



Seafood Health Facts: Making Smart choices

Balancing the Benefits and Risks of Seafood Consumption

Resources for Healthcare Providers and Consumers

Oysters [1]

There are over 200 species of oysters in the world, but only a few species are commonly used for food. Most species are too scattered or too small to harvest for food, and some are collected for their thorny and wing-shaped ornamental shells. Oysters are bivalve (two shells) mollusks that obtain their food by pumping water through their system and filtering small organisms from surrounding waters. They grow near the bottom and attach themselves in clusters to hard surfaces or shells. The edible varieties are usually cultivated in approved coastal waters that are closely monitored to assure product safety. These extra measures for product safety are necessary because many consumers prefer to eat raw oysters.

Types and Sources of Product

Two species of oysters are widely harvested for food in the U.S., the Eastern oyster (*Crassostrea virginica*) and the Pacific oyster (*Crassostrea gigas*). There are significant variations within each species from one harvest location to another. The shape, color and taste of the oyster and its meat are influenced by the surrounding waters and the method of cultivation. Natural cultivation relies on maintaining existing oyster beds that support the full life cycle of the native oysters. Farmed cultivation or aquaculture can use structures and facilities to help support and encourage growth of selected oysters in particular coastal locations. Both approaches depend on natural growth in marine waters.

Since oysters feed by filtering the surrounding waters, the taste will vary (e.g., salty, earthy, etc.) and reflect the unique conditions of the waters in which they live and the season of harvest. For these reasons, oysters are commonly marketed with names associated with their harvest location or region. For example, in the United States along the Eastern Atlantic coast and Gulf of Mexico the common species *Crassostrea virginica*, may be sold as Wellfleet Oysters (from Cape Cod), Blue Point Oysters (from New York and Connecticut), Chesapeake Bay Oysters (from Maryland and Virginia), Apalachicola Bay Oysters (from Florida) and SW Pass Oysters (from Louisiana). The common west coast species *Crassostrea gigas*, may be sold as Fanny Bay Oysters (from British Columbia), Willapa Oysters (from Washington), Umpqua Oysters (from Oregon) and Hog Island Oysters (from California). Many other varieties may be similarly named to identify the waters or region where they are harvested.

Product Forms and Buyer Advice

Oysters can be purchased in many forms. Whole oysters (shellstock) have both shells intact and usually come alive and may be cooked in the shell, or shucked to remove the raw meat for cooking. Half-shelled oysters are typically prepared at the restaurant or bar as a raw selection or a cooked product with special toppings. Shucked meat is the edible portion removed from the shell and sold in pints, gallons, trays or other containers. The meats can be used as an ingredient in recipes, soups and stuffing or be breaded for cooking. All product forms can be purchased refrigerated or frozen.

The size and shape of an oyster will be influenced by the harvest location. Crowded growth conditions on natural oyster beds or cultivation practices used can determine the length, uniformity of size and depth of the shells (cup shaped or flat shaped). There are no formal or regulated size categories for whole oysters or shucked meats. Shellstock can be purchased by shell size (count) or weight per container size (bushel, bag or box). Market names are also used to describe the number of shucked meats per pound. Extra large or counts are the largest with less than 20 meats per pint followed by large or extra selects, medium or selects, and small or standards which may have up to 60 meats per pint.

Oyster color may also be influenced by harvest location and season. In general, the edible meats should appear cream to beige in color surrounded by clear liquor (natural moisture associated with the shucked

oyster). Discoloration is uncommon and can be removed during processing. Rarely a shade of pink, green or black can develop after shucking. These are seasonal events related to the oyster's diet that can include certain natural colored plankton.

When buying fresh whole oysters, it is important to make sure that they are alive. The shells of live oysters should be tightly closed or try to close when tapped or agitated. A tradition in the U.S. is to eat oysters raw on the half shell. Although state and federal regulatory authorities have extensive programs in place to ensure that live bivalves are safe to eat, the system is not perfect and the risk of foodborne illness for these products is higher than for cooked foods. Health authorities have advised high risk individuals, including young children, elderly adults, pregnant women and any person with a compromised immune system (commonly associated with liver diseases, alcoholism, chemotherapy, steroid use, AIDS, diabetes and/or routine use of antacids) not to eat raw animal products like meat, poultry, shellfish like oysters and clams, and eggs which may contain potentially harmful viruses or bacteria for decades.

A special note of caution is necessary for consumers that plan to harvest their own oysters rather than purchase them through established commercial sources. Any personal or recreational harvest must be from 'approved' waters and consumers should contact local authorities to identify the approved locations and resources.

Nutrition Information

Oysters are a low fat, high protein seafood choice with an above average amount of healthful minerals such as selenium, zinc, iron and magnesium and B vitamins. The nutritional profile of oyster products will be determined by the product form and any added ingredients. Nutrition labels for 3 ounce cooked portions of Pacific and Eastern oysters are provided. Three ounces of oysters provide more than 1 gram of omega-3 fatty acids.

Management and Sustainability

Oysters are a sustainable seafood product because they can be cultivated as a renewable resource. Maintenance of natural oyster beds and new aquaculture practices assure a continuous supply in the United States. Current limitations are associated with the availability of clean coastal waters that can comply with stringent standards for approved harvest, and outbreaks of natural oyster diseases. Oysters are an important part of a healthy ecosystem because their active filtering can help improve or maintain water quality. Oysters are primarily harvested in state waters (up to 3 miles from shore) and are managed by state fishery management programs.

References

National Marine Fisheries Service, 2011. [Fisheries of the United States 2010](#) [2]

[USDA National Nutrient Database for Standard Reference](#) [3]

Sidebar Image:

Nutrition Facts

Serving Size 3 oz (85g)
Pacific Oyster, cooked dry heat

Amount Per Serving

Calories 140 **Calories from Fat 35**

	% Daily Value*
Total Fat 4g	6%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 85mg	28%
Sodium 180mg	8%
Total Carbohydrate 8g	3%
Dietary Fiber 0g	0%
Sugars 0g	

Protein 16g

Vitamin A 8% • Vitamin C 20%

Calcium 2% • Iron 45%

Selenium 190%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories: 2,000		2,500	
Total Fat	Less than	65g	80g	
Saturated Fat	Less than	20g	25g	
Cholesterol	Less than	300mg	300mg	
Sodium	Less than	2,400mg	2,400mg	
Total Carbohydrate		300g	375g	
Dietary Fiber		25g	30g	

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4

Nutrition Facts

Serving Size 3 oz (85g)
Eastern Oyster, cooked dry heat

Amount Per Serving

Calories 70 **Calories from Fat 15**

	% Daily Value*
Total Fat 2g	3%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 30mg	10%
Sodium 140mg	6%
Total Carbohydrate 6g	2%
Dietary Fiber 0g	0%
Sugars 0g	

Protein 6g

Vitamin A 2% • Vitamin C 8%

Calcium 4% • Iron 35%

Selenium 90%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories: 2,000		2,500	
Total Fat	Less than	65g	80g	
Saturated Fat	Less than	20g	25g	
Cholesterol	Less than	300mg	300mg	
Sodium	Less than	2,400mg	2,400mg	
Total Carbohydrate		300g	375g	
Dietary Fiber		25g	30g	

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4





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