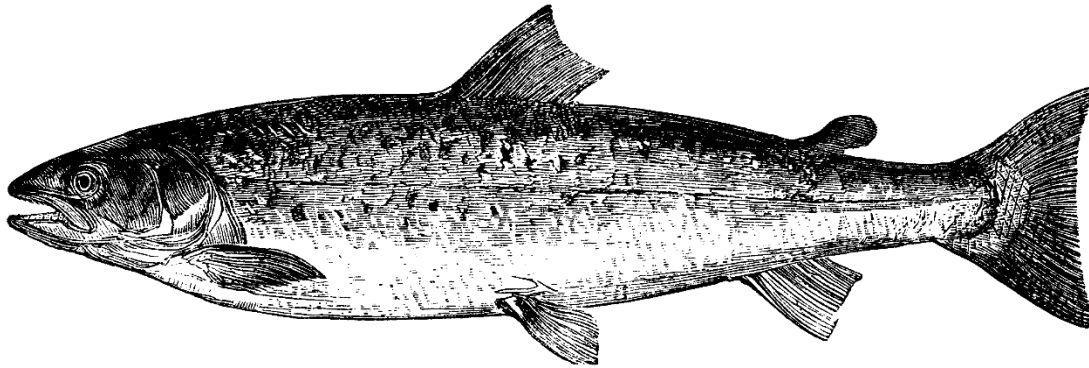


Make & Take Workshop: GRAVLAX (CURED SALMON)

Saturday, November 9, 2019
9:00 a.m. – 12:00 noon



Gravlax is a tasty delicacy that's really easy to make at home, and only takes a few days from start to finish. In this hands-on workshop, we'll cover the process step by step, including selecting fish for quality and safety, making the salt cure and adding flavorings, and knowing when the salmon is done.

You'll go home with a prepared piece of salmon ready to cure in your own refrigerator, along with plenty of ideas on how to serve and enjoy your cured salmon.

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Basic Food Safety & Sanitation

When preparing food for preservation, cleanliness is essential in preventing food-borne illness, especially when handling raw fish, meat and other foods that won't be cooked (including fruits and vegetables). Gravlax is not a cooked product, so safe handling is very important.

Step 1: Clean Your Work Area

Wash your sink and countertops with soap and warm water, rinse well, and dry with clean paper towels. Then apply a sanitizing solution such as bleach (1 scant teaspoon of liquid unscented bleach to 1 quart of water). Spray well and allow to air dry, or let sit for 30 seconds and wipe dry with clean paper towels. If using commercial sanitizers, follow the manufacturer's instructions. Wash and sanitize both before and after preparing food.

Step 2: Wash Your Hands

Wet your hands, apply soap, lather and then scrub for at least 20 seconds. Rinse well and dry with paper towels or a clean cloth. If using gloves, first wash your hands and then wash the gloves following these same procedures. Wash your hands again when switching tasks.



Step 3: Avoid Cross-Contamination

Be sure to use clean cutting boards and kitchen utensils, and wash them thoroughly before switching from one food type to another, or use separate boards and utensils for different types of foods (e.g., use one board for raw fish or meat and another board for vegetables, herbs, etc.). Wipe up spills promptly, and re-clean your work area as often as necessary.



Basic Food Safety & Sanitation – cont.**QUICK TIPS**

- use paper towels or a fresh clean dish towel to clean surfaces
- wipe up spills immediately with paper towels or a clean dish towel (and then put that towel straight into the laundry basket)
- change dish cloths and towels **every day**
- sanitize sponges between uses by using one of these 3 methods:
 - moisten the sponge and heat in a microwave for one minute
 - wash in a dishwasher with a drying cycle
 - soak in a bleach solution for one minute
- replace sponges frequently

Step 4: Prepare Your Food

Do not wash raw seafood, meat and poultry – doing so can spread pathogens and potentially cross-contaminate other foods. Wash **all** fresh produce, even if the skin or rinds won't be eaten. To wash produce, rinse under cool running water in a clean sink – do not soak.

QUICK TIPS

- clean produce right before using
- gently rub soft fruits and vegetables (such as tomatoes) with your hands under running water to remove dirt
- scrub firm fruits and vegetables (such as potatoes, carrots, and melons) with a vegetable brush (don't forget to clean the brush!)
- remove outer leaves of lettuce and cabbage before washing
- rinse herbs and sprouts, then shake to remove excess water
- use a kitchen sink sprayer to rinse berries in a colander, gently turning and shaking the colander to remove dirt and excess water

For more information on cleaning and sanitizing the kitchen using inexpensive and food-safe household products, check out this publication:

<https://extension.colostate.edu/docs/pubs/foodnut/kitchen-sanitize.pdf>

For general information on food safety, here are some good websites to visit:

www.foodsafety.gov

www.fightbac.org

<https://www.cdc.gov/foodsafety/cdc-and-food-safety.html>

Gravlax By Any Other Name is ... Something Else

First things first. What is gravlax, anyway? Originating in Scandinavia, gravlax is salmon that has been cured in salt, sugar and dill. The name means “buried salmon” (the word “gravlax” comes from *gräva* (grave) and *lax* (salmon)) which derives from the original curing process in which the salmon was buried in sand.

Ah, so it's lox, you mean? Well, no, but they're very similar. Lox is made specifically from salmon belly and is not smoked. You may be familiar with smoked salmon, which is similar to both gravlax and lox, but it can be made from any part of the fish and is either cold-smoked or hot-smoked. There are many other variations, too, such as Nova, which is cured and cold-smoked salmon from Nova Scotia; Irish and Norwegian and Western Nova; “pastrami-rubbed” and other spiced cured salmon; kippered salmon (wet-brined and hot-smoked salmon); etc.

Fresh vs. Frozen Salmon

Many fish, including salmon, can carry various types of parasites. These are generally not an issue with fish that is properly cooked, but in the case of cured salmon and other raw fish products (such as sushi), parasites can sometimes cause serious illness. To avoid the risk of infection, salmon should be frozen (and then thoroughly thawed in the refrigerator) before being cured. Salts (such as used in curing) or acids (such as in the case of pickling fish) are not sufficient for killing parasites.

The guidelines for freezing fish in order to kill parasites are:

- freeze at -4°F or below for seven (7) continuous days; -or-
- freeze at -31°F or below until solid and then store at -31°F or below for 15 hours.

Most home freezers cannot reach and/or maintain these very low temperatures, thus we **recommend the use of commercially frozen salmon only**. This applies to both wild caught and to aquacultured (farmed) fish. Commercial processors have access to special equipment which can flash-freeze salmon and keep it super cold, which not only maintains quality but ensures safety. Be sure to thoroughly thaw fish in the fridge before curing, as the curing agents cannot penetrate frozen flesh.

Ingredients

Salmon: When making gravlax, salmon is the star of the show – so be sure to get the very best quality you can. Really inexpensive salmon is that way for a reason: don't even bother with it if you intend to cure it. We prefer the taste and texture of wild-caught salmon for making gravlax, but you can use whatever type of salmon works for you. Just make sure that the fish has been previously commercially frozen (see above) and completely thawed. Choose a piece no bigger than about 2 ½ lbs. You will also need to choose a filet cut – not a steak cut – with the skin still on. Filets from the tail end of the fish are thinner and will cure faster; filets from the head end are thicker and will take longer to cure. Either will work fine, but keep the overall thickness to no more than about 1 ½ inches (thicker than this will take too long to cure properly), and avoid the very end of the tail (the fish will reduce considerably in size so you don't want to start too thin).

Salt: When curing, use *pure* coarse kosher or coarse-grind sea salt. Avoid table salt or any other salt which contains iodine and/or other additives (such as anti-caking agents), as these chemicals can interfere with curing. Note that some brands of kosher salt contain anti-caking agents, so be sure to check the label. If you like a smoky taste, try adding to the coarse salt a bit of smoked salt. A little goes a long way, so start with a little bit and go from there.

Sugar: Some recipes call for white granulated sugar; others call for brown sugar (or a mixture of both). Brown sugar provides additional flavor and contributes to the color of the cured fish. Sugar is interchangeable when making gravlax; use whichever you prefer.

Dill: A hardy annual herb, dill is related to fennel and parsley. Native to southern Europe and Russia, it is very common in Scandinavian cookery and is traditionally used in making gravlax. Its bright green leaves (sometimes referred to as dill weed, especially when dried, to distinguish the leaves from dill seeds) resemble fennel fronds and are aromatic, with a flavor described as warm, similar to a combination of fennel, anise and celery, with slightly bitter undertones. Dried dill seeds have a more bitter taste than the fresh leaves, and have an aroma and flavor similar to caraway.

Citrus: Lemon and orange are typical citrus fruits used in curing salmon. Any citrus can be used, but it's best to use freshly grated rind, as the acids in juice can affect the texture of the fish. Scrub your citrus well, remove wax if necessary, then grate with a microplane or zester.

Spirits: While alcohol is not traditional, many modern recipes call for it. It adds flavor and *may* help to preserve the fish a bit longer. Typical spirits include vodka, gin (which is flavored with juniper berries and other botanicals that provide a distinctive "pine" flavor), aquavit (a Scandinavian distilled spirit flavored with caraway) or Pernod (an anise-flavored liqueur). Alcohol is not necessary for the curing process, so feel free to omit it if you choose.

Ingredients – cont.

Spices: Just like in cooking, freshness counts. Check to see that your spices are not stale. When crushing or grinding whole spices, it's best to do so just before using.

Some cured salmon recipes call for toasting (also known as “dry frying”) whole spices. This method deepens aromas and adds complexity to the flavor. Spices that are often toasted include peppercorns, coriander seeds, and fennel seeds. To toast your spice, place just the amount you need in a small skillet over medium heat. Shake the pan gently until the spice just begins to give off a toasty or nutty smell. It doesn't take long -- watch carefully to make sure the spice doesn't burn (if it smokes, you've gone too far). Once toasted, transfer the spice immediately to a plate or mortar to cool. As some spices can take a bit longer than others, toast each spice individually.

There are no spice rules when it comes to making gravlax: Add or substitute as you please.

Common whole spices used in curing salmon include the following.

Pepper: Some recipes call for black peppercorns (which include the outer hull), while others specify white (which has had the outer hull removed). What's the difference in flavor? Well, that depends on who you ask. Taste can be subjective, and there seems to be differing opinions on the flavor profiles of black vs. white pepper. However, the general consensus appears to be that black pepper is more intense in flavor and aroma and has a spicy heat; while white pepper is milder in flavor (sometimes described as spicy without the bite), more earthy, “a little bit winy,” and having a slightly fermented taste. Feel free to swap pepper when making cured salmon.

Coriander: The dried fruit of an annual herb (the leaves of the same plant are known as Cilantro), coriander seeds have a mild citrus flavor with a bit of sweetness. Toasting brings out robust floral aromas.

Caraway: Familiar to many who eat rye bread or sauerkraut, caraway seeds have a mild anise (licorice) flavor with hints of citrus and pepper. They are similar in flavor to aniseed, which can be substituted for caraway. Toasting caraway will enhance the fennel or anise taste.

Fennel: This spice is warm and sweet with a subtle licorice flavor. It is also similar to, but less pungent than, aniseed.

The Basic Procedure for Making Gravlax

Procure and Prepare the Salmon: Choose fish that is firm and brightly colored. It should smell clean and appealing like the ocean but should not have an overt “fishy” odor. The salmon should have been previously commercially frozen (see above). Thaw thoroughly before curing, and pat dry with paper towels. Check for pin bones by running your fingers along the surface of the fish. Remove bones with kitchen tweezers or a fish bone puller.

Salt/Sugar Ratios: Use at least 2 Tbsp of salt per pound of salmon. There are no rules for the ratio of salt to sugar when making gravlax: use a 50/50 ratio for a basic cure; more salt if you prefer tastes on the savory side; or more sugar if you like things sweeter. More salt will result in a firmer cure, while more sugar will result in a moister cure. It’s just a matter of personal taste; experiment with different ratios to see which you prefer. Just be sure to use a minimum of 2 Tbsp of salt per pound of fish.

Make the Dry Rub: Mix your salt and sugar in a small bowl and add any other flavorings you wish. Lay the fish on a piece of plastic wrap and apply the rub to all sides of the salmon.

Wrap and Weight: The cure works through the process of osmosis. The salt and sugar draw out moisture from the fish, which gives the gravlax its characteristic texture. As moisture is drawn from the fish a liquid brine forms, so it’s important to wrap the salmon well. Wrap the salmon very tightly in a piece of plastic wrap to keep the dry ingredients against the flesh, then wrap in a second piece of plastic wrap. Place the package in a dish and top with a weight(s), such as heavy cans or a (very clean) brick. Salmon must be cured in the fridge.

Flip the Fish: Turn the fish over every day to help distribute the brine to all parts of the salmon. Replace the weights and return the gravlax to the fridge.

Doneness: Gravlax takes 1 to 3 days to cure. The length of time depends on the thickness of the fish and your preference for taste and firmness. The thinner the fish, the faster the cure: A thin tail piece may need only 1 day to cure. Thicker fish will need 2-3 days to cure. A longer cure time will result in a firmer texture and more intense flavors. When cured, the salmon will turn a vibrant and slightly darker color. It will get more dense and should feel firm to the touch at the thickest part of the fish. It shouldn’t feel raw or “squishy”.

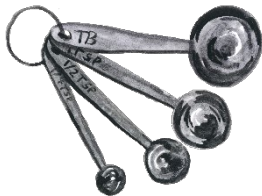
Remove Seasonings and Slice: When the gravlax is cured, scrape or brush off any seasonings and then pat the fish dry with paper towels. Place the salmon skin side down on a cutting board, and using a very sharp, thin knife (such as a filet or boning knife, or a serrated knife) cut thin slices at an angle from tail end to head end, detaching the skin from each slice.

Shelf Life: Curing salmon preserves the fish for only a short time. For best results, plan to use your gravlax, once cured, within a few days. Keep it in the refrigerator, tightly covered in plastic wrap, for up to 5 to 7 days. If it smells off, it probably is. *When in doubt, throw it out.* Cured salmon can be frozen, but freezing will negatively impact the texture.

RECIPES

The following recipes are based on a 1-lb piece of salmon. Remember, you'll need a minimum of 2 tablespoons of salt for each pound of salmon. If your fish weighs more than one pound, you'll need to prorate the quantity of salt (and other ingredients too, of course).

Here are some measurements for adding prorated amounts of salt for fish weighing over 1 lb.



1 Tbsp = 3 tsp

Start with 2 Tbsp of salt for your first pound of fish. For proportional amounts of fish over the first pound, add:

Salmon	Salt
$\frac{1}{4}$ lb	1 $\frac{1}{2}$ tsp
$\frac{1}{2}$ lb	1 Tbsp
$\frac{3}{4}$ lb	4 $\frac{1}{2}$ tsp

For example, if your salmon weighs 1 $\frac{1}{2}$ lbs, you'll need 3 Tbsp of salt.

Basic Gravlax #1

Gravlax at its most basic: Cured simply salt and sugar, for those who want just the fresh clean taste of fish, or who don't like dill or pepper. With its 50:50 salt-to-sugar ratio, it's a great springboard for experimenting with brine ratios (but always use at least 2 Tbsp of salt).

- 1 lb. skin-on salmon filet, previously commercially frozen and thawed
- 2 Tbsp additive-free coarse kosher salt
- 2 Tbsp sugar

1. Mix salt and sugar together in a small bowl.
2. Pat salmon dry with paper towels. Remove any pin bones. Place the salmon on a large piece of plastic wrap.
3. Apply salt/sugar mix to all sides of the salmon.
4. Tightly enclose the salmon with the plastic wrap. Place the bundle on another piece of plastic wrap and wrap tightly. Put the double-wrapped package in a dish or shallow pan, skin-side down. Place another plate or bowl on the fish, then top with a weight(s). Cure the salmon in the refrigerator.
5. After 12-24 hours, turn the salmon over, replace the weight(s), and return to the fridge. Continue to flip the salmon over at least every 24 hours, replacing the weights and putting the fish back into the refrigerator, until it is cured (1-3 days).
6. Unwrap the salmon, brush off the spices, and pat dry with paper towels. Slice and serve.

Basic Gravlax #2

This version is similar to Basic Gravlax #1, but has a higher salt-to-sugar ratio and includes the traditional dill along with some typical gravlax spices. Feel free to change the salt/sugar ratio (using a minimum of 2 Tbsp of salt per pound of salmon) or the amounts or types of spices.

- 1 lb. skin-on salmon filet, previously commercially frozen and thawed
 - 2 Tbsp additive-free coarse kosher salt
 - 1 Tbsp sugar
 - ½ tsp white peppercorns, freshly ground
 - 1 tsp coriander seeds
 - 1 tsp caraway seeds
 - 1 large bunch of fresh dill, or to taste
1. Toast the coriander and caraway seeds until fragrant (about 1 minute or so) and then immediately transfer them to a small bowl. Once cool, grind in a spice grinder or mortar and pestle.
 2. Combine the ground spices with the salt and sugar in a small bowl.
 3. Pat salmon dry with paper towels. Remove any pin bones. Place the salmon on a large piece of plastic wrap lined with half of the dill.
 4. Rub the salt mixture all over the salmon, applying equally to top and bottom. Place the remaining dill on top, then wrap the salmon up tightly. Place the bundle on another piece of plastic wrap and close up tightly. Put the double-wrapped package in a dish or shallow pan, skin-side down. Place another plate or bowl on the fish, then top with a weight(s). Cure the salmon in the refrigerator.
 5. After 12-24 hours, turn the salmon over, replace the weight(s), and return to the fridge. Continue to flip the salmon over at least every 24 hours, replacing the weights and putting the fish back into the refrigerator, until it is cured (1-3 days).
 6. Unwrap the salmon, brush off the spices, and pat dry with paper towels. Slice and serve.

"Pastrami-Style" Variation: Omit the dill and caraway and use 1 Tbsp black peppercorns and 1 Tbsp coriander seeds, each coarsely ground.

Vodka-Dill-Citrus Gravlax

Bright, fresh flavor – a great addition to a brunch or dinner get-together.

Recipe adapted from: NoSpoonNecessary.com

1 lb. skin-on salmon filet, previously commercially frozen and thawed
4 Tbsp coarse-grind or freshly cracked pink Himalayan sea salt
3 Tbsp granulated sugar
½ tsp peppercorns, freshly cracked
½ cup fresh dill, chopped
Zest of 1 lemon
Zest of 1 orange
2 Tbsp vodka, gin or aquavit

1. Combine all of the dry ingredients (from the salt through the zests) in a small mixing bowl.
2. Pat salmon dry with paper towels. Remove any pin bones. Place the salmon on a large piece of plastic wrap, skin side down.
3. Drizzle the vodka over the fish. Apply the dry rub evenly all over the salmon, applying equally to top and bottom. Enclose the salmon tightly with the plastic wrap. Place the bundle on another piece of plastic wrap and close up tightly. Put the double-wrapped package in a dish or shallow pan, skin-side down. Place another plate or bowl on the fish, then top with a weight(s). Cure the salmon in the refrigerator.
4. After 12-24 hours, turn the salmon over, replace the weight(s), and return to the fridge. Continue to flip the salmon over at least every 24 hours, replacing the weights and putting the fish back into the refrigerator, until it is cured (1-3 days). This recipe is best with a longer cure (2-3 days) in order to allow the flavors to develop.
5. Unwrap the salmon, brush off the spices, and pat dry with paper towels. If desired, place the salmon on a rack and refrigerate, uncovered, for an hour to air dry. Slice and serve.

Smoked Gravlax

Gravlax is traditionally not smoked, but there's no reason you can't do so. Imparting a smoky flavor can be as simple as adding some smoked sea salt in addition to the regular coarse salt. But if you have a smoker, here's how to smoke your cured salmon.

Smoking instructions adapted from The All New Ball Book of Canning and Preserving

1. Unwrap the cured salmon and place skin-side down on a rack set over a baking sheet or baking pan.
2. Chill uncovered in the refrigerator for 12 hours or until a pellicle forms. A pellicle is a shiny, shellac-like coating which is necessary to attract the smoke and to prevent the fish from drying out. If a pellicle does not form within 12 hours, continue chilling for another 12 hours or until the pellicle does form.
3. Smoke the salmon in a smoker following the manufacturer's instructions, until a meat thermometer inserted in the center registers 130°F. Cool completely. Wrap the salmon well, and refrigerate for up to 3 weeks.

Honey Mustard-Dill Sauce

A subtly sweet sauce with a fresh – but not overpowering – hit of dill.

Recipe adapted from: Epicurious.com

2 Tbsp honey mustard
1 Tbsp distilled white vinegar
3 Tbsp vegetable or canola oil
2 Tbsp chopped fresh dill
¼ tsp salt
Pepper to taste

1. Whisk all of the ingredients together in a small mixing bowl until completely well blended. Sauce can be made up to 3 days ahead, covered and stored in the refrigerator.

Sweet Mustard-Dill Sauce

A sweeter sauce with a more robust flavor of dill.

Recipe adapted from: formerchef.com

6 Tbsp Dijon mustard
2 Tbsp white sugar
1 ½ Tbsp white wine vinegar
¼ cup olive oil
1 Tbsp very finely chopped fresh dill
½ tsp salt
Pepper to taste

1. Whisk all of the ingredients together in a small mixing bowl until completely well blended. Sauce can be made up to 3 days ahead, covered and stored in the refrigerator.

Serving Ideas

Top a bagel and cream cheese (don't forget the capers, tomatoes and thinly sliced red onion!) ♦ Serve with small slices of buttered dark brown bread (such as pumpernickel or rye) and dill-mustard sauce ♦ No brown bread? Crackers are great too ♦ Cut steamed baby or tiny fingerling potatoes in half and top with a small piece of cured salmon and a dollop of crème fraîche ♦ Keep it simple with a squeeze of lemon juice or arrange on a platter with lemon slices ♦ Some like horseradish and crème fraîche with their gravlax ♦ Finely dice the salmon and serve tartare style ♦ Try it as an accompaniment to a beet salad ♦ Add to a quiche ♦ Marinate cured salmon and potatoes in mason jars along with herbs, carrots, onions and plenty of olive oil for a really delicious French bistro-style meal (find the recipe online here at <http://ruhlman.com/2011/07/salmon-and-potatoes-in-a-jar/>) ♦ And while you have that link open, scroll to the bottom of the page for a recipe for roasted cured salmon ♦

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