

Keeping Food Safe



Understand the decision.

Recognize the condition. Choose the right control.

Food safety is not one action. A food may come from a lawful source, be cooked correctly, and still become unsafe through later handling. This chapter helps you separate those decisions instead of treating one successful step as proof that everything is safe.

Your Chapter 1 map	Where to review
Illness, symptoms and employee health	Page 2
Hazards and allergen cross-contact	Page 3
Five major risk factors and their controls	Page 4
TCS and ready-to-eat food	Page 5
Higher-risk guests and highly susceptible populations	Page 6
Responsibility and temperature evidence	Page 7
Reasoning, recap and sources	Pages 8-9

Study sequence: Watch the chapter video, use this guide to clarify unfamiliar ideas, then take the separate interactive quiz. Return to the relevant topic after reviewing a missed answer. This guide does not include a scored test.

Authority baseline: Corrected FDA Food Code 2022 plus the December 2024 Supplement. The Code is a model for adoption; local requirements govern an operation. CDC guidance and restaurant examples are identified separately.

ILLNESS / LESSON SLIDES 3-4, 7-8, 13

Symptoms are evidence, not a diagnosis

Foodborne illness is illness caused by consuming contaminated food or drink. A pathogen is a disease-causing microorganism. A symptom report alone does not identify the pathogen, the meal responsible, or whether the restaurant caused the illness.

Keep these lists separate	What belongs here
Common food-poisoning symptoms CDC public-health guidance	Diarrhea, stomach pain or cramps, nausea, vomiting and fever. Symptoms and onset times vary. Not everyone develops every symptom.
Employee-health reporting FDA Food Code	Vomiting, diarrhea, jaundice, sore throat with fever, and specified open or draining pus-containing lesions. The lesion rule depends on location and protective covering. Diagnoses and certain exposures must also be reported.

The full lesion-covering, diagnosis, restriction and return-to-work rules belong in Chapter 4. Do not substitute the common symptom list for the employee-health reporting requirements. Norovirus and hepatitis A are viruses addressed further in Chapter 2.

Outbreak language: suspicion versus confirmation

The Code describes a foodborne disease outbreak as two or more cases of similar illness resulting from a common food. A confirmed disease outbreak additionally involves laboratory identification of the causative agent and epidemiological analysis implicating the food. Two complaints suggest a pattern; they do not establish the restaurant as the source.

Restaurant example

Two guests call after a shared meal. Record their reports, involve the person in charge, and follow reporting and investigation requirements. Do not wait for proof before controlling an immediate risk. This response sequence is a restaurant example, not an FDA-mandated script.

Employee vomiting, with no established noninfectious cause: exclusion is required. Moving the employee to another food task or adding gloves does not replace exclusion. The person in charge applies the applicable return-to-work rules.

HAZARDS / LESSON SLIDES 5-6, 12-14

Match the hazard to its control

A hazard is a property that can cause unacceptable health risk. The Code uses biological, chemical and physical categories. Allergens fit the chemical-hazard framework, but are separated below so the prevention decision is clear.

Hazard	Restaurant example	Control to understand
Biological	Contamination from raw chicken reaches cooked food through a utensil.	Prevent transfer; use proper cleaning and sanitizing and the required process controls.
Chemical	A cleaner splashes into an uncovered ingredient.	Prevent chemical contact and keep unsafe food out of use. More cooking is not a universal fix.
Physical	Glass fragments fall into an open food container.	Prevent foreign-object entry and do not serve contaminated food.
Allergen cross-contact	A utensil transfers peanut-containing sauce to a dish intended for a peanut-allergic guest.	Prevent unintended protein transfer and stop the affected dish from reaching that guest.

Why removing the visible food is not enough

Lifting off a nut garnish does not establish that allergenic protein is gone. Microbial cooking or holding controls do not reliably remove an allergen. Ingredient verification and preventing cross-contact address a different problem from controlling pathogen growth.

Restaurant implementation example: stop the plate, verify ingredients and preparation conditions, and follow the operation's verified allergy procedure. A particular ticket color or handoff script is restaurant practice, not a universal FDA requirement.

Memory anchor

Different hazard, different control. A food can look and smell normal yet still contain pathogens, chemicals or allergens. Never taste questionable food to decide whether it is safe.

PREVENTION / LESSON SLIDES 9-13

Five risk factors, five different failures

The Food Code identifies five major foodborne-illness risk factors. Learn the failure each describes. A correct action in one category does not cancel a failure in another.

Risk factor	What the failure looks like	The corresponding control
Unsafe sources	A supplier's compliance with law is not established.	Verify a lawful source before using the food. A cold delivery does not prove its source.
Inadequate cooking	The required cooking endpoint is not met.	Use the temperature-and-time requirement for that food and process.
Improper holding	Cooked TCS food waits for service under unsafe conditions.	Maintain the required holding control after cooking.
Contaminated equipment	A raw-food surface contacts cooked food.	Separate tasks and properly clean and sanitize food-contact equipment.
Poor personal hygiene	Unwashed hands or an ill employee introduce risk.	Apply handwashing and employee-health controls.

Cooking and holding answer different questions

Cooking: did this food reach the required pathogen-reduction endpoint?

Holding: is growth or toxin formation controlled while the food waits? Under the ordinary Code rule, cold-held TCS food is at 41 F or below and hot-held TCS food is at 135 F or above. Specific exceptions and Code-permitted time-control options are taught with their conditions later.

Before equipment touches food again: clean, rinse and properly sanitize it. Follow the sanitizer's required conditions, then air-dry or adequately drain before food contact. Do not towel-dry it.

Hands before gloves

Wash after restroom use and before putting on gloves to begin food work. Clean gloves are not a substitute for clean hands. These are required handwashing occasions, not the complete list.

FOOD CLASSIFICATION / LESSON SLIDES 15-19

TCS and ready-to-eat can overlap

Term	The question it answers
TCS Time/temperature control for safety	Does the food need time-and-temperature control to limit pathogen growth or toxin formation?
RTE Ready-to-eat	Can the food be eaten without further preparation needed to achieve food safety?

Food in the stated condition	TCS?	Ready-to-eat?
Plain cooked rice ready for service	Yes	Yes
Raw chicken awaiting cooking	Yes	No
Plain commercial cracker	Generally no	Yes
Washed, cut melon ready for service	Yes	Yes

Preparation can change the classification

A whole, intact raw potato is ordinarily non-TCS. An ordinarily prepared baked potato is a heat-treated plant food and is TCS. The ingredient name stayed the same; processing changed the control needed.

Recognize common TCS groups: raw or heat-treated animal foods, cooked rice and beans, raw seed sprouts, cut melons, cut leafy greens, cut tomatoes or qualifying mixtures, and garlic-in-oil mixtures unless modified to prevent pathogen growth. Product formulation and the Code's exclusions still matter.

Avoid the false opposite

Ready-to-eat does not mean shelf-stable. Non-TCS does not mean contamination-proof. A cracker still needs protection from contaminants and unintended allergens; cooked rice can be ready-to-eat and still need temperature control.

GUEST PROTECTION / LESSON SLIDES 20-21

Higher risk is not the whole HSP test

HSP means highly susceptible population. For this Food Code definition, identify both the people and the services through which they receive food. Do not decide from age alone.

Part 1: listed people	AND part 2: qualifying service
People with compromised immune systems; preschool-age children; or older adults.	Food obtained at a facility providing services such as custodial care, health care, assisted living, or nutritional/socialization services.

Setting	What the facts establish
Preschool-age children eating at their child day care center	Listed population plus qualifying custodial service: both parts apply.
Older adults receiving a senior-center nutrition meal	Listed population plus qualifying nutritional service: both parts apply.
An older guest eating at an ordinary restaurant	Age indicates increased risk, but alone does not make the restaurant an HSP operation.

Do not mix the CDC and Code definitions

CDC public-health guidance identifies young children, older adults, pregnant people and people with weakened immune systems as higher-risk groups. Pregnancy is not a separate category in the Code's exact HSP definition. This distinction does not mean a pregnant guest has no increased risk.

Ingredient decision: uncooked egg dressing

An assisted-living dining room preparing an uncooked egg-based dressing for older residents must use pasteurized eggs or pasteurized egg products for this preparation. Cold holding, a lawful supplier or washing shells does not replace that ingredient protection. Other egg preparations have their own conditions.

RESPONSIBILITY / LESSON SLIDES 22-24

Assign the task. Keep the oversight.

PIC means person in charge. For an ordinary restaurant without an applicable exception, the permit holder must be the PIC or designate a PIC who is present during operating hours. An owner being off site does not remove that requirement.

Qualification also matters: the model Code requires the PIC to be a certified food protection manager through an accredited program. A regulatory-authority determination that the operation poses minimal risk can exempt it from that certification requirement. Check locally adopted requirements.

Role	Responsibility to understand
Permit holder / owner	Meets permit-holder duties and ensures the required PIC arrangement.
Person in charge	Oversees required controls, employee knowledge and food-safety duties. Responds when controls fail.
Food employee	Performs safe food tasks and reports required health information.
Regulatory authority	Applies adopted requirements and carries out regulatory oversight.

A reading must answer the right question

A cooler display describes conditions at its sensor. A food thermometer measures the food being checked. A cold unit display cannot establish that a recently loaded container of food is already cold enough.

Worked restaurant example

A line cooler reads 39 F, but a pan was just placed inside. To decide whether that pan meets cold-holding requirements, measure the food with the appropriate thermometer and method. Also consider its handling history. The display alone answers a different question.

Authority distinction: assigning a cook to take readings does not remove PIC oversight. A restaurant's exact log columns, initials, backup-person assignment and color coding are implementation choices unless a specific applicable rule or approved plan requires them.

STUDY METHOD / LESSON SLIDES 25-27

Read the situation before choosing an answer

The following is a study method, not a Code requirement. Use it to explain a food-safety decision instead of guessing from a familiar word.

Step	What to do
1. Identify the decision	Is the question about a hazard, food classification, ingredient, control or responsible person?
2. Keep the conditions	Notice the food's state, process, setting and known history. Do not invent missing facts.
3. Apply the matching rule	Choose the control that directly addresses the stated failure.
4. Explain the alternatives	An action can be sensible in another situation and still fail to solve this one.

Two worked reasoning examples

Food is cold, but supplier compliance is unknown. The controlling uncertainty is its source. Rechecking temperature cannot establish lawful sourcing. Keep it out of use while source compliance is resolved; do not treat an acceptable reading as permission to serve it.

Gloves are available, but an employee is actively vomiting without an established noninfectious cause. The controlling condition is employee illness. Gloves address a hand-contact barrier; they do not replace required exclusion.

After the separate interactive quiz

Review the explanation for each missed answer. Find the matching topic below, then explain the rule using a different food or restaurant setting. A practice score is feedback on this chapter, not a guarantee of a certification result.

Review map: illness, employee health and hygiene: pages 2 and 4.

Controls, allergens and food classification: pages 3-5.

HSP and responsibility: pages 6-7.

RECAP / SOURCES

What to carry into the next chapter

Distinction	Keep this conclusion
Symptoms versus diagnosis	Symptoms require attention; they do not identify a cause alone.
Hazard versus control	Match prevention to the hazard. Cooking is not a universal remedy.
Cooking versus holding	Both controls matter at their respective stages.
TCS versus ready-to-eat	They answer different questions and can both apply.
Higher risk versus HSP	For the HSP definition, check both population and service setting.
Assigned task versus PIC duty	Delegating the task does not erase required oversight.

Next chapter: microorganisms and the conditions that affect them. Keep using the same habit: state the condition, name the rule, and explain why the control fits.

Public sources and section map

FDA Food Code 2022, corrected print edition

Definitions: 1-201.10. Risk factors: Preface. Employee health and hands: 2-201.11-.13 and 2-301.14. PIC duties/certification: 2-101.11 through 2-103.11. Sources: 3-201.11. Cooking/holding: 3-401.11 and 3-501.16. Contamination: 3-302.11 and 3-701.11. HSP food protection: 3-801.11. Cleaning/sanitizing/drying: 4-602.11, 4-703.11 and 4-901.11. Thermometers: 4-302.12.

December 2024 Supplement to the 2022 Food Code

Use with the declared Code baseline. This guide does not claim that every summarized section changed in the Supplement.

CDC: Food Poisoning Symptoms - common symptoms and variable onset.

CDC: People at Increased Risk for Food Poisoning - broader public-health risk groups.

Original Peak Shift learning material. Model-code provisions, public-health guidance and restaurant examples are not interchangeable. Local adoption governs operations. This guide supports learning and does not guarantee an examination outcome.