Eating Fish during Pregnancy: What's the Current Hook, Line, and Sinker?

By Ginger Nichols, Licensed Certified Genetic Counselor at MotherToBaby Connecticut

I was pregnant in 2004 when the Food and Drug Administration (FDA) and the U.S. Environmental Protection Agency (EPA) released guidelines on limiting fish consumption in pregnancy because of methylmercury. That pregnancy was definitely the most amazing time of my life; however, it was also stressful. It was the 5th time I had been pregnant, but due to miscarriages and the death of a son who was born very prematurely, I had yet to bring a baby home from the hospital. I became hyper-vigilant about anything that might be a possible exposure of concern for a pregnancy. I freely admit that my frame of mind for that pregnancy could not be called logical. Therefore, with the new and somewhat scary information about fish and methylmercury, fish was quickly added to my list of "don't eat that." I also admit that I don't eat the recommended amount of fish anyway, so it was not that big of a leap to stop eating all fish.

It turns out that I wasn't the only 'fish out of water.' According to a FDA study of the dietary habits of over 1,000 pregnant women in the U.S., around 21% of the women said that within the past month they had eaten zero fish. For the women who said that they did eat fish, most were eating less than the recommended dietary guidelines. However, fish is healthy for you! You don't want to stop eating fish altogether, so instead of avoiding fish, let's learn the facts.

By now, you may be asking: *"What is methylmercury and why is it in fish?"* As a Genetic Counselor and MotherToBaby specialist, I often talk to women about eating fish during pregnancy, so let me explain…. Methylmercury is an organic form of mercury. Mercury occurs naturally in the environment and it is also released into the air as a by-product of some industrial processes. When mercury gets into the soil and the water (including lakes, rivers, and the ocean), bacteria and fungi found in soil and water change mercury into methylmercury. Since methylmercury is in our water, it is found in different levels in pretty much all fish and shellfish. In general, larger fish with long life spans that eat other fish are typically going to have higher levels of methylmercury than smaller, younger fish. If you are interested, there are lists of average mercury levels in fish available online, such as this FDA web site: https://www.fda.gov/food/foodborneillnesscontaminants/metals/ucm115644.htm

Methylmercury is found in all tissues of the fish, so cleaning or cooking the fish will not reduce the levels of mercury. People who eat a lot of fish with high levels of methylmercury can also accumulate methylmercury in their bodies. Our bodies easily absorb methylmercury from our gastrointestinal (GI) tract and it takes a long time for our bodies to get rid of it.

"So why should I be concerned about eating too much seafood with high levels of methylmercury?" We know that even if you are not pregnant, methylmercury is toxic to our nervous system and organs. The effects of methylmercury poisoning have been known since the 1950s. People who became sick from methylmercury poisoning had many symptoms that included numbness in the hands and the feet, muscle weakness, tremors (shaking), and personality changes (irritable, shy, nervous). Now before you panic, be aware that these people had been exposed to fish with levels of methylmercury far higher than even the most contaminated fish in your grocery store!

We know that methylmercury can cross the placenta in pregnancy. With very high exposures, babies have been born with small head size and brain damage that can lead to seizures, developmental delay, blindness, and muscle weakness. Since methylmercury can affect the baby's developing brain, high exposure is a concern at any stage of pregnancy. For more info, visit the MotherToBaby fact sheet on methylmercury in pregnancy and breastfeeding at https://mothertobaby.org/fact-sheets/methylmercury-pregnancy/.

By now you may feel like you just need to stay away from eating fish in pregnancy, when in fact studies are showing that women who eat fish during pregnancy have better pregnancy outcomes than women who do not eat fish. Recent studies have also looked at how nutrients in fish, including Omega-3 fatty acids, might have positive effects for baby's development and actually may help to protect against any possible harm that might occur from prenatal methylmercury exposure. And what's more, women in the U.S. generally do not depend upon fish as their only protein intake, so are unlikely to eat enough fish to cause harmful effects in a pregnancy. So, to reap the full health benefits of fish consumption for you and baby, the key is to eat a variety of fish that are low in methylmercury. This is where the FDA's updated 2017 guidelines can provide some assistance.

"What are the current FDA guidelines?" The FDA's recently revised advice is designed to encourage women who are pregnant and/or breastfeeding to consume up to 12 ounces of fish that are low in methylmercury each week, and provides guidance on which fish are the best options by breaking the fish into categories of Best Choices, Good Choices, and Choices to Avoid. The easy-to-read guide can be found here: https://www.fda.gov/downloads/Food/ResourcesForYou/Consumers/UCM536321.pdf. You'll notice that on the FDA's guide, different types (species) of tuna and tilefish are listed under different categories – so take note of which type you are buying so you know which list it is on.

Following current recommendations, if you are planning to become pregnant, currently pregnant, or currently breastfeeding:

- A typical serving of fish is 4 to 6 ounces, measured before cooking.
- Each week, you may eat up to 2-3 servings of a variety of fish from the Best Choices list; there are over 35 different types of fish on this list!
- If choosing a fish from the Good Choices list, limit yourself to just the one serving of that fish for the week.
- Avoid the following fish, as they are highest in methylmercury: shark, swordfish, mackerel, marlin, orange roughy, bigeye tuna, and tilefish from the Gulf of Mexico.
- If you are eating fish caught by family or friends, check for local fish advisories. The EPA has a search option to check for fish/shellfish advisories based on where you live: https://fishadvisoryonline.epa.gov/General.aspx. You can also check in with your state Department of Public Health. If there isn't an advisory, limit yourself to just one serving of that fish and do not eat any other fish that week.

So now that we've got you on the hook and reeled you in, what's the takeaway? With around 60 fish listed as Best and Good Choices on the FDA's 2017 fish guidelines, 'there are plenty of fish in the sea' for pregnant and breastfeeding moms!

Ginger Nichols is a licensed certified genetic counselor based in Farmington, Connecticut. She currently works for MotherToBaby CT, which is housed at UCONN Health in the division of Human Genetics, Department of Genetics and Genome Sciences. She obtained her Bachelor of Science degree in Biology and Sociology from Juniata College and her Master's Degree in Medical Genetics from the University of Cincinnati. She has a special interest in occupational and environmental exposures.

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