

# Health effects of pesticide mixtures: Unexpected insights from the salmon brain

February 17 2008

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In his research, scientist Nat Scholz examines how pesticides that run off the land and mix in rivers and streams combine to have a greater than expected toxic effect on the salmon nervous system. These pesticides are widely used in the United States and their occurrence as mixtures in the food supply for humans may also pose an unexpected risk for people.

“We have a pretty good handle on how to assess the health effects of single chemicals in conventional toxicity trials,” said Scholz, a fishery biologist with the National Oceanic and Atmospheric Administration. “But the real world is usually more complex, and exposures to mixtures of chemicals can be more of the rule than the exception. One of the major scientific challenges of our generation is to develop new approaches to anticipate and head off any ill effects of interacting chemicals.”

Scholz will present his research along with five other scientists from the U.S. government, the Canadian government and academia in the symposium entitled “From Kitchen Sinks to Ocean Basins: Emerging Chemical Contaminants and Human Health.” Organized by NOAA’s Oceans and Human Health Initiative, the symposium is one of the features of the AAAS Annual Meeting.

Scholz and his colleagues found that salmon died when exposed to combinations of pesticides that were not deadly when tested in individual trials. The findings for salmon could have important implications for the recovery of many threatened and endangered salmon

populations throughout the western United States. The research also points to the need for more study of how combinations of pesticides found on fruits and vegetables may be affecting humans.

Source: NOAA Headquarters

Citation: Health effects of pesticide mixtures: Unexpected insights from the salmon brain (2008, February 17) retrieved 26 April 2024 from <https://phys.org/news/2008-02-health-effects-pesticide-mixtures-unexpected.html>

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