



PhotoDisc

Turkey from Farm to Table

In calls to the United States Department of Agriculture (USDA) Meat and Poultry Hotline, turkey is the most-often-asked-about food category by consumers. Some frequently asked questions: "Are antibiotics and hormones used in raising turkeys? What does self-basted mean? How long can you keep a turkey in the freezer? Is it safe to partially cook turkey at one time and finish cooking later?" The following information answers these and many other questions about turkey.

What is Turkey?

Turkey is a large, widely domesticated North American bird with white plumage and a bare, wattled head and neck. The name turkey was originally applied to an African bird now known as the guinea fowl, which was believed to have originated in Turkey. When the Europeans came upon the American turkey, they thought it was the same bird as the African guinea fowl, and so gave it the name turkey, although the two species are quite distinct.

How are Turkeys Raised?

Turkeys are fed a diet of mainly corn and soybean meal along with a supplement of vitamins and minerals. They grow to full maturity in about 4 to 5 months, depending on the desired market weight.

Are All Turkeys Inspected?



All turkeys found in retail stores are either inspected by the USDA or by State systems which have standards equivalent to the federal government. Each turkey and its internal organs are inspected for evidence of disease. The "Inspected for wholesomeness by the U.S. Department of Agriculture" seal ensures that it is wholesome, properly labeled and not adulterated.

What Does the Grade Mean?



Inspection, for wholesomeness, is mandatory but grading, for quality, is voluntary. If companies choose to have their poultry graded, they pay for this USDA service. Grade A is the highest quality and the only grade you are likely to see at the retail level. The grade shield for poultry may be found on the following ready-to-cook products, whether chilled or frozen: whole carcasses and parts, and other boneless and/or skinless poultry products. Grade A indicates that the poultry products are virtually free from defects such as bruises, discolorations, and feathers. Bone-in products will have no broken bones. For whole birds and parts with skin on, there will be no tears in the skin or exposed flesh that could dry out during cooking, and there will be a good covering of fat under the skin. Also, whole birds and parts will be fully fleshed and meaty.

Can Antibiotics and Hormones Be Used in Raising Turkeys?

NO HORMONES have been approved for use in turkeys. Antibiotics may be given to prevent disease and increase feed efficiency. In approving drugs for use in livestock and poultry, the Food and Drug Administration (FDA) and Food Safety and Inspection Service (FSIS) work together. FDA sets legal limits for drug residues in meat and poultry. FSIS enforces the limits FDA sets for drug residues.

A “withdrawal” period is required from the time antibiotics are administered before the bird can be slaughtered. This assures that no residues are present in the bird’s system. FSIS randomly samples poultry at slaughter and tests for residues. Under the Federal meat and poultry inspection laws, any raw meat or poultry shown to contain residues above established tolerance levels is considered adulterated and must be condemned.

Are Additives Allowed in Fresh Turkeys?

Additives are NOT allowed on fresh turkeys or those “minimally processed” (cut into parts). However, if turkeys are “processed” (injected with a basting solution, ground, canned, cured, smoked, dried or made into luncheon meats), additives such as MSG, salt, or sodium erythorbate may be added but must be listed on the label in descending order from largest to smallest amount of the ingredient.

What Are “Basted” and “Self-basted” Turkeys?

Bone-in poultry products that are injected or marinated with a solution containing butter or other edible fat, broth, stock or water plus spices, flavor enhancers and other approved substances must be labeled as “basted” or “self-basted.” The maximum added weight of approximately 3% solution before processing is included in the net weight on the label. The label must include a statement identifying the total quantity and common or usual name of all ingredients in the solution, e.g., “Injected with approximately 3% of a solution of _____ (list of ingredients).”

What Does “Fresh” or “Frozen” Mean on a Turkey Label?

The term “fresh” may ONLY be placed on raw poultry that has never been below 26 °F. Poultry held at 0 °F or below must be labeled “frozen” or “previously frozen.” No specific labeling is required on poultry between 0 and 26 °F.

This poultry label rule addresses a truth-in-labeling issue, not food safety, because most pathogenic bacteria do not multiply or multiply very slowly at normal refrigerator temperatures. The Agency concluded that the term “fresh” should not be used on the labeling of raw poultry products that have been chilled to the point they are hard to the touch.

“Hen” or “Tom” Turkey — Which Is Better?

The sex designation of “hen” (female) or “tom” (male) turkey is optional on the label, and is an indication of size. Toms are larger but both toms and hens should be equally tender.

When Can a Turkey Be Called “Free Range” or “Free Roaming?”

Producers must demonstrate to the USDA’s food safety agency (FSIS) that the poultry has been allowed access to the outside in order to be labeled “Free Range” or “Free Roaming.”

What is the Age of a Young Turkey?

Turkeys of either sex that are less than 8 months of age according to present regulations are considered “young” turkeys.

How Are Turkey Products Dated?

Product dating is not required by federal regulations. However, stores and processors may voluntarily date packages of turkey or turkey products. There are several types of dates:

- “Sell-By” date tells the store how long to display the product for sale. The product should be purchased before the date expires.
- “Best if Used By” date is recommended for best flavor or quality. It is not a purchase or safety date.
- “Use-By” date is the last date recommended for the use of the product while at peak quality. The date has been determined by the manufacturer of the product. A retailer may legally sell fresh or processed meat and poultry beyond the expiration date on the package as long as the product is wholesome.

What Types of Labeling Are Required on Turkeys?

FSIS requires safe handling instructions on packages of all raw or partially cooked turkey products (fresh and frozen) packaged and labeled in federally and State inspected plants or in retail stores and sold to consumers.

FSIS requires mandatory nutrition labeling for most multi-ingredient turkey products except the raw, single-ingredient products such as turkey breast. Voluntary nutrition labeling on the raw, single-ingredient turkey product is encouraged. As an alternative to providing nutrition information on the label, manufacturers of turkey products that fall in the voluntary nutrition labeling category also may provide nutrition information through point-of-purchase materials, such as pamphlets, wall posters, and videos.

Can Poultry Be Irradiated?



In 1992, the USDA approved a rule to permit irradiation of raw, fresh or frozen packaged poultry to control certain common bacteria on raw poultry that can cause illness when poultry is undercooked or otherwise mishandled. The rule permits irradiation at 1.5 to 3.0 kiloGray, the smallest, most practical “dose” of irradiation for bacterial control with the goal of reducing the potential for foodborne illness.

Only small quantities of poultry have been treated. Packages of irradiated poultry would be easily recognizable at the store because they must carry the international radiation logo as well as the words “Treated with Irradiation” or “Treated by Irradiation.”

What Foodborne Organisms Are Associated with Turkey?

Salmonella Enteritidis may be found in the intestinal tracts of livestock, poultry, dogs, cats and other warm-blooded animals, and inside fresh shell eggs. *Salmonella* infections occur when a person ingests live *Salmonella* bacteria, which then survive digestion and reproduce in the small intestine to numbers large enough to cause symptoms. This strain is only one of about 2,000 kinds of *Salmonella* bacteria. Thorough cooking destroys *Salmonella* bacteria.

Campylobacter jejuni is one of the most common causes of diarrheal illness in humans. It is found in the intestinal tracts of chickens, turkeys, cattle, swine, sheep, dogs, cats, rodents, monkeys, some wild birds and some asymptomatic humans. It has also been found in water, soil and sewage sludge. Avoiding cross contamination and proper cooking prevent infection by this bacterium.

Staphylococcus aureus can be carried on human skin, in infected cuts and pimples, in nasal passages and throats. They are spread by improper food handling. Always wash hands and utensils before preparing and serving food. Cooked foods that will not be served immediately should be refrigerated in shallow, covered containers. Perishable foods should not be left at room temperature more than 2 hours. Temperature abuse can allow the bacteria to grow and produce staphylococcal enterotoxin. Thorough cooking destroys staphylococcal bacterial cells, but staphylococcal enterotoxin is not destroyed by heat, refrigeration or freezing.

Listeria monocytogenes bacteria are common in the intestines of humans and animals and in milk, soil, leafy vegetables, and food processing environments. It can grow slowly at refrigerator temperatures. It is destroyed by cooking but a cooked product can be contaminated by poor personal hygiene. Observe “keep refrigerated” and “use-by dates” on labels.

Safe Handling of Ready-Prepared Turkey Dinners

- If dinner is picked up or delivered hot, the food must be kept at 140 °F or above if eating within 2 hours (1 hour in temperatures of 90 °F or above). It's not a good idea to try and keep the food hot longer than 2 hours.
- If holding the food longer than 2 hours, remove all stuffing from the turkey cavity, divide the turkey into smaller pieces and refrigerate everything in separate, shallow containers. Reheat thoroughly to 165 °F.

- If cooked and refrigerated, keep cold food cold. Refrigerate immediately upon arrival at home (always within 2 hours). Serve the meal within 2 days. Reheating a whole cooked turkey is NOT recommended. However, cooked turkeys with the USDA inspection seal on the packaging have been processed under controlled conditions. Follow package directions for reheating, and storing these products.

On cooked frozen turkey, look for the USDA inspection seal. It tells that the turkey was prepared in a USDA inspected plant. Read and follow package directions for thawing, reheating and storing. If there are no directions on the label, thaw the wrapped cooked frozen turkey on a tray in the refrigerator. The thawed turkey may be eaten cold. To eat it hot, slice breast meat. Legs and wings may be left whole. Reheat thoroughly to 165 °F.

Storage and Safe Handling

Because product dates are not a guide for safe use of a product, follow these tips for use at top quality: purchase the product before the date expires; follow handling recommendations on product. Turkey is kept cold during distribution to retail stores to prevent or slow the growth of bacteria and to increase its shelf life. The grocery should be the last stop before going home. At home, immediately put turkey products in a refrigerator that maintains 40 °F or below, or freeze at 0 °F or below. **Freezer storage times are for best quality. If frozen continuously, turkey products will be safe indefinitely.**

| Turkey Item | Refrigerator Storage | Freezer Storage |
|------------------------|--|-----------------|
| Fresh whole turkey | 1 to 2 days | 12 months |
| Fresh turkey parts | 1 to 2 days | 9 months |
| Ground turkey, giblets | 1 to 2 days | 3 to 4 months |
| Cooked turkey | 3 to 4 days | 4 months |
| Cooked turkey dishes | 3 to 4 days | 4 to 6 months |
| Turkey broth, gravy | 3 to 4 days | 2 to 3 months |
| Lunch meat | unopened 2 weeks opened 3 to 5 days | 1 to 2 months |

Safe Thawing

The USDA recommends three ways to thaw turkeys: in the refrigerator, in cold water and in the microwave. Never defrost turkey on the counter.

- It's best to plan ahead for slow, safe thawing in the refrigerator. Allow about 1 day for every 4-5 pounds of turkey to thaw in the refrigerator.
- Turkey may be thawed in cold water in its airtight packaging or in a leak-proof bag. Submerge the bird or cut-up parts in cold water, changing the water every 30 minutes to be sure it stays cold. Cook the turkey immediately after it thaws.
- Turkey thawed in the microwave should be cooked immediately after thawing because some areas of the food may become warm and begin to cook during microwaving. Holding partially cooked food is not recommended because any bacteria present wouldn't have been destroyed.

Color of Turkey

Raw turkey skin color is off white to cream-colored. Under the skin the color ranges from a pink to a lavender blue depending on the amount of fat just under the skin.

If the turkey has reached a safe minimum internal temperature of 165 °F as measured with a food thermometer in the innermost part of the thigh and wing and the thickest part of the breast, it should be safe to eat. When there is a pink color in safely cooked turkey, it is due to the hemoglobin in tissues which can form a heat-stable color. This can also happen when smoking, grilling or oven cooking a turkey. (See “Is Pink Turkey Meat Safe?” at www.fsis.usda.gov/Fact_Sheets/Is_Pink_Turkey_Meat_Safe/index.asp)

TIMETABLE FOR TURKEY ROASTING

(325 °F preheated oven temperature)

These times are approximate and should always be used in conjunction with a properly placed food thermometer. A whole turkey is safe cooked to a minimum internal temperature of 165 °F throughout the bird. Always use a food thermometer to check the internal temperature of your turkey and stuffing. For reasons of personal preference, consumers may choose to cook turkey to higher temperatures.

For optimum safety, do not stuff whole poultry. It is recommended to cook stuffing outside the bird. If stuffing whole poultry, the center of the stuffing must reach a minimum internal temperature of 165 °F. Let the bird stand 20 minutes before removing stuffing and carving.

| Product | Weight | Unstuffed timing | Stuffed Timing |
|-----------------------|---------------------|----------------------|------------------------|
| Breast, Half | 2 to 3 pounds | 50 to 60 minutes | Not usually applicable |
| Breast, Whole | 4 to 6 pounds | 1 1/2 to 2 1/4 hours | Not usually applicable |
| Breast, Whole | 6 to 8 pounds | 2 1/4 to 3 1/4 hours | 3 to 3 1/2 hours |
| Whole turkey | 8 to 12 pounds | 2 3/4 to 3 hours | 3 to 3 1/2 hours |
| | 12 to 14 pounds | 3 to 3 3/4 hours | 3 1/2 to 4 hours |
| | 14 to 18 pounds | 3 3/4 to 4 1/4 hours | 4 to 4 1/4 hours |
| | 18 to 20 pounds | 4 1/4 to 4 1/2 hours | 4 1/4 to 4 3/4 hours |
| | 20 to 24 pounds | 4 1/2 to 5 hours | 4 3/4 to 5 1/4 hours |
| Drumsticks | 3/4 to 1 pound each | 2 to 2 1/4 hours | Not applicable |
| Thighs | 3/4 to 1 pound each | 1 3/4 to 2 hours | Not applicable |
| Wings, wing drumettes | 6 to 8 ounces each | 1 3/4 to 2 1/4 hours | Not applicable |

Roasting Instructions

1. Set the oven temperature no lower than 325 °F.
2. Be sure turkey is completely thawed. The times are based on fresh or completely thawed birds at a refrigerator temperature.
3. Place turkey breast-side up on a flat wire rack in a shallow roasting pan, 2 to 2 1/2 inches deep.
*For other methods of cooking turkey, see www.fsis.usda.gov/Fact_Sheets/Turkey_Alt_Routes/index.asp.

Optional steps:

1. Tuck wing tips back under shoulders of bird (called “akimbo”).
2. Add one-half cup water to the bottom of the pan.
3. In the beginning, a tent of aluminum foil may be placed loosely over the breast of the turkey for the first 1 to 1 1/2 hours, then remove for browning. Or, a tent of foil may be placed over the turkey after the turkey has reached the desired golden brown.

Microwaving a Whole Turkey

1. Always check the user's manual for cooking recommendations. Times vary according to wattage.
2. A 12 to 14-pound turkey is the maximum size most microwaves can accommodate.
3. Allow 3" oven clearance on top and 2-3" of space around bird.
4. DO NOT STUFF.
5. Use an oven cooking bag for more even cooking.
6. Microwave on medium (50% power); whole turkey, 9-10 minutes per pound.
7. A whole turkey is safe when cooked to a minimum internal temperature of 165 °F as measured with a food thermometer. Check the internal temperature in the innermost part of the thigh and wing and the thickest part of the breast. For reasons of personal preference, consumers may choose to cook turkey to higher temperatures.
8. Let the turkey stand 20 minutes after removing from microwave before carving.

Microwaving Turkey Parts

| Part | Power Level | Timing |
|--------------------------------------|--|----------------------------|
| Breast, Whole | High 10-15 (first 1/3 of time) Medium (remaining 2/3 of time) | 10 to 15 minutes per pound |
| Breast, Half (bone-in) | Medium | 11 to 15 minutes per pound |
| Breast, Half (boneless) | High (first 5 minutes) Medium (remaining time) | 10 to 15 minutes per pound |
| Drumsticks, Wings & Thighs (bone-in) | Medium-High | 13 to 16 minutes per pound |
| Thighs (boneless) | Medium-High | 12 to 14 minutes per pound |

Giblets: Traditionally, turkey giblets are cooked by simmering in water to use in flavoring soups, gravies or stuffing. Place turkey neck, gizzard and heart in a 2-quart casserole with 3 cups of water. Cover with lid or vented plastic wrap. Microwave on medium (50% power) 35 minutes. Add liver, re-cover and microwave on medium 10 minutes. Once cooked, the liver will become crumbly and the heart and gizzard will soften and become easy to chop. Cooked giblets should have a firm texture.

Partial Cooking: Never brown or partially cook turkey to refrigerate and finish cooking later. It is safe to partially cook or microwave turkey if it is immediately transferred to a hot grill to finish cooking.

Food Safety Questions?

Call the USDA Meat & Poultry Hotline

If you have a question about meat, poultry, or egg products, call the USDA Meat and Poultry Hotline toll free at **1-888-MPHotline (1-888-674-6854)**; TTY: 1-800-256-7072.



The Hotline is open year-round Monday through Friday from 10 a.m. to 4 p.m. ET (English or Spanish). Recorded food safety messages are available 24 hours a day. Check out the FSIS Web site at www.fsis.usda.gov.

Send E-mail questions to MPHotline.fsis@usda.gov.

Ask Karen!

FSIS' automated response system can provide food safety information 24/7 and a live chat during Hotline hours.



AskKaren.gov