

Doneness Target Temperatures

FOOD	DONENESS	TEMPERATURE	
		°F	°C
BEEF, VEAL, LAMB, GAME	Rare	120	49
	Medium Rare	134	56.5
	Medium	140	60
	Medium Well	150	65.5
	Well Done	160 and over	71 and over
PORK	Medium Rare	134	56.5
	Medium	140	60
	Well Done	160 and over	71 and over
POULTRY, White Meat DUCK, White Meat POULTRY, Dark Meat	Medium	140-146	60-63
	Medium Rare	134	56.5
	Well Done	176	80
FISH, SEAFOOD	Rare	116	47
	Medium Rare	126	52
	Medium	140	60
VEGETABLES, FRUITS	—	183-190	84-87
EGGS	soft cooked	147 or 167	64 or 75
	hard cooked	160	71
	scrambled	167	75
	pasteurized	135	57

⚠ CAUTION

Raw or unpasteurized food must never be consumed by immune compromised or highly susceptible individuals. The United States Food Code recommends that, for safety, food should not be kept between 41°F (5°C) and 130°F (54.5°C) for longer than four hours.

Recommended Cooking Temperatures and Times

FOOD	THICKNESS ¹		TEMPERATURE		TIME	
	inch	cm	°F	°C	min	max
BEEF, VEAL, LAMB, GAME						
Tender Cuts Tenderloin, Rib-eye, T-bone, Chops, Cutlets	1	2.5	134 or higher	56.5 or higher	1 hr	4 hrs
	2	5	134 or higher	56.5 or higher	3 hrs	6 hours
Tough Cuts and Grassfed ² Bison, Game Lamb Roast or Leg Spare Ribs Flank Steak, Brisket	1	2.5	134 or higher	56.5 or higher	8-10 hrs	12-24 hrs
	2.75	7	134 or higher	56.5 or higher	10 hrs	24-48 hrs
	2	5	134 or higher	56.5 or higher	24 hrs	48-72 hrs
	1	2.5	134 or higher	56.5 or higher	8 hrs	24 hrs
	2	5	134 or higher	56.5 or higher	12 hrs	30 hrs
PORK						
Tenderloin	1.5	4	134 or higher	56.5 or higher	90 min	6-8 hrs
Baby Back Ribs			165	74	4-8 hrs	24 hrs
Chops, Cutlets	1	2.5	134 or higher	56.5 or higher	2-4 hrs	6-8 hrs
	2	5	134 or higher	56.5 or higher	4-6 hrs	8-10 hrs
Roast	2.75	7	160-176	71-80	12 hrs	30 hrs
Spare Ribs	2.75	7	160-176	71-80	12 hrs	30 hrs
Belly (quick)	2	5	185	85	5 hrs	8 hrs
Belly (slow)	2	5	167	75	24 hrs	48-72 hrs
POULTRY						
White Meat Chicken Breast, bone in Chicken Breast, boneless Turkey Breast, bone in Turkey Breast, boneless Duck Breast	2	5	146 or higher	63.5 or higher	2.5 hrs	4-6 hrs
	1	2.5	146 or higher	63.5 or higher	1 hr	2-4 hrs
	2.75	7	146 or higher	63.5 or higher	4 hrs	6-8 hrs
	2	5	146 or higher	63.5 or higher	2.5 hrs	4-6 hrs
	1	2.5	134 or higher	63.5 or higher	90 min	4-6 hrs
Dark Meat Chicken Leg or Thigh, bone in Chicken Thigh, boneless Turkey Leg or Thigh Duck Leg Split Game Hen			165-176	74-80	4 hrs	6-8 hrs
	1	2.5	165-176	74-80	2 hrs	4-6 hrs
			165-176	74-80	8 hrs	10 hrs
			165-176	74-80	8 hrs	18 hrs
	2.75	7	150 or higher	65.5 or higher	6 hrs	8 hrs
SEAFOOD						
Fish Tuna, Halibut, Snapper, Sole, Salmon, Trout, Mackerel	0.5 - 1	1.25 - 2.5	126 or higher	52 or higher	20 min	30 min
	1 - 2	2.5 - 5	126 or higher	52 or higher	30 min	40 min
Crustaceans, Mollusks Lobster Scallops Shrimp						
	1	2.5	140	60	45 min	60 min
	1	2.5	140	60	40 min	60 min
	jumbo	jumbo	140	60	30 min	40 min

VEGETABLES						
Root Carrots, Parsnips, Potato, Turnips, Celery Root, Beets	up to 1	up to 2.5	183	84	1-2 hrs	4 hrs
	1- 2	2.5 - 5	183	84	2.5 hrs	4 hrs
Tender Asparagus, Broccoli, Corn, Cauliflower, Eggplant, Onions, Green Beans, Fennel, Squash, Fresh Peas	up to 1	up to 2.5	183	84	30 min	1.5 hrs
FRUIT						
Firm Apple, Pear	up to 1	up to 2.5	183	84	45 min	2 hrs
Soft Peach, Apricot, Plum, Mango, Papaya, Nectarine, Berries	up to 1	up to 2.5	183	84	30 min	1 hr
EGGS ³						
Soft-cooked in shell (quick)	large	large	167	75	15 min	18 min
Soft-cooked in shell (slow)	large	large	146	63.5	45 min	1.5 hrs
Hard-cooked in shell	large	large	160	71	45 min	1.5 hrs
Pasteurized in shell	large	large	135	57	1.25 hrs	2 hrs
Scrambled (5 eggs)	large	large	167	75	20 min	20 min

¹ Thickness measurements are based on the thickest section of the food and measured through the vacuum-sealed pouch. Cooking times are for foods starting at refrigerator temperature. Add 15 minutes if starting from frozen.

² Tough cuts of meat will heat through to serving temperature in the same time as tender cuts. We recommend longer cooking times for lean, tough cuts to tenderize them.

³ Eggs cooked in the shell should not be sealed in cooking pouches.