**Smoking** is a slow form of cooking that can pack in more flavour than probably any other form. It involves soaking the ingredient, whether it be fish, meat or vegetables, in the smoke of an aromatic wood.

An optional method of smoking food is through the cooking of the food in a covered grill. In a sense, all [grilled](https://en.wikibooks.org/wiki/Cookbook:Grilling) or [barbequed](https://en.wikibooks.org/wiki/Cookbook:Barbecuing) food have some aspect of smoking involved, usually through drippings on hot fire causing smoke, or by the fire smoke itself.

## Ingredients and Materials

* Smoker or smoker grill
* wood, charcoal or other fuel for fire
* Smoking woods, leaves or herbs. Each has different attributes and favors. Some complement the meats more than others.
  + Alder — light smoke, good with fish
  + [Bay leaves](https://en.wikibooks.org/wiki/Cookbook:Bay_leaf) - spicy herbal smoke, good for meats, vegetables, and general purpose
  + Apple — somewhat sweet. Good with ham, beef or poultry
  + Cedar Plank — used with fish.
  + Cherry — sweet smoke, good with poultry or fowl. Do not use the bark from cherry for smoking, as it will impart a bitterness.
  + Grape — unique sweet smoke, good with poultry or fowl
  + Hickory — traditional favorite. Sharper flavor
  + Maple — Mild smoke, good with pork, bacon and ham
  + Mesquite — southwest flavor, somewhat sweet. Burns hot and fast when moisture is depleted so replenish frequently.
  + Oak — medium smoke, good with meats
  + Peach — somewhat sweet, good with poultry or fowl
  + Pecan — rich smoke, burns slowly
  + [Seaweed](https://en.wikibooks.org/wiki/Cookbook:Seaweed) — Sharp unique flavor - unique flavor for seafood
  + Wine barrel chips — combination of fruity wine and oak smokes, good with meats and poultry
  + [Herbal](https://en.wikibooks.org/wiki/Cookbook:Herb) smoke — Bay leaves, [Cinnamon](https://en.wikibooks.org/wiki/Cookbook:Cinnamon), [Nutmeg](https://en.wikibooks.org/wiki/Cookbook:Nutmeg), [Peppermint](https://en.wikibooks.org/w/index.php?title=Cookbook:Peppermint&action=edit&redlink=1), [Rosemary](https://en.wikibooks.org/wiki/Cookbook:Rosemary), [Tea](https://en.wikibooks.org/wiki/Cookbook:Tea)
  + Fruit smoke — [Lemon](https://en.wikibooks.org/wiki/Cookbook:Lemon) Peel, [Orange](https://en.wikibooks.org/wiki/Cookbook:Orange) Peel

## Procedure[[edit](https://en.wikibooks.org/w/index.php?title=Cookbook:Smoking&action=edit&section=2)]

### **Building a Smoker**

**Building a smoker** is not a complicated process, but may take a bit of time and effort. An old style barbecue (the round ones you put coals in the bottom of) is easily modified into a "grade A" smoker. Just get the barbecue, find a thick piece of metal tubing (about 10-15 cm diameter) and cut a hole to fit it into the bottom of the barbecue. Another smaller metal drum is now needed; similar to an oil drum. Attach the other end of the pipe to the lid. The pipe needs to be long enough so that the meat doesn't actually cook while being smoked, just picks up flavour. Put a light bulb at the bottom.

A metal mesh goes above the globe and this is where you place your leaves, wood and/or wood chips.

### **Smoking Fish**

Fish is one food that is typically preserved by smoking. Salmon, Trout, Whitefish, various types of suckers, eel, Tuna, Marlin, and other fish are commonly used, with fish containing a high oil content producing the best results due to the fat picking up the smokes flavor, and helping to retain a moist texture. Whole fish, sectioned steaks, and skin on filets produce the best results because of the tendency of many fish to fall apart if the skin is removed.

Dress and then wash the fish under cold running water. Prepare a brine solution using a common easy brine. Combine 1 cup of salt, and one cup of sugar per gallon of water. This makes a saturated solution in which the liquid will not accept any more salt. Old timers used to mix in salt until it would float an egg. Many variations exist, and the salt/sugar ratio can be reduced, however it will influence flavor and preservation qualities. Full salt brines are highly recommended for cold process smoking due to the very real threat of botulism toxin forming under low heat, low salt smoking conditions. Botulism is likely to form in ranges of 40°F (4.4°C) to 140°F (60°C) temperature. Monitor your temperatures using a quality thermometer you trust. Soy sauce, can be substituted for part of the salt, or in addition to it, as can honey, brown sugar, molasses, or other sweeteners for the sugar. Be aware that it will affect the final flavor and results. Many other ingredients can be added such as Worcestershire sauce, chilies, garlic, herbs like dill, and spices of various flavors are used in regional variations.

Place the fish in a large enough glass, or stainless steel container, then pour the brine solution over the fish and cover. Do not use steel, cast iron or aluminum. Plastic can be used, but it will tend to pick up the odor of the fish, and some ingredients will stain it, rendering it unusable for other purposes. Place the container in the refrigerator and depending upon size and thickness of the cut of fish brine for 2-3 hours for small fish, such a Smelt, or leave large whole fish like Salmon, or Lake Trout overnight. Be aware that the longer the fish is in the brine the stronger the salt and seasoning flavor will become. Experience will guide you.

Remove fish from the brine and rinse under running water briefly. You can skip the rinse, but the finished product will be affected in appearance and have a stronger flavor. Pat dry the fish with paper towel, or a clean lint free cloth. Place the fish on racks also made of stainless steel, or chrome plated steel. Never use galvanized metal in contact with salt brined fish, fowl, or meats. Allow the fish to dry until the pellicles form. This is a thin, shiny membrane that is dry to the touch. It will take about an hour or so to develop depending upon the humidity in the air. This drying step produces a superior product with steaks and filets. The pellicles formation is less apparent in whole fish, but does enhance the finished product. Place the fish in the smoker, and using the wood of your choice, smoke from 1 to several hours depending again on the thickness of filets or steaks, or size of the fish, and how hot the smoke is. Again experience will guide you. If after sampling the fish the product is not sufficiently smoked return it to the smoker.

90 degrees Fahrenheit/32 degrees Celsius constitutes a cold smoke, and results in a superb final product with a long shelf life. Dry cured hams are cold smoked and require no refrigeration. Cold smoking also takes longer than a hot smoke, and closer monitoring. Higher heat is a combination of grilling and smoking, and the finished product will be cooked as well as smoked. Insure that the fish is far enough away from the heat source to avoid burning. Indirect heat is best, and a water filled pan can be placed between the heat source and food being smoked to add moistness and catch fat that may cause flare ups if allowed to drip directly on the coals. This method works with pork, fowl, and also for making beef jerky. Meats and fowl can be basted with a sauce near the end of the cooking cycle. My preference is to use a hotter smoke for meats and fowl, and a cooler smoke for fish.

### **Heat Sources**

Gas, either natural or propane, charcoal, wood burned down to an ember fire, a hot plate with a cast iron pan, or a cast iron smoke box placed on any of these heat sources will generate the required heat and smoke. The advantage of an electric hot plate is the ease of regulating the heat source, and a higher degree of control. Soak the chunks, or chips of wood, in water to prevent them from igniting. This step will cause them to smolder and produce smoke for a longer period of time. Place the wood in either direct contact with the coals, or in a metal pan always when using gas, or electric heat sources. A pan, or smoke box can be used with direct charcoal fires also. If using Cherry wood for smoking remove all the bark. It will adversely affect the flavor of the product. A remote heat source piped into the smoker itself is necessary for cold smoking. Utilize draft control and convection to funnel the smoke into the smoker by placing the smoke generator in a position below the smoker. Clothes dryer vent pipe and elbows, or furnace duct with dampers, works well for directing and controlling the smoke.

### **Cooking by Smoking**

To cook, just pick the leaves and wood chips from an aromatic tree ([Bay leaves](https://en.wikipedia.org/wiki/Bay_Tree) are good) and put it on the metal mesh. Put the meat in the smoker like you would if you were barbequing it. Turn on the light and wait 6 hours. After this you can refrigerate it and cook it on a grill later.

Smoking food is time-consuming, and can be expensive and a bit tricky, but the results can be superb.

## Variations

### **Cooking foods by smoking**

In this method, the foods are cooked slowly with a smokey fire. This usually involves an indirect cooking method, where the food is covered with the smoke and heat, but not directly over hot coals. The smoke is provided through water soaked wood chips or aromatic leaves placed on the fire or coals. It is a slower cooking method taking an hour or longer, depending on the food being smoked.

## Warning

**Warning: If you can't cure it, do not cold smoke it.** While cold smoking food is quite a simple process, there are issues of safety. All smoked products ***must be*** [cured](https://en.wikipedia.org/wiki/Curing_(food_preservation)). The reason for this is the threat of botulism. The bacterium responsible, *Clostridium botulinum*, is ubiquitous in the environment, grows in the anaerobic conditions created in the smoker, and thrives in the 40°F (4.4°C) to 140°F (60°C) temperature range. For this reason, anything you cold smoke should be cured.