

MERCURY IN FISH (from page 28)

The federal government advises women who are or may become pregnant, nursing mothers, and young children not to gorge on several marine species, namely swordfish, albacore tuna, king mackerel, and tilefish, because of the concentration in the tissue of these fish of methylmercury, a highly toxic organic compound of mercury.

While these species are notably identified as fish that should be eaten in moderation by certain groups of people, little information has been recorded on the mercury levels of native species that are heavily fished and consumed by Rhode Islanders.

This is why Taylor's study is important.

During the past 14 years, Taylor and RWU students have been analyzing mercury levels in these species in hopes that the Rhode Island Department of Health (DOH) will update its fish consumption advisories. The effort is aimed at encouraging safe, healthy consumption of popular local fish. Many of the locally caught fish he and his students have test have exceeded the Environmental Protection Agency's threshold level for mercury.

Taylor noted that mercury is recognized as one of the most widespread, toxic environmental contaminants and has been linked to neurological and cardiovascular disorders, immune deficiencies, and reproductive deficits.

His research shows that recreational fishermen generally consume higher quantities of fish than the average American, and thus may be more susceptible to mercury poisoning. To determine how much fish and what species locals are consuming, Taylor has surveyed eating habits of 371 local fishermen and found that they eat about 80 percent more fish relative to the national average.

State-issued fish consumption advisories generally are based on nationally aggregated data, but regional data is critical to more accurately assess mercury levels in local species. Based on his research so far, Taylor has found that the mercury levels of local bluefish, striped bass, and tautog don't reflect nationally aggregated data and often underestimate the mercury risk.

Advice About Eating Fish

What Pregnant Women & Parents Should Know

Fish and other protein-rich foods have nutrients that can help your child's growth and development.

For women of childbearing age (about 16-49 years old), especially pregnant and breastfeeding women, and for parents and caregivers of young children.

- Eat 2 to 3 servings of fish a week from the "Best Choices" list OR 1 serving from the "Good Choices" list.
- Eat a variety of fish.
- Serve 1 to 2 servings of fish a week to children, starting at age 2.
- If you eat fish caught by family or friends, check for fish advisories. If there is no advisory, eat only one serving and no other fish that week.*

Use this chart!

You can use this chart to help you choose which fish to eat, and how often to eat them, based on their mercury levels. The "Best Choices" have the lowest levels of mercury.

What is a serving?

To find out, use the palm of your hand!



For an adult
4 ounces



For children,
ages 4 to 7
2 ounces



Professor David Taylor is also an avid fisherman, seafood consumer and a RISAA member.

Since the current consumption advisories for local marine fish are based largely on nationally aggregated data, they may be overly or insufficiently protective in limiting mercury exposure, according to Taylor.

Mercury exposure occurs mainly through dietary consumption of contaminated fish. To minimize such exposure, federal public health officials and state agencies issue consumption advisories to inform consumers of the possible health risks associated with eating fish.

While consumption advisories have been developed on a site-specific basis for fish inhabiting freshwater systems — DOH, for example, advises not to eat any freshwater fish, with the exception of stocked trout, that are caught in Rhode Island — advisories regarding the consumption of saltwater species lack geographic specificity.

The EPA and the Food and Drug Administration (FDA) have decided which category each fish belongs to by calculating the highest average amount of mercury that could be in a fish when eaten one, two, and three times a week without going over the maximum acceptable mercury intake amount for an average pregnant woman.

The FDA also cautions against eating some fish, such as black crappie and eel, more than once a month because of the presence of other contaminants such as polychlorinated biphenyls (PCBs).

(Taylor said the higher mercury content in some locally caught species, such as bluefish, striped bass, and tautog, compared to national data is likely because of Rhode Island's prominent role in the Industrial Revolution — there is an abundance of legacy mercury in local sediment — wind-blown pollution from coal-fired power plants in the Midwest, and from the local incineration of medical waste.

His research has shown that: striped bass have tested above the EPA's threshold level for mercury 55 percent of the time; bluefish, 46 percent; tautog, 35 percent; black sea bass, 20 percent; summer flounder, 13 percent; and scup, 9 percent.

Based on those results, Taylor said EPA guidelines would advise consumers not to eat local striped bass; bluefish and tautog one meal per month; black sea bass and summer flounder one meal per week; and there would be no advisory for scup.

As for other popular species that aren't part of his study, Taylor said cod, haddock, salmon, and shellfish typically measure low in mercury content.

He noted that getting rid of the mercury flowing through the food web is a very slow process, as the poison is taken in much more quickly than it is released. **(to page 37)**