ILLINOIS FISH AND YOUR HEALTH

Because some fish have become contaminated with chemicals, Illinois has established fish advisories for certain bodies of water in the state. These advisories are issued by the Illinois Fish Contaminant Monitoring Program (IFCMP), which consists of staff from the departments of Agriculture, Natural Resources, and Public Health, and Illinois Emergency Management Agency and the Illinois Environmental Protection Agency. A copy of the current fish advisory can be obtained where fishing licenses are sold or by going to: www.ifishillinois.org or www.idph.state.il.us/envhealth/fishadvisory/index.htm

What are the criteria for the fish advisories?

Fish from areas with suspected or known contamination and from areas with no suspected contamination have been collected and analyzed by the IFCMP since 1974.The samples are tested for 14 chemicals known to cause adverse human health effects. After analysis, the advisory is created by determining which fish are unsafe to eat, which should be eaten in limited quantities and which can be eaten in unlimited amounts.

The most recent Illinois advisories are related to fish contaminated with polychlorinated biphenyls (PCBs), chlordane and mercury. A statewide methyl mercury advisory for predator fish in every Illinois water body also has been established. In order to protect the most sensitive populations, pregnant or nursing women, women of childbearing age, and children less than 15 years of age are advised to eat no more than one meal per week of predator fish.

How do fish become contaminated with PCBs?

Fish get PCBs in their bodies from living in contaminated water or near contaminated sediment, and by eating contaminated food. PCBs are a group of more than 200 similar manmade chemicals that were used widely in electrical equipment like capacitors and transformers. More than 1 billion pounds of PCBs were manufactured in the United States. Because of the health effects associated with exposure to PCBs, commercial production of PCBs ended in 1977. In 1979, the U.S. Environmental Protection Agency (USEPA) banned all use of PCBs.

How do fish become contaminated with chlordane?

Chlordane builds up in the fatty tissue of fish living in contaminated water or near contaminated sediment, and by eating contaminated food. Chlordane is a manmade pesticide used in the United States from 1948 to 1988. Chlordane is a thick liquid that has a mild, irritating smell. In 1983, USEPA limited chlordane to only killing termites because of concern about the damage to the environment and harm to human health. In 1988, all uses of chlordane were banned.

How do fish become contaminated with mercury?

Mercury is stored in the muscle of fish that eat mercury-contaminated food or live in mercury-contaminated water. Mercury is a metal that occurs naturally in small amounts in the environment. It also is thought to come from burning coal or trash, as well as from industrial waste. Mercury gets into lakes and rivers several ways, including rain and runoff. When conditions are right in the water, certain kinds of bacteria change inorganic mercury into methylmercury. This form of mercury is one of the most likely to get into fish.

How can eating contaminated fish affect human health?

Eating contaminated fish does not necessarily mean adverse health effects will occur. The potential for exposed persons to experience adverse health effects depends on:

- the specific chemicals in the fish,
- the amount of chemicals in the fish,
- the amount of contaminated fish eaten, and
- the health condition of the person eating the contaminated fish.

While there is no immediate health threat from eating contaminated fish, there may be from long-term, low-level exposure to chemicals found in fish listed in the advisories.

Laboratory tests in animals have shown that long-term exposure to high doses of some PCBs and chlordane cause adverse health effects, including cancer, liver damage, reproductive damage and developmental damage. Health effects associated with long-term mercury exposure may include damage to the brain, kidney, lungs and a developing fetus.

The fish advisory is intended to protect children from potential developmental problems. Women who eat highly-contaminated fish for many years before becoming pregnant may have children who are slower to develop and learn. Adults are less likely to have health problems at the same low levels of exposure that affect children, so the meal advice contained in the advisory may be overprotective for women beyond child bearing years and adult men.

Should people stop eating fish?

No! Fish are nutritious. When properly prepared, fish provide a diet high in protein and generally low in saturated fats and play a role a maintaining a healthy, well-balanced diet. Many doctors suggest eating a half pound of fish each week is helpful in preventing heart disease. Almost any kind of fish may have health benefits when it replaces a high-fat source of protein in the diet. Steps can be taken to reduce risks from eating contaminated fish. The fat of the fish is where most of the contaminants, except mercury, are stored. As fish grow older, they tend to develop a higher overall body fat content. By choosing to eat younger, smaller fish, exposure to contaminants is reduced. Smaller fish have less fat and have retained fewer contaminants. By following the cooking and cleaning advice in the advisory, exposure to contaminants in fish will be reduced.

Where can I get more information?

www.ifishillinois.org or www.idph.state.il.us/envhealth/fishadvisory/index.htm