

FACTS ABOUT ILLINOIS' METHYLMERCURY ADVISORY

The current statewide methylmercury advisory for pregnant or nursing women, women of childbearing age, and children less than 15 years of age is no more than one meal per week of predator sport fish from any Illinois water body, unless special mercury advisories have been issued. Special mercury advisories are issued based on site-specific sampling data. Therefore special advisories may be more restrictive than the statewide advisory.

Why has Illinois issued a statewide methylmercury advisory?

The Illinois Fish Contaminant Monitoring Program (IFCMP)* issued a statewide advisory for methylmercury in fish based on studies that have shown adverse effects to the developing nervous system of fetuses that could result in lower IQ, abnormal muscle tone, and slowed motor function. The advisory was established to protect the most sensitive populations: pregnant and nursing women, fetuses, women of childbearing age, and children younger than 15 years of age.

*IFCMP includes staff from the departments of Agriculture, Natural Resources, and Public Health, and the Illinois Environmental Protection Agency (IEPA).

Why is there a special methylmercury advisory for these populations?

Pregnant and nursing women, women of childbearing age, and children younger than 15 years of age are at high risk for adverse health effects because the developing nervous systems of infants and children are more sensitive.

Has the concentration of mercury increased in Illinois predator sport fish?

No. Methylmercury levels detected in predator sport fish have remained about the same. The statewide advisory was issued based on the results of scientific studies indicating that methylmercury is more toxic than previously thought. Based on the study results, the guidelines that are used to establish the Illinois fish advisories have been lowered for methylmercury.

Why is the statewide methylmercury advisory only for predator species?

Mercury stays in the environment for a long time. Small organisms absorb mercury from water and sediment; these organisms then are eaten by smaller fish. Predator fish eat the smaller fish and methylmercury is accumulated up the food chain. Larger fish have the highest amounts of methylmercury stored in their bodies. Predator species for Illinois include all species of black bass (largemouth, smallmouth, and spotted), striped bass, white bass, hybrid bass, walleye, sauger, saugeye, flathead catfish, muskellunge, and northern pike.

Is mercury stored in the human body for long periods of time?

When methylmercury is ingested, most of it is absorbed through the gastrointestinal tract into the bloodstream where it is rapidly carried to other parts of the body. It takes about 70 days for half of the mercury that has entered the body to be removed. The remaining mercury is slowly removed from the body over several months, mainly in feces.

How does methylmercury get into bodies of water in Illinois?

Mercury is a metal that occurs naturally in small amounts in the environment. It also comes from burning coal or trash and from industry. Mercury gets into lakes and rivers in several ways, including rain and runoff. When conditions are right in the water, certain kinds of bacteria change metallic mercury into the more toxic methylmercury. Methylmercury is stored in the muscle of fish, the part of the fish people eat.

What are the potential health effects for people who eat fish contaminated with methylmercury?

The developing nervous systems of fetuses and children could be damaged if exposed to even small amounts of methylmercury. At high doses, methylmercury can affect the central nervous system (causing such health problems as memory loss and slurred speech) and can cause kidney damage and failure, and gastrointestinal damage. The possible health effects depend on how much methylmercury is stored in the fish and how much fish is eaten over a period of time. Based on the amounts of methylmercury detected in predator sport fish in Illinois, it is unlikely that people would experience adverse health effects associated with exposure to high doses.

What about the fish I buy in the grocery store? Should I be concerned that they may be contaminated with mercury?

Fish such as shark, swordfish, king mackerel, and tilefish contain high levels of methylmercury. The U.S. Food and Drug Administration (FDA) advises pregnant women, women of childbearing age, and children not to eat these fish. The FDA advisory acknowledges that seafood can be an important part of a balanced diet for pregnant women and women of childbearing age. The FDA advises these women to select a variety of other kinds of fish, such as shellfish, canned fish (including tuna), smaller ocean fish, or farm-raised fish. These women can safely eat 12 ounces per week of cooked fish. A typical serving of fish is from 3 ounces to 6 ounces.

Should I be concerned about children swimming in bodies of water in Illinois because of mercury contamination?

No. Contact with, or the accidental swallowing of, the water will result in minimal exposure to methylmercury.

Why are there special mercury advisories for some bodies of water in the state?

Laboratory results from predator sport fish in some bodies of water have shown more contamination than what has typically been found in other bodies of water. Based on these higher concentrations of methylmercury, a more restrictive advisory is necessary to protect public health.

What is being done to reduce the amount of mercury entering the environment from man-made sources?

There are several actions being taken at the national, regional, state, and local levels. At the national level, the U.S. Environmental Protection Agency (USEPA) is developing standards for mercury-emitting air pollution sources that should be released soon. USEPA also is working on regulations on air pollution controls to limit the amount of mercury emitted from coal-burning power plants, which have been identified as significant sources of airborne mercury.

At the regional level, some of the approaches for voluntary reductions in mercury releases developed by the U.S.-Canadian Binational Toxics Strategy group are being implemented in the Great Lakes basin. At the state level, IEPA is researching sources of mercury release to the air and identifying opportunities for mercury reductions through regulations and air pollution permits. IEPA also has obtained funding from the USEPA to investigate ways to decrease the use of mercury in hospitals. As a result, a pilot program for mercury thermometer exchanges has been implemented at two hospitals.

At the local level, there are a few fluorescent lamp recycling programs. A list can be found at <http://www.epa.illinois.gov/topics/waste-management/factsheets/fluorescent-lamps/fluorescent-lamp-recyclers/index>. A number of local household hazardous waste collections are sponsored by IEPA each year; elemental mercury and mercury-containing products are accepted at these collections. A list of long-term collection facilities and schedule of currently planned collection events is available from <http://www.epa.illinois.gov/topics/waste-management/waste-disposal/household-hazardous-waste/collections/index>.

Where can I get more information?

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Division of Environmental Health

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TTY (hearing impaired use only) 800-547-0466

www.dph.illinois.gov or www.idph.state.il.us/envhealth/fishadvisory/index.htm