

# Cooking Fish & Shellfish

## OBJECTIVES

After reading this section, you will be able to:

- Explain how cooking affects fish and shellfish.
- Cook fish and shellfish.
- Demonstrate ways to garnish fish and shellfish.

YOU have many methods to choose from when cooking fish and shellfish. Dishes may be simple or elaborate, low-fat or rich. Moist cooking methods and deep-frying, as well as baking and sautéing, offer a number of ways to prepare seafood.



## KEY TERMS

- sushi
- en papillote

## FISH & SHELLFISH COOKERY

Fish has little connective tissue, so a long cooking time is not needed to tenderize the flesh. When cooking fish, the chef must pay attention to time, temperature, and the cooking process. Cook fish until the internal temperature is 145°F or above for 15 seconds.

Fish is also usually low in fat and can quickly dry out when overcooked. To prevent this, chefs sometimes use moist cooking techniques, such as steaming or poaching. Fish flesh flakes, or breaks away in small layers, when it is done. Remember

that fish retains heat, even when removed from a heat source. Therefore, it continues cooking and can easily overcook.

Like fish, shellfish can easily be overcooked. Overcooking and excessively high heat will cause shellfish to dry up and shrink or become rubbery and tough. Clams or mussels cooked in the shell will open as they cook. Discard any shells that do not open, since the meat will not be good to eat. To prevent dryness, moist cooking methods are often used.



## BAKING FISH & SHELLFISH

Fish steaks and fillets, as well as small fish and shellfish, can be baked in an oven. Combination cooking methods are sometimes used to bake fish. For example, fish may be initially browned in a small amount of oil in a sauté pan to give it color and flavor, then baked to finish cooking. When baking lean fish, baste it frequently with oil or butter to prevent the fish from drying out.

Fish or shellfish may also be baked in a sauce, such as curry or tomato. Baking in a sauce also helps prevent the meat from becoming dry.

### Baking Guidelines

Since fatty fish, such as pompano or salmon, are not as likely to dry out, they are the best fish for baking. Generally, fish and shellfish are baked between 350°F and 400°F. Large fish will bake more evenly at the lower temperature. Cook fish until the internal temperature of the thickest part is 145°F or above for 15 seconds.

■ **Moist baking.** Adding vegetables and liquid to a large piece of fish or a whole fish is called moist baking. Other moist cooking techniques used for fish and shellfish include simmering, poaching, and steaming. Liquids from moist cooking are often turned into sauces that accompany the fish or shellfish. Wrapping fish or shellfish in parchment paper with vegetables, herbs, and sauces or butters is a method of steaming called **en papillote** (ahn pah-pee-yoa). These cooking methods do not add fat and keep the meat from becoming dry. They also preserve nutrients and natural flavors.

Use the following steps to steam en papillote:

1. Cut the parchment paper into the desired shape and size to prepare the fish. Fold the parchment in half and crease the folded edge.
2. Butter the parchment paper on one side. Place the buttered side down on the baking dish.

## SAFETY & SANITATION

**SERVING RAW FISH & SHELLFISH**—Many restaurants offer raw fish or shellfish on the menu, such as sushi or raw oysters. **Sushi** (SOO-shee) is a Japanese dish of raw, fresh fish or seafood wrapped in cooked and cooled rice, often with a layer of seaweed to hold it together. See Fig. 22-15 below.



Many health officials advise against serving raw fish or shellfish because of the danger of parasites and contamination from polluted water. However, if you do serve these items, follow these guidelines:

- Buy fish from reputable vendors.
- Choose only the highest quality fish since it will not be cooked.
- Handle the fish as little as possible.
- Follow state-mandated guidelines concerning the serving of raw fish and shellfish.

3. Add the fish, vegetables, and butter to one side of the parchment paper. Fold the parchment over the fish.
4. Seal the edges of the paper by crimping, or pinching and pressing them together around the entire paper.
5. Bake when completely sealed.



## a LINK to the Past

### Oysters Rockefeller



Oysters have been cultivated worldwide for over two thousand years and have long been a popular food in America. Cookbooks from the eighteenth century contain recipes for dishes such as oyster pie and pickled oysters. New England oyster stew is still popular today and is prepared much the same way it was centuries ago.

New Orleans is the birthplace for a number of famous oyster dishes, including Oysters Rockefeller. A shortage of snails from Europe in 1899 prompted Jules Alciatore to choose oysters as a main dish for Antoine's, his father's restaurant. Named after business tycoon John D. Rockefeller, Oysters Rockefeller consists of baked oysters on the half shell topped with a rich sauce and served on a bed of rock salt. To this day, the recipe for the sauce is a closely guarded secret, although it is known to include a puréed green vegetable.

## BROILING & GRILLING FISH & SHELLFISH

Because of the high heat used, broiled and grilled seafood dishes can be prepared quickly. Many diners view broiled and grilled dishes as more healthful than dishes cooked with other methods.

The appearance of broiled or grilled fish or shellfish may be enhanced by a relish or side sauce. Grilled vegetables are also a natural accompaniment. Citrus garnishes, such as lemon, lime, or orange, are generally served with broiled or grilled seafood. Sometimes lemon and herb butters are served instead.

### Broiling & Grilling Guidelines

The high heat of broiling or grilling gives fish and shellfish a smoky flavor. Brush butter or oil over the fish before broiling. This keeps the meat from sticking, and it keeps lean fish moist.

To cook a thicker cut of fish or shellfish evenly, turn it once during broiling. Thin pieces of fish and lobster are broiled on one side only.

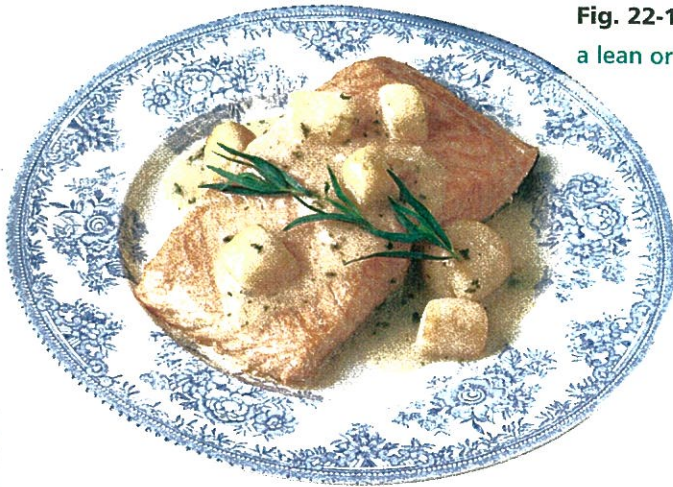
Fatty fish, such as swordfish or trout, are a good choice for broiling. Many types of shellfish are broiled on the half shell or on skewers for ease of handling.

■ **Lean versus fat.** All varieties of fish may be broiled. However, fatty fish is the best choice, since lean fish can become dry very quickly. Before broiling both lean and fatty fish, you may wish to coat them with butter, oil, or a vegetable oil spray. See Fig. 22-16.

■ **Use small fish steaks or fillets for broiling.** Thick fish steaks and whole fish are not good choices for broiling. The high heat used in broiling will finish cooking the outside of thick fish before the interior is done. Use fillets or small fish steaks for best results.

■ **Avoid overcooking.** Broiling and grilling require high temperatures, which cook fish and shellfish quickly. Overcooking will make fish dry and shellfish tough.





**Fig. 22-16.** This is baked salmon. Is salmon a lean or fatty fish?

## ✂ SAUTÉING & PAN-FRYING

The terms sauté and pan-fry are often mistaken as the same thing. Sautéing adds flavor to the food because the surface is lightly browned. Pan-frying uses more fat than sautéing does, and the food to be pan-fried is coated with seasoned batters, flour, or breading before cooking. This coating creates a flavorful crust that protects the fish during cooking.

Be sure the pan and the cooking fat are both hot before adding fish or shellfish. Since only a short cooking time is needed, use high heat to brown the surface when sautéing thin slices of fish or small pieces of shellfish. Thicker pieces may require lower heat so they don't get too brown. Adding too much fish or shellfish to the pan at the same time causes the fat to cool, and the food will then simmer in its own juices.

### Sautéing & Pan-Frying Guidelines

Since both sautéing and pan-frying use oil or clarified butter, these cooking methods work well for lean fish. Usually just enough fat to cover the bottom of the pan is sufficient for sautéing. Pan-frying requires more fat.

To keep fish from sticking, use flour or breading to form a crust. For better appearance, brown the presentation side, which is generally the thicker side of a fillet, first. Turn pan-fried fish or shellfish only once during cooking to help prevent fillets

from breaking. Sautéed or pan-fried items will cook quickly over a high heat.

■ **Dredging and breading.** To dredge a food is to evenly coat it with a bit of flour or cornmeal. Make small batches if there are several pounds of fish to prepare. For a better crust, soak fish in milk and drain before breading to prevent a pasty, heavy coating. Dredge the fish or use large shakers with handles to sprinkle the breading. See Fig. 22-17.

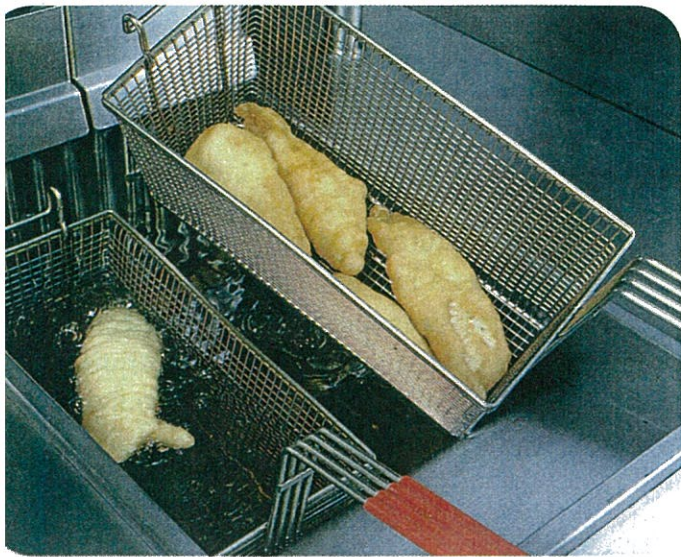
## ✂ DEEP-FRYING

Deep-frying is the most common method used to fry fish in the U.S. Although the foodservice industry often uses frozen, breaded fish for deep-frying, fresh fish or shellfish may also be deep-fried. To protect both the fat and the fish, coat the item with batter or breading. This provides an attractive coating and a crispy texture. The best shellfish to deep-fry are scallops, oysters, shrimp, and clams. Lean fish, usually in sticks or small fillets, are also a good choice.

**Fig. 22-17.** Coat fish evenly and be sure to shake off excess breading before cooking.







**Fig. 22-18.** Many types of fish and shellfish can be deep-fried. **Why is it important to serve deep-fried fish and shellfish immediately after cooking?**

## Deep-Frying Guidelines

When preparing frozen breaded fish, cook the fish without first thawing it. If the portion thaws, the fish will be soggy. Review the guidelines for breading and frying in Chapter 15. Batter recipes for vegetables can also be used for fish or shellfish. See Fig. 22-18.

### SAFETY & SANITATION

**FRYING FAT**—Always take special care when working with hot fat, which can easily spatter and burn. Drain and serve deep-fried foods immediately after cooking.

### CULINARY TIP

**FAT QUALITY**—To maintain the quality of frying fat, only heat oil to the temperature needed. Once a day, filter all the oil through a strainer and replace 20% of it with fresh oil.

## DETERMINING DONENESS

Because fish and shellfish are naturally tender, it is critical to avoid overcooking. Using the following guidelines will help you determine when fish and shellfish are done cooking:

- Fish starts flaking. When fish cooks, the muscle fibers begin to separate from each other.
- Flesh pulls away from the bones or shell easily.
- Flesh springs back when pressed. Uncooked seafood is soft and mushy instead.
- Flesh becomes opaque. Light cannot be seen through the flesh.

In addition, use these guidelines with each specific cooking technique.

■ **Baking.** Bake fish until the internal temperature is 145°F or above for fifteen seconds. Also check that the flesh flakes, pulls away from the bones or shell, springs back when pressed, and is opaque.

■ **Broiling and grilling.** When broiled or grilled, the outside of fish and shellfish should be slightly browned and crispy. The inside should be juicy and tender.

■ **Sautéing and pan-frying.** Sautéed and pan-fried fish and shellfish are done cooking when their surfaces are slightly browned or crispy. As in broiling and grilling, the insides should be juicy and tender.

■ **Deep-frying.** If the oil has reached the proper temperature, deep-fried fish and shellfish are done when their batter is a rich golden brown. When using prepackaged frozen items, follow the package guidelines. These generally give a range of times and temperatures.



## PLATING FISH & SHELLFISH

Serving seafood attractively is an important part of preparation. Since seafood tends to be pale, color is a must in side dishes. The contrasting color and texture make the overall meal appealing. For example:

- A mix of steamed carrots and broccoli brightens the plate and is low in fat.
- A well-garnished rice, pasta, or potato makes a good choice for a side dish.
- If shellfish is served chilled, a cocktail sauce and fresh lemon slices usually accompany it.
- Some seafood dishes are served on beds of sautéed leeks or seaweed.
- Colorful sauces can be plated under seafood to add color and flavor.

### Garnishing Fish & Shellfish

Tartar sauce may be the most familiar sauce accompanying seafood. However, other sauces, such as hollandaise or a caper sauce, work just as well for steamed or poached items.

Citrus wedges often accompany grilled or broiled seafood items. If an item has been broiled with a seasoned butter, an additional serving of the butter may be used for garnish. See Fig. 22-19.

## CULINARY TOP

**NUTRITION**—Both fish and shellfish are high in protein, as well as vitamins A, B, and D. Fish are also a good source of minerals such as iron, potassium, calcium, and phosphorus. Fatty varieties like salmon and mackerel are high in omega-3 fatty acids, which may help prevent some forms of heart disease. Most fish and shellfish are low in sodium, fat, and calories.

**Fig. 22-19.** Garnishes are an important step in attractively presenting cooked fish and shellfish.



### SECTION 22-3

## Knowledge Check

1. Explain three ways that cooking affects fish and shellfish.
2. What are two signs that fish is done cooking?
3. Name three garnishes that are commonly used with different types of fish and shellfish.

### MINI LAB

Working in teams, prepare a garnished fish or seafood dish. Exchange dishes with another team and evaluate the quality of the dish. Discuss your findings as a class.