Most human exposure to mercury - a potent neurotoxin - comes through fish, according to toxicologists with the Northeast Louisiana University School of Pharmacy and Health Science.

Mercury attacks the nervous system, destroying neurons and creating irreversible damage in cases of high exposure, said Kevin Baer, an aquatic toxicologist with Northeast.

It is most dangerous to children, whose nervous systems are still developing, said Carey Pope, head of the Department of Toxicology at Northeast's pharmacy school. Mercury can be transmitted to them through their mothers' milk, Pope said.

When a pregnant woman eats mercury contaminated fish, much of the contamination crosses the placenta to her fetus where it poses a risk of damaging the developing nervous system, he said.

Women who could be pregnant would be wise to limit greatly their consumption of any fish contaminated with mercury, even if it is below the .5 parts per million level which is commonly used to issue health advisories, Pope said.

"Even at .25 (ppm) it's not all right to eat all you want to," he said. "If you are a woman of childbearing status, it's not advisable."

Likewise, it makes sense for parents to limit consumption of fish contaminated even with low levels of mercury by pre-adolescents, particularly children under the age of five, he said.

Asked about fish contaminated with levels of mercury of .3 to 1 ppm, Pope said even adult males would be wise to start limiting their consumption of such fish.

Once mercury contamination in fish gets around 1 ppm a grown male should limit his consumption to a single 8 oz. portion once a month, Baer advised.

The human body absorbs most of the methyl mercury it takes in from contaminated fish, according to state health officials.

Since mercury tends to accumulate in people - though small amounts can be eliminated over time - risk rises when a person repeatedly eats contaminated fish, Baer said.

Just because a pregnant woman eats one of these fish, it doesn't mean she is going to have a problem, but it increases the chance and the risk becomes greater if she continues to eat such fish, said Baer.

"You want to avoid exposure to the developing fetus," because of evidence mercury can cause severe birth defects.

High levels of mercury contamination can cause severe sensory and visual problems in adults, Baer said.

"It destroys neurons in the central nervous system," causing "irreversible effects," he said.

In adults, the earliest signs of methylmercury poisoning include tremors of the hands and abnormal sensations in the fingers, toes, tongue and lips, according to state health officials.

Continued heavy exposure can lead to speech, vision and hearing problems and even paralysis and death.

Most methyl mercury exposure comes from fish, which are usually exposed to mercury from air pollution that has dissolved in rain water to enter streams, Baer said.

How mercury reaches humans

- Mercury is released into the atmosphere mainly from coal-burning power plants and trash incinerators where batteries and other mercury-containing materials are burned. In the atmosphere mercury can travel long distances before falling to earth in rainfall.

- On the ground and in water bottoms sulfate-reducing bacteria add a carbon group to the mercury, turning it to methyl mercury, which is readily absorbed and retained by organisms. Acids aid the methylation process. Plankton absorb the methyl mercury. Small invertebrates eat the plankton. Small fish eat the invertebrates. Large predator fish eat the small fish.

- Since mercury tends to remain in tissue, it is accumulated by predator fish, such as bass, which eat many small fish each day. In mercury-contaminated water, the concentration of mercury gradually gets higher in predator fish as they get larger.

- Mercury also tends to accumulate in humans that repeatedly eat contaminated fish and attacks neurons in a person's central nervous system. It has a greater impact on children whose nervous systems aren't fully developed.

A pregnant woman passes much of the mercury to her fetus, where it increases the risk of birth defects. Lactating women pass mercury to their babies, whose nervous systems are particularly vulnerable to mercury.