



# TIP SHEET 3

## PREVENTING FOOD SAFETY RISKS

You may have come to the food industry with a longing to share a treasured family recipe, an aspiration to develop a novel product, or a desire to provide a healthy eating option. Globally, sharing a family meal is the foundation of a stable society and eating is a pleasurable venture, but the risk of illness is present regardless of even the of best intentions.

Globally, the World Health Organization (WHO) estimates that foodborne diseases impacts almost 1 in 10 people every year and nearly 420,000 die as a result. In the United States, the Centers for Disease Control and Prevention (CDC) estimates that each year roughly 1 in 6 Americans (or 48 million people) gets sick, 128,000 are hospitalized, and 3,000 die of foodborne diseases. Importantly, these diseases may be more serious in children, pregnant women, and those who are older or have a weakened immune system.

Understanding your role in identifying, preventing and managing the risk of foodborne illness is critical. But where to begin? Follow along below to identify the risks to the product (s) you produce and how to prevent or minimize those risks.

LEARNING OBJECTIVES	APPLICABLE CODE ELEMENTS
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- UNDERSTAND THE GLOBAL BURDEN OF FOODBORNE ILLNESS
- UNDERSTAND THE COMMON CAUSES OF FOODBORNE ILLNESS OUTBREAKS AND RECALLS
- DESCRIBE THE STEPS FOR IDENTIFYING AND MANAGING FOODBORNE ILLNESS HAZARDS

- 2.4.3
- 2.4.4
- 2.5.1
- 2.5.2
- 11.2.13
- 11.3.1
- 11.3.2

## KEY TERMS

- FOODBORNE ILLNESS

Additional content relating to key terms can go here.



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### ○ HAZARD

A biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect.

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### ○ HAZARD ANALYSIS

The process of collecting and evaluating information on hazards and conditions leading to their presence to decide which are significant for food safety and therefore should be addressed in the HACCP plan.

## PROCESS STEPS

1. Introduction
  - a. Globally, the most common causes of foodborne illness include
    - i. Contaminated water, ingredients or raw materials,
    - ii. Cross-contamination between contaminated and uncontaminated product via hands or surfaces, and
    - iii. Improperly cooked or held product.
2. The food safety plan
  - a. The hazard analysis is an important part in the development of an effective food safety/HACCP plan. Knowing exactly which hazard(s) pose(s) the most likely risk to the product allows for more thorough and effective control.
  - b. The CDC and WHO track 31 different agents ranging from bacteria, viruses, and parasites to toxins and chemicals, but only some of these agents are likely to pose a threat to a certain product. Careful review of scientific literature, government resources, or industry guidelines is important to understand the risks.
  - c. Review Tip Sheet 6 for an overview of the HACCP plan development steps.
3. Approved suppliers
  - a. Unsafe food cannot be made safer, therefore using raw materials and ingredients that come from suppliers who meet food safety requirements is important for the production of safe product.
  - b. Contaminated water sources are, globally, a common cause of foodborne illness. Using water from a municipal source does not assure safety. Verify the potability of water before use and filter or treat if necessary.
  - c. Review Tip Sheet 7 to better understand how to manage risks from incoming raw materials and ingredients.
4. Personal hygiene
  - a. Unwashed hands can transfer microorganisms from dirty surfaces to food and sick employees can pose a risk to food safety.
  - b. Review Tip Sheet 22 to understand the risks posed by employees and learn the important parts of a personal hygiene program.



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5. Temperature control
  - a. Product that is not cooked thoroughly or held at the right temperature can cause foodborne illness.
  - b. To prevent this from happening
    - i. Cook food to regulatory mandated temperatures and measure internal temperature with a calibrated thermometer.
    - ii. Don't leave cooked food at ambient temperatures,
    - iii. Promptly refrigerate unused cooked food or keep it very hot, and
    - iv. Refrigerate perishable food items.
6. Sanitation
  - a. Unclean surfaces on equipment or dirty utensils can cause food to become unsafe through cross-contamination.
  - b. Proper sanitation of surfaces includes thorough cleaning and the use of sanitizer at the correct concentration.
  - c. Additionally, clean production area will be less likely to attract pests. Keep the site clean and free from food debris and waste.
  - d. Review Tip Sheet 24 for information on the importance of sanitation.

### RELEVANT RESOURCES

- Food and Agriculture Organization's CODEX Alimentarius Commission. Hazard Analysis and Critical Control Point (HACCP) System and Guidelines for its Application – Annex to CAC/RCP 1 – 1969, Rev. 4-2003)  
<http://www.fao.org/docrep/005/Y1579E/y1579e03.htm>
- World Health Organization - Global Burden of Foodborne Diseases  
[http://www.who.int/foodsafety/areas\\_work/foodborne-diseases/ferg/en/](http://www.who.int/foodsafety/areas_work/foodborne-diseases/ferg/en/)
- World Health Organization - The Five Keys to Safer Food Programme  
[http://www.who.int/foodsafety/areas\\_work/food-hygiene/5keys/en/](http://www.who.int/foodsafety/areas_work/food-hygiene/5keys/en/)
- US Centers for Disease Control and Prevention – Estimates of Foodborne Illness in the United States  
<https://www.cdc.gov/foodborneburden/index.html>