Children's Health Protection Advisory Committee

November 8, 2005

Stephen L. Johnson, Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue
Washington, D.C.

RE: Environmental Contaminants in Fish and Shellfish

Dear Administrator Johnson:

The Children's Health Protection Advisory Committee (CHPAC) has provided input in the past on fish advisories (see letter dated June 8, 2004). The CHPAC is pleased that the Agency has signed a Memorandum of Understanding (MOU) with the US Department of Health and Human Services' (HHS) Food and Drug Administration (FDA) to improve coordination and communication regarding environmental contaminants in fish. We would like to provide additional input to EPA as the Agency works with FDA to develop a joint action plan, including more unified federal messages about environmental contaminants in commercial and non-commercial fish and shellfish. This letter recommends that, in addition to implementing the CHPAC's 2004 recommendations, EPA should focus on two problem areas – insufficient fish contaminant data and low consumer awareness of commercial and self-caught fish advisories. We hope that our recommendations will be addressed not only by EPA, but used in cross-agency discussions and activities with HHS, US Department of Agriculture (USDA), US Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) and other relevant federal agencies.

Implement CHPAC June 2004 Recommendations: While the CHPAC has seen limited progress on our initial recommendations, we hope the development of an action plan for the MOU will provide an opportunity to further implement our recommendations. In sum, our initial recommendations were to:

- Use current science to develop a clear public health message addressing the risks and benefits of fish consumption;

- Produce a joint, integrated fish consumption advisory for children, young girls[1] and women of childbearing age that addresses multiple contaminants (Oken, et al., 2005);[2] and

- Evaluate existing data and fill essential data gaps to identify additional major contaminants in fish.

The CHPAC looks forward to a comprehensive and unified advisory developed in consultation with states, local agencies, and communities.

Improve Commercial Fish Contaminant Database: Instructing families on which fish to eat and how much to eat is an important responsibility, one that requires a robust fish sampling database. The data need to: a) be representative of what is available both recreationally and commercially; b) be up-to-date; c) have detection limits low enough to estimate risk even for consumers who eat a lot of fish; and d) have enough samples for calculation of key statistics with a reasonable amount of certainty. Numerous states have invested the resources to develop such high quality databases for recreationally caught fish within their respective jurisdictions. The assistance EPA has provided to states to accomplish this activity for sport fish has been very helpful and the CHPAC commends EPA for this assistance.

Unfortunately, the data for commercial fish, as available from FDA's website, are inadequate for risk assessment. Much of it is dated and in numerous cases there are too few samples in the database to reliably determine contaminant levels. For example, the FDA website has very limited data posted (25 or fewer samples) for mercury in such commercially important species as cod, haddock, perch, catfish, salmon, sardines, and snapper. These data were collected sporadically over the last 15 years without evidence of a well-designed sampling program. The database for other important contaminants such as dioxins, polychlorinated biphenyls (PCBs), and emerging chemicals such as polybrominated diphenylethers (PBDEs) is even weaker. This paucity of data is in contrast to FDA's Total Diet Study (TDS), which is a more comprehensive market basket sampling program. Many commercial fish are not part of the TDS.

It is also important to develop regional datasets so that public health officials can determine whether region-specific advisories are warranted. A recent analysis of the National Health and Nutrition Examination Survey (NHANES) blood mercury dataset showed that women living on U.S. coastlines have greater mercury exposure than women

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[1] Organohalogens begin accumulating in the body at birth, and continue to bioaccumulate throughout the lifespan. Fetal exposure to organahalogens during pregnancy is associated with numerous adverse health effects. It is thus important to consider young girls – realizing their futures as pregnant women – when developing fish consumption advisories.

[2] The importance of this message has been demonstrated in a recent study that demonstrated that cognitive function in six-month old infants was improved if the mother ingested fish during pregnancy, but this benefit was reduced by maternal mercury exposure (Oken, et al., 2005).

living away from the coast, while those on the east coast have greater levels than those on the west coast (Mahaffey, 2005). It may be important to look at regional trends in fish concentration and fish consumption patterns to better assess risk. Unfortunately, the limited data currently available and the fact that it is pooled rather than region-specific, does not allow a regional analysis of fish contaminant exposure.

The CHPAC recognizes that EPA does not have regulatory responsibility over commercial fish. However, as partner to the MOU with FDA, the Agency should work with the FDA to promote improved testing of commercial fish. This would address the 3rd objective of the joint annual plan for the MOU, "encouraging environmental monitoring efforts by FDA/CFSAN and EPA/OW." EPA should offer critical input on which contaminants need to be analyzed in commercial fish, the numbers and species of fish needed from different parts of the country, the sampling frequency, and other aspects in order to make this a well-supported and on-going effort. A testing program developed jointly by the two agencies and in consultation with key stakeholders at the state and tribal level will more likely meet the risk assessment needs of regulatory and advisory bodies than what is currently in place. Fish advisories and new data need to be reviewed annually to identify potential need for updates to advisories.

Under MOU Objectives 4 and 5, Develop and Commit To Sustaining a Comprehensive and Integrated Federal and State Communication Strategy on Fish and Shellfish Consumption: Educating the public about fish and shellfish contaminants, as reinforced by the tremendous post-Hurricane Katrina water contamination issues, remains a complex challenge. Too often there have been competing and conflicting messages that have left the public confused and rendered recommendations ineffective. Some state recreational advisories have been in place for more than 20 years, yet evaluations have documented continuing low public awareness (Tildon et al, 1997; Anderson et al, 2004; Knobeloch et al, 2005; Imm et al, 2005). State fiscal resources have limited communication efforts to annual press releases, information in fishing license pamphlets, distribution of fact sheets to USDA's Women, Infants, and Children (WIC) clinics, doctors' offices and local health departments and posting of Web-based materials. Despite years of effort by some states, the majority of consumers remain unaware of the advice in their State sport-fish advisories.

The documented risks to the fetus and others necessitate a new risk communication strategy including the forging of stronger, coordinated partnerships to create and disseminate a uniform core message. First, the CHPAC challenges the EPA to regularly meet with key stakeholders to gain direction and input on the types of risk communication needed and how to accomplish these objectives. We encourage you to meet with representatives of federal agencies, specifically agencies within HHS (FDA and Centers for Disease Control and Prevention), USDA, USDOC/NOAA, tribal, state, and local governments, universities, environmental advocacy groups and ethnic and minority communities to create a more visible, robust and effective national risk communication strategy and program for fish consumers. The ensuing advisory program needs to provide culturally, linguistically, and geographically appropriate information (including pictographs about fish consumption for subsistence communities) and include

information on fish preparation and the parts of the fish that are healthy to eat. Strong state partners with innovative programs can be identified through the Fish Contaminants Forum, an annual meeting and roster of state and tribal health authorities involved with fish advisories. The CHPAC is grateful to EPA for its role in helping to organize the forum, but the annual Forum, while exceedingly useful, is not the appropriate venue to deliver the needed integrated risk communication strategy.

The second CHPAC challenge to EPA is to specify outcome measures for advisory communication that can be tracked through the MOU annual plan. For example, an aggressive communication program goal would be to demonstrate within five years evidence that all those who consume fish frequently (more than two times a week) and 80 percent of ALL fish and shellfish consumers are aware of the advisory recommendations. An example of an innovative strategy to help achieve that goal would be to provide consumer education in outlets, both traditional and ethnic, that sell fish. Informational signs are currently being displayed in markets in California and in a few other locations (e.g., Westchester County, NY, Swampscott, MA) to raise awareness. Their effectiveness needs to be evaluated. The messages are not always consistent, do not deal with all contaminants, and so add to consumer confusion. The public needs to understand which commercial fish are low in contaminants so they can enjoy the benefits of fish consumption while minimizing risks to the fetus and child. Fortunately, there are healthy seafood choices in fish markets for women, young girls and children. A number of states have developed listings of fish to favor, fish to eat less of, and fish to avoid for these vulnerable consumers. Fish markets are likely to be accepting of a message that balances the benefits and risks of fish consumption and advises consumers on which fish to eat.

To summarize, the CHPAC recommends that EPA take the following recommendations into consideration as they develop the action plan for the MOU with FDA:

- Use the mechanism of the MOU to follow-up on points made in the previous CHPAC letter regarding the evaluation of multiple contaminants and emerging chemicals in fish.

- Work with FDA to develop a well-designed market basket testing program for commercial fish that regularly updates the fish contaminant database, and is designed to inform and update fish consumption advisories. The information should be incorporated into the consumption advisory program.

- On a regular and ongoing basis work with key federal agencies (e.g., HHS, USDA, and USDOC), states, tribes and localities to develop and promote fish consumption advisories that integrate advice on commercial as well as self-caught fish. The program needs specific outcome measures against which to judge success.

- Explore options that extend fish advisory outreach to markets that sell fish so that the benefits and risks associated with fish consumption are communicated to the public at the point of sale.

Appropriate advice on fish consumption to help families protect children remains a high priority to the CHPAC. The annual plan called for in the EPA/FDA MOU will be especially useful and the CHPAC would like an opportunity to review the annual plan when completed and to be kept abreast of future updates. We would be happy to provide our perspective on these plans. The CHPAC wants to convey its sense of urgency that measurable progress needs to be made and eagerly awaits your response to our suggestions. We look forward to learning how they may be reflected in the first annual work plan.

Sincerely,

Melanie Marty, Ph.D., Chair
Children's Health Protection Advisory Committee

Cc: Benjamin H. Grumbles, Assistant Administrator for Water
Dr. William Sanders, Acting Director, Office of Children's Health Protection
Ms. Joanne Rodman, Associate Director, Office of Children's Health Protection

References

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