

## **Mercury Levels in Fish – What Does it Mean?**

Seafood in Asheville, NC is serious business. As a group of health-conscious locals, seafood is an integral part of many of their healthy and active diets. Fish and shellfish contain high-quality protein and other nutrients essential to a good quality life. Now, keep in mind that with everything good comes a little bad. For instance, mercury in fish has been a global concern for more than 50 years and George Baxevanis, owner of Fisherman's Quarters II in Asheville, NC takes the concerns seriously. "The health of my family and friends; the people I see every day in the restaurant; it's all important to me," he says.

## **What are the Concerns for Asheville Seafood Restaurant Owners?**

Asheville seafood restaurant owners are concerned that their customers aren't getting good information on mercury levels in fish. The EPA and the FDA have guidelines on how we should be eating fish, but it can all be a little confusing. The three guidelines are as follows: 1) Do not eat shark, mackerel, sword or tilefish due to high levels of mercury; 2) Eat up to 12 ounces a week of fish low in mercury; and 3) Check local advisories for levels in fish caught by family and friends. These leave you kind of wondering, huh?

## **What Does It Really Mean?**

The first is the most important. What does the EPA consider to be low levels? The five most common fish with generally-accepted low levels of methyl-mercury are: shrimp, salmon, pollock, catfish and light-canned tuna. Those most at risk are young children and pregnant women. Mercury can seriously affect the development of young nervous systems.

## **What Are the Risks?**

The risks depend on what type of fish and how much is consumed. George has told me that, "Seafood is still as popular as ever, but consumers are pickier about what they eat." The fish highest in mercury are larger, older fish that are higher on the food chain. When mercury hits the water it is absorbed by algae and plankton. It is also absorbed by all the other fish. This gives all, or most fish, a trace amount, but when a larger fish eats a smaller fish, bio-magnification takes place. Not only does the large fish have its own trace amount, but you have to add all the traces from all the fish it has eaten.

## **Where Did It Come From?**

In the early part of the 20<sup>th</sup> century, the good folk in Minamata, Japan, located on the island of Kyushu, convinced an industrialist to build his plant in their town. They hoped to benefit from modernization and industry. What they didn't want was to be poisoned. At the time, mercury was an important part of the catalyzing process and many tons were released into the seas surrounding the island. In the early 50s, the inhabitants started to notice strange behavior in the local animals. Cats would act crazy and scream. Birds would fall out of the sky. After several years, these symptoms were noticed in humans and an investigation began. In 1957, fishing was banned but by the time Chisso Corporation was stopped, more than 5,000 people died and as many as 50,000 were poisoned.

Today, there are two primary sources for mercury in fish – coal-burning power plants and chlorine chemical plants. Older chlorine plants use mercury to strip chlorine from salts, leaving a toxic by-product. Modern chlorine plants use a membrane to separate the chlorine and don't pose the same risk. However, coal plants still burn coal. Mercury is a natural contaminate of coal and is released when

coal is burned. The chlorine falls into lakes, rivers and estuaries where it combines with water to form methyl-mercury – the worst kind.