

Studies lead to improved fish advisory for pregnant women

June 26 2014, by Margaret Nagle



(Medical Xpress)—Two studies by researchers at the University of Maine's Sustainability Solutions Initiative (SSI) uncovered compelling data on women's knowledge of both the dangers and health benefits of eating fish while pregnant.

The first study found that Maine Center for Disease Control and Prevention's (CDC) advisory led women to decrease their consumption of [fish](#), while a follow-up study found a newly designed advisory led to a healthier, more balanced approach to [fish consumption](#).

Mario Teisl, professor in the School of Economics, will present and discuss results of the studies, which were published in two peer-reviewed journals, as a featured speaker at the U.S. Environmental Protection

Agency's (EPA) 2014 National Forum on Contaminants in Fish.

Both journal papers are among the first to examine how information about methylmercury in fish is conveyed to [pregnant women](#) in specific states and how that information is used, which is information the EPA has indicated it needs.

Teisl has been part of two research teams from SSI's Knowledge to Action Collaborative that have closely examined CDC's methylmercury advisories sent to pregnant women. He will lay out how the successive sets of data tracked an evolution in the way information is conveyed to and interpreted by pregnant women in Maine.

"CDC suspected that the original advisory was not working as best as it could and our initial study confirmed the state could do better," Teisl said.

In the first study, published in 2011 in the journal *Science of the Total Environment*, Teisl and colleagues found the advisory was changing pregnant women's eating habits, but not always in the intended manner.

Instead of limiting high-mercury fish and switching to a careful diet of low-mercury fish, many pregnant women were dramatically decreasing consumption of all fish, thus missing out on the benefits of eating fish. The misinformation seemed to stem from the fact the advisory was aimed at wild caught fish and mainly focused on the risks of eating fish.

"The old pamphlet was targeted more toward anglers. On the cover, there was a photo of a family fishing. The problem is that very few women eat sport-caught fish. Most eat fish from the grocery store. A lot of pregnant women didn't understand how the information pertained to them," Teisl said.

In 2006, the CDC, with the assistance of a health literacy expert at the University of New England, redesigned its advisory, adding specific information about fresh, frozen and canned fish.

The new literature contains recipes, meal plans and colorful charts, informing women of fish to avoid, fish to limit and fish that are low enough in mercury to eat twice a week while pregnant. The pamphlet emphasizes the importance of fish in the diet, including the fetal/maternal [health benefits](#) of Omega 3 fatty acids and protein.

In the second study, published in 2013 in the journal *Environmental Science*, Teisl and colleagues found women who read the updated advisory were knowledgeable about healthy fish consumption in pregnancy.

For instance, informed women could distinguish between similar products such as canned white tuna, which is high in mercury, and canned light tuna, which is not. People who did not read the advisory generally lacked essential knowledge about healthy fish diets.

"Our evaluation of the Maine CDC's updated fish consumption advisory suggests that it successfully improved women's specific knowledge of both the benefits and risks of consuming fish while pregnant. This improved knowledge has the potential to minimize methylmercury health impacts and maintain, if not increase, overall low-mercury fish consumption," said Haley Engelberth, who received a master's of science in ecology and environmental science from UMaine in 2012. Engelberth was on both SSI methylmercury research teams and the lead author of the 2013 paper.

More information: Teisl will make his presentation at the Sept. 22–24 conference in Alexandria, Virginia.

Provided by University of Maine

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