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# HOW SAFE IS THIS TO EAT? / Chronicle tests find mercury above guidelines in bluefin tuna at some local sushi restaurants

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Staff

Samples of bluefin tuna purchased recently from six Houston-area restaurants had mercury levels above federal guidelines, according to laboratory tests performed for the Houston Chronicle. An additional five showed mercury levels just below the federal standard.

What does that mean to sushi lovers in Houston? That depends on whom you talk to and how much you eat.

Experts and doctors are divided on the health effects of eating fish with high levels of mercury, or even what constitutes a dangerous level of contamination.

"I'm a toxicologist," said Ernest D. Lykissa, co-owner of ExperTox, the laboratory that performed the tests for the Chronicle last month. "I was a connoisseur of sushi. I don't eat tuna anymore after this study."

Others, including the seafood industry, argue that exceeding the Food and Drug Administration's 1 part per million guideline for methyl mercury in seafood does not put a person in danger of toxicity.

"There's a tenfold safety factor, so 1.0 parts per million is 10 times lower than any level that would be associated with risk to begin with," said Gavin Gibbons, spokesman for the National Fisheries Institute, an advocacy organization for the seafood industry.

Mercury occurs naturally in the environment. It also is released into the air through industrial pollution, from which it falls and can end up in rivers and oceans. Bacteria in the water cause chemical changes that transform mercury into organic methyl mercury, the most toxic form.

Unlike the heavier elemental mercury found in thermometers, methyl mercury is easily absorbed in the body and stays there for a longer period of time.

Fish absorb methyl mercury from the water and from feeding on smaller organisms.

Bluefin tuna, like other large predatory fish that live a long time, is higher in mercury than other tuna species used for sushi. Other fish such as sharks, swordfish, king mackerel or tilefish also are high in mercury.

"It's a phenomenon known as bioaccumulation when this amount of mercury in the meat of fish is magnified as you go up to higher and higher levels of the food chain," said Dr. Arch Carson, an assistant professor of occupational medicine and environmental sciences at the University of Texas School of Public Health. "And we can think of ourselves as pretty much at the highest level.

"We are eating those fish that have a lot of mercury. It's accumulating in us as well."

Carson, who specializes in medical toxicology, said a high amount of mercury in the body can cause problems with the liver, neurological system and kidneys.

Warnings for women

The FDA randomly tests fish for mercury content in markets across the country, agency spokeswoman Stephanie Kwisnek said. But no federal agency can take action in cases in which mercury levels exceed the FDA's nonbinding guideline of 1 ppm.

In 2004, the FDA and the Environmental Protection Agency issued a consumer advisory asking pregnant women, nursing mothers, women who may become pregnant and young children to avoid some fish that have high levels of mercury.

However, the advisory recommended that they eat up to 12 ounces (two average meals) a week of a variety of fish and shellfish that are lower in mercury.

Dr. Dariush Mozaffarian, cardiologist at Harvard Medical School, said mercury from fish is not a major concern for many people.

He said the FDA and the EPA have set limits for these women because of the subtle effects mercury has on the development of children.

"Now, for everybody else in the population, there are no recommendations for limiting mercury intake in fish," Mozaffarian said. "There are no national recommendations set by any government body to limit intake of mercury in fish because we don't know in adults and everybody else whether there are any effects."

15 eateries tested

The Houston Chronicle bought sushi from 15 restaurants across the city on Feb. 12 and 13. The sushi was tested by ExperTox in Deer Park for mercury. Each sample was tested twice. The results showed mercury levels ranging as low as 0.23 ppm to as high as 2.76 ppm.

RA Sushi Bar Restaurant on Westheimer, whose bluefin sushi tested between 2.3 and 2.76 ppm of mercury, has consumer advisories in its businesses to warn customers about mercury levels and

that eating raw food that may increase the risk of foodborne illness, said Amy Sun, the company's marketing director.

In a statement about the mercury found by ExperTox, the company said, "The well-being of our customers is our primary concern."

Raymond Ng, manager of Tomo Japanese Restaurant, said he was surprised to learn ExperTox had found a mercury level of 1.9 ppm in the store's bluefin tuna.

"Either we will put some warning on our menu or take the bluefin out," Ng said. "Actually, it's easier to sell the yellowfin because it's cheaper."

Gibbons said bluefin makes up 0.05 percent of the seafood eaten in this country.

He and others point to a 1994 FDA Consumer magazine article in which the agency said the "action level of 1 ppm for methyl mercury in fish was established to limit consumers' methyl mercury exposure to levels 10 times lower than the lowest levels associated with adverse effects."

At that level, Gibbons said, a person would have to consume a piece of high-mercury fish every day over the course of his or her life to be at risk of mercury toxicity.

Lykissa, at ExperTox, disagrees.

"There's no mercury that's good for you," he said. "So, they have to agree to that for everybody. The kidneys are going to hear about it. And it's your kidneys that are going to have to eliminate it."

Michael Zhou, who along with his wife, Chi, owns Masa Sushi restaurant, said the bluefin sushi sold at the business is a smaller fish of about 20 pounds, which he contends is lower in mercury than the bigger species.

Japanese have eaten bluefin for 1,000 years, he said, and no one has gotten ill. But, he added, if it is a health issue here, he will stop selling it.

Chi Zhou said the FDA should check the fish before they are distributed by suppliers to restaurants.

"The restaurants cannot afford to check all the fish," said Chi Zhou, whose restaurant tested about 1.2 ppm. "Let the government do something, not just the restaurants."

Different tunas

Yoichi Ueno, owner of Kubo's Sushi Bar & Grill, said he believes his bluefin sushi is within the federal guideline and that he will continue to serve it. ExperTox found a level of about 1.6 ppm in a sample of Kubo's bluefin.

He said if people do not eat it every day, they will not be at risk of mercury poisoning.

"Unless you are so rich," he said, "you can't eat very much."

Kubo's executive chef, Manabu Horiuchi, said bluefin is popular in the restaurant. He said a lot of people ask which fish are high in mercury, but most still eat it.

Robert White - owner of Japaneiro's Sushi Bistro & Latin Grill in Sugar Land, which ExperTox found had a mercury level of 2.0 to 2.3 ppm in its bluefin - said his business sells mostly yellowfin tuna, a smaller fish.

"If I find that level (in bluefin) is high, I will stop that particular fish until I am assured there is absolutely no risk in that product," White said. "I will immediately stop it and research it."

Attempts to reach owners or management with Azuma restaurant downtown, whose sushi tested between 1.1 and 1.4 ppm, were unsuccessful.