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Smoking Meat and Poultry

By Julie A. Albrecht, Extension Food Specialist

Article provided by USDA and Food Safety Inspection Service

Where there's smoke, there's well-flavored meat and poultry. Using a smoker is one method of imparting natural smoke flavor to large cuts of meat, whole poultry and turkey breasts. This slow cooking technique keeps them tender, too.

Smoking is slowly cooking food indirectly in the presence of a fire. This can be done by using a "smoker," which is an outdoor cooker especially designed for this purpose. A covered grill can also be used for smoking food by placing a drip pan of water beneath the meat on the grill.

Preventing Foodborne Illness

The national FightBAC!™ food safety education campaign advises adhering to the four steps in preventing foodborne illness throughout the smoking procedure.

- **Clean** — Wash hands and surfaces often.
- **Separate** — Don't cross-contaminate.
- **Cook** — Cook to proper temperatures.
- **Chill** — Refrigerate promptly.

Defrost Meat Before Smoking

Completely thaw meat or poultry before smoking. Because smoking uses low temperatures to cook food, the meat will take too long to thaw in the smoker, allowing it to linger in the "danger zone" (the temperatures between 40 and 140°F) where harmful bacteria can multiply. Defrosted meat also cooks more evenly.

Never defrost food at room temperature. Keeping meat and poultry cold while it is defrosting is essential to prevent the growth of harmful bacteria. The best way to safely thaw meat and poultry is in the refrigerator. Cook or refreeze it within one to two days.

The microwave oven can be used to defrost more rapidly. Smoke the meat immediately because some areas may begin to cook during the defrosting. Food may also be thawed in cold water. Be sure that the sink or container that holds food is clean before submerging food. Two methods may be used when thawing:

- 1) Completely submerge airtight wrapped package. Change water every 30 minutes.

- 2) Completely submerge airtight wrapped food in constantly running cold water. If thawed completely, it must be cooked immediately.

Marinate in the Refrigerator

Some recipes state to marinate meat and poultry for several hours or days, either to tenderize or add flavor. Acid in the marinade breaks down connective tissue in meats.

Always marinate food in the refrigerator, not on the counter. If some of the marinade is to be used for basting during smoking or as a sauce on the cooked food, reserve a portion of the marinade. Don't put raw meat and poultry in it. Don't reuse the marinade from raw meat or poultry on cooked food unless it's boiled first to destroy any harmful bacteria.

Partial Cooking

Some people like to cook food partially in the microwave oven or on the stove to reduce smoking time. Partially cook meat or poultry ahead of time only if the food goes immediately from the microwave or stove to the hot smoker. Partial cooking of food ahead of time allows harmful bacteria to survive and multiply to the point that subsequent cooking cannot destroy them. And once food is in the smoker, cook until it reaches a safe temperature as determined with a food thermometer.

Using a Smoker

Cook food in smokers made of materials approved for contact with meat and poultry. Don't smoke foods in makeshift containers such as galvanized steel cans or other materials not intended for cooking. Chemical residue contamination can result. When using a charcoal-fired smoker, buy commercial charcoal briquettes or aromatic wood chips. Set the smoker in a well-lit, well-ventilated area away from trees, shrubbery, and buildings. Only use approved fire starters — never gasoline or paint thinner, for example.

Follow the manufacturer's directions for igniting charcoal or preheating a gas or electric outdoor cooker. Let the charcoal get red hot with gray ash — about 10 to 20 minutes depending upon the quantity. Pile the charcoal around the drip pan for smoking. Add about 15 briquettes about every hour. The

most satisfactory smoke flavor is obtained by using hickory, apple, or maple wood chips or flakes. Soak the chips in water to prevent flare-ups and add about 1/2 cup of chips to the charcoal as desired.

Using a Covered Grill

To smoke meat and poultry in a covered grill, pile about 50 briquettes in the center of the heat grate. When they are covered with gray ash, push them into two piles. Center a pan of water between the two piles and place the food on the grill over the water pan. The water prevents flare-ups that occur when fat and meat liquids drip on the coals, and steam from the water helps destroy harmful bacteria that can cause foodborne illness. Close the lid and keep the grill vents open. Add about 10 briquettes every hour to maintain temperature in the grill.

Use Two Thermometers to Smoke Food Safely

To ensure meat and poultry are smoked safely, you'll need two types of thermometers: one for the food and one for the smoker. A thermometer is needed to monitor the air temperature in the smoker or grill to be sure the heat stays between 225 and 300°F throughout the cooking process. Many smokers have built-in thermometers.

Use a food thermometer to determine the temperature of the meat or poultry. Oven-safe thermometers can be inserted in the meat and remain there during smoking. Use an instant-read thermometer after the meat is taken out of the smoker.

Cooking time depends on many factors: the type of meat, its size and shape, the distance of food from the heat, the temperature of the coals and the weather. It can take anywhere from four to eight hours to smoke meat or poultry, so it's imperative to use thermometers to monitor temperatures.

Smoke food to a safe internal temperature and doneness.

• poultry breast	170°F
• whole poultry	180°F
• beef, veal and lamb roasts	145 to 170°F
• pork	160 to 170°F

If using a sauce, apply it during the last 15 to 30 minutes of smoking to prevent excess browning or burning.

Chill Promptly

Refrigerate meat and poultry within two hours of removing it from a smoker. Cut the meat or poultry into smaller portions or slices, place it in shallow containers, cover and refrigerate. Use it within four days or freeze for later use.

For additional food safety information about meat, poultry or egg products, call the toll-free USDA Meat and Poultry Hotline at 1 (800) 535-4555; Washington, DC area, (202) 720-3333; for the hearing impaired (TTY) 1 (800) 256-7072. The Hotline is staffed by food safety experts weekdays from 10 a.m. to 4 p.m. Eastern time. Food safety recordings can be heard 24 hours a day using a touch-tone phone.

Food Safety information is also available on the FSIS Web Site: www.fsis.usda.gov

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