

## Fish consumption advisories – good science or bad rap?

**Dr. David Carpenter, School of Public Health, SUNY Albany**

The reason fish advisories are so important is that many fish, especially those in the Great Lakes, are highly contaminated with toxins that pose a serious threat to human health.

These toxins include methyl mercury and persistent organic pollutants, such as dioxins, polychlorinated biphenyls (PCBs) and certain pesticides. All of these bioaccumulate in the fat of fish and when we eat such fish, the contaminants accumulate in our bodies.

These agents can stay in the human body for years, causing cancer; disrupting thyroid and sex steroid endocrine systems and weakening the immune system. Perhaps the most serious problem is developmental damage to the fetus, which can result from the contaminants consumed by the mother even years before she becomes pregnant. For children exposed before birth – particularly in the case of dioxins, PCBs and methyl mercury – these toxins can also cause

neurobehavioral problems and a reduction in IQ. This “dumbing-down” of the next generation is, in my judgment, the most serious hazard from these contaminants. PCBs and dioxins can also be passed from mother to infant in breast milk, and cause harm to the developing child.

Not all fish are equally contaminated. The large, predatory fish are most dangerous, since they accumulate contaminants from smaller fish in their diet. The smaller fish, and especially small plant-eating fish, are much less contaminated.

Fish advisories provide information to sports fishing enthusiasts on how to protect their health and the health of their families. An advisory is not a law prohibiting fishing or fish consumption. But, at minimum, it is the responsibility of government to provide information to the consumer so that those who choose may make wise choices on what they eat.

**POINT**  
POINT



*Dr. David Carpenter, M.D. is a professor of environmental health and toxicology at the University at Albany (N.Y.) and a member of the International Joint Commission's Great Lakes Science Advisory Board.*

**Dan Thomas, President, Great Lakes Sport Fishing Council**

The Great Lakes are one of the world's premier sportfishing regions. But all around our region, people are confused as to the safety of these fish because of the many and varied fish consumption advisories. Great Lakes states have nearly two-thirds of the more than 3,000 such advisories currently in effect in the United States, making it sound as if we poor folks in the Great Lakes region are living in a cesspool of pollutants. But what are the facts?

Five bioaccumulative toxins – PCBs, dioxin, mercury, chlordane and DDT – account for nearly all fish advisories. Environmental releases of all of them have either been declining or effectively halted in recent decades, but the number of fish advisories continues to increase. Why? Because the scientific instruments used to detect these chemicals have become incredibly more sensitive – as much as a million times more than 15 years ago, detecting traces in the parts per trillion range. This pretty much guarantees that

you're going to find toxic contamination anywhere you look for it.

One of the rules of science is that everything is a trade-off between risks and benefits. The fact is, the traces of contamination in Great Lakes fish pose far less threat to one's health than the artery-clogging fat found in a hamburger. The National Academy of Sciences says that people should continue to eat the fish they catch because the cardiac, nutritional and other benefits outweigh the risks it poses.

Research has consistently shown that, unless you're exposed to industrial levels of pollution over a long time, there's little to fear from normal consumption of Great Lakes fish. Vulnerable populations, such as women of childbearing age and children, can limit their exposure by removing fatty tissue before cooking and moderating consumption. But Great Lakes fish is still part of a healthy diet.

**counterpoint**  
counterpoint



*A lifelong fisherman, Dan Thomas is a member of the board of directors of the Association of Great Lakes Outdoor Writers and a founding officer and charter member of Salmon Unlimited, Inc.*

The views expressed are those of the authors and do not necessarily reflect those of the Great Lakes Commission or its member jurisdictions.