

# Cooling Foods Properly

## Introduction

Cooling cooked foods properly is a critical defense in preventing food borne illness.

## Critical Action

Cooked foods that are not immediately served need to be cooled quickly and stored in a refrigerator.

Make sure that the food reaches an internal temperature of 41 degrees F or less before storage.

\*\*If the food remains at a higher temperature before and during storage, an environment for bacterial growth can be created. Slow cooling allows bacteria to grow rapidly, and causes potential danger.

## Factors that Influence

The primary factor that influences the rate at which food cools is mass. Generally,

## Cooling

the more dense the food and the greater the amount of food, the longer the food will take to cool.

## Methods of Cooling

Here are some effective ways to cool food quickly and properly:

1. Reduce food mass
2. Use shallow pans
3. Use ice water bath
4. Use ice stirrers
5. Adapt recipes
6. Use a Quick Chill Unit

## Reduce Food Mass

Reduce the size of mass of the food. Large portions, such as a whole turkey, roasts, or stews, should be divided into smaller portions to help cool the food faster. The smaller the portions, the quicker the cool down time.

## Use Shallow Pans

Use shallow pans to cool foods, especially foods that are thick, like refried beans.

- The pan should be no more than 4 inches high and the food depth should be no more than 2 inches deep.
- During cool-down phase, keep food uncovered if safe from cross-contamination, or loosely covered to allow heat to escape.
- Do not stack pans on top of one another. Stacking not only increases mass, but prevents the air from flowing around the pans so heat can be removed quickly from the food product.

[more information is on the back]

## Use Ice Water Bath

An ice water bath is effective for cooling soups and other food that

is easily stirred. This method helps decrease the food temperature quickly and safely.

- Fill a large container or sink with ice and a small amount of water to make a slush.
- Then place the food dish to be cooled into the ice bath.
- Stir the food frequently to avoid hot spots and to enhance cooling.

### **Use Ice Stirrers**

An ice stirrer is a piece of approved equipment that is hollow and you fill it up with water and freeze it. Use this “frozen utensil” to stir the food during cooling down periods.

[Note: Remember to wash and sanitize the Ice Stirrer before re-using it.]

### **Adapt Recipes**

You can reduce cooling time by adapting your recipes. When cooling foods like soups:

- Reduce the original amount of water or liquid called for in the recipe,
- then add ice at the final preparation step.

[If further cooling is required prior to storage, use an ice bath or shallow containers.]

### **Use a Quick Chill Unit**

A quick chill unit uses advanced technology to cool foods quickly. Although this method is more expensive than the other methods, some facilities may have access to a commercial Quick Chill Unit that can cool foods fast and efficiently. Usually hot foods can be cooled to a temperature of 37 degrees F within 90 minutes!

### **Helpful Hints**

Here are some additional hints to remember when cooling foods.

**1.** Verify temperatures. Use a thermometer to record temperatures when cooling to make sure the internal food temperature is cooled from:

135 degrees F to 70 degrees F within 2 hours; and then  
70 degrees F to 41 degrees F or below, within 4 hours

**2.** Use stainless steel containers instead of plastic containers to store divided portions of food. The metal helps cool food faster than plastic.

**3.** Always label food containers with important information like the time and the date of preparation.

### **For More Information**

For more information, contact the Environmental Health Division at (530) 621-5300 in Placerville or (530) 573-3450 in South Lake Tahoe. The Environmental Health Specialist who evaluates your facility can assist you in setting up proper cooling methods for your specific menu items and food facility needs.