream.

***Autoimmune and inflammatory diseases*** - ALA, DHA and EPA reduce inflammation (swelling) and are effective in the treatment of rheumatoid arthritis and inflammatory bowel diseases such as Crohn's disease and colitis.

***Dementia and Alzheimer's disease*** - a low blood level of DHA is a risk factor for dementia and Alzheimer's disease. A diet with good sources of DHA reduces the risk of developing these conditions.

***Age-related macular degeneration*** - Macular degeneration is a leading cause of blindness in older adults. A diet with good sources of DHA reduces the risk of this condition.

### What are some food sources of omega-3 fats?

ALA is the most common omega-3 fat found in food. ALA is found naturally in some plant-based foods. DHA and EPA are found naturally in fish, especially fatty fish such as salmon, mackerel, herring and trout. Other fish and shellfish provide smaller amounts of DHA and EPA.

### Common Food Sources of Omega-3 Fats

Omega-3 Fat	Food Source
ALA	<ul style="list-style-type: none"> <li>• Ground flaxseed and walnuts and soybeans</li> <li>• Flaxseed, walnut, soybean and canola oils and non-hydrogenated canola and soy margarines</li> </ul>
DHA and EPA	<ul style="list-style-type: none"> <li>• Mackerel, salmon, herring, trout and sardines and other fish and shellfish</li> <li>• Marine algae supplements</li> </ul>

### **Omega-3 Fortified Foods**

Other foods are available that have added omega-3 fats including eggs, milk, yogurt, cheese, pasta and bread. Eating these foods can help to meet your needs for omega-3 fats.

*Caution:* If you want a food with added omega-3 fats, you should read the labels carefully and choose products that are low in saturated fat and cholesterol. Canadians are advised to reduce the amounts of saturated fat and cholesterol in their diets. This includes skim or 1% fat milk, yogurt, and liquid egg substitutes.

### **Boosting Your Intake of Omega-3 Fats**

- Eat fish at least 2 times each week.
- Include canned fish in your diet (examples: salmon, sardines, light tuna). Try sardines on toast.
- Add ground flaxseed to foods like hot or cold cereal or yogurt. *Note:* Pregnant women should limit their intake of ground flaxseed to occasional use (not daily). Ground flaxseed contain lignans. There is not enough information about their safety in pregnancy.
- Eat walnuts. Add walnuts to salads, cereals, baking (examples, muffins, cookies, breads) and pancakes.
- Have fresh or frozen soybeans (edemame) as a vegetable at meals.
- Use soybean oil or canola oil in salad dressings and recipes.
- Use non-hydrogenated margarine made from canola or soybean as a spread or in baking.
- Eat omega-3 liquid eggs or eggs in the shell. Enjoy scrambled eggs or try a homemade egg sandwich.
- Use other omega-3 fortified products such as milk, yogurt, bread and pasta.
- Substitute 1/4 cup ground flaxseed for 1/4 cup flour in bread, pizza dough, muffin, cookie, or meatloaf recipes.
- Replace 1 egg with 1 tablespoon ground flaxseed and 3 tablespoons of water in recipes.

**Note:** Omega-3 fats contain the same number of calories as other fats. You may need to adjust your food intake to prevent weight gain.

### **Which Fish Should I Eat?**

Fish and shellfish are important foods for a healthy diet. A few fish have higher amounts of mercury, which could harm an unborn baby or a young child. Fish that tend to have higher amounts of mercury are shark, swordfish, and fresh and frozen tuna. Canned white tuna also contain higher amounts of mercury. Women who could become pregnant, women who are pregnant or breastfeeding, and young children should avoid eating these fish.

Canned "light" tuna, salmon, sardines and anchovies are low in mercury and good sources of omega-3 fats and can be enjoyed often. Other fish and shellfish such as cod, crab, haddock, halibut, pollock, sole, trout and shrimp are safe to eat often.

### **How Much Omega-3 Fat Do I Need?**

Current recommendations for omega-3 fats is to follow Canada's Food Guide choosing a variety of foods that contain omega-3 fats. Most people can meet their needs for omega-3 fats by eating 1 or 2 servings every day of a variety of the following:

- ground flaxseeds (1 tbsp.) or walnuts (1/4 cup) or soybeans (1/2 cup)
  - flaxseed oil, walnut oil, canola oil or soybean oil (1 tsp.)
  - non-hydrogenated canola or soy margarine (1-2 tsp.)
  - fortified foods (examples, eggs, milk, yogurt, cheese, pasta or bread)
- and**
- at least 2 servings (3 ounces per serving) every week of mackerel, salmon, herring, trout, sardines, halibut, cod or tuna

The amount of omega-3 fats needed to prevent or treat diseases such as age-related macular degeneration, dementia or autoimmune and inflammatory diseases is not known. People with these conditions should follow the general advice above for omega-3 fats and talk to their doctor.

### **What About Omega-3 Supplements?**

The best way to get omega-3 fats is through food. People with higher needs for omega-3 fats (women who are pregnant or breastfeeding and people with chronic conditions such as heart disease or an autoimmune or inflammatory disease) may find it hard to meet their needs through their diet. These people may choose to take a supplement. A dietitian, doctor, or pharmacist can help you choose a supplement that is safe for you.

There are some risks and disadvantages when taking supplements. These include:

- *Toxicity*-Fish liver oil supplements, including cod liver oil, are not recommended. Fish liver oil supplements contain high levels of vitamin A, which can be toxic or harmful to an unborn baby if taken in pregnancy.
- *Contamination*-Fish oil supplements may contain toxins such as mercury and pesticides. Consumers concerned about this may want to visit the [International Fish Oil Standards](#) (IFOS) website. IFOS tests DHA and EPA levels and contaminant levels in supplements by brand name.
- *Excessive bleeding*-Consuming higher amounts of omega-3 fats, more than 3000 mg (3.0 g) a day from food and/or supplements, may cause excessive bleeding. This is not recommended without the careful supervision of a doctor.
- *Incomplete nutrition*-Fish and other food sources of omega-3 fats provide many important nutrients that we do not get from supplements.

### **The bottom line . . .**

- Omega-3 fats are important for our health and to prevent and manage chronic conditions.
- A balanced diet that includes omega-3 fats from a variety of foods will ensure that you get ALA, DHA and EPA.
- Omega-3 fats have important health benefits if you are pregnant or breastfeeding, or have a chronic condition such as heart disease or an autoimmune or inflammatory disease.
- Fish, fortified foods and/or a supplement can help you increase your intake of omega-3 fats.

Source: Healthlink Alberta website, [www.healthlinkalberta.ca](http://www.healthlinkalberta.ca)

To learn more, contact your doctor or speak to a nurse 24 hours a day, seven days a week by calling: Alberta Health Link toll free at 1-866-408-LINK (5465). Mandarin Health Link Calgary at 403-943-1554, Cantonese Health Link Calgary at 403-943-1556

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