

**Harvard Medical School Department of  
Continuing Education and the Cardiovascular  
Division of the Department of Medicine,  
Brigham and Women's Hospital**



***Cardiology Rounds***  
**November 2006**

**Fish Intake, Contaminants, and Human Health:  
Evaluating the Risks and the Benefits  
Part 2 – Health Risks and Optimal Intakes**

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**Objectives:**

- Review the current knowledge regarding health risks of mercury in fish.
- Review the current knowledge regarding health risks of PCBs and dioxins in fish.
- Compare the strength of evidence for and the relative magnitudes of these health benefits and risks.
- Describe which common fish species are lower in mercury content.

**Questions:** (Choose the single best answer):

1. Well-established health risks in adults of low level mercury exposure from fish consumption include:
  - a. Increased risk of coronary events
  - b. Serious neuromuscular abnormalities
  - c. Cognitive decline and dementia
  - d. None of the above
2. The effects of low-level mercury exposure from maternal fish consumption on neurodevelopment in infants has been established in randomized clinical trials.
  - a. True
  - b. False
3. Observational studies examining gestational mercury exposure from maternal fish consumption and neurologic outcomes in infants consistently show adverse effects.
  - a. True
  - b. False
4. Which of the following is true regarding the Environmental Protection Agency Advisory on mercury in fish?
  - a. The advisory instructs women of childbearing age to reduce their fish intake.
  - b. The advisory instructs women of childbearing age to avoid 4 specific fish species higher in mercury content.
  - c. The advisory instructs the general population to reduce the intake of 4 specific fish species higher in mercury content due to concerns about possible toxicity.
  - d. Both (b) and (c).

5. Which of the following is most true regarding health risks in adults of PCBs and dioxins?
  - a. Cancer risks have been established in prospective observational studies in humans.
  - b. Cancer risks have been established in randomized controlled trials in humans.
  - c. Fish consumption contributes less than 10% of the average exposure to PCBs and dioxins in the food supply.
  - d. Levels of PCBs in fish are typically higher than levels of PCBs in beef, chicken, butter, or eggs.
  
6. Which of the following is true regarding health benefits and risks of farmed vs. wild salmon?
  - a. Farmed salmon contains higher levels of potentially beneficial fish oils than does wild salmon.
  - b. For wild salmon, the potential cancer risks of the PCBs and dioxins are less than 1% of the likely cardiovascular benefit.
  - c. For farmed salmon, the potential cancer risks of the PCBs and dioxins are less than 1% of the likely cardiovascular benefit.
  - d. All of the above
  
7. Which of the following seafood species contains extremely low levels of mercury?
  - a. Shrimp
  - b. Wild salmon
  - c. Farmed salmon
  - d. Sardines
  - e. Both (a) and (b)
  - f. All of the above

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