

# Care and Handling of Deer from Field to Table

## Savor the Hunt

The thrill of the hunt can continue at the dinner table if the game is handled properly along the way. Game meats are excellent sources of protein and similar in composition to domestic animal meats. Calorie and fat contents vary with the age and species of the animal.

A 3½-ounce portion (before cooking) of game meat provides about half the daily adult protein requirement and about 150 calories. Game meats are usually slightly lower in total fat but higher in polyunsaturated fats than grain-fed beef. Proper handling of the meat at each step from field to table helps ensure optimum eating quality. Keep the following food handling and hunting tips in mind.

## Before the Hunt: New Considerations

Concern has grown in recent years about a disease affecting deer and elk called chronic wasting disease (CWD), which belongs to a family of diseases known as transmissible spongiform encephalopathies (TSEs). Symptoms include weight loss, stumbling, tremors, lack of coordination, blank facial expressions, excessive salivation, loss of appetite, excessive thirst and urination, listlessness, teeth grinding, abnormal head posture, and drooping ears.

Hunters should be vigilant about identifying deer or elk displaying CWD symptoms and report suspected cases to wildlife officials immediately. Many states have specific CWD guidelines for hunters. Hunters need to know CWD regulations of the states in which they hunt and or pass through during interstate hunting trips.

There is no evidence that CWD has been transmitted or can be transmitted to humans under natural conditions. But there is not strong evidence that such transmissions could not occur. Research shows that the abnormal proteins responsible for causing CWD accumulate in the brain, eyes, spinal cord, lymph nodes, tonsils, pancreas, and spleen, but not in muscle tissue. Hunters should take a few simple precautions when handling and transporting deer or elk carcasses:

- Do not shoot, handle, or consume any wild animal that appears sick.
- Wear rubber gloves when field dressing and processing animals.

- Request commercial processors handle animals individually so meat from other animals won't become commingled.
- Minimize handling brain or spinal tissues and fluids.
- Bone out carcasses or at least avoid consuming brain, spinal cord, eyes, spleen and lymph nodes of harvested animals.
- Do not consume the meat from any animal that tests positive for CWD.

## Care in the Field

Be prepared for the hunt. Remember to bring a sharp hunting knife, a small hatchet, a whetstone or steel, about 12 feet of light rope or nylon cord, plastic bags, and clean cloths or paper towels. Other essentials include proper clothing, binoculars, fresh water, a compass, a map, and matches. In warm weather you may want to bring ground pepper and cheesecloth. Sprinkle the carcass with pepper and cover with cheesecloth to repel flies. Abide by game regulations for hunting, transporting, and storing game.

Bleed, field dress, and cool the carcass promptly. Improper temperature is meat's worst enemy. The surface of the carcass may be contaminated with bacteria that can spoil the meat unless growth is stopped by chilling. Clean your hunting knife often with clean water and a cloth to prevent contamination of the meat. Usually it is not necessary to bleed the animal because the bullet or arrow has caused enough damage to the animal to bleed it sufficiently. But if the animal is shot in the head, it will need to be bled. If the animal is a trophy buck that you plan to mount, do not sever its throat, because this will cause problems during mounting.

Cool the animal quickly. Cool the carcass by propping the chest open with a clean stick and allowing air to circulate. Filling the cavity with bags of ice will also enhance cooling. To aid cooling in warm weather, the deer may be skinned if you have provisions to keep the carcass clean. Use ground pepper and cheesecloth to protect the skinned carcass from contamination by flies. In cool weather (28° to 35° F), wrap the carcass or quarters in a sheet and hang to chill in a ventilated shed. Do not allow the carcass to freeze. Freezing may toughen the meat.

## Nutritive Value

	Preparation	Portion	Calories	Protein (g.)	Total Fat (g.)	Saturated Fat (g.)	Cholesterol (mg.)	Iron (mg.)	Sodium (mg.)	Zinc (mg.)
Deer	Roasted	3 oz.	134	25.7	2.7	1.06	95	3.8	46	2.3

Source: USDA National Nutrient Database for Standard Reference, Release 22

Keep the carcass clean. Remove all foreign particles and loose hair. Remove bloodshot areas. Wipe out excess blood in gutted cavity with a paper towel or clean cloth and clean water. Use as little water as possible, because damp meat spoils faster than dry meat. Do not use grass or snow to wipe out the carcass because this may contaminate it.

## Field Dressing

Wear plastic surgical gloves during field dressing.

1. Place the animal on its back with the front end elevated and spread the hind legs. Support the carcass in position by placing rocks or sticks on each side.
2. Cut along the midline of the belly from the breastbone to the anus. Avoid cutting into the paunch and intestines by using the handle of the knife and the heel of your hand to crowd the guts away. Cut around the anus, loosening the bung so it will come out with the guts.
3. Cut the diaphragm (the thin sheet of muscle and connective tissue between the chest and the abdomen) free from the rib cage by cutting through the white tissue near the rib cage.
4. Reach forward to cut the windpipe, gullet, and blood vessels at the base of the throat.
5. Pull the lungs, heart, and guts out of the animal. If you like variety meats, save the heart and liver in a plastic bag and put on ice.

## Care in Transport and Processing

Keep the carcass cool during transport. Do not tie a deer carcass across the hood of the car or put it in the trunk when the animal is still warm. The game may be processed commercially or at home. Be sure to keep the carcass cool until it reaches the locker plant. Keep the carcass out of direct sunlight and allow for adequate air circulation.

If you choose to process your own game, don't cross-contaminate during processing. Wash your knife, hands, and cutting board often with warm soapy water.

Aging meat is the practice of holding carcasses or cuts of meat at temperatures of 34° to 37° F for 10 to 14 days to allow the enzymes in the meat to break down some of the complex proteins in the carcass. Aged meat is often more tender and flavorful. Aging is not recommended for

carcasses with little or no fat covering. They may dry out during aging. Leave the hide on and maintain the proper temperature when aging a carcass. If you do not have the proper cooler space, spoilage or dehydration may result. Aging the carcass two to three days is sufficient. If you intend to grind the meat into sausage, aging is unnecessary.

## Care in the Kitchen

For immediate use, store the meat in the refrigerator and use within two or three days. Keep raw meat and cooked meat separate to prevent cross-contamination.

Freeze game properly. Prevent "freezer burn" by using the right packaging materials. Divide meat into meal-size quantities. Use moisture/vapor-proof wrap such as heavily waxed freezer wrap, laminated freezer wrap, heavy-duty aluminum foil or freezer-weight polyethylene bags. Press the air out of the packages before sealing. Label the packages with the contents and date. Avoid overloading the freezer. Freeze only the amount that will become solidly frozen within 24 hours. Game will keep nine to 12 months in the freezer if properly wrapped.

Do not can the meat unless you have a pressure canner. Low-acid foods, such as meat and most mixtures of foods, should never be canned using the water bath method. Pressure and adequate time are necessary to produce safe canned meat. For the latest canning information, contact your local K-State Research and Extension office.

Thaw frozen meat in the refrigerator or microwave oven. Cook game meats thoroughly. Foods thawed in the microwave oven should be cooked immediately. Refrigerator-thawed meat should be used within one to two days.

Game meats should be cooked to at least 165° F to reduce the risk of foodborne illness. Big game animals usually exercise more than domestic animals, so game meats may be drier and less tender. Moist heat methods, such as braising (simmering in a small amount of liquid in a covered pot), may result in a better product. Chops and steaks may be pan fried or broiled.

The distinctive flavor of game meats is mainly due to the fat they contain. To reduce the gamey flavor, trim the fat from the meat. You may wish to add other sources of fat to maintain the juiciness of the meat. Spices or marinades may be used to mask the gamey flavor. Meat should always be marinated in the refrigerator.

Revised by Karen Blakeslee, M.S., Extension Associate, Food Science

Adapted from *From Field to Table: A Pocket Guide for the Care and Handling of Deer and Elk* by Julie Garden-Robinson, Food and Nutrition Specialist, North Dakota State University Extension, and Martin Marchello, Professor, Department of Animal and Range Sciences, North Dakota State University, July 2003. Revised with permission by Karen Blakeslee, Extension Associate, Food Science, Kansas State University, November 2010.

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Publications from Kansas State University are available on the World Wide Web at: [www.ksre.ksu.edu](http://www.ksre.ksu.edu)

Publications are reviewed or revised annually by appropriate faculty to reflect current research and practice. Date shown is that of publication or last revision. Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. In each case, credit Karen Blakeslee, *Care and Handling of Deer from Field to Table*, Kansas State University, November 2010.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

MF-2176

November 2010

K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, Gary Pierzynski, Interim Director.