

Food Safety Fact Sheet

Biological Hazards

INTRODUCTION

There are three types of hazards that can cause food to be unsafe: biological hazards, chemical hazards, and physical hazards. School nutrition employees have the responsibility to identify and minimize hazards in the food they serve.

HERE ARE THE FACTS

Biological hazards occur when bacteria, viruses, molds, yeasts, or parasites contaminate food. Controlling time and temperature of food is critical for minimizing biological hazards because microorganisms grow rapidly in the temperature danger zone: 41 °F–135 °F.

APPLICATION

Follow good personal hygiene practices identified in the Standard Operating Procedures.

- Wear clean uniforms and aprons.
- Follow appropriate handwashing practices.
- Use gloves for handling ready-to-eat foods.

Purchase food from approved sources.

- Require documentation that proves vendors follow a food safety program based on HACCP principles or good manufacturing practices.
- Include food safety requirement on bid specifications.

Follow good receiving practices.

- Discard any containers that are dented, bulging, or cracked.
- Make sure that all food packaging is intact. If not, discard.

Control time and temperature of food.

- Store foods at the appropriate temperature.
- Limit the time that food is at room temperature during preparation.
- Thaw foods using proper thawing procedures.
- Cook food to the appropriate internal cooking temperature.
- Hold hot food at 135 °F or above.
- Hold cold food at 41 °F or below.
- Check temperature of food at the beginning and end of transportation.





Biological Hazards cont.

- Cool food properly.
 - ◇ Cool from 135 °F to 70 °F in 2 hours or less. Take immediate corrective actions if cooling is not done within time guidelines or discard product.
 - ◇ Cool from 70 °F to 41 °F in an additional 4 hours.
- Reheat food to 165 °F for 15 seconds within 2 hours.

Check and record time and temperatures following monitoring procedures in your foodservice operation.

Follow procedures to avoid cross contamination.

- Wash hands at appropriate times using proper procedures.
- Wash fresh produce in clean, running, drinkable water.
- Use appropriate utensils for serving food.
- Clean and sanitize work surfaces and utensils.
- Use color-coded cutting boards to minimize cross contamination.
- Clean and sanitize equipment between uses.
- Check concentration of sanitizing solutions to make sure they are appropriate.
- Check temperature of rinse water in high-temperature dishmachines to make sure they are adequate for sanitizing.

Remember, follow state or local health department requirements.

References

U.S. Department of Agriculture, Food and Nutrition Service, & Institute of Child Nutrition. (2015). *Food safety in schools*. University, MS. Author.
U.S. Department of Agriculture, Food and Nutrition Service, & Institute of Child Nutrition. (2015). *HACCP-based standard operating procedures*. University, MS. Author.
U.S. Department of Health and Human Services Public Health Services, Food and Drug Administration. (2013). *FDA food code*. Retrieved from <http://www.fda.gov/food/guidanceregulation/retailfoodprotection/foodcode/ucm374275.htm>

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