

5 Moist heat penetrates meat quickly. To avoid over cooking, meat should be simmered, never boiled.

Methods of cooking meat

1. **Dry heat cooking**, such as roasting, broiling, or sautéing.
2. **Moist heat cooking**, like braising, steaming, or poaching.

Choosing the Right Cooking Technique

Using the appropriate cooking method for the type of food being prepared is a major part of the culinary arts. Tough cuts of meat like beef brisket or lamb shank need to be cooked slowly, at low heat, for a long time, and with plenty of moisture. Prepared properly, these cuts can be incredibly tender and delicious. On the other hand, dry-heat methods typically involve very high temperatures and short cooking times. A piece of brisket cooked in this way — on a grill, let's say would be tough, chewy and largely inedible. Interestingly enough, a beef tenderloin steak cooked using a slow, moist-heat method such as braising would also turn out tough, chewy and inedible

Dry heat cooking

Dry heat cooking refers to any cooking technique where the heat is transferred to the food item without using any moisture. Dry-heat cooking typically involves high heat, with temperatures of 300°F or hotter.

Baking or roasting in an oven is a dry heat method because it uses hot air to conduct the heat. Pan-searing a steak is considered dry-heat cooking because the heat transfer takes place through the hot metal of the pan.

Note: The browning of food (including the process by which meat is browned, called the Maillard reaction) can only be achieved through dry-heat cooking. Examples of dry-heat methods include:

Roasting & Baking



Forms of dry-heat cooking that use hot, dry air to cook food roasting and baking. Like other dry-heat cooking methods, roasting and baking brown the surface of the food, which in turn develops complex flavors and aromas.

Both words describe a method of cooking an item by enveloping it in hot, dry air, generally inside an oven and at temperatures of at least 300°F and often much hotter. A convection oven, which circulates hot air throughout the oven, can enhance the browning reaction.

Grilling & Broiling

<http://culinaryarts.about.com/od/dryheatcooking/a/grilling.htm>



Dry-heat cooking methods that rely on heat being conducted through the air from an open flame are grilling and broiling. This type of cooking produces browning reactions on the surface of the food, thus encouraging the development of complex flavors and aromas. Grilling cooks hot and fast, because air is a poor conductor of heat. Broiling and grilling require the food to be quite close to the heat source, which in this case, is likely to be an open flame.

Sautéing & Pan-Frying



Sautéing is a form of dry-heat cooking that uses a very hot pan and a small amount of fat to cook the food very quickly. Like other dry-heat cooking methods, sautéing browns the food's surface as it cooks and develops complex flavors and aromas.

Sautéing requires a very hot pan.

When sautéing, it's important to heat the pan for a minute, then add a small amount of fat and let it get hot as well, before adding the food to the pan. This hot fat helps brown the surface of the food. Another key is to avoid overloading or overcrowding the pan.

Deep-Frying



Since deep-frying involves submerging food in hot, liquid fat, it might take some time to get used to the idea that it's actually a form of dry-heat cooking.

But if you've ever seen the violent reaction of hot oil to even a tiny drop of water, you know that oil and water are a couple of opposites that has nothing to do with each other.

Moist heat cooking

Moist heat cooking methods include any technique that involves cooking with moisture — whether it's steam, water, stock, wine or some other liquid. Cooking temperatures are much lower, anywhere from 140°F to a maximum of 212°F, because water doesn't get any hotter than that. Examples of moist-heat cooking methods include:

Simmering

With simmering, the cooking liquid is a bit hotter than poaching from 180°F to 205°F. Here we will see bubbles forming and gently rising to the surface of the water, but the water still isn't at a full rolling boil.

Because it surrounds the food in water that maintains a more or less constant temperature, simmering cooks food very evenly. It's an excellent choice for culinary preparations including stocks or soups, starchy items such as potatoes or pastas, and many others.

Boiling

The hottest of these three stages is boiling, where the water reaches its highest possible temperature of 212°F. It's actually the least likely of the three to be used for cooking. That's because the violent agitation caused by the rolling boil can be too rough on food and will often damage it.

Water at a full boil would be a bad choice for cooking an egg outside its shell, as we do when preparing poached eggs, because the agitation would cause the egg to fall apart. The same holds true for delicate fish as well as some pastas.

Steaming



Steaming is a moist-heat cooking technique that employs hot steam to conduct the heat to the food item.

Cooking With Steam

Steaming can be done on a stovetop, with a pot containing a small amount of liquid that is brought to a simmer. The item to be cooked is then placed in a basket suspended above the liquid and the pot covered.

Braising & Stewing



Braising is a form of moist-heat cooking in which the item to be cooked is partially covered with liquid and then simmered slowly at a low temperature.

Though it can be done on the stovetop, braising is best done in the oven, because the heat fully surrounds the pot and causes the food to cook more evenly than if it were only heated from below.

Begin by Searing

Because moist heat does not permit the various browning reactions that dry heat produces, giving cooked meats the brown, outer crust that also helps to develop complex flavors and aromas, it's customary to sear meat in a

pan with a small amount of hot fat before braising it. This step helps to develop flavors as well as making the meat more appealing visually. Read more about how to braise meat

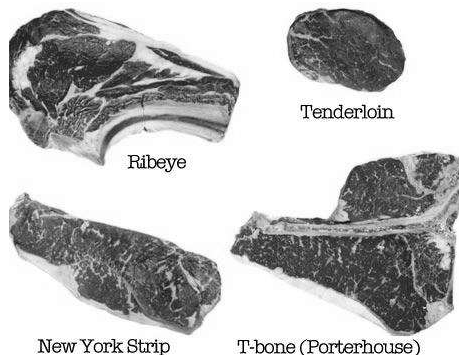
How Braising Works

Braising is a good choice of cooking method for cuts of meat that are tougher or from older animals. The connective tissues that are more prevalent in cuts like this, and which can make meats tough and chewy when improperly cooked, are slowly dissolved through long, slow application of moist heat. So you end up with a tender piece of meat.

Factors Affecting Choice of Cooking Methods in Meat

1. Cuts of meat

- Tender cuts like ribs and loin cuts are used for roasting, broiling and grilling
- Less tender cuts from leg or round are used for braising
- Tougher cuts from chuck or shoulder are usually braced
- Least tender cuts from shanks, breast, brisket, and flank are cooked by moist heat.
- Ground meat and cubed usually made from trimmings can be cooked by dry heat or moist heat.



2. Fat content

- Meats high in fat are cooked without added fat, such as roasting or broiling
- Meats low in fat are often cooked with added fat to prevent dryness, like sautéing, pan frying or braising.



3. Desired quality

- Tenderness is not the only goal of cooking. To develop flavor and appearance is also one of the objectives to get the desired quality.

