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SP626 Use a Food Thermometer

The University of Tennessee Agricultural Extension Service

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Use a Food Thermometer

It's Safe to Bite When the Temperature Is "Right!"

*Janie Burney, Professor
Family and Consumer Sciences*

What Is the "Right" Temperature?

A temperature hot enough to kill harmful bacteria in meat, poultry and egg dishes.

Why Is the "Right" Temperature Important?

According to the Centers for Disease Control, every year more than 76 million people in the United States become sick from harmful bacteria in food, 300,000 are hospitalized and 5,000 die. These bacteria are especially harmful for the very young, pregnant women, the old and those with conditions that make their immune systems weaker than normal.

How Do You Know When Food Reaches the "Right" Temperature?

Use a food thermometer to measure the inside temperature of your food. Looking at the color of food is not a reliable way to be sure it is safe to eat. For example, a ground beef patty may turn brown before it reaches a high enough temperature to kill harmful bacteria. Or, it may look pink, but be safe to eat. What is important is that it reaches 160 degrees F. Using a thermometer will also help you avoid overcooking food so that it will not be dry and less flavorful. Measuring the temperature inside food is the only way to be sure food is cooked to the "right" temperature.

The "Right" Temperatures Are

- 145° F – Beef, lamb and veal steaks, and roasts, medium rare (medium – 160° F)
- 160° F – Ground beef, pork, veal, lamb, pork chops, ribs, roasts and egg dishes
- 165° F – Ground turkey and chicken, stuffing, casseroles and leftovers, whole poultry and poultry parts

What Kind of Thermometer Should You Use?

Digital Food Thermometers

Thermistor (Digital Thermometer)

- Gives readings in about 10 seconds.
- Can be used in thick and thin foods.
- Insert the tip into the center of the thickest part of the food, at least ½ inch deep.
- Cannot remain in the food while it is cooking. Check the temperature near the end of cooking time.
- Available in most discount and department stores.

Thermometer Fork Combination

- Combines a fork with a food thermometer.
- Can be used in thick and thin foods.
- Insert tines into the thickest part of the food, at least 1/4 inch.
- Indicator lights on the handle tell if the food has reached rare, medium or well-done. This usually takes two to 10 seconds.
- Cannot remain in the food while it is cooking. Check the temperature near the end of cooking time.
- Available in most discount and department stores.
- Convenient for grilling.

Dial Food Thermometers

"Oven-Safe" Thermometers

- Use for thick foods, such as roasts and whole birds; not recommended for foods less than 3 inches thick. Can be used in foods in deep containers, such as a stockpot.
- Insert 2 to 2½ inches deep in the thickest part of the food, avoiding gristle, bone and fat.
- Check two or three places to be sure it is the right temperature. Wait at least one minute before reading the temperature.
- Can remain in food while it is cooking so that it constantly shows the temperature of food.
- Available in most discount and department stores.

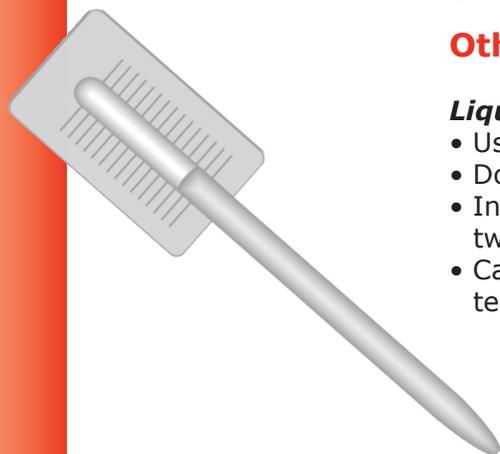
Dial "Instant-Read" Thermometer

- Use in both thin and thick foods, including casseroles, soups, chops, patties, roasts and whole birds.
- Insert 2 to 2½ inches deep in the thickest part of the food. For thin foods, insert from the side through to the center.
- Measures the temperature in 15 to 20 seconds. For thick foods, check two or three places to be sure it is the right temperature.
- Cannot remain in food while it is cooking. Check the temperature near the end of cooking time.
- Available in most discount and department stores.

Other Food Thermometers

Liquid-Filled Thermometer (Glass and Metal)

- Use for roasts and whole birds, such as turkey.
- Do not use to measure thin foods.
- Insert at least 2 inches deep in the thickest part of the food. Check two or three places to be sure it is the right temperature.
- Can remain in food while it is cooking so that it constantly shows the temperature of food.



Pop-Up Timers

- Commonly used in turkeys and roasting chickens.
- Stays in the food while cooking and indicates food has reached the proper temperature when it “pops up.”
- Less accurate than other thermometers. Checking other parts of the food with a different thermometer is recommended.



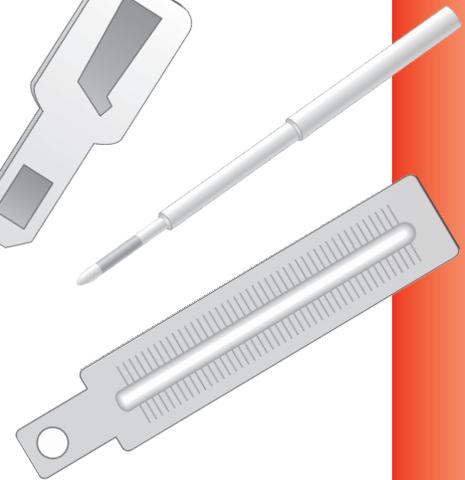
Disposable Temperature Indicators

- Can be used one time only. However, if the desired temperature is not reached, they can be reinserted.
- Designed for specific temperature ranges. For example, indicators designed to measure 160 to 170 degrees F should be used in foods with recommended safe temperatures in that range. Always follow the package directions and use them with the proper foods.
- Special temperature-sensitive sensor changes color when food reaches the proper temperature.



Candy/Jelly/Deep Fry Thermometers

- Designed to measure high temperatures from 100 to 400 degrees F.
- Often used in candy and jelly making and frying in hot oil.



Where Do You Insert a Thermometer?

Where you insert a thermometer depends on the type of food.

Whole Birds – Insert the thermometer into the inner thigh area near the breast of the chicken or turkey, but not touching bone.

Beef, Pork, Lamb, Veal and Ham Roasts, Steaks or Chops – Insert the thermometer into the center of the thickest part, away from fat, bone and gristle.

Ground Meat and Poultry – Insert the thermometer in the thickest area. For thinner patties of beef and poultry, insert the thermometer sideways.

Casseroles and Egg Dishes – Insert the thermometer into the thickest part.

Thermometer Care

- Wash thermometers in hot water with soap. Wash carefully by hand and avoid immersing in water.
- Store with the probe in the stem sheath. Keep glass thermometers in their original packaging for extra protection, since some are sensitive to rough handling.
- Keep thermometers with plastic faces away from high heat to avoid melting them.

How Do You Know Your Thermometer Is Working Properly?

Thermometers that have been dropped or handled roughly may become less accurate. There are two ways to check the accuracy of a

thermometer using ice water or boiling water. Some thermometers have a calibration nut that can be adjusted under the dial. Read package instructions for calibrating your thermometer.

Ice Water

- Fill a large glass with finely crushed ice. Add clean water to cover the ice and stir well.
- Insert the thermometer stem into the ice water at least 2 inches without touching the sides or bottom of the glass.
- Wait at least 30 seconds and check the temperature. It should read 32 degrees F or 0 degrees C.
- Adjust the calibration nut if the temperature is not accurate. Keep the stem of the thermometer in the ice water. While holding the calibration nut, turn the head of the thermometer with a suitable tool until it reads 32 degrees F or 0 degrees C.

Boiling Water

- Bring a pot of clean water to a full rolling boil.
- Insert the thermometer stem in the boiling water at least 2 inches for at least 30 seconds and check the temperature. It should read 212 degrees F or 100 degrees C. (Note: Some parts of East Tennessee have altitudes over 1000 feet. At high altitudes, water will boil at a lower temperature.)
- Adjust the calibration nut if the temperature is not accurate. Keep the stem in the water. While holding the calibration nut, turn the head of the thermometer with a suitable tool until it reads 212 degrees F or 100 degrees C.

If your thermometer cannot be calibrated and it does not show an accurate temperature, make an adjustment when reading the temperature. For example, if it reads two degrees too high, add two degrees when taking a reading of your food. If chicken breast has to reach 165 degrees F, cook until it reaches 167 degrees F on your thermometer.

**For additional information on food safety,
contact your local Extension office at:**

The USDA Meat and Poultry Hotline also will answer your questions about preparing meat safely. Call the following toll-free numbers between 10 a.m. and 4 p.m., Eastern Time.

USDA Meat and Poultry Hotline
1 (888) MPHOTline
1 (888) 674-6854

Or, email the hotline at ***mpholine.fsis@usda.gov***.

Visit the UT Extension Web site at
<http://www.utextension.utk.edu/>

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