NATIONAL ACADEMIES Sciences Engineering Medicine

The Role of Seafood Consumption in Child Growth and Development

Health Outcomes Related to Seafood Consumption

Seafood, including marine and freshwater fish, mollusks, and crustaceans, is a healthy food choice for most people; however, it can also contain contaminants. The U.S. Department of Health and Human Services, the U.S. Department of Agriculture, the U.S. Environmental Protection Agency, and the National Oceanic and Atmospheric Administration asked the National Academies to convene an expert committee to examine associations between seafood intake for children, adolescents, and pregnant and lactating women and child growth and development. As part of its efforts to assess the risks and benefits of seafood consumption, the committee identified a range of health outcomes associated with seafood consumption by pregnant and lactating women.

Why Study Seafood and Health?

Seafood provides protein and is also a rich source of nutrients needed in pregnancy and lactation and nutrients that are vital to support growth and development from infancy through adolescence. Although seafood does provide key nutrients, it can also be a source of contaminants such as methylmercury, persistent organic pollutants including per- and polyfluoroalkyl substances (PFAS), dioxins, polychlorinated biphenyls (PCBs), and microbiological hazards. These contaminants may be detrimental to the growth and development of children.

Health Outcomes at a Glance

- Meeting seafood consumption recommendations by pregnant and lactating women may provide health benefits for their children, including improved cognitive, behavioral, and language development.
- Higher seafood consumption by pregnant and lactating women was found to reduce the risk of some negative health outcomes in children, including hyperactivity and the development of autism spectrum disorder or attention deficit disorder.
- However, in total, the evidence was not strong enough to establish an association between seafood consumption by children and health outcomes broadly.

At-Risk Populations

Concentrations of contaminants in seafood vary widely according to the species, geographic region, size, and age of the animal, and according to whether the seafood is wild-caught or farm-raised (cultivated). Native and Indigenous Peoples and subsistence or sport fishers may be at greater risk of exposure to pollutants and to the resulting negative health outcomes due to the higher amount of seafood they consume or the specific locations where they fish.

Research Questions

There are many questions about the health outcomes of seafood consumption that will need more research to answer, including:

- How does seafood consumption by children affect their health?
- Are there certain periods in child development where seafood consumption might have different effects on child health?
- Do seafood nutrients and contaminants from different species, sources, or locations have different effects on children's health?
- How can regulatory agencies communicate fish consumption recommendations effectively to women of childbearing age, children, adolescents, and their families and caregivers?

Learn more and access the full report at www.nationalacademies.org/seafood-child-development.