

## Seafood and children's health: Report summarizes research

May 20, 2019

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Article type: [AAP Technical Report](#)

Topics: [Nutrition](#)

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Many types of fish and seafood offer a variety of important nutrients. Yet more than 90% of the animal protein children eat comes from other sources.

Some fish and shellfish are rich sources of lean protein, calcium, vitamin D and omega-3 long-chain polyunsaturated fatty acids. They also are the primary natural dietary source of essential nutrients docosahexaenoic acid and eicosapentaenoic acid.

A new AAP technical report highlights research on the potential benefits and risks associated with consumption of fish and shellfish, reviewing the evidence for their impact on specific diseases or conditions. Also discussed are the sustainability of fish harvests and the presence of toxicants in some fish species.

The report *Fish, Shellfish and Children's Health: An Assessment of Benefits, Risks and Sustainability*, from the AAP Council on Environmental Health and Committee on Nutrition, is available at <https://doi.org/10.1542/peds.2019-0999> and will be published in the June issue of *Pediatrics*.

### Impact on diseases, conditions

Studies have analyzed the effects of childhood fish consumption and/or omega-3 intake for the prevention or treatment of various conditions, including inflammatory bowel disease, neurologic/cognitive development, behavioral and mental health, sickle cell disease, lipid profiles, blood pressure, depression, attention-deficit/hyperactivity disorder and allergic disorders. Most of the sources cited address consumption by adults or pregnant women, and definitive conclusions about children were difficult in many cases.

More than a dozen observational studies have shown that a mother's fish intake likely influences the risk of atopy in offspring. Studies also are cited showing that eating fish early in life — probably before 9 months of age — may prevent allergic diseases like asthma, eczema and allergic rhinitis.

A child's neurodevelopment also may benefit from maternal prenatal fish consumption. One study noted that seafood intake of less than 340 grams a week ( $\frac{3}{4}$  pound) during pregnancy was associated with a higher risk of a child ending up in the lowest quartile for verbal IQ. Low seafood intake also was linked to worse outcomes for prosocial behavior, fine motor, communication and social development scores.

For some diseases, fish oil supplementation may benefit children with below-average omega-3 fatty acids. However, the supplements are not approved by the Food and Drug Administration, so their contents may not match what is listed on the label. Adverse events are not always reported either.

## **Sustainability, toxicants**

With the growing exploitation of some of the world's fisheries, consumers should be aware of sustainability issues to help protect the viability of fisheries (see resources).

Some species of fish contain methylmercury; resources are available to guide consumers on which fish to limit or avoid. In addition, fish and shellfish from freshwater areas in the U.S. can contain high amounts of pollutants; guidance is available on when and where toxicants may be present in lakes and rivers.

Despite concerns about toxicants, evidence-based guidance concludes that seafood, especially low mercury choices, should have a larger place in the American diet. More research is needed to substantiate seafood's specific health benefits in children.

## **Resources**

- [Mercury in Seafood: A Guide for Health Care Professionals](#)
- [Monterrey Bay Aquarium Seafood Watch](#)
- [Eating Fish: What Pregnant Women and Parents Should Know from the Food and Drug Administration and Environmental Protection Agency](#)
- [Freshwater fish advisories](#)

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