November 7, 2012
HUFFPOST HEALTHY LIVING

Weekly Health Tip: Mercury In Fish -- How Much Is Too Much?

Posted: 07/11/11 09:08 AM ET

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When you order fish in a restaurant these days, you might feel you need a marine biologist to help you make your selection rather than a waiter. Figuring out which fish is safe to eat -- and how often you should eat fish -- has become fraught with worry, mainly due to concerns about mercury content. You might be tempted to swear off seafood completely to keep things simple. But if you do, you'll miss out on the health benefits of eating fish, including the heart-healthy omega-3 fatty acids in many fish. A wiser approach is to understand why mercury is a concern and when to avoid certain seafood.

Where the mercury comes from How does mercury get into fish and shellfish in the first place? Mercury is a metal that occurs naturally in several forms. The kind inside your thermometer is called elemental or metal mercury. It's used to make dental fillings and some batteries. It's also used in chemical manufacturing plants, coal burning plants and other industries, and that's how it ends up in your swordfish steak. Industrial pollution releases elemental mercury into the air. Rain then washes the mercury out of the air and into streams and oceans where it gets turned into methylmercury. Fish and shellfish absorb methylmercury as they feed and it builds up in the animals' tissues over time. That's why larger and older fish tend to have the most mercury.

Risks to the developing nervous system Most of our exposure to mercury comes from the methylmercury in contaminated fish. Ingesting excessive amounts of mercury is not good for anyone. In adults, it can cause damage to the nervous system, as well as the immune system and heart. But the greatest health risk from the mercury in seafood is to fetuses, infants and very young children. Even small amounts of mercury in a pregnant or nursing woman's blood can damage the developing nervous system of a fetus or infant. Nerve cells multiply and grow at a rapid rate during gestation and infancy and are especially sensitive to mercury. Scientists aren't sure exactly how the metal does its damage, but they think that it may stop the growth of dendrites and axons, the fibers on the cells that deliver and receive signals. Studies of populations that consume large

amounts of seafood have found that children who were exposed to methylmercury in the womb or shortly after birth had altered memory, attention and language development.

So how much mercury is too much? Scientists don't know precisely what level of mercury in the blood leads to harmful effects. Studies show that children suffer developmental delays when their mother's blood level is as low as 30 to 40 ng/mL (nanograms per milliliter), while adults usually don't show symptoms of mercury poisoning until their levels are higher. Fortunately, most people have some built-in protection against mercury: A genetically determined mechanism causes the body to expel the metal in 30 to 40 days. A Swedish biologist recently discovered that a small portion of the population carries a genetic mutation that makes their cells retain mercury much longer -- in rare cases up to 190 days -- and those people may be at higher risk.

While mercury poisoning from eating seafood is relatively rare, the early signs include tingling and numbness in fingers and toes and poor muscle coordination. The treatment for mercury poisoning caused by eating contaminated fish is simple: You stop eating the fish and wait for levels to come down naturally.

G**uidelines for eating seafood** Of course a better solution is to avoid ingesting too much mercury in the first place. That's easy to do. For most adults, eating fish and shellfish is not a health risk -- and it's important to get the health benefits of fish. Seafood is an excellent source of high-quality protein and iron, and it's low in saturated fat. And fish that are high in omega-3 fatty acids, such as trout, salmon and tuna, can lower your risk of heart attack and other cardiovascular problems. That's why the American Heart Association recommends eating at least two servings of fish a week.

However, women who may become pregnant or are already pregnant, nursing mothers and young children need to be more careful. The FDA advises pregnant or nursing women to avoid four fish that contain high levels of mercury: shark, swordfish, king mackerel and tilefish. Instead, they should eat up to 12 ounces a week of fish and shellfish that are lower in mercury. These include shrimp, canned light tuna, salmon, Pollock and catfish. If you eat canned albacore ("white") tuna, limit your intake to 6 ounces per week because it has higher mercury content. Young children should eat smaller portions of these fish.

While pregnant and nursing women should avoid high-mercury fish, they should not stop eating seafood, according to the FDA and others. That's because fish and shellfish contains nutrients that are important for a baby's growth. Plus, the omega-3 fatty acids in many fish can actually promote the baby's brain development (they help adult brains function better, too). So next time you're ordering fish, don't panic. Just make sure you eat a variety of seafood (not a steady diet of the four high-mercury fish) and follow the guidelines if you are pregnant or nursing.

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