

**HEALTH SERVICES AGENCY - COUNTY OF SANTA CRUZ  
ENVIRONMENTAL HEALTH SERVICES  
701 OCEAN ST., ROOM 312, SANTA CRUZ, CA 95060 (831) 454-2022**

**COOLING FOODS PROPERLY**

**INTRODUCTION**

Cooling cooked foods properly is 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 has an internal temperature of 41°F or less.

Note: 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 COOLING**

The main factor that influences the rate at which foods cool is mass. Generally, 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:

- Reduce food mass
- Use shallow pans
- Use an ice water bath
- Adapt recipes
- Use a Quick Chill Unit

**REDUCE FOOD MASS**

Reduce the overall amount of 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, or loosely covered to allow heat to escape.
- Do not stack pans on top of one another. Stacking prevents cool air from flowing around the pans so heat can be removed quickly from the food product.

**USING ICE BATH**

An ice water bath is effective for cooling soups and stews. 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 to enhance cooling.

**OVER**

**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.
- Add ice at the final preparation step.

**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.

**HELPFUL HINTS**

Here are some additional hints to remember when cooling foods.

- Verify temperatures. Use a calibrated thermometer to record temperatures when cooling to make sure the internal food temperature is cooled in the following manner:  
**140°F to 70°F within 2 hours; and then  
70°F to 41°F or below, within 4 hours**
- Use stainless steel containers instead of plastic containers to store food. The metal helps cool food faster than plastic.
- Always label food containers with important information like the time and date of preparation.

**CALIBRATING A THERMOMETER USING THE ICE METHOD**

Immerse the temperature probe at least two inches into a glass of finely crushed ice. Add cold tap water to remove air pockets. Wait at least 30 seconds. The gauge should read 32°F, if not, adjust it accordingly.

For more information, contact the Environmental Health Service (831) 454-2022. 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.