



Seafood Health Facts: Making Smart choices

Balancing the Benefits and Risks of Seafood Consumption

Resources for Healthcare Providers and Consumers

General Information for Healthcare Professionals [1]

This resource for professionals provides an overview of how risks and benefits of seafood consumption have been assessed by the scientific community and gives information on recommendations by governments and health organizations.

Overview of the Health Benefits of Seafood

Seafood was initially recognized as a healthy food choice because it is a low-fat source of high quality protein. Because high-fat diets were associated with increased risk for coronary heart disease (CHD) and some cancers, the National Research Council (NRC) recommended substituting fish for fatty meats and whole-milk dairy products as a way of reducing fat and cholesterol intake. Seafood is indeed a high-protein food that is lower in calories, total fat and saturated fat when compared to other protein-rich animal foods. Seafood also contains a number of vitamins (A, B-complex, and D) and minerals (selenium, iodine, iron and zinc) that have been linked to various health benefits. [To see more information about the nutritional composition of seafood products click here](#) [2].

Studies have shown that eating seafood can decrease the risk of heart attack, stroke and hypertension. Seafood also provides essential nutrients for developing infants and children. Over the past few decades, there has been an increasing amount of scientific research regarding the health benefits of seafood due to a large proportion of its fat being polyunsaturated; which includes long-chain omega-3 fatty acids. Some of these health benefits linked to marine-derived omega-3s include: reduced risk of cardiovascular disease, protection against heart attack and sudden death, decrease in blood triglyceride levels, maintains visual acuity, contributes to neurological development in infants and children, increases duration of gestation, and helps build muscles and tissues. These compounds are not produced in substantial amounts by the human body and must be obtained through the diet. The important omega-3 fatty acids found almost solely in seafood are eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). The plant-derived omega-3 fatty acid, alpha-linolenic acid (ALA), is a precursor to EPA and DHA and is converted at rates less than 10% in the human body. [To see additional information on omega-3s and their role in human health click here.](#) [3]

U.S. Health organizations recommend consuming 250 mg of EPA+DHA per day, and suggest a diet containing 8 ounces of fish per week, especially species high in omega-3s, will provide a beneficial average daily intake. The American Heart Association recommends 1000 mg of EPA/DHA per day for patients with coronary heart disease. Pregnant woman and their children also benefit from omega-3s and *2010 Dietary Guidelines for Americans* recommend *at least* 8 ounces and up to 12 ounces of seafood per week to get the healthy benefits of EPA and DHA. Fish with medium to high levels of omega-3 fatty acids include oily ocean fish, such as salmon, herring, mackerel and sardines.

Summary of Food Safety Issues

Despite the demonstrated positive health effects of seafood, there are also several potential hazards that have been found in seafood, including pathogens, marine toxins, environmental pollutants, and heavy metals. The greatest risk to human health is from pathogens and toxins in seafood; which can mostly be controlled through proper storage and handling. This topic is addressed in another area of this website. [To see more information on seafood safety issues click here](#) [4]. Recently many people have questions about the trace levels of contaminants such as mercury and PCBs (polychlorinated biphenyls) that have been found in fish.

[Specific information on risks associated with natural toxins, environmental pollutants such as metals \(i.e.](#)

[mercury](#)) and persistent organic pollutants can be found by [clicking here](#) [5].

Risk-Benefit Analysis

Recent risk-benefit studies have demonstrated that the benefits of seafood consumption greatly outweigh the risks. These studies have investigated the overall health effect from eating seafood, by considering low-level contaminants such as mercury and the positive health benefits nutrients including EPA and DHA. .

Researchers at the Harvard Center for Risk Analysis examined a variety of fish consumption scenarios and published their findings in a series of papers in the November 2005 issue of the American Journal of Preventative Medicine. Overall, they found that reducing seafood consumption would significantly reduce quality adjusted life-years for society as a whole, even when considering toxic compounds such as methylmercury. In other words, the risks of not eating fish were greater than any risks associated with eating fish. In order to maximize health benefits by eating seafood twice per week, American consumers will need to more than double their current seafood consumption levels. To see this and other studies published, see *Compare Benefits & Risks: Scientific Publications and References* by [clicking here](#) [6].

Maximizing Benefits and Minimizing Risk

All consumers should eat 8 ounces or more of a variety of seafood per week for good health.

Pregnant women should eat at least 8 ounces and up to 12 ounces of a variety of seafood per week.

U.S. health organizations recommend a daily EPA+DHA intake of 250 milligrams (mg) for most consumers and 1000 mg for people with cardiovascular disease. FAO/WHO experts recommend that DHA should account for at least 200 mg of the daily intake for pregnant or nursing women and daily EPA+DHA intake among children should be 100-250 mg.

The most commonly consumed seafood species in the United States present very little risk while offering many health and nutritional benefits.

The main health risk from eating seafood is exposure to harmful microorganisms. Risks associated with pathogenic microorganisms can be prevented or minimized through proper handling, storing and cooking.

Only 1 in 5 Americans currently meet the recommendations set by the U.S. Food and Drug Administration, Dietary Guidelines Advisory Committee, and American Heart Association guidelines to eat fish twice per week

Risk-Benefit Table

The chart below is designed to summarize the major benefits and risks associated with mercury levels in common seafood products. It shows the average level of EPA+DHA and concentration of mercury in a 3-ounce serving of seafood. All seafood highlighted in green is well below the FDA action level of 1.0 part per million (ppm) for methylmercury (MeHg) in seafood, indicated by the red line on the chart. Albacore (white) tuna is highlighted in blue. It is a good source of EPA+DHA but has moderate levels of mercury. Sensitive groups (e.g. children 12 years and under, women who are or could become pregnant, and breastfeeding women) should eat 6 ounces of albacore tuna per week. The four seafood species highlighted in yellow are higher in mercury and should not be eaten by these sensitive groups. Sensitive groups should eat a variety of seafood twice per week to maximize health benefits, but they should choose options that are lower in mercury.



Seafood and Health Information for Healthcare Providers

This brochure is designed to summarize what is currently known about the nutritional benefits associated with seafood consumption as well as information on specific food safety risks. It also contains guidelines for consumers to help them include seafood in their diet in a way that will provide nutritional benefits and minimize potential risks.  [final-seafood-health-reference-guide-for-professionals.pdf](#) [7]



© Copyright 2020. Project partially funded through a grant from from the National Aquaculture Extension Initiative of the National Sea Grant Program (Grant No. NA13OAR4170203), NOAA, U.S. Department of Commerce and the National Integrated Food Safety Initiative (Grant No. 2007-51110-03815) of the National Institute of Food and Agriculture, U.S. Department of Agriculture. This website is owned and maintained by Delaware Sea Grant.

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Links

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[2] <https://www.seafoodhealthfacts.org/seafood-nutrition/healthcare-professionals/fish-and-shellfish-nutrient-composition>

[3] <https://www.seafoodhealthfacts.org/seafood-nutrition/healthcare-professionals/description-omega-3%E2%80%99s-and-their-role-human-health>

[4] <https://www.seafoodhealthfacts.org/seafood-safety/general-information-healthcare-professionals>

[5] <https://www.seafoodhealthfacts.org/seafood-safety/scientific-publications-and-references/seafood-safety-topics>

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