



Drying Jerky

A popular snack, jerky is meat that has been salted, seasoned, and dried until most of the moisture is removed. Because of its very low moisture content, it can be stored for several weeks without refrigeration.

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Penn State Extension's [Let's Preserve: Meat and Proper Processing of Wild Game and Fish](#) provide detailed instructions for making jerky from a variety of meats. Some important tips to remember:

Meat Selection

(beef, pork, venison, turkey, ground meat)

- Choose lean cuts of meat with as little fat as

possible; fat can cause rancidity and off flavors.

- Avoid highly marbled cuts. Lean flank steak and round steak are good choices.
- To make jerky from ground beef, choose ground round, lean or extra lean ground beef.
- If making jerky from venison, freeze at 0°F or below in portions that are six inches or less in thickness at for at least 30 days to kill trichinella parasites that might be in the venison.

Preparation

- Remove as much fat as possible; this prevents "off" flavors.
- Remove any visible fat, connective tissue, and gristle from the meat.
- Partially freeze the meat for ease of slicing.
- Slice slightly frozen meat into strips that are $\frac{1}{4}$ to $\frac{3}{8}$ inch thick, 1 to $1\frac{1}{2}$ inches wide, and 4 to 10 inches long.
- Jerky cut on the grain of the meat is chewy; cutting across the grain makes it more tender.
- Strips may be flattened with a rolling pin for uniform thickness.
- Cook the meat strips to the necessary 160°F by baking them in the oven or simmering them before drying.
 - Using the oven method, place the prepared strips of meat on cake racks with baking sheets underneath, and bake in a 325°F oven.
 - Check the internal temperature of the meat using an instant read thermometer to make sure the meat has reached 160°F.
- To simmer jerky in a marinade, prepare two to three cups of your favorite jerky marinade and bring it to a rolling boil over medium heat. Add a few meat strips, making sure the marinade covers them. Reheat to a full boil for 1 minute.

Marinating

The National Center for Home Food Preservation allows you to marinate the strips of meat 1 to 2 hours or overnight in the refrigerator before cooking it to 160°F in the marinade but cautions that meat marinated for several hours may be very salty. Do not reuse marinades. Marinades are used to tenderize and flavor the jerky before dehydrating it. The [National Center for Home Food Preservation](#) has a jerky marinade recipe, and there are many commercial mixes available for purchase.

Safety of Dried Meat

- Heating the meat to 160°F before dehydrating assures that any bacteria present will be destroyed.
- Drying the meat removes moisture which prevents enzyme reactions and growth of microorganisms such as bacteria and molds.
- If improperly cooked, homemade jerky may contain bacteria that can result in severe, life-threatening illness and possibly death.
- Using the dehydrator alone will inactivate microorganisms but not kill them.

- The right conditions of heat and moisture may cause the microorganisms to become active without the consumer being aware of a potentially dangerous situation.

Dehydration of Jerky

Dehydrator

- After simmering or baking the meat to 160°F, place the strips in a single layer on drying racks. Avoid overlapping or touching pieces.
- Dry the strips at 140°F in a dehydrator, oven or smoker. Maintain a constant dehydrator temperature of 140°F during the process. This is important because the process must be fast enough to dry food before it spoils, and it must remove enough water to prevent microorganisms from growing.

Oven Drying

- The temperature of the oven should not exceed 170°F.
- The door should be propped open 2 to 6 inches.
- Circulation can be improved by placing a fan outside the oven near the door.

Note: It will take 5 to 6 hours to dry. Thinner strips will take less time. Because you have precooked the meat, it will take less time to dry than older methods where the jerky was made with raw meat.

Testing for Doneness

- Allow a strip to cool five minutes and bend it.
- Strips should crack but not break when bent and should not contain any moisture or underdone spots.
- Refrigerate the strips in an airtight container overnight and check again for doneness. If necessary, dry strips further.

Alternative Heat Treatment

If the strips were not heated in marinade prior to drying, they can be heated in an oven after drying. Place strips in a single layer but not touching on a baking sheet.

Heat for 10 minutes in an oven preheated to 275°F so strips reach a temperature of 160°F. Thicker strips may require longer heating to reach this temperature.

Storage of Jerky

- Blot off any excess fat. Jerky may be wrapped in a paper towel for several hours to absorb grease.
- Store jerky in an airtight container because it will absorb moisture very easily from the air.
- Glass is a good long-term storage container that is moisture proof and will prevent odors from escaping.
- Store in a cool, dark place.
- Depending upon the meat used, jerky should be eaten within one to three weeks.
- For longer storage, freeze the jerky to prevent rancidity.