

# Jerky Safety

Jerky is meat or poultry that has been dried until most of the moisture is removed. Because of its very low moisture content, it is shelf stable and can be stored without refrigeration. But drying meat or poultry at home requires proper safe food preparations. USDA recommends that all meat be heated to 160°F before the drying process to ensure that any bacteria present is destroyed.



Thermy™

Drying is the most common method of food preservation. By removing moisture, bacteria, fungi or naturally occurring enzymes found in raw food cannot cause tissue damage or spoilage.

A warm oven or a food dehydrator should be used to dehydrate meat or poultry. USDA currently recommends heating meat to 160°F before the dehydrating process to make jerky. This is because several scientific studies of meat dehydrating conclude that precooking meat to 160°F prior to drying minimizes safety concerns related to foodborne illness causing bacteria, such as *Salmonella* or *Escherichia coli* 0157:H7.

Most dehydrator instructions do not include precooking and some dehydrators may not reach the 160°F temperature needed to kill illness-causing bacteria. Sun or shade drying occurs in open air without the addition of heat. These types of drying are not suitable for the drying of meat or poultry.

After heating the meat to 160°F, the dehydrator temperature should remain between 130° and 140°F during the drying process. The temperature is fast enough to dry food before it spoils and to remove enough water so that bacteria are unable to grow in the finished jerky. A pound of meat or poultry weighs about 4 ounces after being made into jerky.

Safe handling and preparation methods must always be used when preparing any food.

- Always wash hands with soap and water before and after working with food.
- Use clean equipment and utensils.
- Keep meat and poultry refrigerated below 40°F and use or freeze ground beef and poultry within 2 days; use or freeze whole red meats within 3 to 5 days.
- Defrost meat and poultry in the refrigerator.
- Marinades can be used to tenderize and flavor the jerky before dehydrating it. Marinating foods should be done in the refrigerator. Do not reuse the marinade.
- Use a meat thermometer to cook meat or poultry to 160° F before dehydrating it.
- Use a food dehydrator that will maintain a temperature of at least 130° to 140° F throughout the meat drying process.

Commercially-made jerky is monitored in federally-inspected plants by inspectors of the U.S. Department of Agriculture's Food Safety and Inspection Service. Dried commercial products may be cured or uncured, smoked or unsmoked, and air or oven dried.

Commercially packaged jerky should be stored in a cool, dry place for up to 12 months. Home-dried jerky should be consumed within 1 to 2 months.

#### References

- USDA, FSIS. *Food Safety of Jerky*, 2000.
- DeLong, Deana. *How to Dry Foods*, 2006.

Sandra Bastin, Ph.D., R.D., L.D.

Extension Specialist for Food & Nutrition

Issued 05-1999, Updated 02-2005, Revised 08-2006