

Fish advisories could harm consumption, warn researchers

19/10/2005 - **Government warnings about the mercury contamination of fish could threaten overall consumption of the healthy food, say researchers in a new study.**

Their findings follow a series of advisories issued by public health officials warning women of childbearing age about potential mercury exposure from eating fish.

Evidence on how people actually react to such advisories is limited but one study found that pregnant women cut their fish consumption by one-sixth following a 2001 government advisory.

This would result in many infants losing out on the benefits of nutrients like omega-3 fatty acids in fish, warn the researchers in a series of five articles in the November issue of the *American Journal of Preventive Medicine*.

Further, other adults not targeted by the advisory may also cut back on fish based on misperceptions about the risks.

"Fish are an excellent source of omega-3 fatty acids, which may protect against coronary heart disease and stroke, and are thought to aid in the neurological development of unborn babies," said Joshua Cohen, lead author and senior research associate at the Harvard Center for Risk Analysis.

"If that information gets lost in how the public perceives this issue, then people may inappropriately curtail fish consumption and increase their risk for adverse health outcomes."

Fish are a major source of mercury exposure, a neurotoxin that may cause subtle developmental effects in utero, like the loss of a fraction of an IQ point, even at the modest exposure levels typical of the American population.

Yet the food is also a good source of omega-3 fatty acids so the recent government advisories regarding the risks of mercury contamination for pregnant women emphasize that other adults need not worry about mercury in fish.

They even advise women of childbearing age to keep eating fish, although they caution that group to keep away from some species (shark, swordfish, king mackerel, and tilefish) likely to contain more mercury and to limit total fish intake to about two meals a week.

In the new research, a panel of experts in nutrition and related areas found that if pregnant women were to eat the same amount of fish but replace fish high in mercury with fish low in mercury, cognitive development benefits, amounting to about 0.1 IQ points per newborn baby, could be achieved with virtually no nutritional losses.

However, if pregnant women were to decrease their fish consumption by one-sixth, the loss of omega-3 fatty acids during pregnancy would cut the nutritional benefit by 80 per cent.

If other adults were to also decrease their fish intake by one-sixth, then risks from coronary heart disease and stroke would increase. For example, among 65 to 74 year old men, the annual mortality risk would increase by nearly 1 in 10,000.

The study also found that increasing fish consumption among individuals who were not going to become pregnant would substantially decrease stroke and coronary heart disease risks. Much of this benefit appears to be associated with getting people to eat at least some fish (eg one meal a week), rather than no fish at all, said the researchers.

Cohen explained that the problem with fish advisories is that we do not know what their overall impact on the population might be.

"Depending on how the population reacts, that impact could very well be negative," he said.

"Before the government issues advisories, it needs to gather data on how people actually will react, how those changes in behavior will influence nutrient intake and exposure to contaminants, and how those changes in intake and exposure will translate into changes in health."

The panel of experts was chaired by Steven Teutsch, a medical epidemiologist formerly with the U.S. Centers for Disease Control and Prevention and now at Merck. Other members included David Bellinger (Harvard University), William Connor (Oregon Health Sciences University), Penny Kris-Etherton (Pennsylvania State University), Robert Lawrence (Johns Hopkins University), David Savitz (University of North Carolina), and Bennett Shaywitz (Yale University).

The panel identified important health effects to consider, assessed the dose-response relationships between fish consumption (or its constituents) and health outcomes, and developed an overall health effects model.

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