ALABAMA A&M AND AUBURN UNIVERSITIES

ALABAMA COOPERATIVE Extension SYSTEM
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HE-652

Beef Safety: Do It Right

Most people in Alabama enjoy nothing more than a wonderful meal that is centered around a mouth-watering portion of beef. However, there are hidden dangers that could turn a delicious meal into an occasion you would rather forget. Everyone should be aware of food safety procedures. After a picnic, a holiday meal, or even a quiet dinner at home, someone may become ill. The illness is many times blamed on a virus or the "flu bug." But the illness could very well be food poisoning caused by mishandled food.

Every year, more than 90 million Americans are affected by some type of foodborne illness. Despite popular belief, most foodborne illness problems are not caused by poor sanitation in the processing plant or market but by poor handling practices in the home.

Almost all the foods we eat are capable of causing a foodborne illness. Protein foods, such as meat, poultry, and dairy products, are more likely to make you ill than others and must be handled with special care. This publication will focus specifically on beef products. For more general information on food safety, ask your county Extension office for HE-610, "Food Safety: It's In Your Hands."

How Do We Know Our Beef Is Safe?

The beef we select at the grocery store has been guarded from contamination all the way from the farm to the market. The federal government employs some 7,500 meat inspectors who inspect each animal before slaughter and each carcass after slaughter to assure consumers that beef is safe and wholesome when it reaches the grocery store. Public health inspectors also monitor meat products and facilities to make sure the beef consumers select at the grocery store will be safe and wholesome.

How Can I Avoid Foodborne Illness?

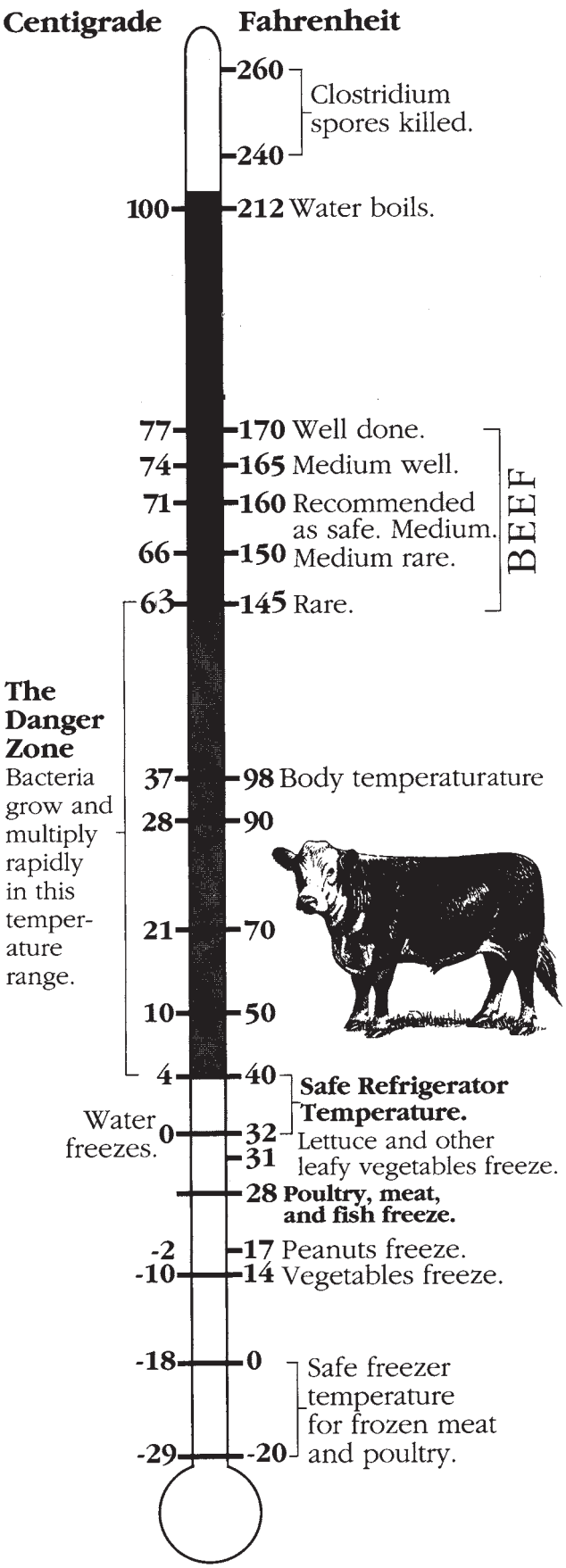
Bacteria require certain conditions to make us ill from food poisoning.

- Moisture—Beef cuts are about 50 percent moisture, so they are a great place for bacteria to grow.
- Food—Bacteria love to eat just like we do. That is why we must be so careful with beef and other meats.
- Temperature—Bacteria love room temperature. They grow more rapidly in the temperature range we call the danger zone—temperatures between 40 and 145 degrees F.

There are five basic guidelines to follow to assure that the foods you eat are safe.

- Purchase your meat from a trustworthy grocery store.
- Be a safe and clean food handler.
- Avoid the danger zone.
- Avoid cross-contamination between raw and cooked or ready-to-eat foods.
- Cool and reheat leftovers properly.

The following tips will help you avoid foodborne illness and serve your family and friends a safe, wholesome meal.



Safe Storage And Cooking Temperatures

Keep Your Beef Cold

When we as consumers select and remove a cut of beef from the refrigerated display case at our local store, the chance of spoilage immediately increases. The small numbers of bacteria that normally occur on all foods, beef included, multiply more rapidly when the temperature rises above 40 degrees F. Most of us spend a long time in the grocery store before we make all of our purchases. One way to help control bacterial growth is to wait until we have selected all of our nonperishable food products before we go to the meat case. This limits the amount of time the products are at temperatures above 40 degrees F.

Upon leaving the grocery store we should go directly home and immediately refrigerate our perishable items, including beef. Never leave any fresh meat products sitting on the counter at room temperature. Temperature control cannot be stressed enough when it relates to food safety because bacteria that can cause illnesses multiply rapidly at room temperature. When thawing frozen meat, always thaw it in the refrigerator. Of course, this could take a considerable length of time depending on the size of the cut. If the product needs to be thawed faster, it can be placed in an airtight bag in the sink under running cold water or thawed in the microwave following the manufacturer's recommendations. Never thaw frozen meat at room temperature. This allows bacteria to grow on the outside of the product, even though the inside is still frozen.

Refrigeration of beef below 40 degrees F is a must to keep it safe before preparation. Beef is safe and of the highest quality when stored in the coldest part of the refrigerator no more than 2 or 3 days. One sure way to avoid using or buying beef that may be contaminated is to observe the color and odor. Fresh beef varies in color from bright red to a dull brown, depending on cut and age. Any beef that has an off-odor when opened should either be thrown away or returned to the store.

When beef is purchased and not used within 2 to 3 days, it should be frozen to maintain its safety and quality. The freezer temperature should be at or below 0 degrees F. At these temperatures, ground beef will retain its quality for 3 to 4 months and steaks and roasts will retain theirs for 4 to 6 months. To freeze beef, wrap it in heavy freezer paper, plastic freezer wrap, or aluminum foil. Also be sure to label each package with its contents and the date of freezing. This will allow you to use the oldest products first and will help prevent freezer burn and the loss of product quality. Freezer burn is white, dried

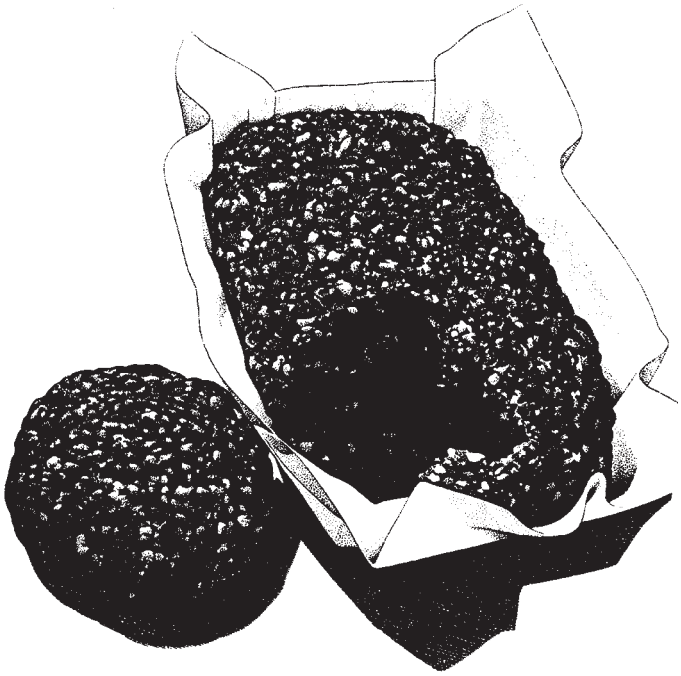
out patches on the surface of the meat. While freezer-burned meat will not make us sick, the meat will have an off-flavor and will be tougher than normal. Avoid overfilling either the refrigerator or the freezer unit because both depend on air circulation for proper cooling.

Keep Yourself and Your Kitchen Clean

When we are handling food products, cleanliness is more important than at any other time. Everything in the kitchen must be clean, especially ourselves. Good personal hygiene goes hand in hand with temperature control as it pertains to beef safety. It is vital to wash our hands with soap and hot water for at least 20 seconds before handling any food product. Each time you re-enter the kitchen from outdoors or any other place in the house where you might have contaminated your hands, you should wash your hands again. Clean clothing, including aprons, is also an important part of personal hygiene. Dirty clothes and dish towels are a good place for bacteria to hide and grow. Sneezing and coughing spreads germs from our lungs, throats, and noses. When handling food, we must control the spread of germs from these natural occurrences by covering our mouths with disposable tissues then rewashing our hands.

Cleaning and sanitizing kitchen equipment and counter tops is also important in the prevention of food contamination. All food contact surfaces and utensils must be cleaned before and after the preparation of each meal. Remember, if it is not clean in the beginning, it cannot be sanitized. To sanitize your kitchen counters and sink, use a chlorine solution. You can make this solution from 2 teaspoons of chlorine bleach and 1 quart of water. Place this in a spray bottle, and spray countertops and sinks after you have removed all food particles. Allow the spray to stay on the surface to air dry. This will allow enough time for the chlorine to kill the bacteria.

It is best to have a cutting board that is only used to cut meat. Use a separate cutting board for fresh fruits and vegetables. Whether you use a plastic or wooden cutting board, make sure it is clean before you reuse it. Wash cutting boards in hot, soapy water to remove the visible food particles, then rinse in hot water. Spray the board with a weak chlorine solution, allowing it to air dry so the chlorine can penetrate into the cracks and crevices. This will kill the bacteria hidden in these cracks.



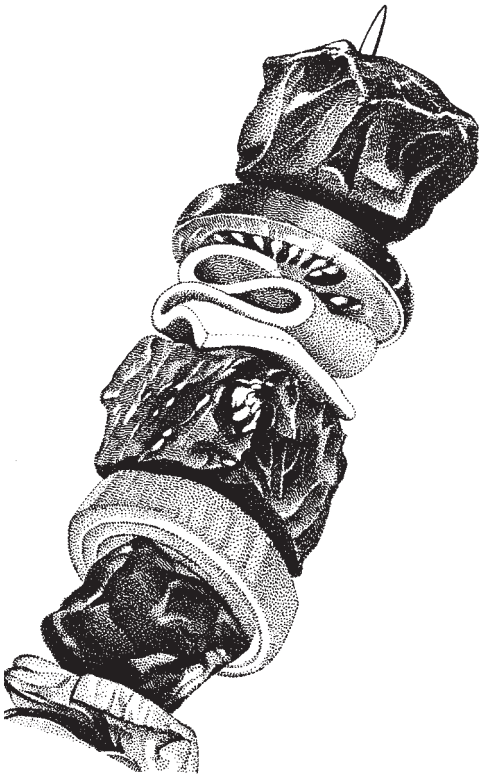
Sponges used in kitchens also have a tendency to hide bacteria. Instead of sponges, use washable or disposable cloths. Keep roaches and insects out of the kitchen too. These pests are laden with bacteria and will contaminate foods, dishes, utensils, and food preparation surfaces.

Prepare Your Beef Safely

Another important aspect of the safe consumption of beef products is proper preparation. We can kill most bacteria that occur on beef by adequate cooking methods. All bacteria are destroyed when the internal temperature of the meat reaches at least 160 degrees F. This is a medium degree of doneness. However, many people like their beef a little more rare. For example, beef cooked to 150 degrees F is medium-rare. While this is considered safe for some people, not all bacteria will be destroyed. The consumption of rare beef, especially by people with compromised immune systems (infants, elderly people, pregnant women, cancer patients receiving chemotherapy, and those who are already sick), may cause problems because these individuals are susceptible to naturally occurring microorganisms. Also, recipes that call for marinating beef at room temperature should be modified to marinate in the refrigerator. Beef may be marinated safely and just as effectively in the refrigerator and kept there for 1 or 2 days until cooking.

Because of the increased handling in cutting and grinding, ground beef and hamburger patties have higher levels of bacteria than steak or roast. Make sure hamburger patties are brownish on the inside

before serving. If for some reason cooked beef is not served immediately, it must be maintained at a temperature above 140 degrees F. Foods should not be allowed to remain at room temperature any longer than necessary, and by no means should meat products, cooked or uncooked, be allowed to remain at room temperature for more than 2 hours. If large roasts or other hot meat dishes are not going to be served right away, they should be divided into smaller portions and placed in covered containers in the refrigerator. This speeds up the cooling process and slows down bacterial growth.



Avoid Cross-Contamination

Cross-contamination is the mixing of cooked or ready-to-eat products with raw products. A good example of cross-contamination would be preparing vegetables on the same surface used to prepare fresh meat without properly washing and sanitizing the area between preparations. This should be avoided at all times. Once beef is cooked to the proper temperature, any bacteria that may have been on the product should be destroyed. However, if this cooked meat comes in contact with raw beef or a surface where raw beef has been (such as a plate or cutting board), the cooked meat will become recontaminated with bacteria. Placing grilled steaks on the same platter used for raw steaks, for example, will cause cross-contamination. An easy way to avoid cross-contamination is to immediately wash and sanitize all utensils, plates, and cutting boards that have been used for the preparation of raw meat.

Treat Leftovers Carefully

If there are large portions of beef left over that can be saved for the next day, keep them safe by careful handling. As soon as possible after the meal has been served, store the leftovers. Follow these tips:

- Place small quantities of the beef cuts in clean, airtight containers.
- Refrigerate below 40 degrees F.
- Consume the leftovers within 2 to 3 days from their original cooking date.
- Reheat leftover beef the right way by heating to 165 degrees F as quickly as possible. This will assure that any bacteria that might have contaminated the beef during storage will be destroyed.

Microwave cooking is an increasingly popular way to cook, especially for reheating leftovers. While microwaving is quick, it does not always cook food evenly. Thus, to avoid overcooking food, many microwave manuals call for a standing time of 10 to 15 minutes following cooking to allow the food to heat evenly. Always be sure to use a meat thermometer to assure that foods are cooked to their proper temperature.

Remember These Tips

Since most food poisoning bacteria cannot be seen, smelled, or tasted, it is up to you to make sure the meals you serve are not only delicious but also safe.

Following the guidelines for avoiding foodborne illness can only enhance your enjoyment of eating high quality, nutritious beef. Remember, keep yourself and your work area clean and sanitized, store your beef properly, keep the temperature of the meat out of the danger zone, avoid cross-contamination, and be careful storing and reheating leftovers.

ALABAMA COOPERATIVE Extension SYSTEM

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For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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