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Fish Consume Could Harm the Boobs

Fish coming from polluted waters could cause breast cancer

Fish are advertised as a healthy food, an easy to assimilate protein-rich meat, full of vitamins (like vitamins A and D), calcium, phosphorus and low cholesterol fats. But there are also species of fish which may cause health issues. A new research made at University of Pittsburgh found that channel catfishes coming from waters heavily polluted with sewer and industrial wastes could cause breast cancer.

Extracts of channel catfish captured in the Allegheny and Monongahela rivers (near Pittsburgh) were rich in chemicals mimicking estrogen, the fat-soluble female sex hormone whose overdose is the main culprit in most cases of breast cancer. Fish accumulate fat soluble chemicals damped into their habitats, like pharmaceutical estrogens and xeno-estrogenic drugs.

"We believe there are vast quantities of pharmaceutical and xeno-estrogenic waste in outflows from sewage treatment plants and from sewer overflows, and that these chemicals end up concentrated and magnified in channel catfish from contaminated areas. Sewer overflows result from inadequate sewer infrastructure, which releases raw, untreated sewage directly into area rivers during wet weather. In Pittsburgh alone, 16 billion gallons of raw, untreated sewage are deposited into area rivers every year with major implications for public health", said lead researcher Dr. Conrad D. Volz, department of environmental and occupational health, University of Pittsburgh Graduate School of Public Health.

[img=2]Volz's team exposed estrogen-sensitive and estrogen non-sensitive human breast cancer cells to extracts of catfish. The extracts triggered division on the estrogen-sensitive breast cancer cells, by turning on the estrogen receptors (proteins activated by estrogen), but had no effect on the estrogen non-sensitive type.

Extracts from individuals captured in heavily polluted waters caused the highest response, no matter the sex of the fishes. The team is going to detect the specific chemicals and the culprits for this kind of contamination.

"These findings have significant public health implications, since we drink water from the rivers where the fish were caught. Additionally, the consumption of river-caught fish, especially by semi-subsistence anglers, may increase their risks for endocrine-related health issues and developmental problems", said Volz.