VAN WERT COUNTY GENERAL HEALTH DISTRICT

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Critical Control Points

Critical control points are points in the process between receiving and serving the food where the food handler can take certain measures to control the growth or spread of harmful bacteria, thus minimizing the potential for foodborne disease. The following paragraphs explain several major critical control points and the ways that bacteria growth can be controlled at each point.

Cooking

In order to kill bacteria that are in food, it is important that the proper cooking temperature is achieved for the particular food in question. Different foods have different required cooking temperatures based on temperature required to kill the types of bacteria that may be living on them. Proper cooking temperatures can be found in the Ohio Uniform Food Safety Code Chapter 3717-1-03.3.

Cooling

In order to prevent significant growth of harmful bacteria, it is important that food spend as little time as possible in the 41-135°F range, or the "danger zone". For this reason, hot foods that are to be cooled and reheated are required to be cooled from **135°F to 70°F in 2 hours** or less and from **70°F to 41°F within 4 hours**. The cooling process must occur in a six hour window. The following procedures will help to achieve cooling within these parameters:

- ✓ Placing the food in shallow pans (2 ½ inches or less) creates a large surface are to volume ratio, allowing heat to escape more quickly.
- ✓ Leaving the food uncovered in the cooler (on a top shelf where it is not likely to be contaminated) also aids in the release of heat.
- ✓ Stirring the food occasionally to equalize temperature.
- ✓ If you are not able to cool food quickly enough using the above methods, then an ice bath or a cooling product, such as a Rapi-Kool, which is a frozen plastic container that is placed directly into the food, may help decrease cooling time.
- ✓ You should always monitor the temperature of items being cooled until you are sure that you have a procedure that cools sufficiently in the required amount of time.

Reheating

Reheating is an important way of controlling bacteria growth, especially in the event of an error in the cooling process. In order to be sure all bacteria are killed, any food that is cooked, cooled, and reheated must be brought to a temperature of 165°F within 2 hours. Again, the time limit serves to minimize the time that food spends in the "danger zone".

Holding

Once fully prepared, all cold foods must be held at or below 41°F until they are served, in order to prevent rapid growth of bacteria. For the same reason, all hot foods must be held at or above 135°F after they have been cooked to the required temperature.

Use and Calibration of Metal Stem Thermometers

In order to be sure these required temperatures are reached, you must check the actual temperature of the food, using a 0-220°F metal stem thermometer. The 0-220°F range allows you to check cold food and cooling food temperatures, as well as hot food temperatures. These thermometers can easily be calibrated on a regular basis, so that you know that you are reading the actual temperature.

The calibration procedure for these thermometers is fairly simple, and there are two methods of calibration:

Freezing Point Method

1. Make an ice bath by filling a small container with ice and adding enough water to fill any air space between the ice cubes.
2. After allowing the ice bath to sit for several minutes in order to allow the temperature to stabilize, insert the metal stem thermometer and wait for the needle to stop moving.
3. The needle should point to 32°F, the freezing point of water. If the needle is not at the freezing point, turn the calibration nut until the temperature reads 32°F while the thermometer is still in the ice/water mix. Now the thermometer is properly calibrated.

Boiling Point Method

1. Insert the metal stem thermometer into a boiling water bath and wait for the needle to stop moving.
2. The needle should point to 212°F, the boiling point of water. If the needle is not at the boiling point, turn the calibration nut until the temperature reads 212°F.