Fish School: Taking Stock of Risks and Benefits

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Reaching At-Risk Audiences and Today's Other Food Safety Challenges
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“Fish School”

- Funded by U.S. EPA-GLNPO
- USEPA and FDA consumer advisory
- At risks populations
- Education project for teachers/ students grades 6-12
Fish is Good to Eat!

• Easy to prepare

• Economical to catch locally

• Culturally important to many populations
Benefits of Eating Fish

• Fish are part of a healthy, well-balanced diet.

• Fish are low in saturated fat.

• Fish are a great source of vitamins, minerals and protein.
Concerns about Eating Fish

• Fish can contain harmful chemicals.

• These contaminants can cause long-lasting health problems.

• Contaminated fish don’t look, smell, or taste different, but can still be harmful.

• Be especially careful if you are pregnant, nursing a baby, or have a young child.
What Can You Learn from Fish Advisories?

- Which fish are unsafe to eat
- Which fish you should eat less of
- Which fish to eat more often

Visit U.S. EPA fish advisories Web site [www.epa.gov/ostwater/fish](http://www.epa.gov/ostwater/fish)
How to Prepare and Cook Fish Wisely

• Remove parts that are higher in fat.

• Bake or broil the fish to allow fat to drain.

• After cooking, discard all liquids.
Publications

• Contaminants in Fish and Seafood--A Guide to Safe Consumption. (Illinois & Indiana versions).
  ✓ English
  ✓ Polish
  ✓ Spanish
  ✓ Chinese

• In brochure and flip chart form.
Other Publications

• The lowdown on mercury.

• What you need to know before you eat that fish!

• The lowdown on PCBs.

• What you need to know before you eat that fish! (PCBs and Your Family)
Year One of “Fish School”

- Illinois-Indiana Sea Grant and ISTA launch effort to recruit science, health, and nutrition teachers.

- Teachers attend workshop.

- Educators create units for their classroom.
Year Two of “Fish School”

• Students present projects at community and school events.
• Teachers present at professional conferences or teacher in-service.

Linda Cook, 4-H Educator, Winter Wonderland Fest Wolf Lake, Indiana
Evaluation

• Teachers completed a pre- and post-survey.

• Receive a stipend upon project completion.
Sample Survey Results

• Teachers get significant amount of info on contaminants from newspapers and TV.

• Spent 3-6 weeks teaching this unit.

• Take home message for students—
  - Be an educated consumer.
  - Check fish advisories.
  - Be aware of risks and vary choices.
  - In restaurant/ grocery store, ask where fish came from.
  - Frying is not best way to prepare fish.
New Student Understandings

• Became more aware of contamination issue
  – How fish become contaminated
  – How people can get PCBs, Chlordane, and Mercury into their systems

• Changed attitudes about concerns related to eating fish

• Sharing new knowledge/ awareness with families and community members
Kilmer Elementary
Students Show Off their Projects
More Projects: Science and Reading
• **What Color is your Water Today?**  
  *Steve Schmidt, Science Teacher, Kilmer Elementary*

• **Create Excitement through Learning about Fish**  
  *Shara Fata, Science Teacher, Kilmer Elementary*

• **Water Quality and Healthy Fish**  
  *Beth Johnson, Art Teacher, Kilmer Elementary*

• **Food Pyramid**  
  *Kelly McCue, Health Teacher, Kilmer Elementary*
Ways to Become Involved in “Fish School”

• Help raise community awareness about important public health issue.

• Discuss with other educators how to implement in the classroom.

• Engage students in community service learning projects.
Online Resources

Visit Sea Grant’s Fish School Web site at:
www.iisgcp.org/edk-12/FishSchool

Raise Awareness/improve health through Fish School

Nutritionists agree that fish is an important dietary source of long-chain omega-3 fatty acids; however, many pollutants in the basin may cause nervous system disorders and long-lasting health effects in this and childhood development. For adults, exposure is primarily through consumption of commercial or sportfish. For the fetus and infant, exposure may come primarily from the mother through placental transfer or breast milk.

Fish consumption advisories, generated by health departments, are designed to protect sensitive populations from excessive exposure to these pollutants in sport fish. The U.S. EPA and FDA announced in 2004, a joint consumer advisory on methymercury in fish and shellfish to reduce the exposure to high levels of mercury in women who may become pregnant, pregnant women, nursing mothers, and young children.

Some argue in ethnic groups, because of culture or because of necessity, rely on fishing to supply an important part of their families’ diets. Although research has clearly shown that high levels of contaminants can exist in some fish, Lake Michigan (prey) is commonly found in Lake Michigan fish is seven million times greater than the surrounding waters) [U.S. EPA, 1999], these groups consume large quantities of fish without regard to minimizing the risk of contamination. Fish advisories have little effect on long-term consumption behavior.

For additional information or questions, please contact Robin Goettel at 217-333-9448 or goettel@uiuc.edu

- Fish School Project Information
- Fish School Group Photo
- Teacher Benefits
- Sample Activities for the Classroom
  - Fish School Elementary School, Chicago, IL
  - Methods and Ideas for Implementing Fish School into Classroom
  - Taking Stock of Risks and Benefits
  - Test your memory about the risks and benefits of eating fish.
  - Web mortality calculator
- What do all the Toxins Do?
- Fish School Publications
  - The Lure of Fish vs. Mercury
  - What You Need to Know Before You Eat that Fish (Mercury)
  - The Lure of PCBs
  - What You Need to Know Before You Eat that Fish, PCBs and Your Family
  - Contaminants in Fish & Seafood: A Guide to Safe Consumption
    - Flipchart version
      - Illinois version
      - English version
      - Spanish version
      - Polish version
      - Chinese version