TIME / TEMPERATURE CONTROL

**TIME AND TEMPS:** Controlling the temperatures of food during food preparation prevents the growth of disease-causing microbes in potentially hazardous foods. The range between 41 – 135°F is called the **Danger Zone** because bacteria can grow rapidly in this temperature range.

**HAZARDOUS FOOD:** Potentially **hazardous foods** support the rapid growth of disease-causing bacteria when these foods are kept in the Danger Zone. Examples of potentially hazardous foods include beef, poultry, pork, seafood, dairy products, eggs, cut melons and high protein foods such as beans, rice and noodles as well as cooked vegetables and garlic in oil.

**HOLDING TEMPS:**
- Store hot foods at or above 135°F.
- Store cold foods at or below 41°F.
- Store frozen foods below 32°F

**THERMOMETERS:** Provide rapid reading probe thermometers for checking the internal temperatures of the food.

- Sanitize the probe, clip and housing regularly. During the work shift you can sanitize using alcohol swabs.
- Install monitoring thermometers in all units in which potentially hazardous foods are stored.
- Consider using a record sheet for marking food temperatures during each shift if you store a lot of food on steam tables or in the top of prep refrigerators.

**THAWING:** PLAN AHEAD! Thawing at room temperature is unsafe, as this practice encourages the rapid growth of disease causing organisms. The following are the four approved defrosting methods for potentially hazardous foods.

1. **In a refrigerator or a walk-in, usually for one to four days.**
2. **Under COLD, RUNNING water.**
3. **In a microwave oven immediately before cooking.**
4. **During the cooking process.**

**COOKING:** Use probe thermometers routinely. Sanitize the probe before inserting it into food. Cook raw foods to the following minimum temperatures (Calcode section, 114040):

<table>
<thead>
<tr>
<th>Food Type</th>
<th>Minimum Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGGS for immediate service</td>
<td>145°F or above for 15 seconds</td>
</tr>
<tr>
<td>FISH</td>
<td>145°F or above for 15 seconds</td>
</tr>
<tr>
<td>CUTS OF BEEF/LAMB/VEAL/PORK</td>
<td>145°F or above for 15 seconds</td>
</tr>
<tr>
<td>RATITES AND INJECTED MEATS</td>
<td>155°F for 15 seconds</td>
</tr>
<tr>
<td>COMMINUTED MEAT or FOOD Containing COMMINUTED MEAT</td>
<td>155°F for 15 seconds</td>
</tr>
<tr>
<td>EGGS and FOODS containing EGGS not for immediate service</td>
<td>145°F for 3 minutes or 150°F for 1 minute or 158°F for &lt; 1 second</td>
</tr>
<tr>
<td>POULTRY and COMMINUTED POULTRY</td>
<td>165°F for 15 seconds</td>
</tr>
<tr>
<td>Stuffed FISH, MEAT and POULTRY</td>
<td>165°F for 15 seconds</td>
</tr>
<tr>
<td>Stuffing containing FISH, MEAT, POULTRY or RATITES and stuffed pasta.</td>
<td>165°F for 15 seconds</td>
</tr>
<tr>
<td>ROASTS BEEF/PORK/CURED PORK</td>
<td>350°F depending on weight</td>
</tr>
</tbody>
</table>
**COOLING:**

**DO NOT COOL POTENTIALLY HAZARDOUS FOODS AT ROOM TEMPERATURE WITHOUT USING RAPID COOLING PROCEDURES.**

If cooling is done quickly, disease-causing bacteria will not have time to grow.

Potentially hazardous foods must be cooled down from 135°F to 70°F within two (2) hours, and then from 70°F to 41°F or below within four (4) hours to prevent the rapid growth of disease causing bacteria. Use the following methods to actively control the cooling process:

1) Cool foods in small quantities.
   a) Cool in long, shallow pans with a food depth of four inches or less. Foods with high densities such as refried beans, chili, or chowder should be cooled in a depth no greater than two inches.
   b) Or, cut meat, poultry and roasts into smaller pieces before cooling.

2) If you cool under refrigeration, be sure to uncover or only lightly cover and periodically stir hot foods so that heat can escape. Foods of sufficiently small quantities in unsealed containers will not spoil or sour if put directly into refrigeration. Consider designating a refrigerator or freezer for cooling if you cook large quantities of food ahead of time.

3) Cool in an ice bath (with water); stir occasionally.
   a) Foods generally cool faster in metal pans than in plastic pans. (Many plastics act as insulators.)
   b) Cover foods after they cool.

4) Use a “cooling paddle” to cool liquid foods by stirring.

**REHEATING:**

Cooked foods which have been cooled and then reheated for hot holding must be reheated to a minimum temperature of 165°F within 30 minutes. (Quick reheating to high temperatures insures the destruction of microbes.)

**STEAM TABLES:**

KEEP FOODS HOT – 135°F or above in steam tables or other holding equipment (such as deli display warmers.)

1) Preheat the hot holding device before placing the hot food inside. (Add hot or boiling water to the steamer.)
2) Always preheat or reheat the food before placing it in the holding device. Use microwave or conventional ovens.
3) Never cook or reheat food in a hot holding device. Holding equipment is Designed only to HOLD food at hot temperatures. (Long reheating times allow bacteria to grow.)