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Dr. Jane Henney, Commissioner  
Food and Drug Administration  
5600 Fisher Lane  
Rockville, MD 20857

Dear Commissioner Henney:

I am writing to you as a physician and a scientist with 30 years of experience in the study of mercury. I am also the Chair of New Jersey's Mercury Task Force which will shortly be issuing its own formal recommendation. The following, however, represents my personal view and experience. I want to assure you that I am not an alarmist, and that I regularly consume fish.

I am writing with two proposals:

1) FDA develop a comprehensive contaminant surveillance program for persistent bioaccumulative pollutants, particularly mercury and PCBs, in commercial fish, and 2) FDA convene a scientific endeavor to review and revise the 1.0 ppm action level.

I base my recommendations on the following:

- 1) Mercury is well known to bioconcentrate in many fish species as they grow in size and to bioamplify through aquatic food chains. Numerous studies by many authors including my own group have shown higher mercury levels in larger individuals within a fish species and in predatory fish that occupy higher trophic levels of food chains.
- 2) The hazards of mercury to the developing fetus and infants are well-established, and pregnant women and infants are the groups at greatest risk from the ingestion of even small amounts of mercury.
- 3) Many states have already issued fish advisories cautioning particularly pregnant women about the need to moderate fish consumption because of mercury and other pollutants.
- 4) Fish is a valuable part of a healthy diet, and may be particularly valuable during pregnancy, according to several studies which show better birth weight outcomes related to higher fish consumption (cause and effect is not established, since there may be socioeconomic confounders).

5) Recommendations to eat fish that are low in mercury (and other pollutants) require that the consumer be able to judge which fish to eat.

6) Studies of fish consumption patterns, including our own work in New Jersey, South Carolina, and Puerto Rico, indicate that there are people who consume much larger quantities of fish than the average. Indeed, many people consume more than 20 kilograms of fish per year and some exceed 100 kilograms of fish consumption per year. Although these individuals make up a small percentage of the population, they comprise a high risk category.

7) In our clinic we have recently diagnosed two (and possibly a third) individuals with mercury poisoning who, ironically for health reasons, had greatly increased their consumption of fish. Both were eating in excess of five meals of fish a week, with a preference for Swordfish.

8) People who really like fish, also eat fish meals that are larger than average. Assumptions based on 6 or 8 ounce (170-230 g) portions are not protective of these individuals who may consume 12 ounces (340 g) or more at a sitting. I regularly consume that amount when I prepare fish at home, and our surveys of fish consumption by fishermen show that that is the rule rather than the exception. People who like fish eat a lot of it.

9) Accepting the Reference Dose of 0.1 ug/kg/day, a 70 kg adult would be able to consume 7 ug/day. However, a single fish meal of 6 ounces would provide 17 ug, even if the fish had a concentration of 0.1 ppm. For the person who eats 20 kg/year, the average daily consumption would be 5.4 ug/day even if the fish averaged 0.1 ppm.

10) We have analyzed commercial fish from our local supermarket, and find that certain samples (not surprisingly shark and swordfish) exceed 1 ppm (wet weight).

11) Even in the 1970's FDA was planning to propose a 0.5 ppm action level, but apparently economic issues prevailed and resulted in the 1.0 ppm level. So the current action level is not a health-based one.

In conclusion, I think it is timely to develop a separate RfD for adults who are not pregnant or planning to become pregnant soon, and an Interagency effort in that regard would be valuable.

In any case, whether the action level is changed or not, consumers, particularly those who are in high risk groups, need to know which fish are likely to have lower level of contaminants.

FDA is uniquely positioned to provide that information on a regular basis. I strongly encourage you to make this a priority for protecting food quality.

Sincerely yours,



Michael Gochfeld, MD, PhD  
Professor

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