

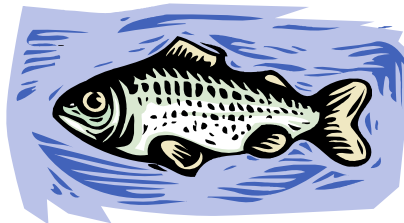
# "Getting Hooked On Fish"

(Ron Jones, MS, ACSM Health/Fitness Instructor, Corporate Wellcoach)



Dietary guidelines now recommend eating at *least two servings of fish per week* (preferably "fatty" fish) for normally healthy adults. If coronary heart disease is present, more fish could be required. A **variety of fish** is recommended such as shell, canned, smaller ocean, and farm-raised fish. Eating a variety of fish helps to limit contamination. Fish has certain types of "healthy fats" that are good for your body. These healthy fats are called *omega-3 fatty acids*. There are three types of omega-3 fatty acids; two of them come from fish and the third (less potent) comes from certain beans, nuts, and seeds. All omega-3 fats have "cardioprotective" benefits.

*Disclaimer: Guidelines and recommendations have been cited from major sources such as the American Heart Association, CA Environmental Protection Agency, HealthAtoZ.Com, US Environmental Protection Agency, US Food & Drug Administration, and do not reflect the personal opinion or advice of Ron Jones.*



<p><b>Research has shown that eating fish regularly can:</b></p>	<ul style="list-style-type: none"> <li>• ↓ Heart Disease</li> <li>• ↓ Risk of Sudden Death &amp; Irregular Heart Beats</li> <li>• ↓ Blood Triglycerides (blood fats)</li> <li>• ↓ Blood Clots</li> <li>• ↓ Platelet Formation (leading to arteriosclerosis)</li> <li>• ↓ Atherosclerotic Plaque</li> <li>• ↓ Blood Pressure</li> <li>• ↑ Artery Health</li> </ul>
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**Serving Sizes:** Many reports cite an average serving of fish at 3-6 oz., but according to the EPA an average *adult serving* of fish is 6 oz. cooked (8 oz. uncooked), and an average *child serving* of fish is 2 oz. cooked (3 oz. uncooked).

☹ Restricted Fish: (Limit or *Eliminate)	☺ Recommended Fish: *(NO limits)
<ul style="list-style-type: none"> <li>• Shark</li> <li>• Swordfish</li> <li>• King Mackerel</li> <li>• Tilefish</li> <li>• Pike</li> <li>• Bass</li> </ul> <p><i>*See Pregnant/Nursing Women &amp; Young Children</i></p>	<ul style="list-style-type: none"> <li>• Mackerel</li> <li>• Lake Trout</li> <li>• Herring</li> <li>• Sardines</li> <li>• Albacore Tuna</li> <li>• Salmon</li> </ul> <p><i>* See Pregnant/Nursing Women &amp; Young Children</i></p>

<p><b>Plant Sources of omega-3 fatty acids:</b></p> <p>☺</p>	<ul style="list-style-type: none"> <li>• Tofu &amp; Soybeans</li> <li>• Canola</li> <li>• Walnuts</li> <li>• Flaxseed</li> </ul> <p><b>*Not potent as fish</b></p>
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**Fish Supplements:** Patients with documented coronary heart disease need approx. 1 g of omega-3 per day which might be hard to obtain from diet alone. Patients with very high triglycerides (>1000 mg/dl) are recommended to consult a physician about *possibly supplementing 2-4 grams per day* of omega-3 into their diets to reduce heart disease and cardiovascular risks. **\*Caution!** People taking over 3 grams per day should **ONLY** do so under direct physician care as high intakes could cause excessive bleeding.

**\*Pregnancy, Nursing Mothers, & Young Children:** It's healthy for pregnant and nursing women to eat certain types of fish. These women should eat a variety of fish, but should not consume more than about *12 oz. per week on average* of cooked fish per week. An average adult serving of fish is 6 oz. cooked. Pregnant and nursing women or children should NOT consume fish with high levels of mercury. Mercury can damage the nervous systems of unborn children.

- Pregnant women, nursing mothers, & young children should also limit their consumption of local water fish caught by family and friends to *one serving per week*. (See "Serving Sizes")

**Contamination Issues:** Some types of fish may contain significant levels of mercury, PCBs, dioxins, chlordane, DDT, and other environmental contaminants. ***Elevated contaminants are found in larger and more predatory fish*** higher in the food chain. When large predatory fish eat smaller fish, contaminants are *accumulated in the muscle tissue* of older and larger fish. Larger predatory fish can have contaminant levels a million times higher than water levels! *Mercury is primarily responsible for most fish advisories.* As of December 2000, almost 79% of all U.S. fish advisories were at least partly due to mercury contamination.

- **Mercury Facts:** Mercury occurs naturally and is distributed throughout the environment by natural and human processes (mining, air pollution, etc.). Mercury is released into the environment then converted into organic mercury or *methylmercury*. Methylmercury is the form that is primarily accumulated in fish and shellfish. Methylmercury is also found in other foods, but fish and shellfish are about 1,000 to 10,000 times more contaminated.
- **Mercury Toxicity:** Methylmercury is rapidly and nearly completely absorbed from the gastrointestinal tract. Highest levels are generally found in the kidneys, but mercury also crosses blood/brain barriers. Neurotoxicity is the effect of greatest concern of mercury contamination. Estimated half life of mercury in humans is 44 to more than 80 days.
- **Foul Fish Facts!** The EPA has published records of "**Fish Advisories**" for each state in the U.S. Fish Advisories are issued when contaminant levels are unsafe. Currently 28% of lake acres and almost 14% of river miles in the U.S. are under advisory.
- **Local Advisories:** At present, there are NO fish advisories listed for Kern County; however, fish advisories do exist in California and certain specific areas can have "unhealthy" fish and contaminant levels even though a state advisory is not posted. In proximity to Kern County, LA County and Lake Nacimiento in San Luis Obispo County have active fish advisories. Caution: CA had the greatest number of U.S. DDT advisories active in 2001!

**Fish Prep Tips:** Only use fillet parts. Don't deep fry or over cook fish because high heat destroys omega-3s. Bake, broil, grill, or steam so juices can drain away from fish which can *remove 30-50% of chemicals stored in fat!* Remove ALL: skin, fat along back, belly fat, guts, & *fatty dark meat* along length of fillet. Avoid larger & older fish due to toxins.

## Surfing the Web for Fish Facts:

- [www.epa.gov/ost/fish](http://www.epa.gov/ost/fish) (US EPA Fish/Wildlife Advisories)
- [www.oehha.ca.gov/fish/pdf/99broch7.pdf](http://www.oehha.ca.gov/fish/pdf/99broch7.pdf) (CA Sport Fish Advisories-PDF)

References: American Heart Association, CA Environmental Protection Agency/Office of Environmental Health Hazard Assessment, HealthAtoZ.Com, US Environmental Protection Agency, and the US Food & Drug Administration.

- For specific web references & additional fish rankings & data , see [www.ronjones.org/Weblinks/nutrition.htm](http://www.ronjones.org/Weblinks/nutrition.htm)
- \* Ron Jones (9.7.07)

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