

## **MSU Extension Publication Archive**

Archive copy of publication, do not use for current recommendations. Up-to-date information about many topics can be obtained from your local Extension office.

Venison – Upper Peninsula Style 2001  
Michigan State University  
Michigan State University Extension Service

Glenn Dudderar, Extension Specialist and Associate Professor (retired) Department of Fisheries and Wildlife; Alden Booren, Extension Specialist and Professor, Department of Food Science and Human Nutrition; Sandra Andrews, Department Head, Physical Science, Grand Rapids Community College; Reviewed by Carol Wruble, Extension Specialist, MSU  
Major Revision  
December 2001  
48 pages

The PDF file was provided courtesy of the Michigan State University Library

**Scroll down to view the publication.**

# ♦ M I C H I G A N ♦ ♦ V E N I S O N ♦



## 2001

HOW TO ♦ FIELD DRESS  
♦ BUTCHER ♦ PREPARE / COOK / PRESERVE







# ◀ M I C H I G A N • V E N I S O N ▶

**Venison that is handled and cooked safely  
is a healthful addition to our  
Michigan food supply.**

**To be safe, venison should be cooked to 165  
degrees F. (Michigan Unified Food Law,  
Public Act 92 of 2000)**

**Glenn Dudderar**, Extension specialist and associate professor (retired),  
Department of Fisheries and Wildlife

**Alden Booren**, Extension specialist and professor,  
Department of Food Science and Human Nutrition

**Sandra Andrews**, Department Head, Physical Science,  
Grand Rapids Community College

Reviewed by: **Carol Wruble**, Extension specialist,  
Michigan State University

FILE COPY  
DO NOT REMOVE

Note: This bulletin contains material adapted from Michigan Extension bulletin  
"Venison, Upper Peninsula Style" and University of Wyoming Agricultural Extension  
Service bulletin "You and Your Wild Game."







# ◀ M I C H I G A N ◀ V E N I S O N ▶

**Michigan Venison** describes proper methods to harvest, dress and cut venison. It recommends proper cooking techniques for the cuts and provides recipes for cooking and sausage making. The process of putting tender, good-tasting venison on the supper table begins with making a quick, clean kill.

## Making A Quick, Clean Kill

### Never shoot at a running deer. Why?

■ Because it is impossible to know what is behind a running deer as you try to aim at the deer as it runs. While you're concentrating on aiming at the deer, it may pass in front of a house, livestock or another person just as you pull the trigger or release an arrow.

■ Because it is very likely that you'll only wound the deer, thus allowing it to escape and causing it to suffer unnecessarily and perhaps die days later.

■ Because, even if you recover a wounded deer, there is a good chance that the shot will have punctured the stomach, bowel or bladder, thus contaminating the meat and unfortunately starting the process of producing the gamey flavor that so many people associate with venison.

Shoot only at standing or slowly walking deer. Aim at a point midway between the top of the back and the bottom of the chest slightly behind the front leg (Fig. 1). If you hit this spot or anywhere within 5 inches of this spot, you will hit a vital organ and

the deer will bleed profusely and die quickly. A shot that is high or low of the aiming point will strike the heart, the aorta (a main blood vessel) or the spine. A shot forward of the spot will strike lungs and/or aorta, and a shot that is no more than 5 inches behind the aiming point will hit both lungs.

As soon as you have shot, go immediately to where you saw the deer fall. If you didn't see the animal fall, go immediately to the place the deer was standing when you shot. This improves your chances of finding the deer or finding evidence that you hit the deer (hair, blood or tissue), and it allows you to trail the deer to where it has fallen while the evidence is still fresh and visible. Do not wait for the deer to "settle down" after you have shot. A wounded deer being trailed by a hunter will bleed more profusely, leave more evidence to trail and die more quickly than a deer that is allowed to settle down, have blood clot in the wound and recover from the shock of being wounded.



**Figure 1**

A line drawing of a deer in profile, facing right. The deer has antlers and a tail. A shaded, cross-hatched area is overlaid on the deer's midsection, representing the internal organs. A white circle with a crosshair is centered within this shaded area, labeled 'best point to aim at'. Labels with leader lines point to various parts: 'spine' points to the top of the shaded area; 'best point to aim at' points to the crosshair; 'aorta (main blood vessel)' points to a small, oval-shaped structure below the crosshair; 'heart' points to a larger, irregular shape below the aorta; and 'lung' points to the lower part of the shaded area.

spine

best point to aim at

aorta (main blood vessel)

heart

lung

the eye with the tip of the gun muzzle, an arrow or a long stick. If there is any eye response, the animal is still alive and should be shot again through the heart. The heart is located immediately behind the joint of the front leg and the chest, close to the rib cage (Fig. 1). Do not attempt to bleed a wounded deer. Inserting a knife into a live deer can be dangerous and will accomplish little more





# ◀ M I C H I G A N ◀ V E N I S O N ▶

than shooting the deer the second time as recommended. If the deer is dead, there is no point in inserting a knife into the deer because once the heart has stopped pumping, severing

additional arteries and veins will cause little additional blood loss.

Once the deer is dead, correctly mark the appropriate deer tag and attach it to the deer as required by law.

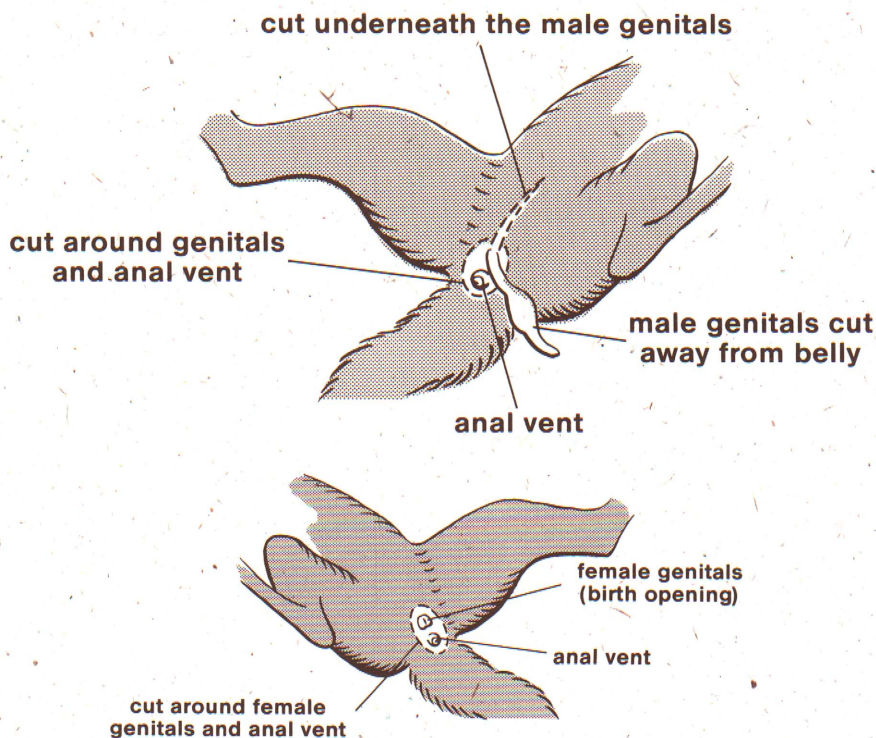
## Field Dressing

Now that you have made a quick, clean and humane kill, it is important to clean and cool the

venison as quickly as possible. To do this, you will need four items: at least one length of rope 10 to

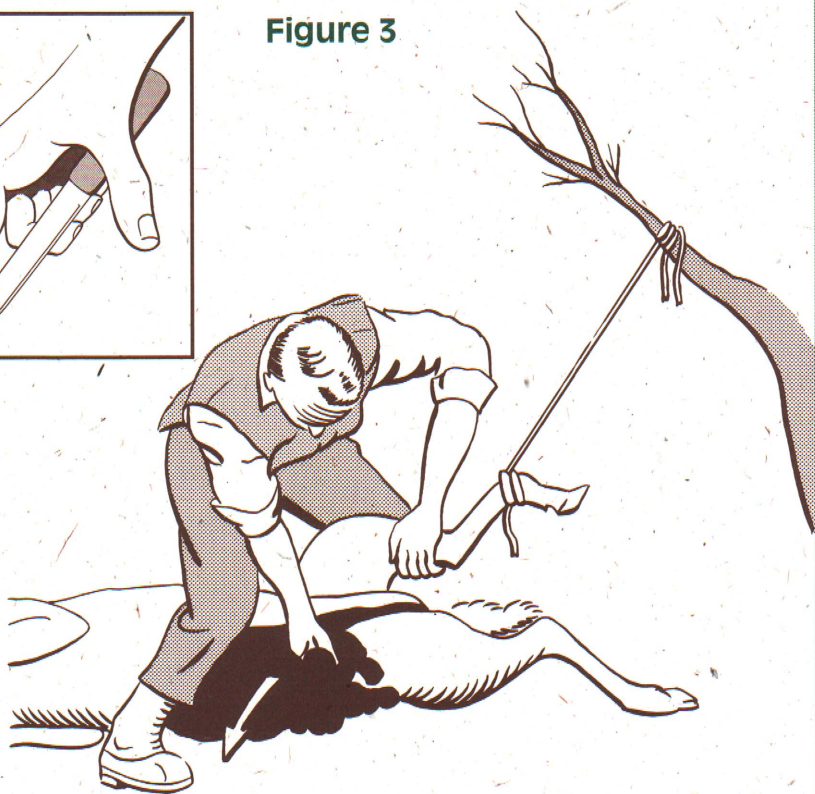
### Field Dressing

Figure 2









**5** Now that the body cavity of the deer is open, reach into the cavity and grasp the bowel, reproductive tubes and bladder where they enter the opening of the hip and pull gently. The bowel, bladder and reproductive tubes will slide easily through the hip opening and out through the opening in the belly if you cut them free from the hip when you cut around the anus and reproductive tubes. If they do not pull easily through the hip

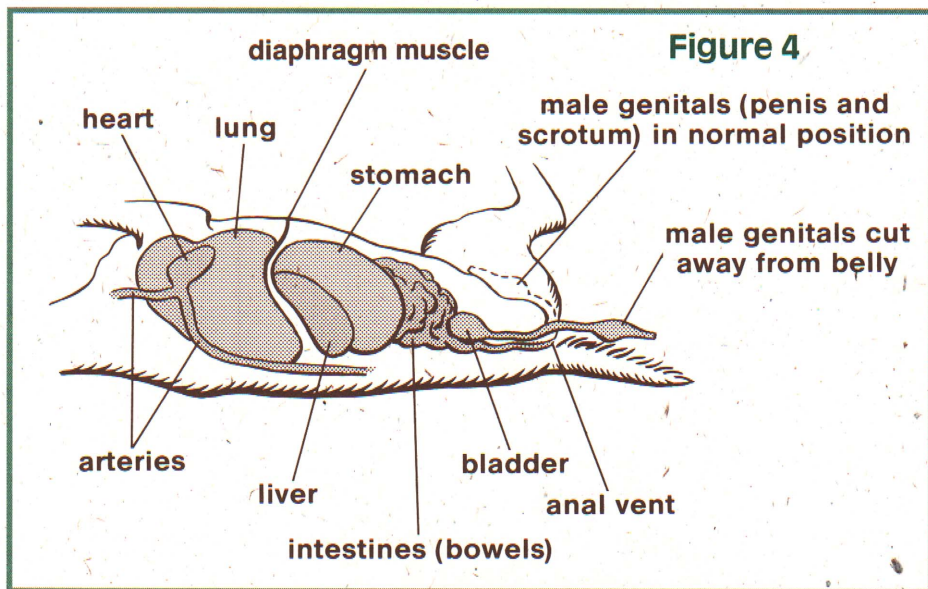




# MITCHIGAN VENTSON

opening, then you will have to go back (step 3) to the anal vent and cut whatever connective tissue is holding the bowel and reproductive tubes to the hip. Once this is done, then you can again reach into the body cavity, grasp the bowel, bladder and reproductive tubes and pull them out through the opening in the belly. Continue to pull all of the reproductive tubes, intestines and the bottom of the stomach out of the opening in the belly and roll them onto the ground (Fig. 3). As you roll the innards onto the ground, it may be necessary to cut some tissue holding them against the inside of the back. As these innards roll out on the ground, you will see a large, thin muscle

separating these innards and the chest cavity containing the heart and lungs (Figs. 4 and 5). This muscle is called the diaphragm. Cut it where it joins the ribs and backbone, being careful not to puncture the top of the stomach where it joins the diaphragm. Once this is accomplished, all the deer innards can be rolled out onto the ground. As the stomach rolls completely free of the deer, you may wish to cut the large purple-pink organ, the liver, free from the stomach and place it in a plastic bag for later processing. As you pull the heart and lungs free of the chest cavity, you may wish to cut the heart free and place it also in a plastic bag for further processing. If you plan to have the





# ◁ M I C H I G A N ▷ V E N I S O N ▷

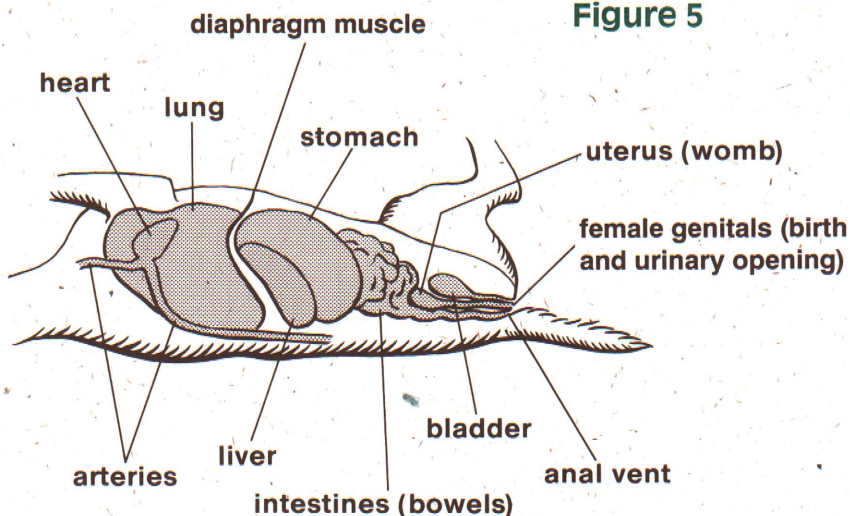
deer mounted, insert your knife as far up into the chest cavity as you can reach and cut as much of the heart, lung and blood vessel tissue free as you possibly can. If you do not plan to have the deer mounted, continue to pull the food and air tubes free from the throat all the way to the chin and cut them off at the chin.

If you have done a good job so far, then all of the organs of the deer will have been completely and cleanly removed from the body cavity. At this point, you may wish to take a few of the brown paper towels and wipe the blood from your hands. If you have blood up to your elbows or beyond, you probably didn't do the job properly.

**6** Use additional paper toweling to wipe all the blood from the body cavity of the deer. Be as thorough as possible, keeping in mind that bacteria will grow very well in blood and bacteria cause meat to spoil and possibly become unsafe. Do not use leaves or soiled cloth to clean the blood from the body cavity — such items are loaded with spoilage bacteria.

**7** Now that you have completed field dressing the deer, bury the paper towels or place them in the plastic bags in which you brought them to be carried out and disposed of later. Untie the deer legs and get ready whatever method you have decided to use to drag the deer back to your home, campsite or automobile.

**Figure 5**







If at all possible, avoid dragging the deer through water, mud or dust in such a way that the inside of the body cavity is contaminated with water, mud or dust. When you

put the carcass in your vehicle, wrap it so that dust, dirt and dirty water from your vehicle or from the road does not contaminate the body cavity.

---

## Hanging Your Deer

As soon as you get your deer to campsite or home, hang the deer to allow the venison to cool quickly and completely. If you did not thoroughly clean the inside of the body cavity when you field dressed the deer, do so as soon as you get the deer hung up. Soak a clean cloth in a saltwater solution (1/2 cup salt in 1 gal. water), wring it dry and wipe the inside of the cavity of the deer with this damp cloth. If the inside of the body cavity has been contaminated by the contents of bladder, bowel, intestine or stomach or with unclean water, mud or dirt, thoroughly rinse out the body cavity with water. When the cavity is clean, thoroughly dry the inside with cloth or paper toweling.

Deer can be hung from the antlers, the neck or the hind legs. Research has shown that it makes absolutely no difference in venison quality whether you hang the deer by its hind legs or its head. If you wish to have the deer mounted, however, hanging it by its hind legs avoids rope damage to the hide on the neck, head, ears, etc.

It is also much easier to butcher the deer and save the head and cape for mounting if you hang it by the hind legs.

To hang a deer by its hind legs, slice the hide between the leg bone and the large tendon on the back of each leg and insert a sturdy branch, board, wooden dowel or metal rod as a cross-bar through these openings. If you wish, notch the branch, board or dowel or bend the ends of the metal rod up to ensure that the deer does not slip. Attach a rope to the middle of the cross-bar to hang the deer as desired.

The major reason for hanging a deer carcass is to allow the meat to cool further and to make the subsequent butchering process easier. If done properly, hanging, may also help tenderize the meat, if that is necessary. Because the majority of deer in Michigan are less than 2 1/2 years old when killed by hunters, there is absolutely no reason to allow most deer to hang for more than one day. If, however, you have your deer aged by a DNR biologist and





Any knife used to cut off the glands will surely be contaminated with the substances contained in these glands.







# ◁ M I C H I G A N • V E N T S O N ▷

base of the skull. If you're going to mount the deer, cut the hide on the chest to the front legs, then cut toward the back of the front leg and down the back of the front legs. Pull the hide free from each leg and carefully continue to pull all of the hide free down to the base of the neck. Cut the neck off from the chest and take the hide, neck and head to a taxidermist.

If you are not going to mount the head, you may wish to remove the head and hide from the carcass at this point. Do so by pulling the hide completely free from where the neck joins the head. Rotate the head as much as possible to help you identify this joint. Once you have done so, insert the knife into the joint and cut from side to side to sever the head and hide from the carcass. If you have hung the deer by the head and wish to mount the head, it is very difficult to skin the deer and remove the shoulder and neck meat. If you have hung the deer by the head and do not want to mount it, then cut the hide from

the inside around the neck and down the throat to the chest if you have not already done so. Pull downward on the hide to the shoulders, and follow the skinning procedure just described, but in the reverse order. Do not cut off the head. Once the hide is removed, inspect the carcass and remove as much hair as possible and any foreign matter. One quick way to remove hair is to singe it with a propane torch.

**The second piece of meat to be removed from the carcass is the loin** (Fig. 6). To remove the loin, insert the knife into the carcass along the edge of the backbone and cut alongside the backbone (midline) from the hip to the shoulder, keeping the knife against the edge of the backbone. Cut the loin off at the hip and shoulder and roll these muscles outward away from the spine, using your knife to cut the meat free from the backbone and the rib cage. When both pieces of meat have been cut free from the back, trim off the connective tissue. The outer white connective

Any equipment used in butchering and cutting up the deer – knives, cleavers, hatchets, cutting boards, etc. – should be sanitized before use and anytime during use that they become contaminated with blood, other body fluids, hair or foreign material (dirt, leaves, etc.). To sanitize these items, mix 1 part liquid chlorine household bleach with 9 parts tepid water. Wipe off as much of the contaminating material as possible. Then soak tools for 2 to 3 minutes. Use the solution to scrub cutting surfaces. Rinse tools and surfaces and allow to air-dry.





A detailed diagram of a whole beef carcass, oriented vertically. The carcass is shown with its characteristic shape, including the head at the top, the rib section in the middle, and the hindquarters at the bottom. Various cuts of meat are labeled with lines pointing to their locations on the carcass. The labels are as follows:

- shank (ground)**: Points to the lower leg area on the left side.
- trim (soup, stew, ground)**: Points to the fatty trimmings along the top edge of the carcass.
- sirloin tip (roast, steaks)**: Points to the sirloin tip section on the left side.
- flank (ground)**: Points to the flank section on the left side.
- ribs (spareribs)**: Points to the rib section on the left side.
- shank (ground)**: Points to the lower leg area on the right side.
- bottom or outside round (steaks)**: Points to the bottom round section on the right side.
- top or inside round (not shown) is behind outside round (steaks)**: Points to the top round section on the right side.
- rump (roast, soup, stew, ground)**: Points to the rump section on the right side.
- tenderloin (steaks)**: Points to the tenderloin section on the right side.
- loin (steaks)**: Points to the loin section on the right side.
- neck (roast, ground)**: Points to the neck section at the bottom of the carcass.
- foreleg and shoulder (roast, soup, stew, ground)**: Points to the foreleg and shoulder section at the bottom of the carcass.

The loin can then be cut crosswise into steaks, butterfly steaks or 1/4-

12



**Next cut the shoulder from the carcass** (Fig. 6). Simply hold the

Once the meat is free of the bone, remove all connective tissue and set the meat aside to be cut up into smaller pieces or ground. If you wish to make a shoulder roast, start by laying the shoulder down on the cutting board with the outside of the shoulder facing upward. The outside of the shoulder blade has a bony ridge in the middle. To debone the meat,

**The next cuts of meat on the deer are easily butchered.**

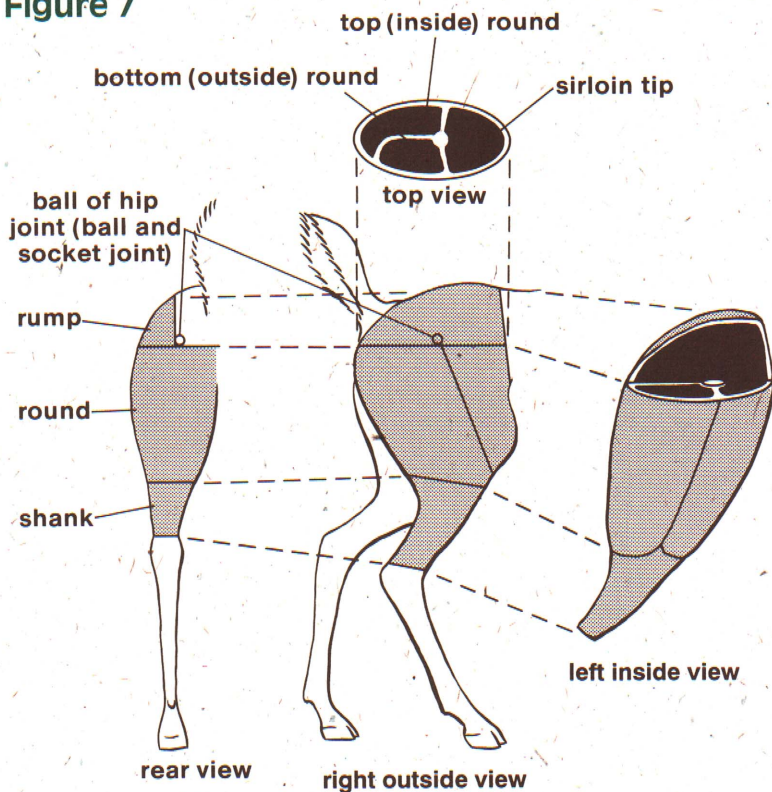
**Neck meat:** In most cases, the neck meat is best ground into burger, so simply cut the meat from the neckbone any way you choose. If you wish to make a neck roast, cut the meat all the way around the neck at the head and the chest. Cut the neck open from head to chest on the bottom of the neck and cut around the neckbone, keeping the neck meat in one piece. Go all the way around the neck, cutting around







**Figure 7**



connective tissue along the seams. Start with the half-round-shaped piece (the sirloin tip) that came from the top or front of the leg bone (Fig. 7). Trim the tips from both ends of this piece of meat. These tips can be used for cubes, stew meat, soup meat or burger. The remaining piece of meat can be tied with string into a roast or can be cut crosswise into 1-inch steaks. These steaks will be less

tender than any other steaks that you can cut from the deer. On a small, young deer, however, these steaks will be tender. Take the two remaining pieces of meat (the inside and outside rounds) and trim both ends (Fig. 7). The trimmings are suitable for cubes, stew or soup meat, or ground meat. The trimmed piece can then be cut crosswise into 1-inch round steaks, which will be almost as





When all the meat has been removed from the carcass, inspect all pieces of meat again, remove any white connective tissue that you did not remove previously and remove all foreign matter, especially hair. Cut away and discard any meat that has been bruised by bullet, shot or arrow. It is far better to cut away more meat than necessary than to leave bruised meat. Bruised meat will have a strong, gamey flavor. If you think it is necessary, rinse the meat in cold water, but be sure to pat it completely dry with toweling. The venison can then be wrapped in white freezer paper, shiny side in, and taped closed. Label each package with the cut of meat and the date. Then place the meat in a freezer kept at approximately 0 degrees F. Spread the meat out over the inside of the freezer as evenly as possible so it freezes solid within 24 hours. Avoid stacking a large amount of fresh meat in one place in the freezer — the middle layers may take days to freeze solid. After the meat is solidly frozen, you can stack it as you desire.

There are many ways to grind venison into burger, but the following suggestions produce excellent ground meat. If you plan to use the ground meat in burgers, it is best to grind the venison with an additional 5 to 10 percent (by weight) beef fat (suet) or grind it with 30 percent (by weight) lean pork shoulder. The resulting venison burgers will be as good as or better than any beef burgers you have eaten. If you plan to use the ground venison in dishes such as sloppy joes or chili, or with commercial mixes such as Hamburger Helper, you may wish to grind your venison without any additional fat or other meat.

Package the ground venison in quantities you find convenient to use, such as 1/2 pound, 1 pound, 2 pounds, etc. If you package it yourself, wrap in freezer paper, slick side in, tape closed, and label with the date and the kind of ground venison. The business that grinds the meat for you may be willing to package it as you direct.



## Quick Review

Venison is a good-tasting, tender meat, but it is often made less tasty or even gamey by the following practices:

- Contaminating the meat with the contents of bowels, bladder or stomach, dirt or dirty water.
- Hanging the carcass when the meat will reach temperatures above 40 degrees F.
- Not cleaning or trimming and disposing of contaminated meat.
- Leaving fat and connective tissue (the white material) on the meat (the red material).

As with all food preparation, it is important to handle and cook venison safely. Venison food safety practices are the same as those for other foods.\*

- Clean hands, cooking utensils and surfaces often.
- Separate: don't cross-contaminate.
- Cook to proper temperature.
- Chill by refrigerating promptly.

(\*Fight BAC campaign from the U.S. Department of Agriculture and the U.S. Food and Drug Administration )







# ◁ M I C H I G A N ▷ V E N I S O N ▷

All other cuts must be cooked using moist heat (pot roasting, stewing, soup). Adding beef suet, butter, pork fat or bacon prevents venison from becoming dry and chewy. This will, however, also increase the total fat, calorie and cholesterol content of the food. Venison without added fat is relatively low in fat, saturated fat and cholesterol. A 3-ounce serving of roasted venison has 131 calories, 2.7 grams total fat, 1.1 grams of saturated fat and 95 milligrams of cholesterol. This means that 19 percent of its calories are from fat and 7 percent from saturated fat. That makes

venison slightly lower in total calories than roasted beef, roasted chicken breast (meat only) and roasted pork tenderloin, and much lower in percentage of calories from fat than either beef or pork. Only chicken is lower in percentage of calories from saturated fat. All the other meats mentioned, however, are lower in cholesterol than venison. (See chart below.)

When mixing venison with other meat for storage, using suet instead of pork will prolong the storage life of the venison. The suet doesn't become rancid as quickly as the pork fat.

**Table 1. Venison nutrition.**

meat or poultry (3 oz.)	calories	total fat	% cal. total fat	saturated fat	% cal. sat. fat	chol.
venison*, roasted	131	2.7 g.	19%	1.1 g.	7.3%	95 mg.
beef, roasted eye of round trimmed to 0" fat	149	4.8 g.	29%	1.8 g.	11%	59 mg.
chicken, roasted breast, meat only	140	3.0 g.	19%	.9 g.	5.8%	72 mg.
pork, roasted tenderloin	133	4.1 g.	28%	1.4 g.	9.5%	67 mg.

Sources: Composition of Foods: raw, processed, prepared. USDA Handbook 8, vol. 5, 10, 13, 17; 1979; 1991, 1990, 1989, USDA.

\*note: Handbook 8, vol. 17, has only one venison entry. There may be leaner cuts of venison available, but no other authoritative reference has more complete nutrient information regarding specific venison cuts.





Eleanora Dudderar, Glenn's wife, likes these recipes because they are quick and easy — especially if Glenn uses them.

Choose only the most tender of the steaks — the tenderloin, the loin or the round steaks — and place them on a broiling platter or pan coated with cooking spray or oil. Baste the steaks with olive oil, butter, margarine or lemon juice, according to your taste and dietary needs. As an alternative, cover the steaks with a strip of bacon. Place the broiling platter or pan on a middle oven rack and broil for approximately 5 to 7 minutes per side. When you turn the steaks, be sure to baste the second side as directed or cover with the strip of bacon. If the steaks are 1 inch thick, broiling for approximately 5 to 7 minutes per side will cook the steaks to medium rare or medium. Adjust the cooking times as necessary or according to your taste, but avoid cooking to well done. Venison cooked beyond medium well is usually dry and chewy.

Boil venison spareribs for at least 20 minutes to remove as much of the fat between the layers of meat.

Grind your venison with 30 percent lean pork shoulder or with 5 to 10 percent beef fat. Pat the ground venison into burgers exactly as you would ground beef. Broil on a broiler platter or pan on a middle oven rack. Cook until meat is 165 degrees F. Do not cook to well done or very well done.

Rinse the liver with cold, clean water and inspect it for any discoloration. A healthy liver is purple-pink. Liver with off-colored (yellow, gray or white) spots should be discarded. After inspecting the liver, cut away all fatty tissue and any connective tissue, and cut out the large blood vessels and ducts that run through the liver.

As you remove the blood vessels and ducts from the liver, you may encounter large, white flatworms



◁M▷|◁C▷H▷|◁G▷A▷N▷ ◁V▷E▷N▷|◁S▷O▷N▷

Then slice the liver into pieces no thicker than 1/2 inch, preferably about 1/4 inch. Season to taste with salt, pepper and flour, and fry the slices in a skillet with melted margarine or butter and sliced onions. Cook thoroughly but do not overcook. Venison liver is best when it's cooked while fresh. It makes an excellent evening meal in deer camp.

You can make a roast by rolling shoulder or neck meat into a cylinder and tying it with string. Before you roll it, season the side of the meat that will be on the inside of the roll with the seasonings of your choice. Many of the dried instant soup mixes are excellent for this purpose, especially the vegetable soup mixes. Large rolled roasts from the neck and shoulder can be tied and cut into smaller roasts of desired size. Coat the meat with a mixture of salt, pepper and flour, and brown all sides in your choice of cooking oil. If you are going to

A 1-pound venison roast will usually cook in 10 to 15 minutes at 10 pounds pressure, so you may wish to add fresh vegetables of your choice at this time. Most fresh vegetables, if cut into large pieces, will cook in approximately the same time. If you wish to use frozen vegetables instead, cook the roast at pressure for 10 to 12 minutes, then remove the cooker from heat until the pressure is completely gone, add the desired frozen vegetables, return the cooker to the heat, bring the pressure up to 10 pounds pressure and cook for approximately 2 additional minutes. Most frozen vegetables require approximately 2 minutes of pressure to cook thoroughly. If you're using a roasting pot, cover and cook the meat over low heat for 1 to 2 hours or until the meat is tender. Then add fresh vegetables and cook until the vegetables are done.

Slice the heart open and remove all blood vessels and all the tough tissue lining the inside of the heart. Slice the heart crosswise into pieces 1/4 inch thick. Season to taste and fry in olive oil, melted





## Venison Kabobs

If you're cooking on an open barbecue grill, wait until the coals are completely white, then grill the cubes approximately 10 to 15 minutes on one side. Continue turning and grilling until the other sides are done. If you do not wish to use barbecue sauce, lower the grill as close as possible to the coals, sear the cubes quickly on all six sides, and then cook for approximately 5 to 10 minutes, turn and cook for another 5 to 10 minutes for medium to medium rare cubes.

## Food Safety

Whenever preparing food, it is important to follow these four steps to keep your food safe from harmful bacteria.

- **Clean:** Wash hands and surfaces often. Bacteria can spread throughout the kitchen and get onto cutting boards, utensils, sponges and countertops.
- **Separate:** Don't cross-contaminate. Cross-contamination is the scientific word for the spread of bacteria from one food product to another. When handling raw meat, keep these foods and their juices away from ready-to-eat foods.
- **Cook:** Cook to proper temperatures. Food safety experts agree that foods are properly cooked when they are heated for a long enough time and at a high enough temperature to kill the harmful bacteria that cause foodborne illness. To be safe, venison should be cooked to 165 degrees F.
- **Chill:** Refrigerate promptly. Refrigerate foods quickly because cold temperatures keep harmful bacteria from growing and multiplying. Set your refrigerator no higher than 40 degrees F and the freezer unit at 0 degrees F. Check these temperatures occasionally with an appliance thermometer.

\*Adapted from the Fight BAC campaign from the U.S. Department of Agriculture and the U.S. Food and Drug Administration.



## Recipes

The following Michigan venison recipes have been modified to reduce fat and sodium content. Some have been used for years by loggers and backwoodsmen. Others are quite new. All of them are worth trying.



### BARBECUED DEERBURGERS

If you happen to get a deer that has a very strong wild flavor, here is one way to prepare the meat to make it delicious. It's so good on toasted buns and easy to make for a crowd.

Temp: 400 degrees F to brown, 250 degrees F to finish.

Time: About 20 minutes to brown, 1/2 hour to finish.

3 Tbsp. fat, oil or drippings	2 tsp. salt (optional)
2 pounds ground venison	1/4 tsp. pepper
1 cup onion, chopped	2 Tbsp. Worcestershire sauce
1 cup celery, finely diced	1/4 cup vinegar
1/2 large green pepper, chopped fine	1 Tbsp. brown sugar
1 clove garlic, minced (optional)	2 tsp. dry mustard
1/2 cup chili sauce	1 tsp. paprika
1/2 cup catsup	2 tsp. chili powder
1 3/4 cups water	2 Tbsp. chopped parsley

Preheat frying pan. Add fat, oil or drippings and melt. When hot, add meat, onions and celery. Brown, stirring frequently. Spoon off excess fat. Combine remaining ingredients, except parsley. Mix well and pour over meat. Cover pan and simmer 30 minutes, stirring occasionally. Add parsley. Serve between hot buns or over mashed potatoes, rice or noodles. Serves 8 to 10.





## BARBECUED VENISON NO. 1

- Mix all ingredients except venison in large saucepan. Cook over low heat for about 30 minutes or until sauce is thick. Slice rump roast into the bubbling sauce and simmer until meat is just heated through. Serve on hard rolls crisped in oven. Makes 10 hearty sandwiches.

Brown onions in salad oil. Add remaining ingredients except venison. Arrange meat in casserole dish. Pour sauce over meat. Bake at 375 degrees F for 20 minutes, or until sauce thickens.

Heat oven to 375 degrees F. Brown ground venison in large, heavy skillet. Add celery and onions. Cook and stir 3 minutes. Reduce heat. Stir in soup, corn, beans and seasonings. Pour into 2-quart casserole dish. Bake uncovered 20 minutes. Top with corn chips. Bake 10 to 15 minutes, or until chips are slightly toasted. Serves 8. Variation: Omit corn chips. Bake 35 minutes. Serve with corn bread.



## VENISON AND RICE CASSEROLE

Vegetable oil, margarine or non-stick cooking spray

2 pounds ground venison

Pepper and salt, if desired

2 cups celery, diced

2 cups onion, diced

1 green pepper, chopped

1 can mushroom soup

1 can chicken rice soup

1 cup uncooked rice

Brown venison in a little oil, margarine or non-stick cooking spray in large frying pan. Add salt (if desired), pepper, celery, onion and green pepper, and heat thoroughly. Combine remaining ingredients and pour over meat and vegetables. Simmer for 1 hour at 300 degrees F. Serves 8.

## CHILI

Vegetable oil, margarine or non-stick cooking spray

2 pounds ground venison

2 cloves garlic, minced

1 tsp. paprika

2 Tbsp. chili powder

1 Tbsp. salt, if desired

1 Tbsp. white pepper

1 Tbsp. diced chili pods

1 quart water

Brown meat in a little oil, margarine or non-stick cooking spray. Add seasonings. Add enough water to cover meat. Cook slowly 4 to 5 hours, stirring occasionally. Add remaining water as needed. Serves 8.

## VENISON CHOP SUEY

1 pound venison, cubed

Vegetable oil, margarine or non-stick cooking spray

1 cup onion, chopped

2 cups celery, chopped

2 Tbsp. molasses

2 Tbsp. soy sauce

1 can bean sprouts

2 Tbsp. cornstarch

Rice or chow mein noodles

Cook venison in a little oil, margarine or non-stick cooking spray; do not brown. Add onion, celery, molasses and soy sauce. Cook 5 minutes. Drain bean sprouts. Reserve liquid. Mix cornstarch and reserved liquid. Add slowly to meat mixture. Cook until thickened. Add bean sprouts. Heat thoroughly. Serve over cooked rice or chow mein noodles, if desired. Serves 6.





# ◁ M I C H I G A N ▷ V E N I S O N ▷

## DEERBURGERS (with suet)

2 pounds lean venison, ground  
1/8 to 1/4 pound suet  
A handful moist bread

Sliced onion  
Salt (optional)  
Pepper

Mix well, shape and fry.

## DEERBURGER SKILLET MEAL

Non-stick cooking spray, vegetable oil  
or margarine

1/2 pound ground venison  
1/2 medium onion, chopped  
1/2 green pepper, chopped  
1 cup tomatoes, canned

1/2 tsp. Worcestershire sauce  
1/2 tsp. salt (optional)  
1/16 tsp. pepper  
3/4 cup water  
3 ounces noodles

Brown venison in non-stick cooking spray, vegetable oil or a little margarine. Add chopped onion and green pepper and continue cooking until onion is light brown. Add all ingredients except noodles. Stir and heat to boiling. Spread uncooked noodles over the top. Cover tightly. Simmer for 15 minutes or until noodles are tender and have absorbed most of the liquid. Serves 2 to 4.

## VENISON GOULASH

This is simplicity itself, and it uses the tougher portions of venison that are usually ground into deerburger. Chuck portions are ideal.

2 pounds small white onions, sliced  
4 ounces canned vegetable shortening  
or vegetable oil  
3 pounds stewing venison, cubed

1 Tbsp. marjoram  
1 1/2 Tbsp. paprika  
2 cans beef broth  
Noodles (if desired)

Saute onion slices in shortening until soft. Add cubed venison and brown on all sides. Sprinkle marjoram and paprika over meat and cover with beef broth. Cover pot and simmer slowly 3 hours or until meat is tender, stirring often and adding more warm beef broth from time to time. Gravy should be thick. Broad noodles are excellent with this gravy liberally spooned over them. Serves 8.



Heart may be fried, boiled or baked. Baked heart requires boiling prior to baking. Heart may be served hot or cold and sliced thin for sandwiches.

## BOILED HEART

Slice the heart open and remove all blood vessels and tough tissue lining the inside of the heart. Boil heart until tender.

## BAKED HEART

Slice the heart open and remove all blood vessels and tough tissue lining the inside of the heart. Boil heart until tender. Split heart open and fill with dressing. Put the rest of the dressing around the heart. (The heart will be better if completely covered.) Bake at 350 degrees F until dressing reaches 165 degrees F. Try this dressing:

- 1 large onion, diced  
1 cup celery, finely cut  
1/4 cup margarine (1/2 stick)  
1/2 loaf dry bread, cubed  
1 tsp. salt (optional)  
1/8 tsp. pepper  
1 tsp. sage  
Water

Cover onion and celery with a little water and simmer until tender. Add margarine and leave until melted. Mix bread cubes, salt, pepper and sage. Pour the liquid over the bread and stir until moist.

**LIVER** (See "Quick and Easy" section, pp. 20 - 21).





# ◀ M E A T B A L L S ▶ V E N I S O N ▶

## MEATBALLS

2 pounds ground venison  
2 tsp. salt (optional)  
1/4 tsp. pepper  
1 onion, chopped fine  
1 cup celery, chopped

1/2 cup green pepper, chopped  
4 eggs, slightly beaten, or 8 egg whites  
1 cup cracker crumbs, crushed  
2 Tbsp. shortening or vegetable oil  
Tomato sauce or tomato juice

Mix ground venison, salt (if desired), pepper, onion, celery, green pepper, eggs or egg whites, and cracker crumbs. Shape into small balls and brown thoroughly in shortening. Pour tomato sauce or tomato juice over the meatballs. Cover and simmer for about 1 hour. Serves 8 to 10.

## MEAT LOAF

1 egg or 2 egg whites  
1/2 cup dried bread crumbs  
1 cup lowfat milk

1 pound ground venison  
1/2 pound ground pork  
1/2 Tbsp. onion, chopped  
1 1/2 tsp. salt (optional)

Beat egg or egg whites; add bread crumbs and milk. Mix thoroughly with meats. Add onion and salt, if desired. Put in greased pan and bake at 350 degrees F for 1 hour. Tomato and green pepper may be added for seasoning. Serves 4.

## MEAT PIE

1 large onion, chopped  
2 Tbsp. vegetable oil  
1 pound ground venison  
1 tsp. salt (optional)  
1/4 cup canned green chilies, chopped  
(about 2 small peppers; optional)

1/8 tsp. oregano  
1 can (8 ounces) tomato sauce  
2 cups biscuit mix, prepared according to directions on package  
1/2 cup American cheese, shredded

In 10-inch cast-iron frying pan, cook onion in oil until wilted. Add ground venison, salt (if desired), green chilies and oregano. Cook until brown, breaking meat with a fork. Add undiluted tomato sauce and heat. Pat out biscuit dough on a piece of floured waxed paper to a 10-inch circle. Cut into wedges and place paper side up on top of the "filling." Peel off paper and bake in hot oven (425 degrees F) for 15 to 20 minutes or until brown. Turn upside down on a broiler pan. Sprinkle with shredded cheese and slip under the broiler for a few minutes to melt the cheese. Serves 6.



# ◁ M I N C E M E A T ▷ V E N I S O N ▷

## MINCEMEAT NO. 1

4 pounds of cooked venison  
5 pounds of apples, chopped  
1/2 pound beef suet, ground  
2 pounds currants  
4 pounds seedless raisins  
2 pounds crushed pineapple  
2 cups white sugar

2 cups brown sugar  
2 scant Tbsp. salt (optional)  
2 Tbsp. cinnamon  
1 Tbsp. vanilla  
1 tsp. cloves  
1 tsp. allspice  
3 quarts cider (sweet)

Combine all ingredients in a large pot. Cook slowly for 2 hours. Cool in the refrigerator in a shallow pan, pour into freezer containers and freeze. May be frozen up to 6 months. Refrigerated mincemeat may be stored up to 1 week.

## MINCEMEAT NO. 2

2 pounds cooked venison, chopped in food grinder  
4 pounds apple, chopped  
2 pounds raisins  
4 cups brown or white sugar  
3/8 pound shortening

1/2 tsp. cloves  
1 tsp. mace  
1/2 tsp. nutmeg  
2 tsp. salt (optional)  
1-1/2 tsp. cinnamon  
Cider

Mix all ingredients except cider. Add cider to cover mixture or use fruit juices or water with 1/2 cup vinegar. Cook slowly until fruits are tender (about 1 hour). Cool in the refrigerator in a shallow pan, pour into freezer containers and freeze. May be frozen up to 6 months. Refrigerated mincemeat may be stored up to 1 week.





1 tsp. salt (optional)



Roll out second half of dough and place in other half of pie plate. Fill with the remaining meat mixture. Fold dough over into half-moon shape. Seal and crimp edges. Do not slit dough. You will have two half pies or pasties. Bake at 375 degrees F for 1 hour and 10 minutes. Pierce crust and vegetables with sharp fork to be sure vegetables are tender. Serves 4.

## RIBS (CHINESE STYLE)

4 pounds of venison ribs

1/2 cup soy sauce

1/2 cup cooking sherry (optional)

1/2 cup water

4 Tbsp. brown sugar

2 cloves garlic, crushed

Preheat oven to 350 degrees F. Arrange the racks of ribs in a large roasting pan. Combine all other ingredients, stir well and pour over ribs. Cover pan. Bake 45 minutes, turning ribs over once or twice. Remove cover and continue cooking until golden brown and well done. Baste with sauce or turn ribs occasionally. For crispy brown ribs, try to arrange in roaster in single layer. Serves 6 to 8.

## ROASTING VENISON

For roasting venison in moist heat, a favorite way is to lay out a piece of aluminum foil large enough to wrap the roast. Sprinkle half of a package of dehydrated vegetable soup mix on the aluminum foil. Place the thawed roast on top of it and spread the rest of the vegetable mix on top of the roast. Wrap the aluminum foil tightly around the roast and place it in an oven preheated to 350 degrees F. Cook the average 2- or 3-pound venison roast for 2 1/2 hours, until the thickest portion of the roast reaches 165 degrees F. The meat will be juicy and moist.

## POT ROAST NO. 1

### A neck or shoulder roast

3 Tbsp. vegetable oil

## Mustard

1/2 tsp. salt (optional)

1 clove garlic, crushed

1 medium onion

2 bay leaves

Pepper to taste

1/2 cup vinegar

Water

Brown roast on all sides in Dutch oven. Cover roast thinly with mustard. Add garlic and onion, bay leaves, salt (if desired) and pepper to taste. Add vinegar and some water, and cook in Dutch oven at 350 degrees F until the thickest portion of the meat reaches 160 degrees F, adding water as needed.





# ◀ M I C H I G A N • V E N I S O N ▶

## POT ROAST NO. 2

4 to 5 pounds venison  
Pepper and salt (optional)  
6 slices salt pork, 1/8 inch thick  
2 lemons

2 Tbsp. Worcestershire sauce  
1 medium onion, chopped  
Hot water, if needed

Remove all fat from venison roast. Season with salt (if desired) and pepper. Line a roasting pan with salt pork that has had excess salt washed off. Place roast in pan. Add the juice of one lemon, Worcestershire sauce, chopped onion and slices of the other lemon. Cover and cook at 350 degrees F until thermometer inserted in the thickest portion of the roast reaches 160 degrees F. Add a small amount of hot water as needed. Serves 12 to 16.

## VENISON SAUERBRATEN

2 pounds venison chuck, round or rump roast  
6 peppercorns  
5 whole cloves  
3 bay leaves  
1 cup vinegar  
Water to cover

3 Tbsp. fat  
6 carrots  
6 onions  
1 cup celery, diced  
1 Tbsp. sugar  
10 gingersnaps, crushed

Trim all visible fat from venison. Place venison in glass dish with cover. Add peppercorns, cloves and bay leaves to vinegar and pour over meat. Add enough water to cover meat. Cover dish and refrigerate. Allow to stand for up to 3 days. Remove meat from marinade. Reserve liquid for gravy. Heat fat in heavy frying pan. Brown meat on both sides. Add vegetables and 2 cups of vinegar marinade. Simmer until meat and vegetables are tender — approximately 1 1/2 hours. Remove meat and vegetables from pan. Add sugar and gingersnaps to remaining liquid to make gravy. Serve meat and vegetables with gravy. Serves 8.

(Note: For a less spicy flavor, substitute beef consomme' for spiced vinegar when cooking meat. Larger amounts of venison may be prepared this way if your family likes sauerbraten.)



# ◀ M I C H I G A N ▶ V E N I S O N ▶

## DEERBURGER SOUP

1 to 2 pounds deerburger  
2 Tbsp. vegetable oil  
1 cup onion, diced  
1 cup raw potatoes, cubed  
1 cup carrots, sliced  
1 cup cabbage, shredded  
1/4 cup uncooked rice

Beef concentrate to taste  
1 small bay leaf, crushed  
1/2 tsp. thyme  
2 tsp. salt (optional)  
1/8 tsp. pepper  
1 1/2 quarts water  
1 No. 2 can tomatoes

Brown deerburger and onion in oil in large kettle. Add potatoes, carrots, cabbage and water. Bring to boil. Sprinkle rice into mixture. Add remaining ingredients, except tomatoes. Cover and simmer for 1 hour. Add tomatoes just before serving. Skim off fat, if necessary. Serves 8.

## CREOLE STEAK

1 large round steak  
Flour  
Salt (optional) and pepper  
Vegetable oil, margarine or non-stick cooking spray

3 stalks celery, chopped  
1/2 green pepper, chopped  
3 large onions, chopped  
1 cup tomatoes

Pound flour, salt (if desired) and pepper into steak. Brown in vegetable oil, margarine or non-stick cooking spray. Cover with celery, green pepper and onions. Add tomatoes. Cover tightly and cook slowly until meat is tender (about 1 1/4 hours).

## FRESH STEAK

Cut steaks 1 inch thick. Put between waxed paper and flatten with mallet or side of a cleaver until 1/4 inch thick. Heat frying pan. Add the steaks and keep shaking the pan so steak does not stick. If desired, salt and pepper lightly while cooking. Turn just once, but keep shaking the pan all the time. Serve hot.





# ◀ M I C H I G A N • V E N I S O N ▶

## MARINATED STEAK

Steaks 1/4 to 1/2 inch thick  
1 quart vinegar  
1 quart water  
2 Tbsp. salt (optional)

8 bay leaves and/or  
8 whole cloves

In the refrigerator, marinate steaks 12 to 24 hours in liquid made from above ingredients. Remove, drain and rinse in cold water. Dry on cloth or paper toweling. Salt (if desired) and pepper to taste. Fry at medium heat in margarine or non-stick cooking spray.

## PAN-FRIED VENISON STEAKS

1 pound round steaks, 1/2 inch thick  
1/4 cup evaporated milk  
1/4 cup flour

1 Tbsp. margarine  
Salt (optional) and pepper to taste

Pound steaks thoroughly with sharp-edged meat pounder. Cut into serving pieces. Dip steaks into milk and dredge in flour. Brown one side in hot margarine. Turn. Salt (if desired) and pepper to taste. Continue browning until second side is well browned. Serves 4.

## STEW

1 1/2 pounds venison (any part cut in pieces for stew)  
6 medium potatoes, cut in chunks  
6 carrots, cut in chunks

3 celery stalks, cut in 2-inch lengths  
1 package onion soup mix  
1 8-ounce can tomato sauce  
1 2-ounce can mushroom bits and pieces

Put venison, potatoes, carrots and celery in casserole dish and sprinkle with onion soup mix. Add tomato sauce and mushrooms. Cover tightly, either with lid or aluminum foil. Place in oven at 350 degrees F and bake 1 1/2 hours, or until venison is tender. Serves 6.



# ◀ M I C H I G A N ▶ V E N I S O N ▶

## STROGANOFF

1/4 cup vegetable oil  
2 pounds venison cut in strips 1/2 inch  
by 1/2 inch by 2 inches  
1/4 cup flour  
1 envelope onion soup mix

3 cups water  
1 can cream of mushroom soup  
6 Tbsp. catsup  
Noodles, rice or mashed potatoes

Heat oil. While oil is heating, shake meat in flour to coat. Saute until browned. Add onion soup mix and water. Simmer until venison is tender (1 hour or more). Add cream of mushroom soup and catsup. Heat thoroughly and serve over cooked noodles or rice, or mashed potatoes. Serves 6.

## CANNING VENISON

Choose quality chilled meat. Remove excess fat. Soak strong-flavored meat for 1 hour in the refrigerator in a brine solution containing 1 tablespoon salt per quart of water. Rinse. Remove large bones. **Hot-pack:** precook meat until rare by roasting, stewing or browning in a small amount of fat. Add 1 teaspoon of salt per quart to the jar, if desired. Fill jars with pieces of venison and add boiling broth, meat drippings, water or tomato juice, leaving 1 inch headspace. Adjust lids and process, using information in the charts below.

**Table 2. Recommended process times for strips, cubes or chunks of meat in a dial-gauge pressure canner.**

Style of pack	Jar size	Process time	Canner pressure (PSI) at altitudes of			
			0-2,000 ft.	2,001-4,000 ft.	4,001-6,000 ft.	6,001-8,000 ft.
Hot/raw	pints	75 min.	11 lb.	12 lb.	13 lb.	14 lb.
Hot/raw	quarts	90 min.	11 lb.	12 lb.	13 lb.	14 lb.

**Table 3. Recommended process times for strips, cubes or chunks of meat in a weighted-gauge pressure canner:**

Style of pack	Jar size	Process time	Canner pressure (PSI) at altitudes of	
			0-1,000 ft.	Above 1,000 ft.
Hot/raw	pints	75 min.	10 lb.	15 lb.
Hot/raw	quarts	90 min.	10 lb.	15 lb.

Source: Complete Guide to Home Canning. Agriculture Information Bulletin No. 539. 1994. USDA.





Before the advent of refrigeration, various methods of preserving meat were practiced. Drying, smoking and salting of meat to prevent spoilage were common. These practices antedate recorded history, and they were common by 1000 B.C. The Spaniards who came to North America following Columbus found dried meat (jerky) in use by the Indians. Meat was cut into thin strips and often dried without seasoning. The strips of meat were hung in trees, on poles, or in the tops of huts or tepees out of the reach of dogs. When the meat became hard, it was powdered and mixed with dried berries and corn or other dried fruits and vegetables to form pemmican. Animal fat was often added. In this form, the dried meat was transported in skins and was the principal food whenever tribes were migrating. Pemmican was often soaked four or five hours and boiled into a stew.

In recent years, jerky has again become a popular item. It can be purchased at the grocery, in sporting goods stores, in bars and even in some gas stations. As a result of its popularity, recipes for homemade jerky are in demand. The purpose of this section is to outline several methods of making jerky. All of the recipes listed can utilize meat from domestic sources or from big game. For example, the same recipe will produce beef or venison jerky.

**NOTE:** Because of recent food poisoning outbreaks, it is recommended to bring jerky to 165 degrees F and avoid cross contamination with raw foods after this temperature is reached. This can be done either before or after drying at 120 degrees F. If it is done before drying, the drying process will take less time. Care should be taken to assure texture is not changed.

The Indians frequently used the loin or tenderloin, but any muscle from any place in the carcass can be used. Muscles from the round or leg are most often used today. It is recommended that muscles be removed from the carcass and made into jerky the day after the kill to prevent unnecessary bacterial growth. However, aged meat can be used. Meat that has been frozen and thawed can also be used satisfactorily. Freezing meat for a month at 0 degrees F or below before jerky is made ensures that it will be free from live parasites that are rarely found in venison. To have freshly made jerky during the year, many people freeze meat that is to be made into jerky, then thaw it in small quantities and make it into jerky as it is needed. Meat should be trimmed of fat and connective tissue and then cut into strips 1/4 inch thick, 1 inch wide and up to a foot long. Cut with (not across) the grain. Small muscles, 1 or 2 inches in diameter, are often separated and made into jerky without being cut into strips. These thicker pieces of meat take longer to absorb the salt and seasonings and longer to dry, but with these exceptions, no changes in the jerky recipes need to be made. Some recipes call for drying jerky in the sun. Because of sanitation problems, this method is not recommended. If sun



# ◀ M I C H I G A N ◀ V E N I S O N ▶

drying is used, the jerky should be cut into strips 1/4 inch thick or less. The color of finished jerky ranges from light brown to black. Color variations depend on the recipe used, the species of animal and the age of the animal. The latter two factors are related to the myoglobin concentration in fresh meat. Myoglobin is the substance in meat responsible for color. Higher levels of myoglobin result in darker colored jerky.

## CHECKLIST FOR MAKING JERKY

1. Use fresh, lean meat free of fat and connective tissue.
2. Slice the meat with the grain, not crosswise.
3. Add the correct amount of seasoning. If you do not have a scale, use approximate equivalent measures for the jerky recipes as follows:

Salt.....	10.5 oz (298 g) = 1 cup
	8.0 oz (227 g) = 3/4 cup
	2.0 oz (57 g) = 3 level Tbsp.
Sugar.....	5.0 oz (141 g) = 2/3 cup
	3.5 oz (99.2 g) = 1/2 cup
	1.0 oz (28 g) = 2 level Tbsp.
Ground spices.....	0.50 oz (14.2 g) = 2 level Tbsp.
	0.08 oz (2.3 g) = 1 level tsp.

4. Cure the meat the correct length of time at refrigerator temperatures. Salted meat should be placed in plastic, wooden, stainless steel or stone containers.
  5. Oven or smokehouse temperatures of 170 to 190 degrees F are often recommended for the first 30 minutes, or until the meat reaches 165 degrees F. Keep the drying or smoking temperature in the smokehouse or oven at 120 degrees F or below after the first 30 minutes (use a thermometer).
  6. If an oven is used, line the sides and bottom with aluminum foil to catch the drippings. Open the door to the first or second stop to allow moisture to escape and to lower the oven temperature when necessary.
  7. Use any hardwood for smoking. Do not use pine, fir or other conifers.
  8. Remove the jerky from the smokehouse or oven before it gets too hard for your taste. Five pounds of fresh meat should weigh approximately 2 pounds after drying or smoking.
  9. Store jerky in clean jars or plastic bags, or wrap it in freezer paper and freeze it. Although jerky will last almost indefinitely at any temperature, its quality deteriorates after a few months.
  10. Alter seasonings and smoking or drying times to suit individual tastes.
- Examples of spices that could be added to 5 pounds of meat in the recipes below:  
2 Tbsp. chili powder, 2 Tbsp. garlic powder, 2 Tbsp. onion powder, 1 tsp ginger, 2 Tbsp. coriander or 1 tsp allspice.





## **SIMPLE DRY-CURED JERKY**

1. Prepare 5 pounds of meat as described above (1/4-inch strips).
2. Spread out meat and sprinkle on 2 ounces salt (3 Tbsp.), 0.16 ounce ground pepper (2 tsp.) and 1 ounce sugar (2 Tbsp.).
3. Put the meat in a pan or dish and let stand 24 hours in the refrigerator.
4. Dip strips of meat in liquid smoke 1 to 2 seconds for added flavor (optional).
5. Spread meat out in the top half of a kitchen oven on a rack to dry. Heat the meat to 165 degrees F for 30 minutes. Open the oven door to the first or second stop. Heat at 120 degrees F (lowest temperature) for 48 hrs or until the desired dryness is reached. Use an oven thermometer to make sure the oven does not get hotter than 120 degrees F. Higher temperatures result in hard, brittle jerky that crumbles when it is eaten.

## **PICKLE-CURED JERKY**

1. Cut the meat into 1/4- by 1-inch strips.
2. Make a brine as follows:
  - 1 gallon water
  - 8 ounces salt (3/4 cup)
  - 3.5 ounces sugar (1/2 cup)
  - 0.5 ounce ground pepper (2 Tbsp.)
3. Stir to dissolve salt and sugar.
4. Put the meat strips into the brine and leave them in the refrigerator overnight.
5. Pour off the brine and let cold tap water run on the meat in a container for one hour.
6. Hang the strips of meat in a smokehouse, heat at 170 degrees F until meat reaches 165 degrees F, then dry at 120 degrees F until the jerky is the desired texture. Use any hardwood for smoking.

NOTE: An oven, as described under "Simple Dry-cured Jerky," can be used if a smokehouse is not available, but the smoked flavor will be lacking. In addition to pepper, some people add 10 bay leaves, 1 tsp of cloves or 1 tsp of sage (or all of these) to the above brine.



NOTE: Hot pickle-cured jerky is preferred by some because the boiling brine sterilizes the surface of the meat before the meat is dried.

4. Oven-dry or smoke in a smokehouse as described for pickle-cured jerky.

6. Slice into thin strips with a knife or a pair of kitchen shears. NOTE: Ground meat can be used if it is 10 to 15 percent fat or less and if care is taken to make sure the spices are thoroughly mixed into the meat.





# ◀ M I C H I G A N ▶ V E N I S O N ▶

## MAKING SAUSAGE

### CASINGS

Most sausages are molded and processed in casings. Casings serve as the container for sausage products during handling. Before 1920, all sausage casings were prepared from animal intestines. Today's sausage casings include several types of synthetic casings. For example, regenerated cellulose casings are used in the preparation of the major portion of today's sausage production.

Pork casings, pickled or preserved in dry salt, are obtainable from many locker plants. Beef casings, sheep casings and artificial casings are also often available from some locker plants or places where sausage is made. The use of casings can be avoided if fresh game sausage is made into patties and if cooked sausage such as salami is made in loaf pans. Sausages cooked in loaf pans may require the addition of bread crumbs, soy protein concentrate or other binder at the 5 to 10 percent level to prevent excessive fat and moisture separation.

All casings preserved in dry salt must first be soaked in lukewarm water for approximately 30 minutes before use. Flush each case by putting the end of the casing over the cold water tap and running cold water through the casing. Unused casings can be drained, covered again with fine salt and frozen.

Some artificial casings should be soaked in hot tap water (100 degrees F) at least 30 minutes but not over 4 hours before use and punctured with a knife point before sausage is stuffed. The purpose of puncturing the casing is to eliminate air and fat pockets in the finished sausage.

### FRESH GAME SAUSAGE

17 pounds lean boneless meat  
8 pounds ground pork or beef (25 to 30 percent fat)  
3/4 cup (8 ounces or 227 grams) salt

6 Tbsp. (42 grams) ground black pepper  
5 Tbsp. (14 grams) rubbed sage

Grind venison through a 1/2- to 3/4-inch plate. Add seasonings by sprinkling over the meat, and add pork or beef. Mix thoroughly. Then grind through a 3/16-inch plate. The sausage can be wrapped and frozen, formed into patties or stuffed into casings. Note: This is a mild sausage. For a spicy or hot formulation, add an additional:

2 Tbsp. red pepper  
1 Tbsp. nutmeg

1 Tbsp. ginger  
1 Tbsp. mace



# ◁ M I C H I G A N ▷ V E N I S O N ▷

## BOCKWURST

19 pounds lean venison

6 pounds ground pork or beef (25 to 30 percent fat)

3/4 pound nonfat dry milk

3/4 cup (8 ounces or 227 grams) salt

2 quarts ice

3 eggs or six egg whites

2 Tbsp. (28 grams) sugar

3 Tbsp. (18.9 grams) onion powder

4 Tbsp. (26.4 grams) ground white pepper

1 Tbsp. (5.4 grams) ground mace

1 Tbsp. (4.8 g) ground ginger

Grind venison through a 1/2- to 3/4-inch plate. Add seasonings by sprinkling the ingredients over the meat, and add pork or beef. Mix thoroughly and grind through a 1/4-inch plate while adding ice. Regrind through a 1/8-inch plate. Stuff into hog or collagen casings. Cook in water at 170 degrees F. Use a meat thermometer and cook to 165 degrees F internal temperature. Immediately immerse in cold water until sausage reaches an internal temperature of 100 degrees F. Blot dry. Refrigerate at 32 to 38 degrees F.

Note: This product may be refrigerated after stuffing and cooked from the fresh state for immediate consumption.

## COOKED SALAMI

19 pounds lean boneless venison

6 pounds ground pork or beef (25 to 30 percent fat)

1 cup (10.5 ounce or 298 grams) salt

1/2 cup (100 grams) sugar

1 quart ice

4 Tbsp. (29.6 grams) ground black pepper

3 Tbsp. (13.5 grams) garlic powder

3 Tbsp. (14.5 grams) coriander seed

4 tsp. (7 grams) ground mace

4 tsp. (7 grams) ground cardamom

3 tsp. (21 grams) cure\*\*

Grind venison through a 1/2- to 3/4-inch plate. Add seasonings by sprinkling the ingredients over the

meat, and add pork or beef. Mix thoroughly. Then grind through a 1/4-inch plate while adding ice or water. Regrind through a 1/8-inch plate. Stuff into artificial or natural casings 2 to 3 inches in diameter. Hang in smokehouse and heat at 180 degrees F while smoking. Use a meat thermometer and cook to an internal temperature of 155 degrees F. Chill in a cold water bath until internal temperature is 100 degrees F. Refrigerate to 32 to 38 degrees F before slicing. \*\*See note on cure on p. 42.





# ◀ M ◀ E ◀ A ◀ T ◀ I ◀ N ◀ G ◀ A ◀ N ◀ V ◀ E ◀ N ◀ I ◀ S ◀ O ◀ N ◀

## PEPPERONI

22 pounds lean venison  
3 pounds ground pork or beef (25 to 30 percent fat)  
15 ounces (426 grams) salt  
2 1/4 ounces (64 grams) cane sugar (dextrose)

3 tsp cure\*\* dissolved in 1 cup water  
3/4 cup (75 grams) ground red pepper  
3/4 cup (64 grams) ground allspice  
1 Tbsp. (5 grams) garlic powder  
5 Tbsp. (28 grams) fennel seed

Grind venison through a 1/2- to 3/4-inch plate. Add seasonings by sprinkling the ingredients over the meat, and add pork or beef. Mix thoroughly. Then grind through a 1/8-inch plate. Let stand in a 6-inch-deep tray at 38 degrees F for 72 hours. Stuff in hog casings. Heat in 170 degree F smokehouse to 155 degrees F. Reduce smokehouse temperature to 90 degrees F and dry for 48 hours. Refrigerate until needed.

## COUNTRY-STYLE BOLOGNA

17 pounds lean venison  
8 pounds ground pork or beef (25 to 30 percent fat)  
1 quart ice  
1 cup (10.5 ounces or 298 grams) salt  
0.7 pound nonfat dry milk

3 Tbsp. (42 grams) sugar  
3 tsp. (21 grams) cure\*\* dissolved in 1 cup water  
8 tsp. (12 grams) ground coriander seed  
5 Tbsp. (34 g) white ground pepper

Grind venison through a 1/2- to 3/4-inch plate. Add seasonings by sprinkling the ingredients over the meat, and add pork or beef. Mix thoroughly. Then grind through a 1/4-inch plate while adding ice. Regrind through a 1/8-inch plate. Stuff into natural or fibrous casings. Hang in smokehouse and heat at 180 degrees F while smoking. Use a meat thermometer and cook to an internal temperature of 155 degrees F. Chill in a cold water bath until internal temperature is 100 degrees F.

Note: This product may also be water cooked in 160 to 165 degree F water to an internal temperature of 155 degrees F.

Note: Frankfurters can be made following this recipe. The difference is that franks are stuffed into smaller casings.

\*\*The cure mentioned contains 6.25 percent sodium nitrite, which gives a red, cured color to the sausage after heating and helps prevent botulinum toxin formation. Cures such as "Modern Cure" and "Prague Powder" can often be purchased from small commercial sausage makers. Complete cures such as Morton "Tender Quick" also contain sodium nitrite. When using a complete cure in this formulation, omit 1 cup salt and all cure, then add 1 cup (10.5 ounces or 298 grams) of "Tender Quick".



# ◁ M I C H I G A N ▷ V E N I S O N ▷

## POTATO SAUSAGE

4 pounds pork  
8 pounds venison  
13 pounds potatoes  
6 medium onions

3/4 cup salt  
1/3 cup pepper  
2 Tbsp. sugar  
Casings

Grind pork and venison as for hamburger. Peel and grind potatoes and onions (coarsely). Add salt, pepper and sugar. Mix together and put in casings that have been soaked in water for several hours or overnight. Put in casings as soon as potatoes are ground and mixed — potatoes will turn dark if allowed to stand. Tie ends and prick each ring in several places with a large needle. Place rings in kettle of water. Bring just to boil and simmer until the sausage reaches 165 degrees F. (Boiling too hard can cause rings to burst.) Cool, wrap and freeze. When ready to eat, thaw in refrigerator, then finish cooking in a little water, simmering about 10 minutes or until done. This makes about 35 rings the size of a small ring of bologna.







MSU is an Affirmative-Action Equal-Opportunity Institution. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, marital status, or family status. ■ Issued in furtherance of Extension work in agriculture and home economics, acts of May 8 and June 20, 1914, in cooperation with the U.S. Department of Agriculture. Margaret A. Bethel, Extension director, Michigan State University, E. Lansing, MI 48824. ■

This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned. This bulletin becomes public property upon publication and may be printed verbatim with credit to MSU. Reprinting cannot be used to endorse or advertise a commercial product or company. *Produced by ANR Communications and printed on recycled paper using vegetable-based inks.*

Major Revision 12:01-7.5M-KMF/FP, \$2.25, for sale only File: 23.71 (WILDLIFE)



