



## Patients and Consumers

# Seafood Safety

## Seafood Handling and Storage

This section provides practical advice for consumers to help them transport, store and prepare seafood products to ensure safety and maximize quality.

### Introduction

There are a number of very good resources for consumers on the safe handling and storage of seafood. The links to the web sites where these resources can be found are provided at the end of this page. If you would like more in-depth information, please go directly to these sites. The following summary was adapted from “A Consumer Guide to Safe Seafood Handling” by Doris Hicks, University of Delaware and “Fresh and Frozen Seafood: Selecting and Serving Safely” from the U.S Food and Drug Administration (FDA).

### Overview

Safe handling and storage of all food should follow the same basic guidelines that are listed below. However, seafood is more perishable than many food items, and the consumer must pay a little more attention to its careful handling.

Whether a consumer buys seafood from a market or catches/harvests fish and shellfish on their own, proper handling, storage and preparation are necessary to maintain quality and ensure safety. Although there are many types of seafood available from commercial sources or from recreational fishing, all fish and shellfish are highly perishable, and the same basic storage and handling guidelines should be followed: Keep it cold, Keep it clean, Store it quickly, Prepare and cook it properly.

### Keep Seafood Cold

How long your fresh seafood will last depends on the condition of the product when you purchased it (See selecting seafood) and on how well you take care of it. When storing fresh seafood, keep it in the coldest part of the refrigerator. Use a thermometer to make sure your home refrigerator is operating at 40°F or lower. Fish will lose quality and deteriorate rapidly with higher storage temperature - so use ice when you can. Always purchase seafood last during your shopping trip, and bring a cooler to transport it home. If you have caught your own fish, do not let them sit on the deck until you come back to the dock. Bury them on ice immediately or use an ice slush with approximately 2 parts ice to 1 part water to keep your catch cold.

### Store Seafood Properly

**Finfish** should be stored in the refrigerator and used within 1 to 2 days after purchase. It's a good idea to store it on ice in the refrigerator to keep it as cold as possible. If the fish won't be used within 2 days, wrap it tightly in moisture-proof bags (so the fish won't dry out) and store it in the freezer.

**Shellfish**, such as mussels, clams and oysters that are purchased live in their shells, should be put in a shallow pan (no water), covered with moistened paper towels and refrigerated. Mussels and clams should be used within 2-3 days and oysters within 7-10 days. Shucked shellfish can be placed in a sealed container and



frozen. Live lobsters and crabs should be cooked the day they are purchased. Recommended storage times and shelf-life times can be found on the websites below.

**Frozen seafood** should be kept frozen, and it is a good idea to date packages of frozen seafood so you can use the older seafood first. For best quality remember the FIFO concept - First In, First Out. Frozen seafood must be thawed properly. It's best to thaw frozen seafood in the refrigerator overnight. Other thawing methods include: immersing frozen seafood in cold water for a short time in a sealed plastic bag, or microwaving on a defrost setting until the fish is pliable but still icy. Be careful not to overheat the seafood in the microwave or you will start the cooking process.

## Handle and Prepare Seafood Properly

All foods, including seafood, must be handled and prepared in a clean area to avoid cross-contamination. Always remember to keep your hands, preparation area and utensils clean. Never let raw seafood come in contact with already cooked or ready-to-eat foods (e.g. salads, fruit, smoked fish). Whether you are storing fresh fish or thawing frozen fish in your refrigerator, make sure that the juices from raw seafood do not drip onto food that has already been cooked or food that will not be cooked.

Marinades are great for seafood but should not be saved and used as a sauce unless the marinade has been cooked to a temperature of at least 165°F to eliminate microorganisms from the raw fish. Always marinate in the refrigerator in a glass or plastic container.

Never serve cooked seafood on a plate that held the raw product without proper cleaning. Store leftovers, properly wrapped, in the refrigerator within 2 hours. Bacteria will grow rapidly in the temperature "Danger Zone" of 40-140°F so keep hot food above 140°F and cold food below 40°F.

## Cook Seafood Properly

To avoid foodborne illness, it is necessary to cook seafood to an internal temperature of 145°F for 15 seconds until the flesh is opaque and flaky. Use a food thermometer to check the internal temperature in the thickest part to make sure that it is fully cooked without overcooking. When fully cooked, scallops and shrimp will turn firm and opaque. Shellfish like clams, mussels, oysters will become plump and opaque and their shells will open. Lobster and crab shells will turn bright red with a pearly-opaque flesh. For specific recommendations on cooking parameters for different seafood products, go to the websites listed below.

## Other Seafood Safety Tips

It is always best to cook seafood thoroughly to minimize the risk of foodborne illness. Healthy individuals may choose to eat raw or partially cooked seafood, but young children, females who are pregnant or nursing, immuno-compromised individuals, and older adults should avoid eating raw or partially cooked seafood.

If you have an allergy to one or more types of finfish, shellfish (clams, oysters) or crustaceans (shrimp, lobsters, crab) read food labels carefully and do not eat items you are allergic to.



## Resources for More Information

Detailed information about storing, preparing and cooking seafood can be found at these websites:

Food and Drug Administration Consumer Brochure - Fresh and Frozen Seafood: Selecting and Serving it Safely. (<http://www.fda.gov/food/resourcesforyou/consumers/ucm077331.htm>)

University of Delaware Fact Sheet - A Consumer Guide to Safe Seafood Handling. (<http://www.deseagrant.org/products/mas-bulletin-consumers-guide-safe-seafood-handling>)

Virginia Cooperative Extension Consumer Brochure - Safe and Nutritious Seafood in Virginia. (<http://web.vims.edu/adv/seafood/nutrition.htm>)

Cornell University & NY Sea Grant Booklet - Seafood Savvy: A Consumer's Guide to Seafood Nutrition, Safety, Handling and Preparation. (<http://www.seagrant.sunysb.edu/seafood/article.asp?articleID=231>)

Food and Drug Administration Website and Video - Food Allergies: Reducing the Risks (<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm089307.htm>)

Food and Drug Administration Flyer - Food Facts: Food Allergies - What You Need to Know. (<http://www.fda.gov/Food/ResourcesForYou/Consumers/ucm079311.htm>)

Seafood Health Facts Consumer Brochure (<http://seafoodhealthfacts.org/pdf/final-seafood-health-3fold-brochure.pdf>)