Bacteria exist everywhere in nature. They are in the soil, air, water, as well as the foods we eat. Even though most bacteria will not harm you, some types of bacteria given favorable conditions can produce sickness in susceptible individuals including children and the elderly. When bacteria have nutrients (food), moisture and favorable temperatures, they grow rapidly and can cause serious illness.

A standard rule, recommended by the U.S. Department of Agriculture, is to keep hot foods above 140° F and cold foods below 40° F. Temperatures in between these two are known as the “Danger Zone”. Outside of the danger zone, it has been found that above 160° F, heat destroys bacteria. On the other hand, refrigerating foods below 40° F only slows the growth of bacteria but does not kill them. Also, freezing stops their development, but does not destroy bacteria.

Bacteria grow most rapidly in the “Danger Zone”, some doubling in number in as little as 20 minutes. Also, food may not be safe to eat if you hold it for more than two hours at the danger zone temperature range where bacteria can multiply rapidly. Food can reach the two hour time limit cumulatively. For example, cooked meat left for one hour at room temperature, refrigerated, and then left out for another hour (without proper reheating) is the same as leaving it out for two consecutive hours. Since refrigerating or freezing cooked meat does not kill bacteria, these organisms will again multiply when the meat is put back into the danger temperature zone. This means that cooked foods should be rapidly cooled in the refrigerator to less than 40° F and then reheated quickly to 160° F.

Check your refrigerator and freezer periodically. Keep your refrigerator at or below 40° F and your freezer at 0° F. It is also helpful to use a thermometer to make sure of these temperatures. Always keep your refrigerator and freezer clean and free from any spoiled food that may contain harmful bacteria.

Thaw meat and poultry in the refrigerator. Do not thaw food on the kitchen counter at room temperature. For faster thawing, place frozen packages in a watertight plastic bag under cold water and change the water often.

Extra care needs to be given when cooking in the microwave. Microwaves often cook food unevenly, thus creating hot and cold spots. Bacteria can then survive and grow in the cold spots. To prevent this, cover food with plastic wrap or a glass covering. This produces steam which readily kills bacteria. Also, to ensure uniform heating, turn the dish or stir dish contents several times while cooking.

References
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