Philadelphia University researcher weighs risk of PCBs in children’s supplements in newly published study

PHILADELPHIA, Jan. 30, 2013 – The health benefits of omega-3 fatty acids from fish oil are well documented, and include increased heart healthiness in adults and essential brain development in children. As a result, in recent years many products aimed at delivering fish oil to young children have come on the market, including vitamins and gummy supplements.

But is there anything else kids may be getting with that dose of omega-3s that might not be so beneficial? wondered Jeff Ashley, Ph.D., associate professor of chemistry.

Ashley, who previously studied the levels of polychlorinated biphenyls—or PCBs, a toxic chemical banned in the U.S. since the mid-1970s—in adult fish oil tablets, decided to look into PCB levels in children’s supplements. He had good reason to do so, as the father of two young sons who take the supplements daily.

The resulting study, published this month in the journal *Food Additives & Contaminants*, highlights the analysis of 13 over-the-counter brands of children’s dietary supplements with fish oil to enable consumers to weigh the potential benefits of ingesting these supplements with the potential negative, long-term effects of PCB exposure.

"Although we found PCBs in every supplement tested, the levels were very low, comparable to those you would find in a child’s portion of fresh or frozen fish, if not lower, depending upon the fish species eaten,” said Ashley, lead author of the study.

Thus, he says, while children’s fish oil supplements contain PCBs, supplements may offer the largest dietary source of beneficial omega-3 fatty acids for children who do not eat fresh fish regularly or at all. For children who do eat fish, he advised parents to stick with fresh fish and select fish species rich in omega-3 fatty acids and low in contaminant levels, with salmon being one of the best options. In general, larger and older fish tend to accumulate higher levels of PCBs and other contaminants.
The published paper, “Children’s daily exposure to polychlorinated biphenyls from dietary supplements containing fish oils,” included two PhilaU student researchers, Joshua Ward and Christopher Anderson, who have since graduated, and several collaborators from the Academy of Natural Sciences in Philadelphia.

“This research is a great example of how PhilaU faculty members involve students in every aspect of the research process, from conception of a novel idea to dissemination of results in a peer-reviewed journal,” Ashley said.

Ashley and his research students currently are assessing potential mercury exposure to infants from commercial baby food. Increasingly, many baby foods are being fortified with tuna oil, which may present a significant source of dietary mercury exposure to their rapidly developing bodies.

Philadelphia University, founded in 1884, is a private university with 3,600 students enrolled in more than 60 undergraduate and graduate programs. As a model for professional university education, the University prepares students to be leaders in their professions in an active, collaborative and real-world learning environment infused with the liberal arts. Philadelphia University includes the innovative Kanbar College of Design, Engineering and Commerce; the College of Architecture and the Built Environment; and the College of Science, Health and the Liberal Arts. For more information, go to www.PhilaU.edu.

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