Northwestern Gulf of Mexico Fish Consumption Advisory
Frequently Asked Questions
Prepared by the Seafood and Aquatic Life Group
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Q: What is mercury?

A: Mercury is an element that occurs naturally in the environment in several forms. In the elemental form, mercury is a shiny silver-white liquid. Mercury can combine with other elements such as chlorine, carbon, or oxygen to form mercury compounds. These compounds are called organic mercury if they contain carbon and inorganic mercury if they do not. All forms of mercury are poisonous. The type of mercury found in fish is in the organic form and is called methylmercury.

Q: How does mercury enter the environment?

A: Mercury is found throughout the environment as a result of normal breakdown of the earth's crust by wind and water. Air, water, and soil can contain mercury both from natural sources and from human activity. Inorganic mercury can enter the air from deposits of ore that contain mercury, from the burning of fuels or garbage, and from the emissions of factories that use mercury. Mercury released to the air can be carried for long distances.

Q: How does mercury get into fish?

A: Mercury in water settles to the bottom where it mixes with the sediment. Here it can be changed into an organic form called methylmercury and enter the food chain. Small aquatic plants and animals can absorb the methylmercury in the sediment. Small fish eat these plants and tiny animals and larger fish eat smaller fish. At each step, the concentration of mercury increases. Higher amounts of methylmercury are generally found in older, predatory fish.

Q: How can mercury affect my health?

A: Methylmercury can harm the brain and nervous system of adults and children. Young children are particularly sensitive to mercury because their bodies are still developing. The brain and nervous system in a developing fetus can be permanently damaged if the mother eats food containing high levels of mercury. In young children exposed prenatally to low levels, reported symptoms have included developmental effects such as late walking (>18 months) or late talking (>24 months). Exposure to higher levels may result in abnormalities of the central nervous system, retardation, or seizures. Some children may experience a type of allergic reaction to mercury, with symptoms such as discoloration and itching of hands and feet, insomnia, and sensitiveness to light. Adults exposed to high levels of methylmercury may

progressively experience nervous system disorders including tingling of the fingers and toes, irritability, memory loss, depression, insomnia, difficulty in walking or speech, visual changes, or hearing defects.

Q: How can methylmercury enter and leave my body?

A: Organic mercury in fish or other foods that you might eat enters your bloodstream easily and goes rapidly to other parts of your body, including the brain. Organic mercury that is ingested is eliminated from the body primarily through the feces. The half-life for elimination of mercury is approximately one to two months. Mercury may be found in hair or blood samples. Since there is no placental barrier to mercury, the fetus is at increased risk for methylmercury poisoning.

Q: Can I be tested to see if I have mercury in my body?

A: Blood or hair samples can be taken in your doctor's office and tested in a laboratory. The amount of mercury that is found may be used to predict the potential for adverse health effects. Blood tests are useful during and shortly after mercury poisoning. Once mercury is in the hair it remains until the hair is cut.

Q: What fish consumption advice has the Department of State Health Services (DSHS) recommended to protect human health?

A*:* Due to the extremely high levels of mercury found in blue marlin (average level = 12.9 milligrams per kilogram) and the potential mercury exposure that an individual or family may have from eating such a large fish; the DSHS has recommended that people do not eat blue marlin from the northwestern Gulf of Mexico. A consumption limit of two meals per month of blackfin tuna, little tunny, jack crevalle, king mackerel > 35 inches, shark (all species), swordfish, or wahoo has been recommended. Each meal should not exceed eight ounces for women past childbearing age and adult men. A consumption limit of 1 meal/week of king mackerel < 35 inches has also been recommended for women past childbearing age and adult men. The DSHS recommends that women of childbearing age and children less than 12 years of age do not eat blackfin tuna, little tunny, jack crevalle, king mackerel < 35 inches, king mackerel > 35 inches, shark (all species), swordfish, or wahoo. Because the developing nervous system of the human fetus and young children may be especially susceptible to adverse health effects associated with consuming mercury-contaminated fish, the DSHS recommend more conservative consumption guidance for this sensitive subpopulation.

Q: Why issue a consumption advisory for blue marlin; don't most anglers targeting blue marlin practice catch-and-release?

A: The DSHS realizes that most blue marlin caught in the northwestern Gulf of Mexico are released. However, there are a few fish brought into Texas ports every year. The 99-inch minimum length limit for blue marlin ensures that any landed blue marlin is large and produces a lot of fish steaks or fillets. The DSHS data indicates that any legal blue marlin will have an

extremely high level of mercury and produce hundreds of pounds of fish steaks or fillets creating an unsafe mercury exposure for an individual or family.

Q: Is there a swordfish fishery in the northwestern Gulf of Mexico?

A: A developing swordfish fishery is producing more frequent and larger swordfish catches along the Texas Gulf Coast. Swordfish are prized as food in Texas. The daytime deep dropping fishing technique is becoming very popular and recreational anglers are catching and consuming more and larger swordfish. The DSHS data indicates that mercury levels in swordfish could pose significant health risks for those that eat large amounts of swordfish. Because of the large size of the swordfish being landed, a successful recreational swordfish angler may get several hundred pounds of steaks or fillets from a large swordfish.

Q: I have been eating these fish all my life. Will I have adverse health effects?

A: The recommended consumption limits made by the DSHS have allowed a margin of safety below those levels that could result in adverse health effects; however, eating more than the recommended amount of fish from the northwestern Gulf of Mexico does not necessarily mean that a person will have adverse health effects.

Q: Should I stop eating fish?

A: No. Fish are an important source of protein in the diet. The DSHS only recommends that people do not eat or limit consumption of those species listed in the advisory.

Q: How can I reduce the amount of mercury that I get from northwestern Gulf of Mexico fish?

A: In general, when you have a choice you should eat smaller fish that have had less time to build up mercury in their tissues and eat fish other than blackfin tuna, blue marlin, little tunny, jack crevalle, king mackerel, shark (all species), swordfish, and/or wahoo.

Q: Will cooking or cleaning fish a certain way reduce the mercury level and make the fish safe to eat?

A: No. Mercury levels are not affected by cooking, and since the mercury is in the muscle tissue, which is the portion of the fish we eat, cleaning or filleting will not make the fish safe.

Q: Should we stop fishing for fish listed in the advisory?

A: No. Recreational fishing for blackfin tuna, blue marlin, little tunny, jack crevalle, king mackerel, shark (all species), swordfish, and/or wahoo does not need to stop. Catching and releasing larger fish or consuming smaller legal fish in amounts below those recommended by the DSHS poses no health risk from mercury poisoning.

Q: Should I be concerned about mercury while conducting contact recreation activities like fishing, boating, or swimming?

A: There is no risk of mercury poisoning while swimming or participating in other contact recreational activities. Mercury levels in the water are low. The concern is for consumption of fish that concentrate mercury in their tissue.