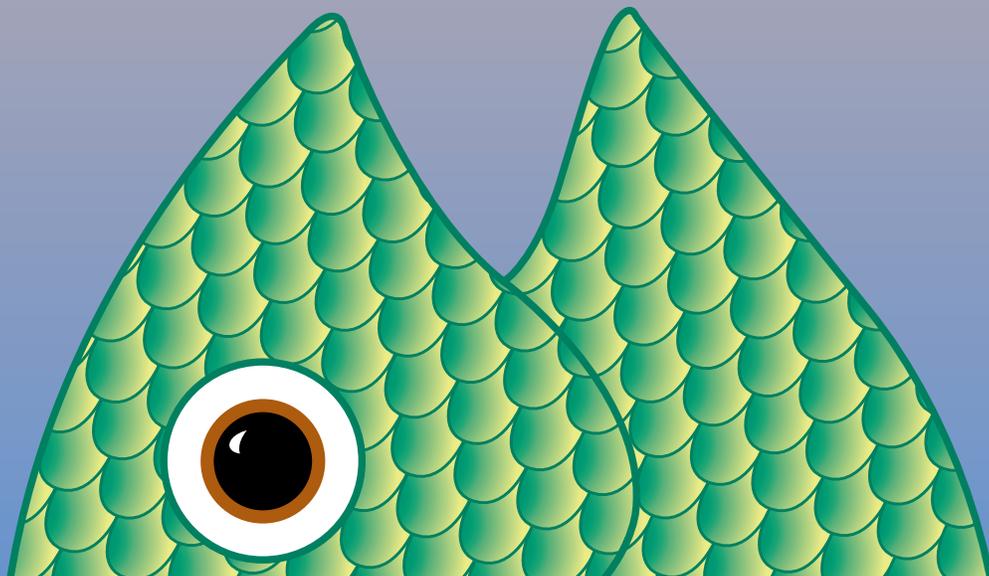


Get hooked on
HEALTH

FISH – A GREAT NUTRITIONAL CATCH

FIND OUT ABOUT
**THE SAFE TYPES OF FISH TO EAT,
THE SAFE WAYS TO PREPARE FISH,**
PLUS SPECIAL INFORMATION ON HOW EATING FISH CAN AFFECT
PREGNANCY.

*Good Health is Catching
in Alabama!*



FISH – A GREAT NUTRITIONAL CATCH

Fish and shellfish are an excellent source of protein, vitamins, and minerals. Many fish are also high in omega-3 fatty acids – which are believed to provide protection from heart disease.

However, fish can become unhealthy to eat based on:

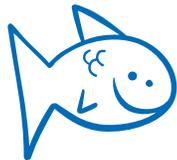
-  **the length of time they are exposed to harmful substances in their habitat;**
-  **the amount(s) of contaminant(s) in the food they themselves eat;**
-  **and the bacteria and parasites they may contain that are harmful to humans.**

You can reduce your risk of health hazards that may be involved in eating fish by knowing how to choose, store, prepare, and cook fish.

Both the American Heart Association and the American Dietetic Association agree that a healthy eating plan should include two servings of fish a week. To receive the greatest nutritional benefit and reduce health risks from fish, eat a variety in moderate amounts.

FISH NUTRITION					
Seafood (4oz. cooked)	calories	protein (gm)	total fat (gm)	saturated fat (g)	cholesterol (mg)
bass	166	27	5	1	99
catfish	170	21	9	2	72
flounder	133	27	2	0.4	77
ocean perch	137	27	2	0.4	61
oysters	185	21	5	1	113
salmon	245	31	12	2	99
shrimp	95	20	1	0.3	183
trout	170	26	1	0.3	183
tuna, packed in water	132	29	1	0.3	33
whiting	116	24	1.7	0.4	84

Saturated fat, the kind of fat that raises cholesterol levels in people and increases risk of heart disease and stroke, is low in fish and seafood. The cholesterol content of fish is generally similar to that found in lean meat and poultry. Shellfish, while somewhat higher in cholesterol, are low in saturated fat so they are still considered a good choice when eaten in moderation.



THE SAFE TYPES OF FISH TO EAT

Fish may contain different kinds and levels of contaminants based on their location, their length of life, and their feeding habits.

For example, a fish that lives a longer life and is at the top of the food chain will have more time to accumulate more mercury in its body muscle. Fish known as bottom feeders will be more exposed to pesticides and PCBs, because these chemicals run off the land and settle to the bottom of waterbodies. These primarily deposit in the fatty portions of the fish.

Fish bought at a store are usually farm-grown. Farm-grown fish have the least exposure to contaminants, because they are raised in tanks and other carefully controlled areas and are sold as soon as they reach the best size for eating.

Women who could become pregnant, who are pregnant, or who are nursing should be aware that contaminants transferred through the uterus or through breast milk can harm the development of their child.

The following guidelines for pregnant women are from the Environmental Working Group, a Washington, D.C.-based advocacy group.

Safe for pregnant and nursing women: farmed trout, farmed catfish, shrimp, fish sticks, summer flounder, wild Pacific salmon, croaker, mid-Atlantic blue crab, haddock.

Pregnant women should eat no more than one serving per month: canned tuna, mahi mahi, blue mussels, Eastern oysters, cod, pollock, Great Lakes salmon, wild channel catfish, blue crab from the Gulf of Mexico.

Any woman considering pregnancy, already pregnant, or nursing should avoid these fish: shark, swordfish, king mackerel, tilefish, tuna steaks, sea bass, marlin, halibut, pike, walleye, white croaker, largemouth bass, sport fish caught from waterways with fish advisories.

THERE ARE THREE PRIMARY CONTAMINANTS OF FISH:

Mercury is a toxic metal that naturally exists in low levels throughout air, water, soil, rocks, plant, animal, and human life. It also accumulates in fish muscle tissues.

Health risk: When mercury is present in food, it can build up in the body and cause damage to the nervous system and kidneys. Women who eat fish containing mercury before or during pregnancy risk causing developmental and/or learning problems in children.

Risk reduction: Fish that live longer or that eat other fish will contain more mercury than small fish or crayfish. No cooking will reduce mercury levels; eat long-lived fish such as bass or tuna in moderate amounts (two to three times per week in small to medium portions – 3 to 4 ounces). If you are pregnant or nursing, avoid fish that usually contain high mercury levels or that are on the fish advisory list.

PCBs (polychlorinated biphenyls) are chemicals that were created for use in electrical transformers, cutting oils and hydraulic fluids, and carbonless paper. While banned in the U.S. in 1979, they have remained in the soil and tend to accumulate in the sediment at the bottom of lakes and streams when they reach water.

Health risk: High levels of PCBs have been linked to problems with learning and short-term memory. **PCBs can accumulate in breast milk, and it is important that nursing women eat a variety of animal foods in moderation to avoid consumption of high rates of PCBs.**

Risk reduction: All animal fat is a source of storage for PCBs, and so intake of fish fat and other animal fats should be reduced (see section on how to prepare fish and safe amounts to eat). Bottom feeders such as catfish, carp, buffalo fish, and sucker tend to have a higher level of PCBs.

Pesticides found in fish in Alabama are mainly chlordane and DDT. These have either been dumped into the ground or the water or have run off the land where they have been used into the water.

Health risk: Chlordane can cause nervous system and liver damage as well as cancer in experimental animals. DDT damages the liver and can harm reproductive, developmental, and nervous systems. Exposure to pesticides can damage a child's development.

Risk reduction: Chlordane and DDT accumulate in the fatty tissues of fish, so reduce intake of the fatty parts of fish.

The Alabama Department of Public Health issues fish consumption advisories to help people decide whether or not to eat a specific fish from a specific Alabama waterbody.

FISH CONSUMPTION ADVISORIES:



have no regulatory impact and are not laws to say you cannot eat the fish; they only help you make a decision about eating fish caught in some Alabama waters.



are based on an examination of the level of contaminants in the fish by the Alabama Department of Environmental Management. Because there are 77,000 miles of rivers and streams in Alabama, ADEM can only do representative samplings. ADEM personnel collect at least six fish of each species from various watershed basins every five years. These fish are analyzed for 21 different materials that are known to be harmful when eaten and stored in various human body parts such as muscle, fat, and organs where they may damage either development or function.



are issued by the Alabama Department of Public Health after a review of the information provided by the ADEM samples. The Health Department issues two types of advisories:

A **limited consumption advisory** states that women of reproductive age and children less than 15 years of age should avoid eating certain types of fish from specific waterbodies. Other people should limit consumption to one meal per month.

A **no consumption advisory** recommends that everyone should avoid eating certain species of fish in the defined area.



are updated annually in the spring and whenever any important changes are found.



are available by calling 1-800-201-8208 or on the Health Department website at www.adph.org

Continued on reverse.

THE SAFE WAYS TO PREPARE FISH

Follow these simple guidelines when preparing fish and other kinds of seafood:

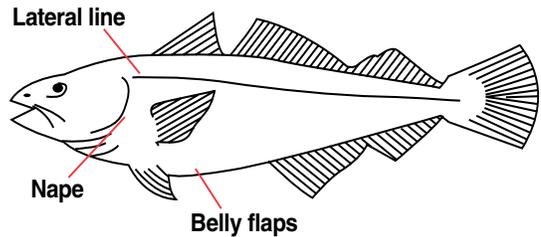
Keep fish cold until ready to cook. Fish must be kept on ice or in the refrigerator to prevent spoiling. Store fish in the refrigerator within two hours after cooking or serving.

Eat only thoroughly cooked fish. Uncooked fish may contain viruses and parasites that can make you sick.

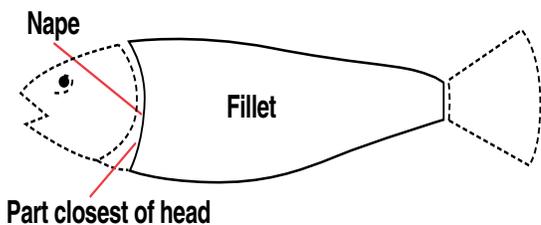
Eat only the fillet portions of fish. Contaminants that may come from the environment can accumulate in fatty tissues, especially when fish are large. Remove and discard the skin, guts, and liver. Filleting removes fat that is located in the belly flaps and along the lateral line of the back.

Use low-fat cooking methods like broiling, grilling, poaching, and steaming. Let juices drain away from the fish as much as possible. Frying or adding butter and other rich sauces during or after preparation takes away the heart health benefits of eating fish and adds many calories.

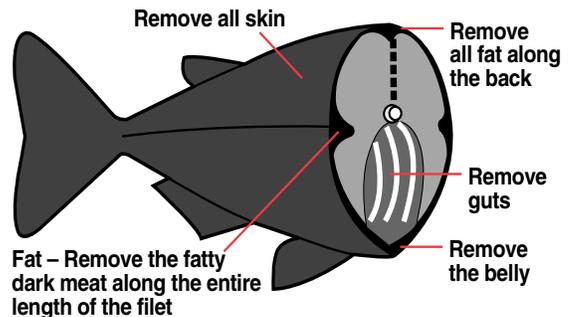
LOCATION OF FAT IN FISH



- Belly flaps
- Nape
- Sections closest to head
- Dark red portions
- Lateral line
- Just under skin



Tail portions leanest



CALL

1-800-201-8208

OR VISIT OUR WEBSITE:

www.adph.org

**ALABAMA DEPARTMENT OF
PUBLIC HEALTH**

