Few foods have consumed as much as seafood. Even though the health benefits associated with eating fish and shellfish continue to expand, fears of seafood contaminants sometimes overshadow the good associated with eating more fish. Are we being irrational? Risk experts say that people exaggerate the chance of rare but nasty events occurring, following their gut instincts rather than logic. Faced with conflicting information, consumers say, “Why take the chance when I don’t have to?” This paper takes a close look at what we might gain or lose by eating fish and shellfish more often.

US Seafood Consumption

With meat and poultry, Americans eat little seafood, about 14 g (1/2 oz) a day versus 210 g (7 1/2 oz) a day for meat and poultry.

Most people eat fewer than 2 servings of fish/week, the amount currently recommended.3 Low seafood consumption means that the intake of long-chain omega-3 fatty acids—mainly EPA and DHA (eicosapentaenoic and docosahexaenoic acids)—are also low, about 100 mg/day.2 These fatty acids occur almost exclusively in seafood and can sometimes overshadow the good associated with eating more fish. Are we being irrational? Risk experts say that people exaggerate the chance of rare but nasty events occurring, following their gut instincts rather than logic. Faced with conflicting information, consumers say, “Why take the chance when I don’t have to?” This paper takes a close look at what we might gain or lose by eating fish and shellfish more often.


References


Maturationity, more mature sleep patterns and for healthy immune system, brain structure and function, cognitive development, visual acuity.

DHA is needed for the infant’s brain and eye development, Higher maternal DHA translates into higher DHA in the infant during pregnancy, long-chain essential fatty acids are key.

Lactation

Special Need for DHA in Pregnancy and Lactation

Diverse Health Benefits From Seafood’s Long-Chain Omega-3s

Increased omega-3 consumption may ease the symptoms of inflammatory conditions, such as rheumatoid arthritis, asthma, certain allergies and digestive disorders. Omega-3s tone down overactive immune responses making symptoms less severe, but do not cure the conditions.

High levels of long-chain omega-3s have been used to treat rheumatoid arthritis, without the adverse side effects of some anti-inflammatory drugs. Some evidence suggests that increased intake of long-chain omega-3s during pregnancy reduces the infant’s chance of developing allergies, such as eczema, allergic rhinitis and asthma.

Clinical conditions – Long-chain omega-3s may reduce the chance of type 2 diabetes and improve the welfare of patients needing total parenteral nutrition; they may be helpful in post-surgery and trauma, inflammatory bowel and Crohn’s disease, possibly some forms of cancer and most recently bone health.

New products such as yogurt, margarine, spreads and snack bars may have omega-3s added, but may not indicate which ones they have. Foods nearly always have alpha-linolenic acid from flax seed or oil. Unless the label specifically mentions “long-chain” omega-3s, or EPA, or DHA, it will not have fish oil omega-3s. Be sure to read the label.

What Is the Potential Downside of Eating Seafood?

Most seafood contains detectable levels of contaminants because this are part of the environment and food chain. Of greatest concern is methylmercury, a heavy metal readily absorbed and potentially toxic. Inorganic mercury from volcanoes, the weathering of soils and rocks, coal-fired power plants, mining and various industrial processes is converted by aquatic microorganisms to methylmercury, the form found in fish.

The concern about methylmercury (mercury) is 3-fold: it accumulates through the food chain and is most concentrated in large predator and long-lived fish; seafood is the major source of mercury in humans; and mercury is potentially toxic to the developing nervous system of the fetus and infant. Other undesirable effects in adults are much less certain.

In contrast to the potential harm from mercury, the great majority of scientific evidence suggests that eating fish does much more for your health than against it. Seafood consumption has net health benefits in cardiovascular, neurologic, immune, behavioral and mental health outcomes. Moreover, seafood carries a protective factor against mercury toxicity.

Who Could be at Risk from Mercury?

Because mercury can affect the developing nervous system, pregnant and nursing mothers exposed to large amounts of mercury could jeopardize the brain development of the fetus and infant. Most other adults are at very low risk from mercury. Detrimental effects of mercury have been observed in accidental poisonings in Japan and Iraq, but there is no clinical evidence that women who consume fish, even large amounts of fish, as women in Japan and Iceland do, harm their infants. In fact, the opposite seems to be the case. A large study in the United Kingdom reported that children whose mothers had the greatest fish consumption—more than the US Food and Drug Administration (FDA) recommends—had higher neuropsychological scores than children whose mothers consumed less fish or none.

Children whose mothers avoided fish had suboptimal scores. Other studies suggest that children whose mothers have high fish intakes during their pregnancy are less likely to develop eczema and asthma. Thus, several lines of evidence suggest that avoiding fish consumption during pregnancy may be detrimental to the child’s health and development.