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Food Facts For You!

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Cooking Ham and other Ready-to-Eat Pork Products; So Easy to Preserve! Video Series; When It's Time to Store Canning Supplies; Home Processing of Venison; New "Smart Kids Fight BAC!®"; Pink Color of Cooked Poultry; What's On Your Mind? (cooking resources online; avian flu)

Cooking Ham and other Ready-to-Eat Pork Products

Most hams are fully cooked and simply need to be reheated thoroughly before serving. Cooking this meat at holiday time, or any time, is easy to do. Just remember that proper handling of ready-to-eat products, such as ham, is an important step in offering a safe product for your family gathering.

What is ham? Ham (cured ham) is pork leg meat that has been dry- or wet-cured. Hams are labeled according to the amount of water added to the ham during the curing process. Because the leg muscle is a well-exercised part of the hog, ham is surprisingly low in fat.

What is curing? Pork and other meats can be cured by the addition of nitrite, salt, spices and flavorings. Nitrite is a compound that is added to cure pork products: ham, chops, hotdogs, etc. Nitrite binds to myoglobin in the muscle tissue and 'fixes' the color so that a pink color is retained on cooking. Nitrite also lends a cured flavor to meats and sausage and helps to prevent the production of botulinum toxin in these products. Nitrite, added as sodium nitrite (a salt), is present along with vitamin C (ascorbic acid or sodium erythorbate) as a cure accelerant.

Hams are dry-cured by rubbing nitrite, salt and spices into the meat's surface. Wet-curing involves a brine solution containing water, salt, sugar and spices that is pumped or injected into the ham. Dry-cured hams are known as 'country-style,' and are popular in the southern United States. Wet cured hams are more common in other parts of the country.

Cuts of pork that are similarly cured and then smoked but that are not the ham muscle are most often referred to as smoked products, i.e. smoked pork chops.

What types of ham are available? Wet-cured hams are most commonly available in three varieties. **Ham with natural juices** is a favorite for a dinner centerpiece. This type of ham has had little water added during the curing process. Its velvety texture and attractive appearance make it an ideal choice for holiday meals. **Ham with water added** retains more water during the curing process than ham with natural juices. This type of ham is ideal for steaks, thin-slicing and shaving. **Ham and water product** is a common type of ham, most often found at the deli counter. This type of ham has the most water

added of all the ham varieties. It is a great choice for ham that's intended to be served cold.

A specialty of the southern United States, **old-fashioned, country-style** or **Southern-style** ham is dry-cured and contains no added water. It is extremely salty and usually served in small portions, very thinly sliced.

How are hams sold? All varieties of cured ham are either boneless or bone-in. Bone-in hams are traditionally considered more attractive and boneless are considered easier to serve because of simplified carving. Bone-in hams are available in a variety of shapes - whole or as a shank or butt half. Boneless hams also are available in a variety of sizes.

How should ham be cooked? Most hams are fully cooked, as noted on the label. Cooked hams can be served cold or after warming in the oven. Uncooked hams **must** be heated to an internal temperature of 160° F. Follow these recommendations for cooking, or heating, pork products. [*Note: pork is a very lean meat and should not be overcooked. Cook raw pork products to 160°F internal temperature; reheat ham and other ready-to-eat products to 140°F.]

Cooking Method	Cut	Final Internal Temperature	Cooking Time (min per pound)
<u>Roasting – Raw Product</u> (325°F oven, minimum)	Loin Roast (2-5 pounds) Shoulder Roast (butt) (3-6 pounds) Tenderloin (1-1 ½ pounds)	160°F	20-30
<u>Grilling – Raw Product</u> (in-direct heat)	Loin Roast (2-5 pounds) Shoulder Roast (3-6 pounds) Tenderloin (1-1 ½ pounds) – direct heat	160°F	10-25
<u>Roasting – Cooked Product</u> (325°F oven, minimum)	Ham, fully cooked (bone-in) (10-14 pounds) Ham, fully cooked (boneless) (6-12 pounds) Spiral cut ham (7-9 pounds)	140°F 140°F 140°F	15-18 10-15 10-20

Note: Years ago, raw pork products were cooked to 180°F to ensure destruction of the parasite *Trichina spiralis*. *Trichina* has been virtually eradicated from the U.S. hog population, so pork can be safely consumed if cooked to an internal temperature of 160° F. When cooked to 160°F, pork meat may retain a slight pink color in the middle; however as long as the meat reaches 160°F it is considered safe to consume. Because pork is so much leaner now than it is used to be, over-cooking (above 160°F) will result in a dry product that is much less acceptable. When cooking larger cuts of pork, consider removing the roast from the grill or oven when the internal temperature reaches 150°F; allow to set for 10 minutes before slicing. The temperature of the roast will continue to rise to 160°F and the pork juices will redistribute throughout the roast before slicing.

So Easy to Preserve! Video Series

The National Center for Home Food Preservation has issued a revised version of the popular *So Easy to Preserve!* video series. A new web site is now dedicated to this popular book and video series: www.soeasytopreserve.com This new series is comprised of eight shows (20 to 35 minutes each) that contain the most up-to-date recommendations for preserving foods by a variety of methods. Features include: home canning of tomatoes; canning vegetables; canning fruits; freezing fruits and vegetables; drying fruits and vegetables; pickling; making jams and jellies; and, a show devoted to the canned specialties of hot chile salsa, mango chutney and a spicy jicama relish. The methods demonstrated continue the tradition of teaching USDA-recommended practices for food safety as well as high quality finished products.

The eight shows are distributed between two DVD disks; each disk also contains Home Canning Basics, a collection of 13 important illustrated concepts and procedures to review when canning or teaching canning.

Copies have been ordered for each county office. I hope to be able to ship those to you in February (Happy Valentines' Day!).

And a new (5th) edition of the book, *So Easy to Preserve*, is in the works and should be available in time for the 2006 canning season. I will let you know when those books are available and any significant changes from the 4th edition.

On the home front...There are two sessions of Master Food Preserver scheduled so far for summer 2006:

- Week of July 10th – Oconto County – contact Donna Doll-Yogerst
- July 24-26 – Clark County – contact Gayle Rose Martinez

My summer schedule is rapidly filling with Extension programs of many kinds, so if you would like to host a food preservation workshop this summer please contact me before the end of January. I will be convening a Wisline with a contact person from each of the host counties in early February.

When It's Time to Store Canning Supplies

(Note: This article appears on the web site for the National Center for Home Food Preservation: www.uga.edu/nchfp)

With frost on the pumpkin, many home food preservers are storing canning equipment until summer. Before packing up and forgetting about those items that served you so well this past preserving season, take time to give them a little tender loving care! You will be so glad you did next year when you see those first signs of vegetables in the garden and fruits beginning to ripen.

First, start with your biggest investment, the pressure canner. For safe operation next season, clean the vent and safety valve. To clean the vent, draw a clean string or narrow strip of cloth through the opening. Check to make sure the safety valve is free of debris and operates freely. Clean the valve by removing, if possible, or following the manufacturer's instructions.

Next, check the gasket which is the rubber or rubber-like compound that helps seal the edges of the canner and lid to prevent steam from escaping. Gaskets are removable for cleaning or replacement by following the manufacturer's directions. If needed, new

gaskets can be ordered from the canner manufacturer or found at hardware stores. (Some canners do not have gaskets and use a metal-to-metal seal instead.)

If your canner has a dial gauge, go ahead and mark your calendar now for a time to have your gauge tested in early summer. Contact your County Extension office for information on checking the accuracy of the gauge. This should be done well in advance of canning season so that if the gauge tests off more than 1 pound of pressure at 5, 10, or 15 pounds, it can be replaced. (*Note: Some canner manufacturers ensure the reliability of their gauges to within 2 pounds, not 1 pound. Consumers should contact the manufacturer of their canner before replacing their gauge if it is off by 2 pounds or less.)

Follow the manufacturer's directions for care of the sealing edges of your canner. If your canner has a dial gauge, be careful not to immerse the gauge when cleaning. The darkened surface on the inside of an aluminum canner can be cleaned by filling it above the darkened line with a mixture of 1 tablespoon cream of tartar to each quart of water. Place the canner on the stove, heat water to a boil, and boil, covered, until the dark deposits disappear. Sometimes stubborn deposits may require the addition of more cream of tartar. Empty the canner and wash it with hot soapy water, rinse and dry. (Hint: deposits from hard water may be reduced if you add 1 tablespoon of white vinegar to the water in the canner while you process your jars.)

Store the canner with crumpled clean paper towels in the bottom and around the rack. This will help absorb moisture and odors. Place the lid upside down on the canner. Never put the lid on the canner and seal it.

Once your canner is properly stored, take time to inventory jars and two piece lids. If properly used and stored, jars can last indefinitely. As you empty jars during the winter, check for any chips or breaks, wash and store in a safe place. Two-piece lids consist of a flat metal disc and a separate metal screw band. After canning, screw bands should be removed once the jars have sealed, instead of leaving them on the jars during storage. Wash and dry the screw bands completely and put them away in a dry place. Bands can be used over and over, unless they rust. The flat lid is used only once and then discarded after the jar of food is opened.

Designate a clean and dry storage area for your canning equipment and utensils. Use clear storage boxes, stackable racks, and other organizer accessories to make a food preservation storage center. Come summer, you'll be ready for another year!

Home Preserving Venison

Note: Based on the article "Resources for Home Preserving Venison" by Dr. Brian Nummer, National Center for Home Food Preservation. <http://www.uga.edu/nchfp/tips/fall/venison.html>

Introduction

Venison offers variety and an unusual flavor to the fall and winter table. When handled properly it can make an excellent meat. It can be refrigerated or frozen as meat cuts or sausage. It can also be preserved by canning, curing, or drying.

Field-to-"frig"

Use care when field dressing the deer. Contaminating the carcass is one of the most common errors hunters make. Refrigerate the carcass as soon as possible for best quality; usually within 3 to 4 hours after killing if the air temperature is above 45° F.

Aging Venison

Aging will help dissipate the gamey taste and permit natural occurring enzymes to tenderize the tissues. Proper aging also firms the meat, making it easier to cut. Aging should be conducted between 32° and 35° F for 7 to 10 days. Never age at room temperature. Venison may be cut within 24 hours after the kill and still be acceptable for aging. Improper storage facilities increases risk for spoilage.

Freezing Venison

Trim fat and clean cuts so they are ready for end use. Fat will go rancid quicker and often has a very “gamey” undesirable flavor. Use freezer wrap or packaging made for the freezer. For best quality, wrap the meat tightly in plastic wrap first, keeping air out as much as possible. Then wrap packages in moisture- and vapor-proof freezer paper. Seal, label and date each package. Home vacuum sealers will also work for packing venison for freezing. Follow manufacturer directions for vacuum sealing. Freeze quickly at 0°F or below. Freeze no more than 4 pounds per cubic foot of freezer space within a 24-hour period. If space in the home freezer does not permit spreading the packages out, take the wrapped meat to a processing plant or meat locker for quick freezing.

Store ground venison in a freezer at 0°F or colder for no more than 3 to 5 months. Venison roasts and steaks can be stored up to 6 to 12 months at this temperature. Meat quality and flavor will deteriorate in the freezer over time. Proper dressing, handling, packaging, quick freezing, and colder freezer temperatures will help maintain meat quality for the longest period of time. Thaw meat in the refrigerator or microwave, never at room temperature. (Adapted from: So Easy to Preserve, Andress and Harrison 1999).

Resources for handling and processing wild game (including sausage recipes) –
see How Do I...**Make Sausage, Cure Meat, and Smoke Fish and Handle Wild Game**
http://www.wisc.edu/foodsafety/Food%20Preservation/how_Do_I.htm

Other Resources for Making Sausage from Venison

- **Venison Sausage.** University of Georgia
http://www.homefoodpreservation.com/how/cure_smoke/venison_sausage.html
- **Fresh Game Sausage.** University of Minnesota
<http://www.msue.msu.edu/msue/imp/mod01/01600616.html>.
- **Venison Garlic Sausage, Venison Summer Sausage.** N. Dakota State University
<http://www.ext.nodak.edu/extpubs/yf/foods/he176w.htm>.
- **Wild Game Polish Sausage.** Pennsylvania State University
<http://foodsafety.cas.psu.edu/test/pdfs/procwldgamefish.pdf>.

Canning Venison

- **Canning Strips, Cubes or Chunks of Venison**
http://www.homefoodpreservation.com/how/can_05/strips_cubes_chunks.html
- **Venison Mincemeat**
http://www.homefoodpreservation.com/how/can_05/mincemeat_filling.html
- **Venison Chile con Carne** (substitute ground Venison for ground beef in this recipe)
http://www.homefoodpreservation.com/how/can_05/chili_con_carne.html

Curing/Smoking Venison

- **Corning Game, Sweet Pickle Cure of Game, Venison Bologna, Venison Summer Sausage.** Pennsylvania State University
<http://foodsafety.cas.psu.edu/test/pdfs/procwldgamefish.pdf>.

- **Dry-Curing Game**, Sweet Pickle Curing [Game], and Corning Game Meats. Clemson University; <http://hgic.clemson.edu/factsheets/HGIC3603.htm>.
- **Dry Curing Game**, Using Sweet Pickle Cure [Game]. N. Dakota State University <http://www.abs.sdstate.edu/flcs/foodsafety/menulist/doc/wildsid3.htm>.

Drying Venison (making jerky)

Homemade venison jerky was responsible for an outbreak of foodborne illness several years ago. Therefore use only “new” and updated processing recommendations as suggested below:

University of Georgia <http://www.homefoodpreservation.com/how/dry/jerky.html>

Colorado State University <http://www.ext.colostate.edu/pubs/columnnn/n001003.html>

How do I know my venison jerky is dried properly? The jerky will be as brittle as a green stick; it won't snap clean as a dry stick does. Be sure to test it after cooling because it will be pliable when it is still warm.

Can I safely make a meat jerky without salt? Making low-salt jerky is not recommended. The salt binds the moisture in the meat and thus any bacteria on the meat are more quickly killed because they do not have water available to them.

Venison Cooking Tips

The key to cooking venison and to making it tender, moist and delicious is understanding that it has very little fat or fat cover. Add butter or cheese, or baste with other fats for improved flavor. Without much fat cover, the meat tends to dry out. Cook venison slowly using moist heat and baste often with a marinade sauce or oil. Don't overcook. A roast may also be wrapped in aluminum foil after browning or covered in a roasting pan. Strips of bacon may be placed on a roast for self basting. For these foods to be safe, internal temperatures must be high enough to kill any harmful microorganisms. Cook ground meats, chops, steaks and roasts to 160°F. Venison can be substituted for meat in many recipes and makes an excellent variation to your menu. (Source: Estes Reynolds, University of Georgia).

Recipe books on cooking venison and other wild game:

- **Wisconsin's Wild Game** <http://cecommerce.uwex.edu/pdfs/B3573.pdf>
- **Michigan Venison** <http://www.msue.msu.edu/msue/i/mp/modac/visuals/E657.pdf>.

Canning information can be found in B3345 Canning Meat, Wild Game, Poultry and Fish Safely <http://cecommerce.uwex.edu/pdfs/B3345.PDF>

New "Smart Kids Fight BAC!®"

The University of Georgia announces a new "Smart Kids Fight BAC!®". This interactive CD-ROM is a collection of engaging computer games and activities focused on safe food handling education for elementary age children. It introduces safe food handling concepts of The Partnership for Food Safety Education's Fight BAC!® Food Safety Education Campaign through science, language arts and mathematics activities. The CD-ROM contains:

- The "Smart Kids Fight BAC!®" animated video, a 15-minute cartoon about keeping food safe.
- Six interactive games to reinforce food safety principles and integrate them into math, science and language arts. All games have 3 levels of play (Easy, Medium

and Hard) to accommodate differing ages and abilities. Most games allow for two players.

- Teaching Tools which lets educators access the animated video by chapter for quick review, pre- and post-tests, coloring pages to print, sound controls to allow teachers to turn off music and sounds for a quieter classroom.
- "BACtionary," a glossary for kids of almost 200 terms related to the science of food safety.
- "BAClopedia," two mini-encyclopedias on food safety. The Kids' "BAClopedia" explains the science of food safety simply and includes pictures and illustrations. The "BAClopedia" for Teachers provides greater detail on the same basic food safety topics.
- "BACFacts," a collection of facts about bacteria and the science of food safety.

Together, "BACFacts," "BAClopedia" and "BACtionary" supplement the science curriculum and are excellent resources for vocabulary development and writing assignments. The games reinforce and extend the teaching introduced in the animated video. The program works on PC or Macintosh computers. For more information, contact Dr. Judy Harrison, University of Georgia, at: judyh@uga.edu or 706-542-3773.

<http://www.fcs.uga.edu/ext/pubs/food/safety.php>

<http://www.fcs.uga.edu/ext/pubs/food/fightbac.pdf>

Pink Color of Cooked Poultry

The color pink in cooked turkey meat raises a "red flag" to many diners and cooks. Conditioned to be wary of cooked fresh pork that looks pink, they question the safety of cooked poultry and other meats that have a rosy blush.

The color of cooked meat and poultry is not always a sure sign of its degree of doneness. Only by using a food thermometer can one accurately determine that a meat has reached a safe temperature. Turkey, fresh pork, ground beef or veal can remain pink even after cooking to temperatures of 160°F and higher. The meat of smoked turkey is always pink.

To understand some of the causes of "pinking" or "pinkening" in fresh turkey, it's important to know first what gives meat its natural color.

Why is poultry lighter in color than beef? The protein myoglobin is the major pigment found in all vertebrates and can exist in various forms which determine the resulting meat color. The major reason that poultry meat is much lighter in color than beef is that it is dramatically lower in myoglobin. Also, as an animal becomes older, its myoglobin content usually increases. Turkeys today are young — 4 to 5 months old at the time of slaughter.

Why are white and dark meat of poultry different colors? The pink, red or white coloration of meat is due primarily to oxygen-storing myoglobin which is located in the muscle cells and retains the oxygen brought by the blood until the cells need it. To some extent, oxygen use can be related to the bird's general level of activity: muscles that are exercised frequently and strenuously — such as the legs — need more oxygen, and they have a greater storage capacity than muscles needing little oxygen. Turkeys do a lot of standing around, but little if any flying, so their wing and breast muscles are white; their legs, dark.

What causes well-done meat to be pink? Scientists have found that pinkness occurs when gases in the atmosphere of a heated gas or electric oven react chemically with meat tissues to give poultry a pink tinge. They are the same substances that give red color to smoked hams and other cured meats.

How to test for doneness. The best way to be sure a turkey — or any meat — is cooked safely and done is to use a food thermometer. If the temperature of the turkey as measured in the thigh has reached 180°F and is done to family preference, all the meat — including any that remains pink — is safe to eat.

What's On Your Mind?

Helpful cooking hints and resources online! Wondering where to go for recipes? Check out **Recipe Source**. Hosted by the University of California, Berkeley, this site is a searchable archive of thousands of recipes. So when a consumer calls with a difficult question, consider directing them to this site. <http://www.recipesource.com/>

Cook's Thesaurus is a cooking encyclopedia that covers thousands of ingredients and kitchen tools. If a learner calls you wondering what 'treacle' is, this is the place to look: <http://www.foodsubs.com/>

Interested in **contacting Food Companies** for information? Check out the list provided by the University of Nebraska <http://lancaster.unl.edu/food/ciq-contacts.htm>

Ingredient substitutions can be found online <http://lancaster.unl.edu/food/ciqsubs.htm> or in the **Food FAQs** book (each county office should have a copy of this handy little book).

For the latest information on the Avian flu, turn to the CDC web site for up-to-date information: <http://www.cdc.gov/flu/avian/index.htm>

Happy New Year!

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