BACTERIA

Bacteria cannot be seen without a microscope. Bacteria live everywhere: on our hands, skin, under our fingernails, and on all kinds of surfaces. Bacteria thrive on pets and other living animals. The most common sources of bacteria in food products are raw meat, poultry, fish, eggs, and unpasteurized milk.

Bacteria grow most rapidly in the danger zone, between 40° and 140° Fahrenheit. Warm temperatures allow harmful bacteria to grow and multiply rapidly. Refrigeration does not prevent the growth of harmful bacteria, it only slows it. Food should be refrigerated quickly (within 2 hours). Refrigerators should be set between 34° and 40° Fahrenheit and freezer units at 0° Fahrenheit. These temperatures need to be checked occasionally with an appliance thermometer.

There are as many as 100 different bacteria-caused foodborne illnesses. The following are among the worst troublemakers:

Staphylococcus aureus: This bacterium is carried on the skin, nose, and throat and in skin infections. Then is spread to food. Ordinary cooking does not kill toxins or poisons produced by staph. Personal hygiene and cleanliness in the kitchen are very important.

Clostridium botulinum: While rare, if left untreated, botulinum can be fatal. This bacterium usually comes from home-canned low-acid foods, such as meats and vegetables that have not been processed or cooked properly. Home canners must use approved recipes and re-heat home-canned meats and vegetables properly before serving. Refer participants to the Cooperative Extension Service for more information on proper canning techniques.

Clostidium perfringens: This bacterium grows where there is little or no oxygen. Sometimes called the buffet germ, this bacterium grows fastest in large portions of food like casseroles, stews, and gravies held in the danger zone, between 40° Fahrenheit and 140° Fahrenheit. Dishes that are not hot enough and large portions that do not cool quickly in the refrigerator are breeding grounds for this bacteria. Small-serving portions, replenished often and refrigerating leftovers quickly and in small dishes will slow the growth.

Campylobacter: This is one of the most common bacterial causes of diarrheal illness in the United States. It occurs more frequently in the summer months than in the winter. Undercooked poultry and meat is the most common source. Campylobacter is prevented by cooking foods thoroughly, washing hands, avoiding unpasteurized milk, and reducing cross-contamination.

Salmonella: Salmonella is found mostly in raw or undercooked poultry, meat, and eggs, and in unpasteurized milk. Cooking food thoroughly, refrigerating or freezing foods promptly, and keeping surfaces and hands clean help prevent Salmonella poisoning.

E. coli 0157 H:7: This strain of bacteria is commonly associated with eating raw or undercooked ground beef or unpasteurized milk. It can result in life-threatening conditions such as hemorrhagic colitis with severe abdominal cramps, bloody diarrhea, nausea, and vomiting. It can lead to kidney failure, brain damage, strokes, seizures, and death, especially in young children. Consumers can eliminate this bacterium by cooking ground meats to 160° Fahrenheit, washing raw fruits and vegetables thoroughly, keeping cutting surfaces clean, avoiding cross-contamination of raw foods, and thoroughly washing hands after using the restroom and before handling food.