

Heart Healthy and Delicious

- Smell it!

Fresh fish should smell sweet: you should feel that you're standing at the ocean's edge. Any fishy or strong flavors means the fish is past its prime; do not buy it. I still have a vivid memory of shopping in a local supermarket, watching an elderly gentleman sniff each portion of raw fish offered to him by the butcher. The gentleman rejected almost every fish because it didn't smell fresh. You can be sure that the fish he chose was moist, delicate, and delicious.

- Look at it!

Whole fish should look as they were just pulled from the water; bright eyes and firm flesh are signs of freshness. Fish fillets or steaks should be firm and bright looking, with no brown spots or discoloration.

- Freeze it!

Fresh fish should be stored in your refrigerator for only a day or two; it's very perishable. Any longer than that, and wrap the fish well in freezer paper and freeze it. Unless you live near a coast with a reliable supply of freshly caught fish, most fish that you buy will be sold frozen. Keep it frozen until you're ready to cook it. Fish can be thawed in the refrigerator, or under cold running water, or in the microwave. Be sure to cook it as soon as it's thawed.

Don wrote and reminded me of a great trick - thaw frozen fish in milk! Place the frozen fish in a bowl and cover with fresh milk, then cover and let sit in refrigerator overnight. The fish will have a wonderful fresh-caught taste. Discard the milk after the fish thaws.

- What about bones?

Many fish, including trout and salmon, have a double rib cage, so the fillets may have small pin bones. You can remove these by pressing the flesh with your fingers, and removing the bones using a tweezer. It's possible to buy fillets of these species without pin bones, but they are generally much more expensive.

Fish Science Everyone knows that fish is good for you. The fats in fish, especially fatty fish like salmon, tuna, and mackerel, are thought to help prevent heart disease, and can even aid in preventing diseases like Alzheimer's and strokes.

: beef is red because a cow's hard used muscles need lots of oxygen and therefore have a lot of myoglobin, the molecule that transports oxygen around the body. Fish have a much easier life. They don't need to fight gravity to stay upright, and can move long distances with just a flick of a tail. Therefore there isn't much myoglobin in fish, so it tends to be light colored and translucent.

When fish cooks, the proteins denature or unwind, then reattach to each other, or coagulate. This process squeezes out water and the molecules shrink, pressing closer together. You can see this process happening as the fish becomes opaque. Light isn't able to pass through the coagulated proteins; fish is cooked when it is opaque.

Because fish have very little connective tissue and fat, they are quite delicate when cooked. A reliable doneness test is to check if the fish 'flakes'. Insert a fork or knife gently into the thickest part of the fish and twist. The flesh should begin to separate along the natural lines.

Don't Overcook!

There's a delicate balance between perfectly cooked fish and overcooked fish. First of all, remember the principle of residual heat: a pan will hold heat when it's removed from the heat source, continuing to cook the food for several minutes. For best results, cook fish until it's almost done, then remove the pan from the oven, microwave, stovetop or grill and let it stand for a few minutes to finish cooking.

Some fish, especially tuna and salmon, can be served medium rare.

Americans eat only about 15 pounds of fish per person per year, but we eat twice as much fish in restaurants as at home. Buying, storing, and cooking fish isn't difficult; it just requires a little knowledge.

To Marinate, or Not?

Marinating fish adds flavor and moisture to the flesh, but any marinating should be very brief. If fish flesh sits in acidic ingredients for more than 30 minutes, the acid will begin to denature the delicate protein, and you'll have a mushy fish when it's cooked. Even richer flesh of salmon and tuna should only be marinated for about an hour.

Marinades include oil (extra virgin olive oil provides the best flavor) and an acidic ingredient like chopped tomatoes, red wine vinegar, or lemon juice, along with seasonings including salt and pepper. Depending on your tastes, seasonings can range from chopped jalapeno peppers and crushed red pepper flakes to fresh thyme leaves and parsley.

Roasted Fish

Baking at a high oven temperature really concentrates the flavors of fish and helps the sugars on the surface caramelize for superior flavor. Roasting is baking at temperatures above 400 degrees F. You can season the fish with just about anything you like before roasting.

Poached Fish

Fish is poached in a flavored liquid called a court bouillon. Just about any aromatic herb or vegetable can be used in the poaching liquid. There's one important rule for poaching: do not let the water boil! The liquid should be barely simmering. If the water boils the outside of the fish will overcook quickly.

Crockpot Fish

Most crockpot recipes call for adding the fish toward the end of cooking time. At high temperatures, 1" pieces of fish will cook in about half an hour. Be sure to carefully follow the recipe instructions when cooking fish in a crockpot or slow cooker.

Baked Fish

Baking is one of the easiest ways to cook fish. Just follow the recipe instructions for cooking, covering, and standing times.

Sauteed Fish

Using just a bit of olive oil and making sure to preheat the pan are the two tips for a perfectly sauteed piece of fish. Also remember to let the fish cook undisturbed for 2-3 minutes to develop a nice crust. Be sure not to crowd the fish; cook it in batches rather than overcrowd the pan. The best way to saute thin fillets is to cook over medium high heat for 2-3 minutes, then turn, cook for another minute or two, then remove the pan from heat and let the residual heat cook the fish. Cook thick fillets 5-6 minutes on the first side, then reduce heat to medium and cook for 4-5 minutes longer.

Fried Fish

Deep fried fish is usually battered, then gently lowered into 375 degree oil and cooked for about 4 minutes per side, turning once carefully.

En Papillote

Cooking fish encased in parchment paper or foil is a wonderful way to get the best results. The paper or foil holds in the moisture, concentrates the flavor, and protects the delicate flesh. Follow the folding and cooking instructions carefully. The packets can be cooked in the oven or on the grill.

There are many common methods used to cook fish; the most popular are described below. There's one important point to make about cooking fish: leave it alone! When you place the fish in the pan or on the grill, let it cook undisturbed for 2-4 minutes before you touch it. The fish will develop a nice crust and will release perfectly when it's ready to turn.

Grilled Fish

The sturdier and fattier fish, including grouper, salmon, tuna, swordfish, and shark, grill beautifully. Make sure that your grill is very clean and oil it lightly before adding the fish. Then leave the fish alone! If the grill is properly preheated and prepared, the fish will develop a nice crust and will release when cooked. For more delicate fish fillets, using a grill basket¹ will make grilling any type of fish much easier. Just be sure to remove the fish from the basket as quickly as possible so it doesn't stick. I like Nigella Lawson's method for cooking thinner fillets on the grill; she simply puts a sheet of heavy duty foil on the grill and cooks the fish on that. Don't cover the grill as the fish is cooking; the cover traps too much of the smoke and overseasons the flesh.

Steamed Fish

A bamboo steamer² is a great investment if you like this method of cooking fish. To steam fish, place water or stock in a large saucepan and add seasoning ingredients; everything from lemons to ginger will work. Bring the liquid to a simmer, place the fish in the steamer(s) and place over the simmering water. Do not let the liquid boil; this will cook the fish too quickly and it could overcook in seconds.

Microwaved Fish

The microwave oven will cook fish very well as long as you follow a few rules. First, make sure that you rotate the fish halfway through the cooking time so the fish cooks evenly. If the fillets are of uneven thickness, fold the thinner parts under each other so the fish is about the same thickness throughout. And standing time is very important; let the dish stand on a flat surface according to the recipe so the food finishes cooking.

Broiled Fish

Broiled fish can be really delicious, especially if you season the fish well before cooking. Be sure to preheat the broiler before adding the fish. Make sure the fish is 4-6" away from the broiler and watch carefully. Thinner fillets (1/2") probably won't have to be turned over; thicker fillets (1") should be carefully turned halfway through cooking.

Fish generally take 10 minutes to cook per inch of thickness. Just to be sure it won't overcook, start checking the fish at 7-8 minutes. Steaming is the one method where this rule doesn't apply; if you steam your fish, check for doneness starting at about 7 minutes.

Grilled Dilled Salmon

You could use just about any other fresh herb in this simple recipe. This treatment would also work well with swordfish steaks or salmon fillets.

Prep Time: 15 minutes

Cook Time: 15 minutes

Total Time: 30 minutes

Ingredients:

- 4 salmon steaks (about 1/2 lb. each)
- 1/4 cup lemon juice
- 2 Tbsp. olive oil
- 3 tablespoons fresh chopped dill, or 2 teaspoons dried dill weed
- 1/2 teaspoon salt
- 1/8 teaspoon white pepper

Preparation:

Place salmon in glass 9x13" baking dish. In small bowl, mix lemon juice, oil, dill, salt, and pepper. Pour over salmon and turn steaks to coat. Cover and chill for 2-4 hours. When ready to cook, heat grill and oil rack.

Place steaks on grill and cook 4-6" from medium coals for 10-20 minutes, turning once, until salmon flakes easily with fork. OR, place steaks on broiler pan and broil, 4-6" from the heat, for 10-15 minutes, turning once, until salmon flakes easily with fork. Serves 4

How to make Paella

Paella is one of the world's most famous rice dishes, and this version is a seafood extravaganza. Although traditionally paella is prepared in a paellera (a wide, shallow pan with looped handles) and cooked over an outdoor fire, it's easy to cook paella to authentic perfection in your own kitchen over the stovetop. The following paella recipe serves 4, and for best results cook in a 14 or 15-inch paellera. A large shallow frying pan makes an acceptable substitute.

Chop the vegetables



Finely chop 1 red onion, dice 1 red and 1 green pepper (capsicum), finely chop 4 cloves of garlic, and finely chop 2 tablespoons of fresh flat-leaf parsley.

Puree the tomatoes

Using a box grater, puree 2 ripe tomatoes (vine-ripened are best), discarding the skin. Alternatively you can use a cup of canned peeled tomatoes mashed with a fork.



Prepare the seafood

Peel and devein 16 large raw shrimp (prawns), cut 2 squid tubes into rings, and scrub and debeard 12 fresh mussels. Cover and refrigerate.



Make the sofrito

Sofrito is a Spanish tomato and onion sauce which is used as a flavor base for a variety of dishes, including paella. To make the sofrito, heat 2 tablespoons of extra virgin olive oil in the paella pan over a medium heat and cook the chopped red onion, 2 tablespoons of parsley and 3 of the chopped garlic cloves for 8 minutes, stirring occasionally.

Add the pureed tomatoes and 2 teaspoons of paprika (preferably Spanish smoked paprika) and cook until all the liquid from the tomatoes has evaporated and the sofrito has the consistency of jam. Transfer the sofrito to a small bowl and wipe clean the paella pan.



Cook the mussels

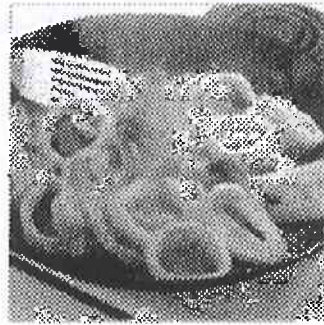


While the sofrito is cooking, place the mussels in a saucepan with half a cup of simmering water. Cover and steam on a low heat for 5 minutes. Remove mussels and set aside, discarding any that haven't opened.

Cook the shrimp and squid

Heat 1 tablespoon of extra virgin olive oil in the paella pan over a medium-high heat. Add the remaining clove of chopped garlic

and the shrimp and cook for 1½ minutes, tossing continuously. Add the squid rings and cook for a further 1½ minutes. Remove the shrimp and squid from the paella pan and lightly season with salt and freshly ground black pepper. Cover and set aside.



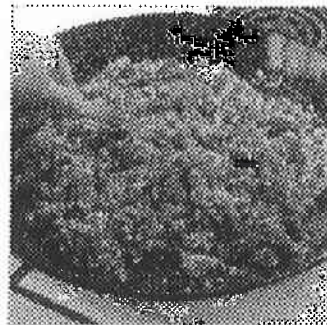
Cook the diced red and green peppers



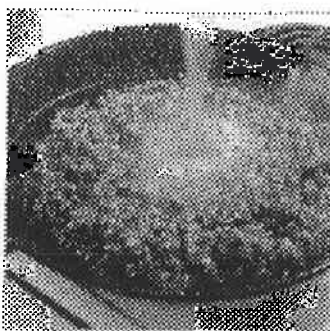
Heat 2 tablespoons of extra virgin olive oil in the paella pan over a medium heat and cook the diced red and green peppers for 6 minutes, stirring occasionally.

Add the rice

Add the sofrito back to the pan along with 1½ cups of Spanish Calasparra or Bomba rice (regular medium-grain rice makes a good substitute) and cook for a minute, stirring to coat the grains.



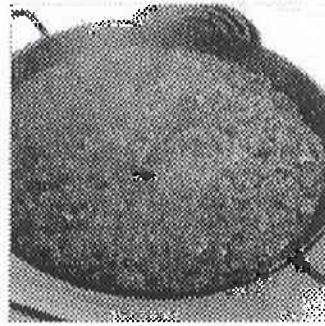
Add hot stock, saffron, salt and pepper and cook without stirring



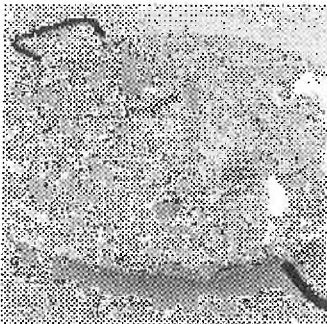
Add 3 cups of heated fish or chicken stock, a pinch of saffron threads, 1½ teaspoons sea salt and ½ teaspoon freshly ground black pepper. Stir to combine, and bring to a rolling simmer. Cook for 10 minutes, uncovered without stirring. (To make sure the rice cooks evenly you will need to regularly move the paella pan around the heat source, or you can straddle the paella pan over two burners.)

Lower the heat and continue cooking

Lower the heat to a gentle simmer and cook for a further 15 minutes without stirring. After 15 minutes, turn the heat up to medium-high for a minute or so until you can smell the rice toasting at the bottom, then remove the paella pan from the heat. (The toasted rice bottom of a paella is called *socorrat* and is highly prized.)



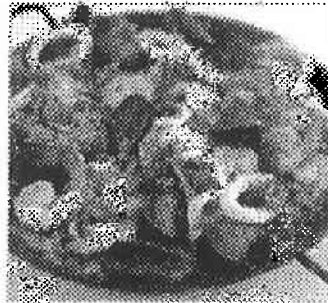
Add seafood and peas and cover



Push the reserved shrimp, mussels and squid into the cooked rice, and scatter with half a cup of defrosted green peas. Cover the pan with foil or a clean cloth, and let the paella rest for 5 minutes.

Serve with lemon wedges

Present the paella in the pan at the table with lemon wedges on the side for drizzling.



Easy Paella For Two

Time 30 minutes | Serves 2

Ingredients

1 t. saffron, crushed and steeped in 3 T. stock
2 cups broth – either chicken broth, or half chicken, half clam juice
chopped peeled tomato (drained from can, amount to taste)
1 t. Spanish or Hungarian paprika
dash turmeric (for color)
salt and pepper
Spanish olive oil
1/2 cup chopped onion
5 minced garlic cloves
8 oz boneless chicken with skin
1 roasted peeled red pepper, cut into slices (or from jar)
1 cup paella rice (Matiz from Whole Foods) or other mediterranean rice
10 mussels (debearded and cleaned)
OPTIONAL INGREDIENTS: you could add shrimp, artichoke hearts, peas, Spanish sliced chorizo, but adjust proportions so that rice is not overwhelmed.

How to make it

Boil together the broth, saffron and the broth it steeped in, tomato, paprika, turmeric, salt and pepper.

Heat oil in the paella pan or cast iron 12 inch frying pan.

Add garlic and onion and cook until soft, then remove.

Brown chicken, adding oil as needed, until about 75% done, then remove.

Scrape bottom of pan, add more oil, add rice, and cook until translucent.

Add boiling broth, cook at medium for 5 minutes.

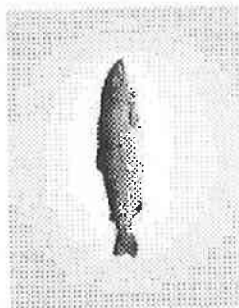
Lower heat, arrange chicken, red pepper, mussels, and any optional ingredients, and cook 15 minutes

Cover, continue cooking on very low, about 5 more minutes.

Note: you may need to move pan around so heat is even; you want the water to be absorbed and the bottom to begin to get crusty.

Let stand about 5 minutes, discard mussels that do not open.

We know that eating fish is good for you. In fact, fish may be the ultimate anti-aging superfood, but eating the wrong kinds of fish too often can raise the level of mercury in your body. This is especially dangerous for pregnant and breastfeeding women because fetuses and newborns are very sensitive to mercury. Find out the best fish to eat and in what amounts.



Note: Stay up-to-date on longevity and anti-aging with my weekly newsletter.

Why Eat Fish?

Fish are a great source of protein. They contain healthy fats that will reduce your cholesterol and improve your health. Fish also contain omega 3 fatty acids that help keep your heart healthy and may even improve your mood. Fish have been shown to be an important diet of many long-lived peoples around the world.

The Problem With Fish

All fish contain trace amounts of mercury. For most people, the small amounts in fish do not pose a health problem. Some fish, however, contain high amounts of mercury -- enough to damage a fetus or newborn. That is why pregnant and nursing mothers must be very careful about the amounts and types of fish they eat. Young children should also avoid eating fish high in mercury. According to the FDA, pregnant women and small children (under 6) should not eat more than 2 servings of fish each week -- and should only eat those fish with low mercury content (see below).

Mercury levels can build in adults too -- eventually becoming harmful to health. High mercury levels can cause permanent damage to the kidneys and brain.

Which Fish Have the Most Mercury?

Big fish have more mercury for the simple reason that big fish usually live longer. They have more time to build up higher levels of mercury in their bodies. The Environmental Protection Agency (EPA) recommends checking local advisories for the mercury content of fish caught in your area.

See the lists below for general mercury levels of many common types of fish and how much of each type to eat (according to the National Resource Defense Council):

LOWEST MERCURY

Eat 2-3 servings a week (pregnant women and small children should not eat more than 12 ounces (2 servings):

- Anchovies
- Catfish
- Clam
- Crab
- Crawfish
- Flounder
- Haddock
- Herring
- Mackerel
- Mullet
- Oyster
- Perch
- Pollock
- Salmon
- Sardine
- Scallop
- Shrimp
- Sole
- Squid
- Tilapia
- Trout
- Whitefish

MODERATE MERCURY

Eat six servings or fewer per month (pregnant women and small children should avoid these):

- Bass
- Carp
- Cod
- Halibut
- Lobster
- Mahi Mahi
- Monkfish
- Perch
- Snapper
- Tuna (Canned Chunk light)

HIGH MERCURY

Eat three servings or less per month (pregnant women and small children should avoid these):

- Bluefish
- Grouper
- Sea Bass
- Tuna (Canned Albacore, Yellowfin)

HIGHEST MERCURY

Avoid eating (everyone):

- Marlin
- Orange Roughy
- Shark
- Swordfish
- Tilefish
- Tuna (Ahi)

There are so many wonderful things about salmon that it's hard to know where to start.

It's a fish which even people who don't like fish (e.g., my husband) can enjoy. It's firm enough to grill, can be cooked in many different ways, and doesn't dry out as easily as many other fish. It comes fresh, frozen, smoked, and canned. Wild salmon can be eaten without fear of excess contaminants or mercury, and it has a very high nutrient profile, including the highly-prized omega-3 fatty acids¹. What's not to like?

Salmon Nutrition

Salmon is a highly nutritious food. Of course, it is high in protein, and the "good fats." But did you know that a 4 oz serving of wild salmon provides a full day's requirement of vitamin D? It is one of the few foods that can make that claim. That same piece of fish contains over half of the necessary B12, niacin, and selenium, and is an excellent source of B6 and magnesium. Canned salmon also contains large amounts of calcium (due to the bones of the fish).

Health Benefits of Salmon

People who eat fish seem to be protected from a host of conditions. Some of this is probably due to the omega-3 fats, but there may be other benefits apart from this. The science isn't clear yet as to all the reasons why eating fish (particularly fatty fish such as salmon) seems to be so darned good for us.

Omega-3 fats seem to primarily work through reducing inflammation in our bodies. Inflammation is turning out to be at the base of many health problems, including heart disease, diabetes, some types of cancers and arthritis. Omega-3's also help prevent the blood clots which cause many strokes.

An exciting, fairly recent development is the realization that omega-3 fats have potential to help slow cognitive problems such as Alzheimer's disease and age-related cognitive decline. Also, people who have sufficient levels of omega-3's (especially as compared to omega-6 fats²) seem to have less depression and suicide risk, as well as less aggression -- in one study, giving prison inmates this type of fat (plus vitamins) reduced aggressive behavior by a third in a mere two weeks.

Farmed vs. Wild Salmon

There is somewhat of a controversy about eating wild vs. farmed salmon. The issues fall into three main categories:

Contamination: Most of the salmon available for human consumption today is farmed, but several independent studies have found concentrations of PCBs and other contaminants at levels of up to 10 times higher in farmed salmon. In Europe, there have even been situations where farmed fish tested at high levels of heavy metals such as lead and cadmium. These contaminants seem to be getting to the fish through the feed, which become concentrated in the oil of the salmon.

Farmed salmon in the U.S. are regulated through the USDA and FDA, which allows much higher levels of these contaminants than are allowed than with wild salmon, which is regulated by the EPA. A common argument about this is that the EPA has reviewed the scientific literature and made new recommendations much more recently than the FDA. FDA regulations have not been updated since 1984, when people in the U.S. were eating much less salmon and other fish. [More information about contaminants in farmed salmon](#)⁵.

Omega-3's: Farmed fish is fattier -- much as farm animals are "fattened up," the same is true of salmon. This means that there are higher levels of omega-3 fats. But there are caveats regarding this:

1. Because of the contaminants, it is often recommended that farmed salmon be cooked in ways that reduce the fat content.
2. New feeds are being developed with less fish meal in them and more plant foods. In general, the more plant-based ingredients, the lower the level of omega-3 fats in the salmon. (Note that in the ocean, salmon are carnivores: they eat no plants at all.)
3. Even today, the **percentage** of omega-3 fats is lower in farmed salmon, apparently because of the soybean, wheat, etc., in the meal fed to them.

Environmental Issues: Farmed fish produce a bunch of environmental problems. [Read about them at the Seafood Watch site](#).⁶

But there's good news. Both wild and farmed salmon have low levels of mercury. Also, salmon is not being over-fished -- especially salmon from Alaska is in good shape. [More about this from Seafood Watch](#)⁷

Additional Note: Most canned salmon is wild.