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# Omega-3 Fatty Acids: An Overview and Food Sources

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Omega-3 fatty acids are a form of polyunsaturated fat that our bodies use to keep the heart, brain, and eyes healthy. They are “essential” fatty acids because we cannot make them on our own. We need to eat them in our diet.

There are 3 types of Omega-3 fatty acids:

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

Our bodies easily use EPA and DHA. When we eat foods with ALA, our body uses an enzyme to very slowly change it to a usable form over the span of a couple days and only 2-5% can be converted to EPA and <1% to DHA. Therefore, larger amounts of foods with ALA are needed to get the same health benefits as foods with EPA or DHA.

## Benefits of Omega-3 Fatty Acids:

- Lower triglycerides (a type of fat in the blood)
- Raise HDL (good cholesterol)
- Prevent blood clots
- Decrease inflammation

## Research Shows Omega-3 Fatty Acids May Also:

- Improve heart health
- Lower high blood pressure
- Maintain healthy eyes
- Improve rheumatoid arthritis
- Improve lupus
- Reduce risk of cancer
- Improve diabetes control
- Improve depression
- Improve Raynaud’s disease
- Reduce risk of Alzheimer’s

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## Recommended Amount:

- Adult Men: 1.6 g/day EPA and DHA
- Adult Women: 1.1 g/day EPA and DHA

Eating two 4oz servings of fish per week provides the recommended amount.

## Food Sources of Omega-3 Fatty Acids:

**EPA** and **DHA** are found in cold-water fish. Aim for one checkbook-size portion of fish, twice per week. Prepare these foods by baking, broiling or grilling. Limit frying or using heavy butter sauces.

- Tuna
- Sardines
- Salmon
- Mackerel
- Whitefish
- Herring

**ALA** is found in numerous plant foods. Eat a variety of these foods to gain the many health benefits that omega-3 fatty acids can offer. Good sources include:

- Leafy greens (collard, kale, spinach, mustard, turnip)
- Nuts (almonds, walnuts)
- Seeds (ground flaxseed, hemp, chia, pumpkin seeds)
- Oils (flaxseed, walnut, canola, olive, hemp)
- Tofu
- Other (avocado, summer squash, Brussels sprouts, winter squash)

## Dietary Supplements

The potential benefits of fish oil and other omega-3 dietary supplements are not as clear. Let your health care team know before you start taking any supplements. Mercury and other industrial pollutants build up in fatty tissues of fish from which fish oils are extracted and are not always completely removed by distillation techniques.

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## Mercury

Mercury is a toxic substance that enters waterways as a waste product from coal burning plants and iron mining. Fish absorb mercury directly from the water. Larger fish are exposed to higher levels of mercury because their prey also absorbs mercury. Cooking does not reduce the mercury content of the fish.

### Symptoms of Mercury Poisoning:

- Numbness and tingling around the lips, fingers and toes
- Difficulty walking and difficulty speaking
- Impaired vision or hearing
- Muscle weakness, fatigue, headache, irritability
- Inability to concentrate
- Tremors or jerky muscle movements

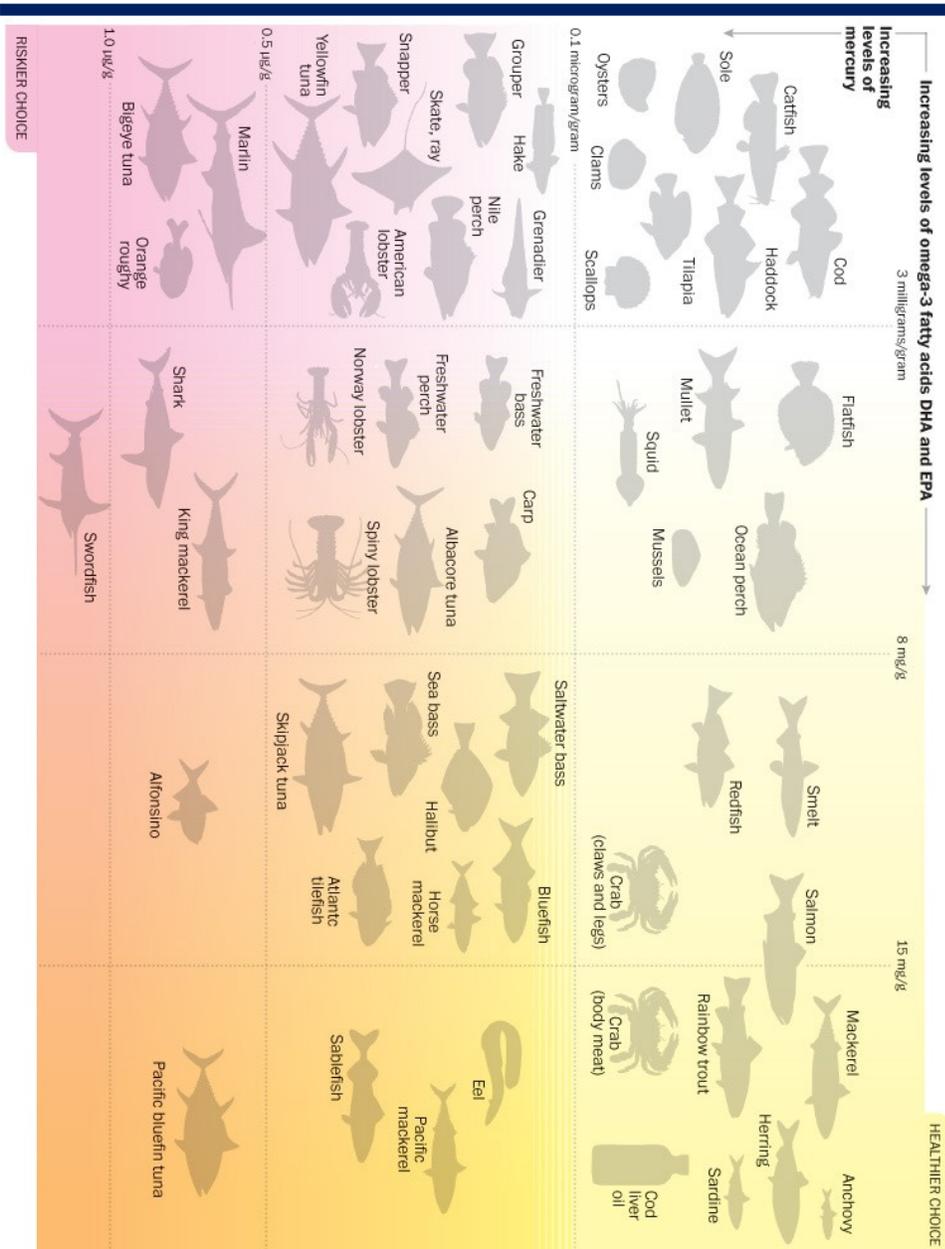
### Mercury Guidelines

Nearly all fish contain trace amounts of mercury, some more than others. In a 2014 report, the Federal Food and Drug Administration (FDA) and Environmental Protection Agency (EPA) concluded pregnant and breastfeeding women, those who might become pregnant, and young children should eat more fish that is lower in mercury to gain important developmental and health benefits.

The report advises pregnant or breastfeeding women to avoid four types of fish that are associated with high mercury levels:

- Tilefish from the Gulf of Mexico
- Shark
- Swordfish
- King mackerel
- Albacore Tuna, limit to 6 ounces per week

When eating fish caught from local streams, rivers and lakes, follow fish advisories from local authorities. If advice is not available, limit your total intake of such fish to 6 ounces a week and 1-3 ounces for children.



Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption. Patterson Clark/The Washington Post. April 3<sup>rd</sup>, 2012.