

FACTS ABOUT MERCURY IN FISH

Mercury may have toxic effects on humans and other animals. It exists naturally, but may also be released into the environment during manufacturing operations, or through burning of fossil fuels and waste products. Mercury actually exists in different forms. One of those forms is called methyl mercury, which can accumulate in animal tissue.

- Mercury pollutants tend to find their way into aquatic environments where they are available to enter into the food chain.
- Most fish contain some quantity of mercury commonly in the form of methyl mercury.
- Methyl mercury accumulates in larger and older predatory fish at the top of the aquatic food chain, such as king mackerel, swordfish, shark, and tilefish, also known as golden snapper or golden bass.

Studies suggest that consumption of high levels of mercury by certain consumers has been associated with permanent damage to several organs, most notably the brain and kidneys.

- Some parts of the population are more vulnerable than others.
- Methyl mercury can cause damage to the brain development of unborn fetuses, infants and very small children.
- Potential risk to pregnant women, and women of child bearing age who may become pregnant, makes it imperative that they follow the U.S. Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) joint advice for fish consumption.

Developed in cooperation with:



SO CAN I EAT FISH?

Yes. Fish and shellfish play an important role in a healthful diet. For most people, the risk from mercury by eating fish and shellfish is not a health concern. However, the FDA recommends that women who might become pregnant, women who are pregnant, nursing mothers and young children should restrict their consumption of certain fish and shellfish and should not eat shark, swordfish, king mackerel or tilefish because of high levels of methyl mercury in these fish.

- FDA advises that pregnant women and women of child-bearing age who may become pregnant can safely eat 12 ounces of cooked fish per week, with the exception of shark, swordfish, king mackerel and tilefish.
- Typical serving size of fish is from 3 to 6 ounces. Choose shellfish, canned fish, smaller ocean fish, or farm-raised fish. Select a variety of different species.

WHY IS IT GOOD TO HAVE FISH IN YOUR DIET?

- Provides high quality protein. For example, a 3 ounce serving of cooked fish or shellfish provides about one third of the average daily recommended protein intake.
- Good source of vitamins and minerals.
- Very digestible for people of all ages.
- Low levels of saturated fat.
- Good source of polyunsaturated fat.

Within the polyunsaturated fats, there are two important classes of fatty acids: omega-3s and omega-6s.

- Diets can often lack adequate omega-3 fatty acids which are present in fish and shellfish, as well as tofu, flax, nuts, canola and soybean oils.
- Most Americans consume plenty of omega-6 fatty acids, abundantly present in vegetable oils.



AMERICAN DIETETIC ASSOCIATION
"Your link to nutrition and health."

This brochure has been favorably reviewed by the American Dietetic Association.

WHY ARE OMEGA - 3s

IMPORTANT TO INCLUDE IN THE DIET?

Research by the American Heart Association has shown that certain benefits of omega -3 fatty acids in the diet can include:

- Helps protect the heart.
- May reduce the incidence of the most common type of stroke.
- Decreases triglyceride levels.

ADDITIONAL RESOURCES

American Dietetic Association - <http://www.eatright.org>

American Heart Association - <http://www.americanheart.org>

International Food Information Council - <http://www.ific.org>

National Fisheries Institute - <http://www.aboutseafood.com>

Food Marketing Institute - <http://www.fmi.org>

U.S. Environmental Protection Agency,
Office of Science and Technology - <http://www.epa.gov/ost/fish>

U.S. Food and Drug Administration - <http://www.fda.gov>

U.S. Food and Drug Administration, Environmental Protection
<http://www.cfsan.fda.gov/~dms/admehg.html>

U.S. Food and Drug Administration Seafood Information and
Resources - <http://www.cfsan.fda.gov/seafood1.html>

Backgrounder for the 2004 FDA/EPA Consumer Advisory:
"What You Need to Know About Mercury in Fish and Shellfish"
<http://www.fda.gov/oc/opacom/hottopics/mercury/backgrounder.html>

Q&A on Mercury in the Environment and Food
<http://www.ific.org/publications/qa/mercuryqa.cfm>

USDA/ARS Nutrient Data Laboratory
<http://www.nal.usda.gov/fnic>

MERCURY AND FISH

ADVICE FOR:

- ▶ WOMEN WHO MIGHT BECOME PREGNANT
- ▶ WOMEN WHO ARE PREGNANT
- ▶ NURSING MOTHERS & YOUNG CHILDREN



Eat Fish! Live Healthy!

This brochure was developed to help consumers, especially women and young children, better understand how fish can be an important part of a healthful diet. Fish and shellfish contain high-quality protein and other essential nutrients: are low in saturated fat, and contain beneficial omega-3 fatty acids. A well-balanced diet that includes a variety of fish and shellfish can contribute to heart health and children's proper growth and development. So, women and young children in particular can include fish or shellfish in their diets and enjoy the many nutritional benefits.

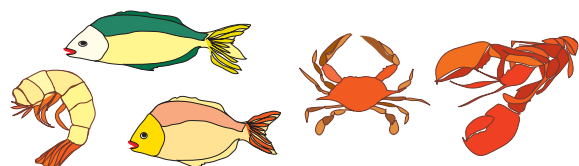
This brochure explains the benefits of omega-3 fatty acids and their advantages. It also addresses several safety issues such as methyl mercury levels found in some species of fish.

The Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) are advising women who may become pregnant, pregnant women, nursing mothers, and young children to avoid some types of fish and eat fish and shellfish that are lower in mercury.

If you may become pregnant, are pregnant or nursing, **DO NOT EAT:**

- ◆ Shark
- ◆ Swordfish
- ◆ King Mackerel
- ◆ Tilefish

Women who may become pregnant, pregnant women and nursing mothers can safely consume **12 oz total per week** of other varieties of fish and shellfish that are lower in mercury. A typical serving size of fish is from **3 to 6 ounces**. When feeding fish and shellfish to young children, follow these same recommendations, but serve smaller portions.



THE 20 MOST CONSUMED FISH AND SHELLFISH IN THE U.S. THAT ARE LOWER IN MERCURY

EAT UP TO 12 OZ TOTAL PER WEEK OF A VARIETY OF FISH

Catfish 	Cod 	Flatfish - Flounder/Sole 	Haddock 	Halibut
Ocean Perch 	Orange Roughy 	Pollock 	Rainbow Trout 	Rockfish
Salmon (Atlantic, Coho, Sockeye, Chum, Pink) 	Tilapia 	Tuna, canned 	Tuna, yellow fin, fresh 	Blue Crab
Clams 	Lobster 	Oysters 	Scallops 	Shrimp

DO NOT CONSUME

FDA and EPA are advising women who may become pregnant, pregnant women, nursing mothers and young children to avoid the following

4 TO AVOID



Shark



Swordfish



King Mackerel



Tilefish (Golden Bass or Golden Snapper)



OMEGA-3 CONTENT OF FISH AND SHELLFISH

Amounts are in grams per 3 ounce portion

Fish is cooked without added fat or sauces, unless otherwise noted.

FINFISH

Salmon, Atlantic, farmed - 1.8
 Salmon, sockeye, canned, drained with bones - 1.0
 Tuna, white, canned in water, drained solids - 0.7
 Rainbow trout - 0.6
 Halibut, Atlantic/Pacific - 0.4
 Ocean perch, Atlantic - 0.3
 Pollock, Atlantic - 0.5
 Rockfish (Rock cod or Pacific red snapper - 0.4 name for 70 species)
 Flatfish (flounder, sole) - 0.4
 Tuna, light, canned in water, drained solids - 0.2
 Tuna, yellowfin, fresh - 0.2
 Haddock - 0.2
 Catfish, channel, farmed - 0.2
 Cod, Atlantic - 0.1
 Tilapia - 0.1

MOLLUSKS

Oysters, farmed, Eastern - 0.3
 Scallops, mixed species - 0.3
 Clam, mixed species - 0.2

SHELLFISH

Crab, Alaska king, imitation, from Surimi - 0.5
 Crab, Alaska king - 0.4
 Crab, blue - 0.4
 Lobster, mixed species - 0.4
 Shrimp, mixed species - 0.3

Source: USDA Nutrient Database for Standard Reference Release