



Grilling Food Safely

Barbequing or grilling food is a popular method of cooking, but how you prepare and cook these foods can pose some specific challenges in terms of food safety.

Preparation

Proper planning can help minimize the risk of foodborne illness. Bacteria multiply rapidly at temperatures above 4°C and below 60°C. Keeping food for more than two hours in this temperature range increases the risk of foodborne illness.

- Before handling food and after handling raw food, wash hands with water and soap for a minimum of 15 seconds.
- Do not wash meat, poultry or fish prior to use; this increases the contamination of the sink and counters providing opportunity for cross-contamination.
- Keep raw and cooked food separate.
- Avoid cross-contamination. Do not place cooked food on plates used for raw food.
- Marinate meats in the refrigerator and do not reuse the marinade to flavour cooked food unless the marinade is boiled for at least one minute. Use separate basting brushes/utensils for raw and cooked meat/food.

Cleaning

If a dishwasher is not available, wash plates, thermometer tip, cutting boards and utensils in hot soapy water; rinse thoroughly and air dry or dry with a clean towel. The grill can be easily cleaned by turning up the heat to high and closing the lid for ten minutes to remove caked oil and grease from grilling. Some grills can also be cleaned in the dishwasher.

Cooking Vegetables

Various cooking and flavour enhancement techniques are available when grilling vegetables. Fresh vegetables are usually rinsed before grilling to remove dirt. Minimize charring of the vegetables by wrapping in aluminum foil or marinating them.

Cooking Meat

Use a food thermometer to ensure the safety of cooked meat. Colour and time are not good indicators that the meat has reached a temperature sufficient to destroy harmful bacteria. Ground beef burgers can prematurely turn brown at temperatures too low to assure safety while burgers cooked from frozen can remain pink even after reaching 71°C (160°F). Keeping meat pieces small will reduce grilling times.

To use a food thermometer:

- Remove the food from the grill.
- Place the thermometer tip into the center of the thickest part of the meat without touching bones.
- Check every piece of meat as heat is not evenly distributed on the grill.
- Wash the thermometer with potable water and soap between each use.

The following temperatures are recommended for the safety and quality of the meat.

Type	Cut	Internal temperature
Beef/Veal/Lamb	Steaks/Roasts/Chops	Medium-rare: 63°C (145°F) Medium: 71°C (160°F) Well-done: 77°C (170°F)
Pork	All cuts	71°C (160°F)
Chicken	Pieces	74°C (165°F)
	Whole (stuffed or not)	85°C (185°F)
Turkey	Whole (not stuffed)/Pieces	77°C (170°F)
	Whole (stuffed)	82°C (180°F)
Ground Meat Mixtures*	Beef, veal, lamb and pork	71°C (160°F)
	Poultry	74°C (165°F)
Reheating	Leftovers, hotdogs	74°C (165°F)

*Burgers, sausages, meatballs, meatloaf and casseroles

When grilling, food can become smoked and charred which can be hazardous for your health. The grilling of meat produce two types of potentially carcinogenic compounds: polycyclic aromatic hydrocarbons (PAHs) produced mainly in smoked foods, and heterocyclic amines (HCAs) produced mainly in charred food. For more information, please refer to FSN factsheet on [Health Hazards of Grilling and Barbequing](#).

Information Sources:

Canadian Food Inspection Agency (2007). *Barbequing Food Safety Tips. Preventing foodborne illness*. Retrieved from <http://www.inspection.gc.ca/english/fssa/concen/tipcon/barbece.shtml>

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Health Canada (2006). *It's Your Health: How to Avoid Illness from Hamburgers*. Retrieved from http://www.hc-sc.gc.ca/iyh-vsv/food-aliment/meat-viande_e.html

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