



# Arkansas Department of Health

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## **Bull Shoals and Norfolk Mercury in Fish (MIF) Frequently Asked Questions (FAQs)**

- **How does the Arkansas Department of Health (ADH) decide when to issue a fish consumption advisory?**

**ADH issues fish consumption notices when there are enough fish data to indicate that elevated levels of mercury have been reached.**

ADH works with the Arkansas Game and Fish Commission (AGFC), the Arkansas Division of Environmental Quality (ADEQ) and other state agencies in a Mercury in Fish (MIF) Taskforce. Typically, AGFC collects fish samples, ADEQ performs laboratory analysis of the fish tissue for mercury content, and ADH evaluates the fish data using a risk-based public health assessment method. When a specific fish species exceeds the Food and Drug Administration action level of 1.0 part per million (ppm) mercury, there is a potential risk for the public's health based on the amount of fish typically eaten. If a potential hazard is determined, ADH will issue a fish consumption advisory.

- **Where is this mercury coming from?**

**Mercury comes from both naturally occurring and atmospheric depositions (rain, snow, and fog).**

An increase in mercury concentration in waterbodies is on the rise across the U.S. All 50 states have issued MIF advisories for a variety of fish species. Mercury is both naturally occurring and man-made. Certain soil types have naturally occurring mercury in them, and additional mercury may be deposited in a waterbody via rain, snow, and fog.

Mercury occurs naturally in the environment and is found in varying concentrations in soils and sediments throughout Arkansas. Mercury has also been used in many industrial and agricultural applications and has been associated with some smokestack emissions. Mercury can enter lakes and streams from any of these sources and it only takes an extremely small amount of mercury to build up over time and impact the organisms in that water system.

In January 2001, the U.S. Environmental Protection Agency and the Food and Drug Administration jointly issued a fish consumption advisory covering both commercially and recreationally caught fish, advising women who are pregnant or who may become pregnant, to limit consumption of all fish to one eight-ounce fillet per week. More information and the text of this advisory can be found at: <https://www.epa.gov/choose-fish-and-shellfish-wisely>.

For more information on other fish consumption advisories in Arkansas, please see: <https://www.healthy.arkansas.gov/programs-services/topics/fish-advisories>.

- **How did the mercury build up in the fish?**

**Mercury builds up in the food chain.**

Once mercury has entered a lake or stream it is readily taken up by bacteria found in sediments. Mercury can then build up in tissue of insects as they graze on these bacteria. When these insects are eaten by predators and these predators are, in turn, eaten by even larger predators, the mercury concentration increases every step, all the way up the "food chain" to "top predators" such as Walleye. Concentrations of mercury in large or older fish can be many times higher than those found in the insects at the bottom of the food chain.

- **What fish species are included in this advisory?**

**Walleye are included in this advisory.**

All fish species tested and found to contain mercury above 1.0 ppm can be considered for a MIF advisory. Specifically, for the Bull Shoals and Norfolk MIF advisories, species include Walleye.

- **I've eaten fish from Bull Shoals Lake or Norfolk Lake in the past, am I okay?**

**Likely, if the fish meals are eaten in moderation.**

The process for calculating risks from exposure to mercury is very conservative. Mercury will naturally leave the body over time once exposure has stopped. This elimination process occurs at a rate of roughly one half of the total amount in the body every two months. Any health risks associated with eating fish from the areas listed in a fish consumption advisory are based on long-term consumption and are not tied to eating fish occasionally. Fish are an excellent source of protein and can be an important part of a healthy, diverse diet as they are low in saturated fat and high in omega-3 fatty acids. The American Heart

Association recommends that individuals eat at least two fish or seafood meals weekly. If you have any questions about risks from mercury you may have consumed in the past, please contact your health care provider.

- **Is it safe to fish in Bull Shoals or Norfolk Lakes?**

**Yes.**

Recreational fishing is not affected by this advisory. It is safe for the general population to consume Walleye at or below the posted consumption rates and consume other fish species that are not on the advisory. It is also safe to handle these fish in catch and release situations.

- **Are Bull Shoals and Norfolk Lakes safe to swim or boat in?**

**Yes.**

Once mercury enters an aquatic ecosystem such as a lake or stream, it is quickly accumulated in the muscle tissue of living organisms such as aquatic insects and fish where it primarily remains, moving from organism to organism. Thus, in aquatic ecosystems, much of the mercury is most likely contained in the organisms inhabiting that system, leaving only very small amounts in the water. Swimming, boating, water skiing or taking part in other recreation in and around the water does not present a human health hazard due to mercury.

- **When will the advisory be lifted?**

**If mercury in fish levels consistently remain under the target level of 1.0 ppm.**

During routine and regular testing of fish samples collected in Bull Shoals or Norfolk Lake, should mercury levels show a steady decrease under 1.0 ppm, the MIF task force will reconsider the fish consumption advisory.

- **How many people have had mercury poisoning in AR?**

**ADH is not aware of any current mercury (or methylmercury) poisonings due to fish consumption.**

There are other factors to consider in addition to the ingestion of mercury-contaminated fish, such as inhalation and dermal exposures from liquid mercury, meth & meth lab ingredients, occupational exposures, etc.

- **How often are fish tested for contaminants?**

**Fish are collected and tested regularly for mercury.**

A variety of fish species in both Bull Shoals and Norfolk Lakes will continue to be sampled and monitored to identify mercury concentrations. Typically, the MIF task force will determine the frequency and location of routine sampling.

- **What is the fish advisory at Bull Shoals and Norfolk?**

ADH has issued a fish consumption advisory recommending that people limit consumption of Walleye caught from Bull Shoals or Norfolk Lakes due to mercury contamination.

For sensitive groups such as pregnant or breastfeeding women, women planning to be pregnant, and children under seven years of age, no fish meals should be consumed of Walleye (18 inches or longer).

For the general public, no more than two meals per month should be consumed of Walleye (18 inches or longer). Other fish species not listed are considered safe to eat in larger quantities.

This advisory does not limit the recreational use of either Bull Shoals or Norfolk Lakes for fishing, bird watching, swimming, boating, or other types of recreational uses or as a drinking water source.