

# Amazing Food



MADE EASY

## Cooking By Thickness Rulers

Presented by [AmazingFoodMadeEasy.com](http://AmazingFoodMadeEasy.com)

These rulers will let you know how long it takes to heat up, cool down, or pasteurize various pieces of meat. The times are to be used as a guide and are not exact because different pieces of meat heat differently, even if they are the same cut, which can affect the amount of time it takes to heat or pasteurize them. I've tried to list times at the upper edge of the range so that following them will always result in success, though they might actually be heated or pasteurized before the time listed.

Many doctors suggest that people with weak immune systems, such as elderly, pregnant or sick people should not eat un-pasteurized food.

The Heating and Cooling Times specify how long it takes a piece of meat, with a particular shape, to heat all the way to the center. The center of the meat will come up to about 1° less than the water bath temperature in the time given. The final degree takes a much longer time and generally does not contribute to the final taste or texture of the food.

The temperature of the water bath does not affect the heating time, but remember that you should not cook food at less than 130°F for more than 4 hours. If you want to cook a piece of food at a lower temperature, you can cut it into smaller portions so it heats more quickly. The times shown are also minimum times and food can be, and sometimes needs to be, left in for longer periods in order to fully tenderize the meat.

The "Heating Beef, Lamb, Pork" section shows times both for frozen and refrigerated foods. These times generally do not vary much as the water bath temperature changes. These times usually apply to all types of meats except fish, though chicken and poultry is almost always cooked to pasteurization and has been left off for clarity. If you have some other type of meat (moose, bear, rabbit, etc.) you can use these heating charts as long as you remember it is not pasteurizing the meat.

If you are cooking food and then storing it in the refrigerator or freezer, the "Cooling Most Meat" section gives the times that food needs to be in an ice bath before the center is chilled out of the danger zone. Make sure the ice bath is at least one half ice.

The "Fatty Fish" column gives the heating times for fatty fish. Remember that these times will not pasteurize the fish.

The Pasteurization Times let you know how long you need to cook something for it to be effectively pasteurized and safe to eat. Like the Heating and Cooling times, they are not exact, but are also on the longer side for safety reasons.

### A Few Notes on the Times

These times were extrapolated from the descriptions in Baldwin's Practical Guide to Sous Vide as well as Nathan's tables on eGullet and a few other sources. Credit goes to them for researching and determining how food heats in a water bath.

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## How to Use This Ruler

To use, first print out this page. I prefer printing it onto thick card stock so it's more rigid but any paper will work.

After you print it, double check that the lines on the ruler are accurate, some PDF viewers try to scale the image, which can result in the lines being off once it is printing. This can be usually be corrected in your print preview box.

Once printed to the proper size, cut out the cards by following the dotted lines. Try to make the bottom as level as possible to ensure accurate measurements. I like to align a hard edge or ruler along the line and draw a knife along it, just make sure you do it on a cutting board!

Once it is cut out, simply hold the card up to the thickest point of the food you are preparing to cook and follow the time listed in the column you want.

For example, if you want to heat a piece of beef tenderloin you would hold the "Heating and Cooling Times" card up to the beef. If it is 2 inches thick you would then cook it for three hours and thirty minutes if it was in the refrigerator or five hours and thirty minutes if it was frozen.

Remember, these are the minimum times needed, you can cook it for an hour or two longer if you aren't in a hurry.

Also, cooking based on thickness tells you the minimum time you can cook a piece of meat to ensure it is safe and comes up to temperature in the middle. It doesn't take into account tenderizing time or any other factors and the times on these rulers will not tenderize the meat in any way. So even though tough cuts would be safe to eat at the times listed, they would need to be cooked much longer for them to be tender enough to enjoy.

## Amazing Food Heating and Cooling Times

Starting Temp: Shape of Meat:	Heating Beef, Lamb, Pork				Cooling Most Meat		Fatty Fish
	Fridge Slab	Fridge Cylinder	Freezer Slab	Freezer Cylinder	Hot Cylinder	Hot Slab	Fridge Slab
— 2.75"	--	3:30	--	5:00	2:45	5:30	3:45
— 2.5"	4:50	2:30	--	4:00	2:00	4:15	2:50
— 2.25"							
— 2"	3:30	2:00	5:30	3:00	1:30	3:15	2:00
— 1.75"							
— 1.5"	2:30	1:15	3:30	2:00	1:00	2:15	1:25
— 1.25"	1:40	0:50	2:15	1:15	0:40	1:30	0:50
— 1"							
— 0.75"	0:50	0:30	1:15	0:45	0:20	0:50	0:23
— 0.5"	0:20	0:10	0:30	0:20	0:10	0:25	0:06

For more times, see [AFMEasy.com/SVThick](http://AFMEasy.com/SVThick)

## Amazing Food Pasteurization Times

Water Bath Temperature:	Beef, Lamb, Pork			Chicken and Poultry Breast			
	131°F	134.5°F	140°F	136.5°F	140°F	145.5°F	149°C
— 2.75"	6:30	5:15	4:00	6:00	5:00	4:15	3:45
— 2.5"							
— 2.25"	5:15	4:15	3:15	5:00	4:15	3:15	3:00
— 2"	4:30	3:15	2:30	4:15	3:15	2:30	2:15
— 1.75"							
— 1.5"	3:30	2:30	2:00	3:15	2:35	2:00	1:45
— 1.25"	3:00	2:00	1:35	2:45	2:00	1:30	1:15
— 1"							
— 0.75"	2:30	1:45	1:10	2:00	1:25	0:50	0:40
— 0.5"	2:00	1:15	0:40	1:45	1:00	0:30	0:20

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Cut Here ↑