



SEAFOOD SAFETY

Real and Imaginary Concerns

News reports talk more about the dangers than the benefits of eating seafood. Should you be afraid to eat fish? In a word, no. Your health has much more to gain from eating fish, especially fatty species such as salmon, herring, mackerel, sardines, and rainbow trout, than by avoiding seafood. In fact, people who eat seafood regularly are healthier than those who do not. But there are some potential dangers and it is good to know about them.

Real health concerns come from eating fish and shellfish that carry bacteria, viruses, or toxins that cause illness. Like other foods, spoiled fish can also make you ill, so it is important to refrigerate seafood right after you buy it, at a temperature as close to 32°F as possible. Eat fish as soon after you buy it as you can. Keep frozen seafood as cold as possible and avoid storing it for a long time. This is because home freezers change temperatures often and fish quality declines.

Imaginary dangers are those that could occur under unusual circumstances, but are not generally a problem in the U.S. An example is the potential health risk from PCBs and dioxins. These contaminants are found only in extremely small amounts but are publicized in the news.

Will Seafood Make You Ill?

Most fish in the marketplace is completely safe to eat. However, certain species and some fish from tropical waters can be riskier than others. Not all fish and shellfish have substances that cause illness and not everyone who eats fish with disease-causing agents will become ill. That is because disease organisms vary in their ability to cause illness. People, too, differ in their susceptibility to harmful substances. People who are

most likely to become ill include: elderly people, pregnant women and young children, and those with impaired immune systems (e.g., those with HIV/AIDS, liver disease, diabetes, cancer, gastrointestinal disorders, and people taking steroids, chemotherapy, or immune suppressant drugs).

The greatest danger comes from eating raw or partially cooked mollusks (snails, oysters, mussels, clams, octopus, and squid). Not all mollusks are contaminated, but there is no way for a person to tell if they are. Because the diseases linked to raw shellfish are serious, the safest practice is to avoid eating raw shellfish. However, states producing shellfish must abide by strict limits on bacterial counts, so illness from eating raw shellfish has become less common.

Harmful viruses are almost always linked to shellfish harvested from waters contaminated with sewage. The two most common are Norwalk virus and hepatitis A. Norwalk virus causes gastrointestinal upset, but symptoms usually subside after 48 hours. Hepatitis may not be detected for 2-6 weeks and can be long-lasting and severe. Hepatitis A virus can survive light cooking, so simply steaming shellfish until the shells open may not destroy all the virus, if it is present.

Bacteria mostly occur in shellfish but can be present in some ready-to-eat fish products. Cooking destroys most bacteria, so again, the danger lies mainly with raw shellfish. The family of bacteria known as "Vibrios" can cause serious illness, especially in people with compromised immune systems. Illness from ready-to-eat seafood occurs only rarely.

Besides viruses and bacteria, some fish—mainly species from tropical or subtropical waters—may have toxins that cause illness. The two most common types are ciguatoxin and scombrototoxin, or histamine poisoning. Ciguatoxin is found mainly in reef fish such as barracuda, grouper, and snapper. There is no way to tell whether a particular fish contains the toxin and not all fish caught in the same area will have the toxin.

The other toxin, histamine, is associated mainly with mahi-mahi, fresh tuna, mackerel, and bluefish. The toxin develops when fish have not been kept sufficiently cold after harvesting and shipping. Symptoms of illness develop quickly after eating the affected fish, but usually disappear completely within 24 hours.

The Safest Seafood

Canned fish and shellfish are the safest forms of seafood because they are cooked and have been tightly sealed. They are suitable for people of all ages and health conditions.

Seafood storage: Store all fish and shellfish in the refrigerator or freezer. Live shellfish should have ventilated con-

tainers. Do not store live shellfish in water. Use as quickly as possible and discard all dead animals (shells do not open after cooking) and any with broken shells. Live crabs, lobsters, and crayfish move their legs. Do not cook or eat any dead shellfish.

Raw seafood to be cooked: When preparing raw seafood at home, first wash your hands with soap and water. Then, be sure that no cutting board, wrap, utensils, or containers used for raw seafood comes in contact with the cooked item. Viruses and bacteria can easily transfer to the cooked food and provide an opportunity for illness. Thoroughly scrub all materials that have touched raw seafood.

Frozen seafood: Thaw frozen seafood in the refrigerator or under cold running water. Do not thaw at room temperature or in warm water. Doing so will enable bacteria to grow. When possible, cook frozen fish and shellfish directly in the frozen state.

Raw, marinated, and smoked seafood: Use only commercially frozen shellfish and fish to prepare sushi, gravlax, ceviche, or at-home smoked seafood. This will eliminate any possible parasites that may be in the fish. Use only shellfish obtained from reputable stores and has come from certified shellfish growing waters. Fish stores should have the certification tags available to inspect, if you ask. Raw, marinated, or partly cooked seafoods can be safe to eat for healthy people, but may not be so for people with compromised immunity. Pregnant women are taking unnecessary health risks eating these seafoods during pregnancy.

Environmental Contaminants

Mercury is a contaminant found usually in small amounts in all fish and shellfish. Too much mercury can be risky for pregnant women and young children. They should avoid eating species with high mercury levels—shark, swordfish, king mackerel, and tilefish. Eating a variety of species reduces the chance of getting too much mercury. Fortunately, recent analysis showed that Alaska salmon, cod, and pollock have among the lowest mercury levels of all seafoods. Mackerel, herring, and sardines are also low in mercury. Everyone can eat these fish without worrying about safety. Organic contaminants such as PCBs, dioxins, and pesticide residues are generally found only in very low amounts in most fish sold commercially. Current consumption of these contaminants from commercially available fish and shellfish has not been linked to any health risks. Experts agree: the health benefits from eating fish far outweigh any risks.

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