

## **The Athlete's Kitchen**

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### **Fishing For Health**

When Hippocrates said “Let food be thy medicine”, he might have been referring to eating fish. Fish contains health protective omega-3 fats (DHA, EPA) that reduce the risk of inflammatory diseases (heart disease, diabetes, rheumatoid arthritis, irritable bowel) and atrial fibrillation. But Hippocrates’ decree to let food be thy medicine was back in the days before mercury and PCB pollution infiltrated oceans and streams and contaminated many of the fish we eat today.

Hence, the questions arise among health-conscious athletes: Should I eat fish or avoid it? Does the risk of mercury poisoning and PCB toxins outweigh the health benefits from eating fish? Unlikely, if you eat fish in moderation. But here are some facts to help you make wise fish choices.

### **Benefits of Eating Fish**

For athletes, there's no doubt that fish is an excellent source of lean protein used for building muscles and repairing tissues. A six-ounce serving of fish provides about 40 grams of protein--a hefty chunk of the daily 75 to 135 grams of protein needed by a 150-pound athlete.

- The protein in fish is among the most healthful animal sources of protein. That's because fish is low in saturated fat, the kind of fat that is associated with heart disease. When you eat fish, you are also not eating artery-clogging spare ribs, greasy hamburgers, and cheesy pasta meals.
- Unlike the “bad” saturated fat in beef and cheese that is hard at room temperature, the “good” polyunsaturated omega-3 fish fats (called EPA and DHA) are so soft they are oil. This oil allows fish to stay flexible (unlike beef lard) and be able to swim despite living in cold ocean waters or mountain streams.
- Omega-3 fish oil makes human blood less likely to form clots that cause heart attacks and strokes. Omega-3s have a beneficial effect on the electrical systems of the heart; this protects against irregular heartbeats that can cause sudden death. Omega-3s also reduce triglyceride levels. No wonder the American Heart Association (AHA) recommends eating 6 ounces of fish (one or two meals) per week, particularly oily fish (such as trout, wild or canned salmon, light tuna, sardines). For people who dislike eating fish, fish oil pills are another option (1 gram EPA+DHA; about \$1/day).
- If you already have a history of heart disease, the AHA recommends eating 7 to 13 ounces of oily fish (two to three fish meals) per week.

### **Fish Risks: Mercury**

Eating fish comes with risks related to mercury and PCBs (polychlorinated biphenyls). Here's what you should know about these toxic substances.

- A tiny amount of mercury is found in nature, but man has bolstered the presence of mercury by discarding mercury-containing thermometers, fluorescent lights and batteries,

along with polluting the air with coal-burning power plants. The mercury ends up in lakes, streams and oceans, and gets converted into methylmercury.

- Fish that live in polluted waters accumulate the methylmercury as they feed in these waters. Hence, the big predatory fish that eat the smaller fish in the food chain have the highest levels of mercury.
- Mercury binds tightly to muscle proteins in fish flesh. It accumulates more in fish flesh than in oil, so fish oil supplements appear to contain almost no mercury.
- Most men and older women can safely enjoy up to 7 ounces of high-mercury fish per week. (Healthy people are better able to detoxify mercury than are sickly and elderly people.)
- The Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) advise women who may become pregnant or who currently are pregnant or breast feeding—and their young children—to avoid the fish highest in mercury (shark, swordfish, king mackerel (ono), tilefish). Large amounts of methylmercury can harm an unborn or young child's developing nervous system, resulting in problems with IQ, attention, reading, and memory.
- Everyone—including pregnant women—can safely enjoy up to twelve ounces (two or three fish meals) per week of low-mercury fish and shellfish: shrimp, salmon, pollock, catfish, and canned light tuna. But take heed: if you are into sport-fishing or sushi-eating or the tuna-for-lunch-every-day diet, and enjoy high-mercury fish several times a week, the mercury can accumulate in your body and create health problems (numbness and tingling in hands and feet, fatigue, muscle pain).
- Albacore (white) tuna has three times as much mercury as “light” tuna (skipjack, bluefin, yellowfin, tongol—smaller fish than albacore tuna). For pregnant women, the FDA recommends a limit of one can (6 ounces) of albacore tuna per week
- For a list of fish oil and mercury in commonly consumed seafoods, go to the American Heart Association’s website, [www.amhrt.org](http://www.amhrt.org), and search “Fish.” To calculate your potential mercury intake, go to [www.gotmercury.org](http://www.gotmercury.org).

### **Fish Risks: PCBs**

- Contamination of fish with PCBs is another concern. PCBs were used for industrial purposes until banned in 1976. They are associated with behavior problems, diabetes, cancer and other health issues. PCBs persist in the environment for long periods and accumulate up the food chain. Farmed salmon tend to have some of the highest levels of PCBs, largely due to being fed fishmeal high in PCBs. (This practice is changing.) Wild Pacific (fresh, canned) salmon is a wiser choice.

### **The bottom line**

The American Journal of Preventive Medicine (Nov., 2005) published a study from the Harvard Center for Risk Analysis that suggests the benefits of consuming fish far outweigh the risks. Children and adults who do not eat fish tend to be more likely to suffer a stroke or heart attack. The trick to eating fish is to eat it in moderation and to consume a variety of different fish, with a focus on the smaller fish. Each week, enjoy a meal with oily fish (salmon, blue fish) and another with low-mercury fish (pollock, sole.) Be moderate, and you’ll get hooked with good health.

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Sidebar:

### **Top 10 fish and shellfish consumed in the United States**

The following list indicates the mercury level and the amount of omega-3 fats in the ten most commonly eaten fish in the US. The trick is to eat more of the fish lower in mercury and higher in omega-3s.

|                       | Mean mercury level in parts per million (ppm) | Omega-3 fatty acids<br>(grams per 3-oz. serving) |
|-----------------------|---|--|
| Canned tuna (light)   | 0.12  | 0.26-0.73  |
| Shrimp                | ND*   | 0.27   |
| Pollock               | 0.06  | 0.46   |
| Salmon (fresh,frozen) | 0.01  | 0.68-1.83  |
| Cod                   | 0.11  | 0.13-0.24  |
| Catfish               | 0.05  | 0.15-0.20  |
| Clams                 | ND*   | 0.24   |
| Flounder or sole      | 0.05  | 0.43   |
| Crabs                 | 0.06  | 0.34-0.40  |
| Scallops              | 0.05  | 0.17   |

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