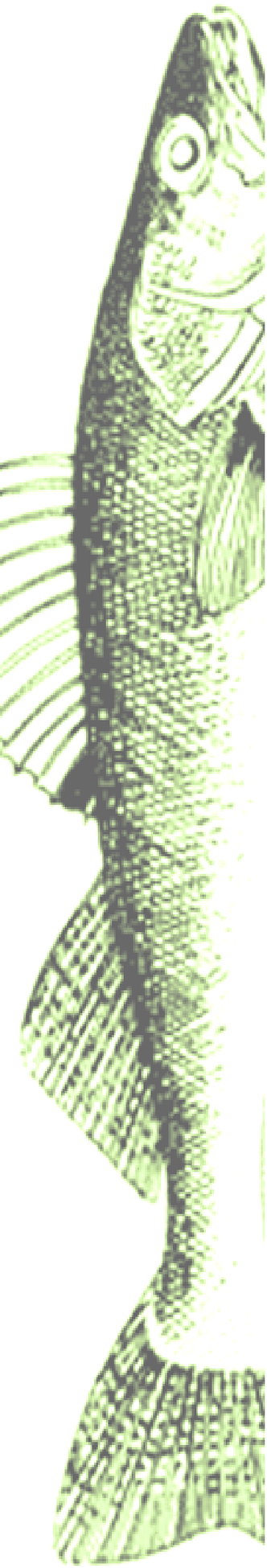
# What Anglers Should Know About Mercury Contamination



## Mercury In the Environment

Mercury is an atmospherically deposited toxic metal, which has contaminated waterbodies throughout Vermont and other states. Mercury is emitted to the atmosphere during the combustion of fossil fuels and municipal and medical waste. It is subsequently deposited to watersheds (a watershed is the land surrounding a lake or river which delivers both water and other materials). In the watersheds, mercury undergoes a naturally-occurring biochemical transformation, becoming highly toxic in the process. This process is called methylation. Toxic methylmercury is easily assimilated by microscopic organisms at the bottom of the food web. After it has entered the food chain in this fashion, methylmercury bio-accumulates (accumulates as it moves up the food chain), yielding very high concentrations in the tissues of predatory fishes. Some mercury is also directly assimilated by fish across the gill membrane.

## Mercury and Health

Mercury has been found at unsafe levels in fresh water fish in many lakes and ponds in the northeast, including some in Vermont. Some species of saltwater fish also show contamination. Scientific studies have linked mercury with developmental problems, and with kidney and nervous system damage. Women who are pregnant should not eat fish with high levels of mercury. Mercury affects fetal development, preventing the brain and nervous system from developing normally. Affected children show lowered intelligence, impaired hearing, and poor coordination. Nationwide, most states currently have fish consumption advisories. Due to the level of mercury contamination in Vermont, the Department of Health has issued health advisories certain species of fish, sometimes in reference to particular bodies of water. Walleye, smallmouth bass, and chain pickerel typically show the highest concentrations of mercury. Please see the Vermont Dept. of Health Fish Consumption Advisory, or go to the Health Department's Web site (http://healthvermont.gov/) for an on-line version.

## Common Misperceptions about Mercury and Fish

**Misperception:** *"Larger fish have less mercury."*

**Fact:** This is Not True. Mercury accumulates as it moves up the food chain. Therefore, the large, predatory fish accumulate more mercury in their tissues. The older and larger the fish, the greater the potential for high mercury levels in their bodies.

**Misperception:** *"Thoroughly cooking the fish and trimming away the dark meat will get rid of the mercury."*

**Fact:** This is Not True. There is no method of cooking or cleaning a fish that will eliminate the amount of mercury in a meal. Mercury is tightly bound to the proteins in all fish tissue, including muscle. Mercury does not accumulate in any one area and cannot be cut from the fish.

**Misperception:** *"I can no longer eat fish because it is all contaminated by mercury."*

**Fact:** This is Not True. The Department of Health annually issues the Fish Consumption Advisory to provide guidelines for the safe consumption of fish. The Department of Health considers fish to be a desirable and healthy food when eaten within the limits provided by the Advisory.

## More Information on Mercury in Fish

Information regarding mercury contamination in Vermont waters is available online at http://dec.vermont.gov/watershed/lakes-ponds/. Information regarding current efforts by the State of Vermont to curb mercury emissions and reduce contamination is available at www.mercvt.org. Vermonters are encouraged to call (802) 828-1535 for more information about mercury contamination.