

# Standard Operating Procedure

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## Cooling Food

**Policy:** When cooked food will not be served right away (or food is left over and can be saved), it must be cooled as quickly as possible to prevent microbial growth. Temperatures will be taken during the cooling process to make sure time and temperature standards are met to ensure the safety of food served to children.

**Procedure:** There are two acceptable methods of cooling food outlined below. Employees involved in the cooling process of food must observe the following procedures:

### One-stage (four hour) method:

1. Cool hot cooked food from above 135°F to 41°F within four hours using appropriate procedure.
2. Take temperatures at four hours to make sure that the appropriate temperature was reached.
3. Reheat food to above 165°F if food has not cooled to 41°F in four hours.

### Two-stage method (\*recommended by the FDA Model Food Code)

1. Cool hot cooked food from above 135°F to 70°F or lower within two hours, and then cool down to 41°F or lower within an additional four hours, for a total cooling time of six hours using appropriate procedure.
2. Take temperatures at the two and six hour intervals to make sure that the appropriate temperatures were reached.
3. Reheat food to above 165°F if food has not cooled to 41°F in four hours.

*\* NOTE: The reason that the two-stage method allows six hours to cool is that in the first two hours of cooling the food is passed through the most dangerous part of the temperature danger zone where the growth of microorganisms is ideal.*

### Factors that affect how quickly foods will cool down:

1. Size of the food being cooled – the thickness of the food or distance to its center plays the biggest part in how fast a food cools.
2. Density of the food – the denser the food, the slower it will cool. Chili will take longer than chicken noodle soup.
3. Container in which a food is stored – stainless steel transfers heat from foods faster than plastic. Initially loosely wrap food items. Shallow pans allow the heat from food to disperse faster than deep pans.



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## Cooling Food, continued

Food may not move through the temperature danger zone fast enough if the food is still hot when placed in the cooler or freezer or kept in bulk. The hot food may also raise the temperature of the surrounding food items, placing them in the temperature danger zone (above 41°F).

Listed below are a few methods that can be used to cool foods more quickly. The methods can be used alone or in combination in order to cool foods quickly.

### Methods for cooling foods:

1. Reduce the quantity of the food being cooled– cut large food items into smaller pieces or divide large containers of food into smaller containers.
2. Use blast chillers or tumble chillers to cool food before placing into refrigerated storage.
3. Use ice-water baths – divide the cooked food into shallow pans or smaller pots, then place them in ice water and stir food items frequently.
4. Add ice or water as an ingredient – this works for foods that contain water as an ingredient, such as a soup or stew. The recipe can initially be prepared with less water than is required, cold water or ice can then be added after cooking to cool the product and to provide the remaining water required in the recipe.
5. Stir food products to cool them faster and more evenly – ice paddles (plastic paddles that are filled with water and frozen) and chill sticks can be used to stir food through the cooling process. Stirring food with these cold paddles chills food very quickly.

The foodservice supervisor will:

1. Review logs daily to ensure the temperatures and corrective actions are being met.
2. Follow-up as necessary.
3. File temperature logs with HACCP records.



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