

Ensuring that foods reach the proper internal temperature during cooking is one of the four basic food safety messages — Clean, Separate, Cook, and Chill.

By following these important steps when preparing, storing, and serving foods, people can lessen the risk of having their food become contaminated allowing harmful bacteria to multiply and cause food-borne illness.

When cooking, visual indicators, like colour change, are not a reliable means of ensuring that food is thoroughly cooked and safe. The only reliable method of knowing that foods are adequately cooked is the use of food thermometers.

Thermometers will:

- indicate if food has reached proper internal temperature to destroy harmful bacteria
- prevent over-cooking
- be helpful when cooling and reheating foods

To protect yourself and your family from food borne illness, food thermometers should be in every kitchen and used every time.

Types of Thermometers

There are several types of food thermometers available, and they vary in technology and price. Thermometers satisfactory for food safety include: thermocouple; digital instant-read thermistors; two types of bimetal dial thermometers — the oven-safe and instant-read thermometers; thermometer forks; and pop-up thermometers.

Digital instant-read thermistors have a sensor device in the tip and can measure both thick and thin foods. The tip is placed in the center of the thickest part of the food. This thermometer is not designed to remain in the food but measure the temperature near the end of the estimated

cooking time. The thermometer responds quickly (about 10 seconds) on a digital display.

Bimetal dial thermometers — the oven-safe and instant-read thermometers sense the temperature from the tip and up the stem about 2 – 2½ inches. The resulting temperature is an average of the temperature along the sensing area. They have a dial display.

The oven-safe thermometer is designed to remain in the food during cooking, however if not left in the food it may take up to several minutes to register the temperature. It is used with thick foods, not recommended for foods less than three inches thick.

Instant-read dial thermometers measure food temperature in about 20 seconds. To be accurate the probe must be inserted the full length of its sensing area (two to three inches). The thermometer is not designed to remain in the food, but to measure the temperature near the end of the estimated cooking time.

The pop-up timer is commonly used in turkeys or roasting chicken. The stem of the device pops up when the tip has reached a certain temperature. While these devices are accurate it is recommended that other parts of the food be checked with a conventional food thermometer.

The thermocouple displays food temperatures the quickest and is good for measuring both thick and thin foods. These thermometers are the most expensive and may be difficult to find in most stores.

Thermometer forks combine cooking forks with food thermometers. The temperature-measuring device is located in one of the tines of the fork. Food temperatures are indicated by a digital display or indicator lights on the handle. These are not designed to be left in foods; they are most convenient when grilling.

Food thermometers are available in most grocery stores, kitchen boutiques and from restaurant equipment suppliers.

Accuracy

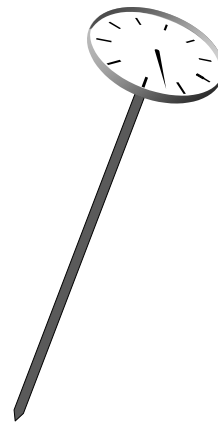
Most food thermometers have an accuracy of approximately 1°C (3°F). These temperatures are only correct when the thermometer is positioned properly in the food. If not properly placed, it will not indicate the correct internal temperature of the food.

Thermometers should be placed in the thickest part of the food away from bone, fat or gristle. When food is irregularly shaped such as meat roasts, temperature should be checked in several places. For poultry, measure in the thickest part of the thigh, avoiding contact with the bone. If stuffed, check temperature at the center of the stuffing. When measuring temperatures of thin foods such as hamburger patties or chicken breasts, a thermistor is suggested. If using a dial thermometer, insert through the side of the food so that all of the sensing area is in the center of the food.

Temperatures

Poultry and meat must be cooked to the following internal temperatures to ensure safety:

Pork, Veal, Lamb	71°C (160°F)
Ground Meat	71°C (160°F)
Whole chicken/turkey	82°C (180°F)
Chicken/turkey Stuffing (inside temp.)	74°C (165°F)
Chicken/turkey pieces	74°C (165°F)
Ground Poultry	74°C (165°F)
Beef steaks/roasts	63°C (145°F) med. rare 71°C (160°F) med. 77°C (170°F) well done



For further information on food safety visit the
Nova Scotia Department of Environment
and Climate Change website at
www.novascotia.ca/nse/food-protection