

## Food Safety in the Kitchen



The Hazard Analysis and Critical Control Points (HACCP) system is a way of preventing microbial contamination of food. Good sanitation and safe food handling in the home requires an understanding of the hazards and the HACCP critical control points. Potential food safety hazards in the home can be divided into three categories:

- biological (bacteria)
- chemical (cleaning agents)
- physical (equipment)

The focus of this article is on the biological hazards, or foodborne bacteria, which can lead to illness if food is mishandled, particularly for those more at risk: the very young, the elderly and the immuno-compromised.

Critical control points are the processes or handling practices that are essential in preventing foodborne illness. These processes and handling practices are purchasing, storing, pre-preparation, cooking, serving, and handling leftovers. Failure to take appropriate action at these critical points could result in foodborne illness.

### Critical Point 1: Purchasing

- Purchase meat and poultry products last and keep packages of raw meat and poultry separate from other foods, particularly foods that will be eaten without further cooking. Consider using plastic bags to enclose individual packages of raw meat and poultry
- Make sure meat and poultry products -- whether raw, pre-packaged, or from the deli -- are refrigerated when purchased
- USDA strongly advises against purchasing fresh, pre-stuffed whole birds
- Canned goods should be free of dents, cracks or bulging lids
- Plan to drive directly home from the grocery store. You may want to take a cooler with ice for perishables. Always refrigerate perishable food within 2 hours. Refrigerate within 1 hour when the temperature is above 90 °F

### Critical Point 2: Home Storage

- Verify the temperature of your refrigerator and freezer with an appliance thermometer -- refrigerators should run at 40 °F or below; freezers at 0 °F. Most foodborne bacteria grow slowly at 40 °F, a safe refrigerator temperature. Freezer temperatures of 0 °F stop bacterial growth
- At home, refrigerate or freeze meat and poultry immediately
- To prevent raw juices from dripping on other foods in the refrigerator, use plastic bags or place meat and poultry on a plate

- Wash hands with soap and water for 20 seconds before and after handling any raw meat, poultry, or seafood products
- Store canned goods in a cool, clean dry place. Avoid extreme heat or cold which can be harmful to canned goods
- Never store any foods directly under a sink and always keep foods off the floor and separate from cleaning supplies
- Thaw in the refrigerator, NEVER ON THE COUNTER. It is also safe to thaw in cold water in an airtight plastic wrapper or bag, changing the water every 30 minutes till thawed. Or, thaw in the microwave and cook the product immediately
- Marinate foods in the refrigerator, NEVER ON THE COUNTER
- USDA recommends that if you choose to stuff whole poultry, it is critical that you use a meat thermometer to check the internal temperature of the stuffing. The internal temperature in the center of the stuffing should reach 165 °F before removing it from the oven. Lacking a meat thermometer, cook the stuffing outside the bird

### **Critical Point 3: Pre-Preparation**

- The importance of hand washing cannot be overemphasized. This simple practice is the most economical, yet often forgotten way to prevent contamination or cross-contamination
- Wash hands (gloved or not) with soap and water for 20 seconds: before beginning preparation; after handling raw meat, poultry, seafood or eggs; after touching animals; after using the bathroom; after changing diapers; or after blowing the nose
- Don't let juices from raw meat, poultry or seafood come in contact with cooked foods or foods that will be eaten raw, such as fruits or salad ingredients
- Wash hands, counters, equipment, utensils, and cutting boards with soap and water immediately after use. Counters, equipment, utensils and cutting boards can be sanitized with a chlorine solution of 1 teaspoon liquid household bleach per quart of water. Let the solution stand on the board after washing, or follow the instructions on sanitizing products

### **Critical Point 4: Pre-Cooking**

- Always cook thoroughly. If harmful bacteria are present, only thorough cooking will destroy them; freezing or rinsing the foods in cold water is not sufficient to destroy bacteria
- Use a meat thermometer to determine if your meat or poultry or casserole has reached a safe internal temperature. Check the product in several spots to assure that a safe temperature has been reached and that harmful bacteria like *Salmonella* and certain strains of *E. coli* have been destroyed
- Avoid interrupted cooking. Never refrigerate partially cooked products to later finish cooking on the grill or in the oven. Meat and poultry products must be cooked thoroughly the

first time and then they may be refrigerated and safely reheated later

- When microwaving foods, carefully follow manufacturers instructions. Use microwave-safe containers, cover, rotate, and allow for the standing time, which contributes to thorough cooking

**Critical Point 5: Serving:**

- Wash hands with soap and water before serving or eating food
- Serve cooked products on clean plates with clean utensils and clean hands. Never put cooked foods on a dish that has held raw products unless the dish is washed with soap and hot water
- Hold hot foods above 140 °F and cold foods below 40 °F
- Never leave foods, raw or cooked, at room temperature

longer than 2 hours. On a hot day with temperatures above 90 °F, this decreases to 1 hour

**Critical Point 6: Handling Leftovers:**

- Wash hands before and after handling leftovers. Use clean utensils and surfaces.
- Divide leftovers into small units and store in shallow containers for quick cooling. Refrigerate within 2 hours of cooking
- Discard anything left out too long
- Never taste a food to determine if it is safe
- When reheating leftovers, reheat thoroughly to a temperature of 165 °F or until hot and steamy. Bring soups, sauces and gravies to a rolling boil
- If in doubt, throw it out