



# Principles of Cooling

## Cooling is a critical control point

Safe cooling requires rapidly cooling foods enough to prevent microbial growth. Cooling too slowly allows pathogens to grow and contributes to foodborne illness. School nutrition staff must know, monitor, and document proper temperatures and times for cooling food.

## Time and temperature guidelines

Use a calibrated food thermometer to monitor temperatures while cooling food. Document temperatures and times in a log. Prepare food that must be cooled early enough to allow staff to be present to monitor cooling and take corrective action when needed. Food that does not meet these time and temperature guidelines must be discarded.

- Hot food must be cooled from 135 °F to 70 °F within 2 hours.
- Food must be cooled from 135 °F to 41 °F within a total of 6 hours.
- Food at room temperature must be cooled to 41 °F within 4 hours.

## Use one or more of these cooling methods

Using one or more cooling method outlined in the *Food Code* can help safely cool foods to the proper temperatures. These methods include:

- Place food in shallow pans. Food should be no more than 2 inches deep.
- Separate food into smaller or thinner portions depending on what foods you are cooling. For example, pour soups into smaller containers, and slice roasts into smaller slices.
- Use rapid cooling equipment and active cooling methods, such as ice water baths and/or chill sticks. When high volumes of food are processed, use a blast chiller whenever possible.
- Stir the food in a container placed in an ice water bath. Monitor and refresh ice as it melts.
- Use containers that facilitate heat transfer such as metal.
- Pre-chill ingredients and containers used for making bulk items such as salads.
- Loosely cover or uncover pans if protected from overhead contamination. Place cooling food on top shelf of freezer.



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## References

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