Prepare Meat and Poultry Safely
Meat and poultry products are well known for their high protein content and nutritive benefits, but it's up to the food handler to serve these items safely.

Keep the work area for handling both raw and cooked meat as clean as possible. Wash your hands frequently during food preparation. These simple rules cannot be over-emphasized. In addition, make every effort to prevent cross-contamination or recontamination of a cooked food or produce with bacteria from raw meat.

If a cutting board, platter, knife or any other utensil or container has been used for raw meat, STOP before using again. Clean these items in hot, soapy water prior to using them to handle or store cooked meat.

Bacteria present on raw meat are essentially destroyed by thorough cooking. However, pathogenic (disease-causing) bacteria from an unclean utensil or container will grow very well on any cooked meat they come in contact with.

**SOME BASIC MICROBIOLOGY**

To understand the dangers, we need to learn some basic microbiology. All animal food products contain bacteria from two general sources. NATURALLY occurring bacterial plants are those organisms present on the bird or animal and in the growing environment, such as pine shavings, litter on the floor or dust in a poultry house.

INTRODUCED bacteria are those which usually come from sources other than the bird or animal and its environment. Most often, introduced bacteria come from people, equipment, water and other materials used in processing the animal after it leaves the farm.

Typical poultry processing reduces naturally growing bacteria by 95 percent through scalding and chilling procedures. If proper cleaning and sanitation practices are followed, introduced bacteria should be minimal and not harmful to humans. After processing, meat and poultry may still contain some bacteria that could be classified as pathogenic.

**SPOILAGE BACTERIA UNPLEASANT BUT NOT HARMFUL**

Spoilage bacteria are considered non-pathogenic, or not harmful. Spoilage bacteria usually grow well even when meat is refrigerated. They are responsible for the "off odors" and "off flavors" in food but will usually not cause illness. Smell the poultry product near the opening to the body cavity—if it has a slightly sweet to strong sweet odor, it’s a sign that bacterial levels have increased. Spoilage is about to occur, usually within a day. Spoilage smells are by-products from the breakdown of carbohydrates, fats and proteins by the growing bacteria. And it's time to discard the food.

**FOODBORNE ILLNESS**

Harmful bacteria are few in number when compared to the many spoilage types. Common “food poisoning” bacteria (Staphylococcus, Salmonella, Clostridium and Campylobacter, to name the most frequent culprits) grow very well at or near the body temperatures of animals, poultry (105°F) and humans (98.6°F). Salmonella produces illness by actually growing in the body and is considered an “infection.” Staphylococcus and Clostridium produce toxins in the food prior to being eaten. Even heating may not destroy these toxins. Because most of these organisms are not spoilage bacteria, they don't produce unpleasant odors and flavors and can go undetected in foods.

High protein foods are at the greatest risk. As living organisms, bacteria have four basic requirements which can control their growth (1) available nutrients; (2) adequate moisture; (3) proper growth temperature; and (4) adequate time. Consumers can control the time and temperature.

Cooked and raw meat and poultry should be refrigerated at 40°F or lower. For serving, cooked meat and poultry should be held at 140°F or greater. The time these protein foods are held at 40°F to 140°F should be kept to an absolute minimum.

The information in this leaflet was provided by Dr. James Denton, Associate Department Head and Extension Program Leader for Poultry Science, The Texas A&M University System.
SAFETY...SIMPLY

Consumers can be assured that meat and poultry are safe if they will:

- maintain CLEAN working areas
- COOK products thoroughly to destroy bacteria
- CHILL as quickly as possible after cooking
- avoid CROSS-CONTAMINATING cooked meat or poultry with bacteria from a raw meat.

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15M—6-91