

Talking Turkey: Dinner is Served

Heather Norman-Burgdorf, Dietetics and Human Nutrition, and Annhall Norris, Family and Consumer Sciences

There are several ways to cook your turkey. One way is not necessarily better than the other: It depends on your preference. Traditionally, turkeys are baked in the oven. They can be baked in a roasting pan or an oven-safe plastic bag. They can be cooked in a roaster oven, deep fried, or even cooked in the microwave.

How to Check Internal Temperatures

Whatever way you choose to cook your bird, remember that the final internal temperature must reach 165°F measured with a food thermometer to destroy bacteria and avoid foodborne illness. A food thermometer is a metal-stemmed thermometer that can be inserted into the turkey. This is preferred over the small pop-up temperature gauges found in many turkeys. The pop-up gauges are not temperature specific and are not as accurate as food thermometers at determining if the bird is at 165°F.

Check the temperature in the innermost part of the thigh and the thickest part of the breast.

Adding Flavor before Cooking

Many people choose to brine and/or baste their turkey to add flavor and increase moisture in the bird. Brining is simply soaking the bird in salty water in the refrigerator for various amounts of time to add moisture and flavor. Basting is a process of pouring juices, melted butter, or oil over meat throughout the cooking process. These steps are not required for preparation but are based on preference.

Cooking in the Oven

Start by preheating the oven to 325°F. Next remove the turkey from its packaging. Do this in the sink to allow juices to drain, but don't wash (or rinse) the turkey. Remove the bag of giblets and pat the turkey dry with a paper towel. Rub salt, pepper and other dry seasonings of your choice all over the bird. Drizzle oil (or butter) generously over the skin and massage. The oil will allow for a crispy skin. You can rub seasonings and oil inside the cavity if you like. Many also like to place celery, onion, garlic or carrots inside the cavity for extra flavor



during the cooking process and to season the drippings. Note that you don't eat the vegetables cooked inside the cavity, you discard them once the turkey is done.

Once the bird is seasoned, place it breast-side up on a rack in a roasting pan. The USDA recommends cooking a whole turkey breast side up during the entire cooking process. Flipping over a large, hot bird is difficult and can be dangerous. It may also tear the skin, which makes the finished product unattractive.

Placing the turkey on a rack in the roasting pan will allow air to circulate around the turkey while cooking and for drippings to collect in the bottom of the pan. If you don't have a rack you'll want to make one. Crumpled up aluminum foil or large chunks of potatoes and onions make a nice platform for the bird. Just make sure you don't place the turkey directly on the bottom of the pan as this causes uneven heating and could lead to burning. Add 1½-2 cups of liquid (e.g. chicken broth, water) to the pan. Place the pan in the oven and cook the turkey until the internal temperature reaches 165°F measured with a food thermometer.

For food safety reasons, it is best to cook the stuffing separately. If you want to cook a stuffed bird, mix the ingredients right before stuffing and

Table 1. Cooking times for oven roasting.			
Unstuffed Bird		Stuffed Bird	
Weight	Time	Weight	Time
4-6 lb. breast	1½-2¼ hours	8-12 lb.	3-3½ hours
6-8 lb. breast	2¼-3¼ hours	12-14 lb.	3½-4 hours
8-12 lb.	2¾-3 hours	14-18 lb.	4-4½ hours
12-14 lb.	3-3¾ hours	18-20 lb.	4¼- 4¾ hours
14-18 lb.	3¾-4¼ hours	20-24 lb.	4¾-5¼ hours
18-20 lb.	4¼-4½ hours		
20-24 lb.	4½-5 hours		

Table 2. Cooking times in a turkey bag.	
Weight	Time
8-12 lb.	1½-2 hours
12-16 lb.	2-2½ hours
16-20 lb.	2½-3 hours
20-24 lb.	3-3½ hours

stuff loosely. Be sure to check the temperature of the stuffing when you check the temperature of the turkey. The stuffing should reach a temperature of 165°F as well.

If your turkey already looks done and the skin is a nice golden brown, but the internal temperature has not reached 165°F, you should cover the skin with aluminum foil and keep cooking. The turkey is not safe to eat until the internal temperature reaches 165°F, no matter what color the skin is, or the color of the juices.

Use Table 1 below for approximate cooking times at 325°F in the oven.

Remove the turkey from the oven and let it stand for 20 minutes before carving or remov-

ing the stuffing. This allows the meat to firm up and reabsorb some of the natural juices. If you start carving immediately, you will lose some of those juices and the meat will be dry.

Cooking in a Bag

Prep and season the turkey like above but place the whole bird inside a large bag specifically designed for cooking a turkey. These oven bags can be found in the same grocery aisle as sandwich bags and other storage bags. Place the bagged turkey on a rack in the roasting pan and follow the directions on the oven bag package for the manufacturer's recommended cooking times. As a general rule, whole, unstuffed turkeys in bags should be cooked at 350°F for the following times:

Add at least 30 minutes to the times above if you are cooking a stuffed turkey.

Cooking in a Roaster Oven

A roaster oven is a portable, electric appliance that can double as an oven. They are especially useful around Thanksgiving when you need your conventional oven for other baking purposes such as stuffing, sweet potato casserole and pumpkin pie. Generally, roaster oven temperatures and times are the same as conventional ovens. But always check the roaster's operating manual for the manufacturer's recommendations.

Preheat the roaster to at least 325°F. Prep the turkey as described above and then place it on the rack inside the roaster oven. Make sure the lid closes properly. Leave the lid on throughout cooking. Each time you lift the lid, it lets heat out and slows the cooking process. You can use a cooking bag in the roaster oven as long as no part of the bag touches the sides, bottom, or lid. Cook until the internal temperature of the bird reaches 165°F at the innermost part of the thigh and wing and the thickest part of the breast. Allow it to rest 20 minutes before slicing.

Deep-fat Frying a Turkey

Turkeys can be deep fried as long as the bird is completely thawed and has not been stuffed. The turkey should be no larger than 12 pounds. Before you start your prep, you'll need to make sure the turkey fits in your cooker with enough space to allow the oil to completely cover the turkey by 1-2 inches without it spilling over the sides. You can determine the amount of oil you need by testing the volume with water. Start by placing the turkey on the stand or in a basket and lowering it into the cooker. Add water to cover the turkey 1-2 inches. Remove the turkey and draw a line on the cooker at the water level or pour it out and measure it. This is the amount of oil you will need. Dry the cooker thoroughly before adding the oil and choose an oil that has a high smoke point. Peanut oil is best but other oils such as safflower, soybean and canola will work too.

Heat the oil to 350°F and monitor the temperature of the oil throughout the entire process using a thermometer attached to the side of the cooker. Next, you'll start prepping the bird. Pat it dry with paper towels and apply seasonings. Many people like to inject seasonings for turkeys that will be deep

fried, but you can also rub seasoning onto the skin. There is no need for butter or oil on the skin, since the bird will be cooking in oil. Lower the turkey into the oil and begin cooking. Make sure it is completely covered. Allow 3-5 minutes cooking time per pound. After cooking, remove the bird from the oil and check the temperature with a food thermometer. The internal temperature must reach 165°F at the innermost part of the thigh and wing and the thickest part of the breast. If the turkey is not done, place it back in the oil for further cooking. Once done, remove it from the oil and place it on a pan or tray lined with paper towels. Let it rest 20 minutes before carving.

The used cooking oil can be stored and used again. Allow it to cool and then strain it. Pour the oil into storage containers and store them in the fridge. The oil can be safely stored in the refrigerator and reused within one month if it has been strained and covered.

Microwaving a Turkey

Did you know that turkeys can be cooked in a microwave oven? They can be cooked whole or in parts, if they are completely thawed. For more information about thawing turkeys, see the publication *Talking Turkey: Prep*

and Safety. Prep your turkey as described above but do not stuff it. Cook the stuffing in a separate casserole when using the microwave. When selecting your seasoning rub you may want to include a dark seasoning, such as paprika, so that the skin appears brown. Keep in mind the turkey will not crisp up and brown in a microwave like it does when cooked in the oven or a roaster.

Cooking bags can be used in the microwave. In fact, cooking the turkey in a bag in the microwave helps it to cook more evenly. If you're not going to use a bag, place the turkey or turkey parts in a microwave safe dish and cover it with a lid. If you don't have a lid, cover the dish with plastic wrap and vent the top. A 12-pound turkey is the largest size most microwaves will hold. It is important that you have at least 3 inches of space between the bird and the top of the microwave and 2-3 inches of space around the bird.

Follow the recommendations in the microwave owner's manual for cooking a turkey. Microwaves differ in their wattages so cooking times are different for each one. A general rule is to allow 9 - 10 minutes of cook time per pound on medium power. Remember to rotate the bird during cooking to ensure even cooking. Rotating should be done by hand if you don't

have a spinning plate. Use a food thermometer to check for doneness. The internal temperature must reach 165°F at the innermost part of the thigh, the innermost part of the wing and the thickest part of the breast. After removing the turkey from the microwave, let it stand for at least 20 minutes before carving.

Cooking a Frozen Turkey

If you find yourself having to cook a frozen turkey on Thanksgiving, don't fret! It can be done. There are a few extra steps and added cook time, but the day is not lost. You'll want to use the oven for baking and allow 50% more cook time – this is simply 1.5 times the recommended cook time from suggested cooking times for oven roasted turkeys. For example, a 19-pound thawed turkey needs 4 ½ hours to cook whereas a frozen 19-pound turkey needs 6 ¾ hours to cook.

Oven baking/roasting is the only method recommended for cooking a frozen turkey. Don't use an oven bag or cook the frozen turkey in the deep fryer. You should also never smoke, grill or use the microwave to cook a frozen turkey.

Start the process by preheating the oven to 325°F. Remove the turkey from its packaging and place on a rack in a roasting pan. Don't try to remove the bag of giblets. You won't be able to yet. Place the turkey in the oven and let it cook undisturbed for 2 hours. After 2 hours, take the temperature using a food thermometer at the legs and thigh. The temperature should be around 90 to 95°F. At this time, you can season the bird and apply butter or oil to the outside. The breast and cavity of the bird is still partially frozen at this point, so you may not be able to remove the bag of giblets. If you can, go ahead. If not, don't worry about it just

Method	Size of Turkey	Estimated Cooking Time
Oven (stuffed, unstuffed, or in bag)	See charts above	See charts above
Roaster oven	8-24 lb.	Similar times to oven roasting
Deep-fat frying	8-12 lb.	3-5 minutes per pound in 350° oil
Frozen turkey	8-24 lb.	Add 50% additional time to oven times
Microwaving	8-12 lb.	9-10 minutes per pound on 50% power

yet. Put the bird back in the oven for another hour and then check it again.

After 3 hours in the oven you should be able to remove the bag of giblets. Check to see if the bag holding the giblets is paper or plastic. If the bag is paper, there is no safety concern if the giblets continue to cook inside the bird, but if you can, go ahead and remove the giblets and cook them separately. If the bag is plastic, you need to remove it. If any of the plastic has started to melt, you will need to throw away the bag of giblets as well as the turkey. Harmful chemicals can be released into the turkey as the bag melts making the turkey unsafe to eat.

Once the giblets have been removed, brush the outside of the turkey with butter or oil or baste with pan drippings before placing back in the oven. At this point the turkey should cook for another 1 ½ to 2 hours depending on its size. Start checking the temperature after 4 ½ hours. The turkey needs to

reach an internal temperature of 165°F at the innermost part of the thigh, the innermost part of the wing and the thickest part of the breast. Once it's done, don't forget to let it rest at least 20 minutes before carving.

Additional Cooking Methods

Turkeys can also be prepared in pressure cookers and slow cookers. In these cases, turkey parts or quarters will be cooked as many turkeys will not fit in these small appliances. Refer to the owner's manual for instructions on preparing turkeys. Cooking times will vary by machine and altitude.

References

“Alternative Ways to Cook Turkey,” United States Department of Health & Human Services, accessed on October 1, 2018, <https://www.foodsafety.gov/keep/charts/alternativeturkey.html>.

“Proper Thermometer Placement,” United States Department of Agriculture, accessed on October 1, 2018, https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/teach-others/fsis-educational-campaigns/thermy/proper-thermometer-placement/ct_index.

“Turkey: Alternate Routes to the Table,” United States Department of Agriculture, accessed on September 28, 2018, <https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/poultry-preparation/turkey-alternate-routes-to-the-table>.

“Turkey Basics: Safe Cooking,” United States Department of Agriculture, accessed on October 1, 2018, https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/poultry-preparation/turkey-basics-safe-cooking/CT_Index.