

# Seafood at its Best

FCH11-02  
December 2010

## Participant Handout

Seafood is a nutrient-rich food that can benefit your health. Most Americans, however, consume less fish and shellfish than is recommended.

### How much do you know about seafood? Quiz

1. Approximately what percent of seafood consumed in the U.S. is imported?  
25%            50%            80%            90%
2. About how many pounds of seafood do Americans eat per year?  
10            16            21            44
3. The American Heart Association recommends that all adults eat fish once a week.  
True            False
4. Seafood is considered the best dietary source of omega-3 fatty acids.  
True            False
5. Which of the following is rich in omega 3 fatty acids?
  - Salmon
  - Trout
  - Herring
  - All of the above
6. According to the Food and Drug Administration and the Environmental Protection Agency, pregnant women should:
  - a. Not eat shark, swordfish, king mackerel, or tilefish
  - b. Avoid seafood during pregnancy
  - c. Eat up to 12 ounces per week of a variety of seafood low in mercury
  - d. a and c
7. A country of origin label for seafood will indicate
  - a. Whether the seafood is wild or farm raised
  - b. The country of origin
  - c. Whether it is domestic or imported
  - d. a and b
8. For every inch of thickness, cook fish for
  - 20 minutes
  - 10 minutes
  - Until it reaches a temperature of 160° F.
  - None of the above



## Balancing Seafood Risks and Benefits



Recent risk-benefit analyses have demonstrated that the benefits of seafood consumption greatly outweigh risks. To maximize benefits, consumers should eat a variety of seafood twice a week for good health. The majority of the population doesn't eat enough seafood to maximize the associated health benefits.

Pregnant women should eat up to four 3-ounce servings of lower-mercury seafood per week. This can include up to 2 servings of albacore (white) tuna. Large predatory fish that are high in mercury (e.g., shark, swordfish, tilefish, or king mackerel) should be avoided.

The same seafood consumption recommendations apply to young children. Their serving size should be age appropriate (i.e., less than 3 ounces).

## Buying Seafood



### Fresh seafood

Buy from reputable sources known to have safe handling practices. Check the "sell by" or "use by" date so that you can prepare it while it's still fresh.

Buy what looks and smells good. Fresh fish should have little or no odor.

Fresh *whole fish* should have bright, clear eyes that often protrude. Gills should be bright red or pink. Flesh should be firm but elastic enough to spring back. The skin should be shiny with scales that adheres tightly. There should not be a strong fish or ammonia smell.

*Fillet*s should have firm, elastic, translucent flesh and a fresh-cut, moist appearance. There should be no browning around the edges or ragged edges. The flesh should adhere to the bones. Prepackaged steaks and fillets should contain a minimum of liquid - which causes faster deterioration.

*Shellfish* may be sold live, cooked, or fresh-shucked. Each form and species has different signs of quality.

Shells of *clams, oysters, or mussels* should look moist and be tightly closed. If shells do not close when tapped, don't purchase them.

*Meats of fresh-shucked clams, oysters, or mussels* should be plump and covered with their liquor. The liquor should be clear or slightly milky or light gray. There should be no strong odor.

*Live crabs* show leg movement. Crabs won't be very active if they have been refrigerated, but they should move at least a little bit.

Choose *raw shrimp meat* that is firm and has a milk odor. The shells should not have blackened edges or black spots.

Look for *cooked shrimp meat* that is firm and not stored next to raw products. The color of the meat should be white with red and pink tints.

## Frozen seafood

Frozen seafood can be superior in quality to fresh seafood. “Fresh frozen” seafood may be frozen within hours of harvest. Fishery products frozen and thawed for retail sale should be labeled “previously frozen”.

Choose frozen seafood that is free of signs of freezer burn (such as discoloration or drying on the surface) and with no objectionable odor.

Choose frozen fish and shellfish packaged in a close-fitting, moisture proof package. Look for packages with the wrapping intact with little or no visible ice.

At home, wrap seafood in individual leak-proof plastic bags to avoid cross-contamination with other foods.

## How much to buy

Quantities will depend on who you are feeding and whether the seafood will be “stretched” in mixed dishes. The following is considered an average serving per person:

- Whole fish –  $\frac{3}{4}$  to 1 pound (12 to 16 ounces)
- Dressed fish (gutted, scales, gills removed) –  $\frac{1}{2}$  pound (8 ounces)
- Fillets (boneless sections from either side of the backbone) or steaks (cross cuts with a small portion of backbone) –  $\frac{1}{4}$  to  $\frac{1}{3}$  pound (4 to 6 ounces) per person
- Crab –  $\frac{1}{4}$  pound of cooked meat and 1 to  $1\frac{1}{2}$  pounds of live meat per person
- Mussels, in the shell – 1 dozen
- Oysters in the shell – 6 to 12 depending on the size
- Clams in the shell –  $\frac{1}{2}$  dozen
- Oysters, clams or mussels, shucked –  $\frac{1}{2}$  to  $\frac{1}{3}$  point
- Whole shrimp – 1 pound
- Headless, peeled shrimp –  $\frac{1}{3}$  pound

## Handling and Storage

Choose seafood right before checking out at the supermarket. If your trip home is more than 30 minutes, pack the seafood in a cooler or thermally insulated bag.

Use seafood within 36 hours of purchase or freeze it immediately. Thaw frozen seafood (including vacuum packed) in the refrigerator. Use defrosted seafood within 36 hours.

Store molluscan shellfish (such as oysters clams, and mussels) in the refrigerator in open containers with clean, damp cloths placed on top. Cook these products within 1 to 2 days of purchasing. If the mollusk’s shell is open, tap it and see if it closes on its own. If it remains open throw it out. If it closes, it is safe to cook.

Cook live crabs the same day as purchased. Leave them in the storage bag until ready to cook.

Store seafood in the coldest part of your refrigerator at a temperature as close to 32 degrees F. as possible.



Preparing seafood can be quick, easy and safe if you follow a few simple guidelines.

Seafood can be called a “fast food” when it comes to preparation. Unlike some meat, seafood doesn’t need to be tenderized by cooking. Most products can be cooked in 10 to 20 minutes.

Fish is best cooked quickly over high heat (425° to 450° F.) Just remember the 10-minute rule: For every inch of thickness, bake fish at 450° for 10 minutes.

Cook fish until it reaches an internal temperature of 140° to 145° F.

### **Bake**

Measure fish at the thickest part to estimate cooking time. If ends are thin, fold them under for even cooking. If the fish is stuffed or rolled, measure it after stuffing or rolling.

If fish is more or less than an inch thick, add or subtract time from the 10 minute rule. If fish is half an inch thick, divide 10 minutes in half and cook for 5 minutes. If fish is an inch and a half thick, add 5 minutes and cook for 15 minutes.

Add an extra 5 minutes total to the cooking time if the fish has not been defrosted.

### **Broil or grill**

Preheat the broiler or grill.

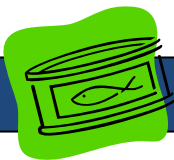
If fish is 1 inch thick or less, place it 2 to 4 inches from the heat source. Place thicker fish 5 to 6 inches away.

Turn the fish halfway through the cooking time. If fish is less than ½ inch thick, however, don’t turn it.

### **Telling when seafood is done**

Seafood will turn opaque and flake easily with a fork when it is done. Insert the fork into the thickest part of fish to test for doneness. Shellfish should turn opaque.

Adapted from “Seafood at its best” by Carolyn Raab, Extension Foods and Nutrition Specialist  
Reviewed by Jeanne Brandt, Extension Family and Community Health, Washington county



## Dressing ingredients:

- 2 Tbsp. extra virgin olive oil
- 2 cloves garlic, minced
- ¼ cup natural rice vinegar
- 1/8 tsp. salt
- ½ tsp. ground black pepper

## Salad ingredients:

- 1 can (about 16 oz.) no salt added light kidney beans
- 1 dozen kalamata olives, pitted (optional)
- ½ medium red onion, sliced lengthwise into thin slivers
- 1 Tbsp. coarsely chopped fresh mint (optional)
- 1/3 cup coarsely chopped fresh Italian parsley
- 1 (12 oz.) can solid white albacore tuna\* in water, drained
- ½ red bell pepper, chopped

\*Substitute other tuna if salad will be eaten by pregnant women or young children

## Directions:

1. In small bowl, whisk together oil, garlic, vinegar, salt and pepper. Set aside dressing.
2. In medium bowl, gently toss beans, olives, onion, mint and parsley. Add tuna, red pepper and enough dressing to coat. Gently toss and drizzle with additional dressing, if needed, to thoroughly coat.
3. Cover and place in refrigerator for a minimum of 30 minutes up to 24 hours before serving.

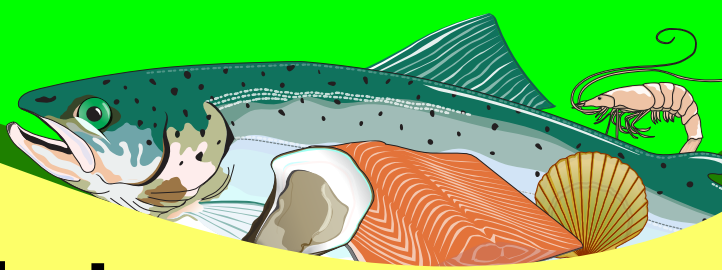
## Variations:

Add more chopped vegetables such as:

- Bell peppers
- Carrots
- Tomatoes
- Celery
- Spinach or leafy greens
- Artichoke hearts

*Adapted from American Institute for Cancer Research*

# Seafood



## Nutrition Facts

Cooked (by moist or dry heat with no added ingredients), edible weight portion.  
Percent Daily Values (%DV) are based on a 2,000 calorie diet.

Seafood Serving Size (84 g/3 oz)	Calories	Calories from Fat		Total Fat		Saturated Fat		Cholesterol		Sodium		Potassium		Total Carbohydrate		Protein		Vitamin A		Vitamin C		Calcium		Iron	
		g	%DV	g	%DV	mg	%DV	mg	%DV	mg	%DV	g	%DV	g	%DV	%DV	%DV	%DV	%DV	%DV	%DV	%DV	%DV	%DV	%DV
<b>Blue Crab</b>	100	10	1	0	95	330	300	0	20g	0%	4%	10%	4%												
<b>Catfish</b>	130	60	6	2	50	40	230	0	17g	0%	0%	0%	0%												
<b>Clams, about 12 small</b>	110	15	1.5	0	80	95	470	6	17g	10%	0%	8%	30%												
<b>Cod</b>	90	5	1	0	50	65	460	0	20g	0%	2%	2%	2%												
<b>Flounder/Sole</b>	100	15	1.5	0	55	100	390	0	19g	0%	0%	2%	0%												
<b>Haddock</b>	100	10	1	0	70	85	340	0	21g	2%	0%	2%	6%												
<b>Halibut</b>	120	15	2	0	40	60	500	0	23g	4%	0%	2%	6%												
<b>Lobster</b>	80	0	0.5	0	60	320	300	1	17g	2%	0%	6%	2%												
<b>Ocean Perch</b>	110	20	2	0.5	45	95	290	0	21g	0%	2%	10%	4%												
<b>Orange Roughy</b>	80	5	1	0	20	70	340	0	16g	2%	0%	4%	2%												
<b>Oysters, about 12 medium</b>	100	35	4	1	80	300	220	6	10g	0%	6%	6%	45%												
<b>Pollock</b>	90	10	1	0	80	110	370	0	20g	2%	0%	0%	2%												
<b>Rainbow Trout</b>	140	50	6	2	55	35	370	0	20g	4%	4%	8%	2%												
<b>Rockfish</b>	110	15	2	0	40	70	440	0	21g	4%	0%	2%	2%												
<b>Salmon, Atlantic/Coho/Sockeye/Chinook</b>	200	90	10	2	70	55	430	0	24g	4%	4%	2%	2%												
<b>Salmon, Chum/Pink</b>	130	40	4	1	70	65	420	0	22g	2%	0%	2%	4%												
<b>Scallops, about 6 large or 14 small</b>	140	10	1	0	65	310	430	5	27g	2%	0%	4%	14%												
<b>Shrimp</b>	100	10	1.5	0	170	240	220	0	21g	4%	4%	6%	10%												
<b>Swordfish</b>	120	50	6	1.5	40	100	310	0	16g	2%	2%	0%	6%												
<b>Tilapia</b>	110	20	2.5	1	75	30	360	0	22g	0%	2%	0%	2%												
<b>Tuna</b>	130	15	1.5	0	50	40	480	0	26g	2%	2%	2%	4%												

Seafood provides negligible amounts of trans fat, dietary fiber, and sugars.