

Shopping for Health: Seafood¹

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Seafood is a general term for all types of fish and shellfish (USDA 2010). Seafood is part of the “protein foods group” of MyPlate and also provides other nutrients needed for good health (USDA 2011). 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.

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.
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What makes seafood healthy?

Seafood intake offers health benefits. Compared to many other popular sources of protein, seafood is low in saturated fat and cholesterol and is a good source of healthy fats such as omega-3 fatty acids (Seafood Health Facts [SHF] 2012d). Seafood, like most lean meats, is a good source of B vitamins, as well as selenium, zinc, iodine, and iron (SHF 2012d). Some varieties of seafood, such as salmon and canned light tuna, are excellent sources of vitamin D, a nutrient that is very important for bone health (USDA 2010, p. 90).

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 (SHF 2012d).

Scientific studies link seafood consumption with a reduced risk for heart disease. Eating two servings of seafood per week reduces the risk of heart attack and stroke (USDA 2010). This reduction in risk is related to the omega-3 fatty acid content of seafood. Some fish, like salmon and herring, are naturally higher in total fat and therefore have higher omega-3 fatty acid contents as well.

Omega-3 fatty acids help the brain and eyes to develop before birth and during infancy. (SHF 2012b). It is recommended that pregnant and breastfeeding women eat 8–12 ounces of a variety of seafood each week (USDA 2010, p. 39).

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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 (considered “fatty” ocean fish) (SHF 2012d). The omega-3 fatty acid content of a selection of seafood is shown in Table 1.

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 (SHF 2012c). However, the average intake of methyl mercury in seafood is not high enough to be a health concern for most adults (Fish Watch 2013b). Pregnant or breastfeeding women should try to limit their methyl mercury consumption, as it can pose a problem to a fetus or infant. Pregnant or breastfeeding women should eat 8 to 12 ounces of seafood per week, selecting seafood varieties containing low to moderate levels of methyl mercury. They should further reduce methyl mercury exposure by not eating shark, swordfish, king mackerel, or tilefish, and eating no more than six ounces of canned albacore tuna each week (USDA 2010, p. 39).



Figure 2.
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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.

Frozen seafood, found in the freezer section of grocery stores, is generally in the same or better condition than fresh seafood (Stiles 2013). This is because frozen seafood

usually is frozen immediately after it is caught, sometimes even before reaching land (Stiles 2013). Immediate freezing helps to maintain the quality and flavor of the seafood and slows the growth of bacteria. Fresh seafood may travel on ice for long distances and sometimes is frozen and thawed before reaching the supermarket (Stiles 2013).

Another lower-cost option is canned seafood. Canned seafood retains its health benefits (SHF 2012a) and is shelf stable and easy to use in recipes. Canned seafood tends to be higher in sodium (SHF 2012a). 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 (Fish Watch 2013). As fisheries worldwide are experiencing declining stocks, it is important to ensure that we continue to have access to fresh seafood (Fish Watch 2013a). Much of the seafood in the United States is imported, and 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 for foodborne illness, eating cooked seafood generally is safe. To reduce risk, look for the following characteristics in the seafood you buy:

Fresh fish (Food and Drug Administration [FDA] 2013):

- 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 (FDA 2013):

- 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 (SHF 2012e). 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 2013):

- Separate seafood from other food products.
- Wash your hands well before and after preparing seafood in your kitchen.
- Use a disinfectant cleaner on any kitchen surface with which seafood has come into contact .
- Defrost frozen seafood by placing it in the refrigerator overnight (FDA 2013).
 - If you are short on time, you may consider using the defrost setting on your microwave, stopping the cycle when your seafood is still icy, but no longer rigid.
- 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.
 - Fresh seafood should be used within two days after purchase (SHF 2012e).
 - Frozen seafood should be consumed within two months (NOAA Seafood Inspection Program 2013).
 - Canned seafood can be stored at room temperature for several years (National Fisheries Institute 2013).

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 2013).

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 2013). 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 (U.S. Dept. of Health and Human Services and U.S. Dept. of Agriculture 2010), is a great way to add variety to your diet while obtaining nutrients important for good health. Be sure to consider the safety of the seafood for which you are shopping, and to make the right choice for your budget.

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Table 1. Omega-3 and methyl mercury contents of Seafood (USDA, 2010).

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
Lobsters (Northern, American)	200
Shrimp	100
Tilapia	150

*Should not be consumed by pregnant or breastfeeding women