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Shopping for Health: Seafood[1]

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Seafood is a general term for all types of fish and shellfish. Seafood is part of the "protein foods group" of MyPlate and provides other nutrients needed for good health (USDA n.d.). As there are many health benefits associated with including seafood in one's diet, it is recommended that adults consume at least eight ounces of a variety of seafood every week (USDA and USDHHS 2020). Pregnant and breastfeeding women should aim to eat 8–12 ounces of a variety of seafood each week (USDHHS and USDA 2020). While eating more seafood is recommended as part of a healthy diet, it is important to consider your budget when shopping for seafood. This article explains the health benefits of seafood and offers some money-saving strategies for making seafood more affordable.



Figure 1.
Credit: Elena Gaak/iStock/Thinkstock

What makes seafood healthy?

Seafood intake supports good health. Compared to many other popular sources of protein, seafood is low in saturated fat and is a good source of healthy fats such as omega-3 fatty acids (USDA n.d.). Seafood, like most lean meats, is a good source of B vitamins, as well as selenium, zinc, iodine, and iron (USDA n.d.). Some varieties of seafood, such as salmon and canned light tuna, are sources of vitamin D, a nutrient that is very important for bone health. Seafood provides protein that your body needs for healthy growth, maintenance, and repair. A three-ounce serving of seafood generally provides up to 40% of the daily protein requirement for adults (IOM 2005).

Scientific studies link seafood consumption with a reduced risk for heart disease (Mohan et al. 2021). Eating two servings of seafood per week may reduce the risk of heart attack and stroke (USDHHS and USDA 2020). This reduction in risk may be in part due to the omega-3 fatty acid content of seafood. Some fish, like salmon and herring, are naturally higher in fat and have higher omega-3 fatty acid contents.

When deciding which seafood to purchase, think about the omega-3 fatty acid content of different varieties. Options that have moderate to high levels of omega-3 fatty acids include salmon, mackerel, herring, and sardines which are considered "fatty" ocean fish. The omega-3 fatty acid content of a selection of seafood is shown in Table 1.

Table 1. Omega-3 contents of seafood.

Type of Seafood	Omega-3 Fatty Acids (milligrams) per 4 ounces
Salmon (Atlantic, chinook, coho)	1,200–2,400
Tuna (bluefin and albacore)	1,700
Swordfish*	1,000
Canned light tuna (not albacore)	150–300
Pollock (Atlantic and walleye)	600
Flounder	350
Clams	200–300
Catfish	100–250
Cod (Atlantic and Pacific)	200
Scallops (bay and sea)	200

Type of Seafood	Omega-3 Fatty Acids (milligrams) per 4 ounces
Lobsters (Northern, American)	200
Shrimp	100
Tilapia	150

*Should not be consumed by pregnant or breastfeeding women

Source: U.S. Department of Agriculture n.d.

What about mercury in seafood?

Methyl mercury is a natural element found in trace amounts in some seafood. This molecule can cause damage to the nerves and brain when consumed in high amounts (. Seafood is an important component of a healthy diet and should not be avoided due to its mercury content (FDA 2022a). The FDA suggests eating 2 to 3 servings of fish from the “Best Choice” list OR 1 serving from the “Good Choice” list to limit methyl mercury intake (FDA 2022a). A chart that lists seafood found within each category can be found at https://www.fda.gov/media/102331/download. Although this information is geared towards children and pregnant or breastfeeding women whose consumption of methyl mercury poses a great risk to a fetus or infant, anyone can utilize the chart (FDA 2022a).



Figure 2.
Credit: David De Lossy/Photodisc

What are some money-saving shopping options?

While seafood provides healthy meal-planning options, some varieties can be expensive. When looking to save money, canned or frozen seafood may be good choices.

A lower-cost option is canned seafood. Canned seafood retains its health benefits and is shelf-stable and easy to use in recipes (USDA n.d.). Canned seafood tends to be higher in sodium (USDA n.d.). To help keep your sodium intake in check, consider selecting canned seafood labeled "low sodium" or "very low sodium." Another option is to rinse canned seafood under running water to reduce its sodium content (Vermeulen et al. 1983).

What about sustainability?

Sustainability, which focuses on meeting today's needs without compromising the ability to meet future needs, is becoming a very important issue that should be considered when purchasing seafood (NOAA 2022). As of the 2019 Report to Congress on the Status of U.S. Fisheries, the number of stocks on the overfishing list reached an all-time low (NOAA 2019). This means that sustainable fishing efforts may be working (NOAA 2022). Up-to-date sustainability information and guidelines for shopping sustainably can be found at www.fishwatch.gov.

What about food safety?

Seafood may have bacteria on its surface. Although this poses a risk of foodborne illness, eating cooked seafood generally is safe. To reduce risk, look for the following characteristics in the seafood you buy:

Fresh Fish

- Smell is not overly fishy
- Flesh is shiny
- No discoloration
- No drying or darkening on the edges
- Eyes of whole fish should be clear

Frozen Fish

- No damage to packaging
- Not on the top shelf of freezer case
- No visible ice crystals (this indicates temperature changes during transport)

Always shop for fresh seafood at the end of your shopping trip and store it in a cold refrigerator (less than 40°F) immediately when you get home (USDA 2013). Frozen seafood should be kept frozen until preparation. If you live in a hot environment, bring a cooler with ice packs with you to transport your fish.

At home, follow these food safety tips to make sure your seafood is safe (FDA 2022b):

- Separate seafood from other food products.
- Wash your hands well before and after preparing seafood in your kitchen.
- Use hot water, detergent, and sanitizer on any kitchen surface with which seafood has come into contact.
- Defrost frozen seafood by placing it in the refrigerator overnight.
- Cook seafood to an internal temperature of 145°F, or until the flesh is opaque.
- Do not keep seafood for longer than its recommended storage time.
  - Frozen raw seafood should be consumed within 3 to 8 months (USDA n.d.)
  - Unopened canned seafood should be consumed within 2 to 5 years from the date of purchase if stored in proper pantry conditions (ASPA 2022)

Can I eat raw seafood?

Many people enjoy eating raw seafood such as oysters and sushi. However, it is always best to cook seafood to minimize the risk of foodborne illness. If you are still planning to eat raw seafood, you should consider eating fish that has been previously frozen. Freezing will kill parasites present in or on the seafood, although it will not kill all microorganisms (FDA 2017).

Pregnant women, young children, older adults, and persons with compromised immune systems (such as individuals with HIV, tuberculosis, or who have undergone organ transplants) should never eat raw or partially cooked seafood (FDA 2017). These populations are more susceptible to foodborne illness.

Preparing Seafood

Once you have selected your seafood and followed the food safety tips outlined above, make sure you prepare it in a way that is enjoyable for you. Cooking methods like broiling and baking are great options that do not add extra fat. Using fats like oil and butter while cooking can add a lot of extra calories, so use these in moderation. To enhance the flavor of your seafood, try using herbs such as rosemary, thyme, and basil, as well as lemon instead of salt. A quick Internet search is likely to turn up many great recipes. There are also excellent seafood spice blends and marinades available in most grocery stores.

Summary

Seafood is an important source of protein and offers heart health benefits. Eating 8 ounces of seafood per week for adults, as recommended by the Dietary Guidelines for Americans (USDHHS and USDA 2020), is a great way to add variety to your diet while obtaining nutrients important for good health. Be sure to consider food safety when shopping and preparing seafood and make the right choice for your budget.

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