

Safe Cooking Temperatures

Requirements for Safely Cooking Raw Animal Foods

All raw animal foods such as eggs, fish, meat, poultry or a combination of these foods must be cooked until harmful bacteria are destroyed. Here are some things to be aware of:

- The minimum temperature depends upon the type of food being cooked.
- A thin probe-type thermometer can measure the internal temperature of food.
 - The thermometer should be placed in the thickest parts of the food.
- Temperature charts are used to determine doneness.

Internal Cooking Temperature and Time for Raw Animal Foods

- 145°F for 15 seconds:
 - Raw eggs cooked for immediate service.
 - Fish, unless it is ground or stuffed.
 - Meat, unless it is ground, mechanically tenderized, injected, or stuffed.
 - Commercially raised game animals.
- 155°F for 17 seconds:
 - Ratites (Ostrich, Rhea, and Emu).
 - Mechanically tenderized or injected meats.
 - Raw eggs not for immediate service (pooled or hot held).
 - Ground meat, fish or commercially raised game animals (hamburger or sausage).
- 165°F for <1 second.
 - Wild game animals.
 - Poultry.
 - Stuffed fish, meat, pork, pasta, ratites or poultry.
 - Stuffing that contains fish, meat, ratites or poultry.
 - All raw animal foods cooked in a microwave oven.

Internal Cooking Temperature and Time for Whole Meat Roasts

Whole meat roasts include:

- Beef.
- Corned beef.
- Lamb
- Pork.
- Cured pork roasts such as ham.

Table 1: Internal Cooking Time and Temperature Specifications for Whole Meat Roasts.

Internal Cooking Temperature	Time
130°F	112 minutes
131°F	89 minutes
133°F	56 minutes
135°F	36 minutes
136°F	28 minutes
138°F	18 minutes
140°F	12 minutes
142°F	8 minutes
144°F	5 minutes
145°F	4 minutes
147°F	134 seconds
149°F	85 seconds
151°F	54 seconds
153°F	34 seconds
155°F	22 seconds
157°F	14 seconds
158°F	0 seconds

Oven Cooking Roasts

Table 2: Temperature to Cook Roasts in Oven based on Oven Type and Roast Weight.

Oven Type	Roast Weight Less than 10 pounds	Roast Weight More than 10 pounds
Still Dry	Oven Temperature $\geq 350^{\circ}\text{F}$	Oven Temperature $\geq 250^{\circ}\text{F}$
Convection	Oven Temperature $\geq 325^{\circ}\text{F}$	Oven Temperature $\geq 250^{\circ}\text{F}$
High Humidity	Oven Temperature $\leq 250^{\circ}\text{F}$	Oven Temperature $\leq 250^{\circ}\text{F}$

Health Response and Licensure • Food and Lodging
1720 Burlington Drive, Suite A, Bismarck, ND 58504-7736
Phone: (701) 328-1291 • Toll-free: 1 (800) 472-2927 • 711 (TTY)
hhs.nd.gov/foodandlodging

