



# 1 Providing Safe Food

# Providing Safe Food

## Objectives:

By the end of this chapter, you should be able to identify the following:

- What a foodborne illness is and when a foodborne-illness outbreak has occurred
- TCS and ready-to-eat food
- The five risk factors for foodborne illness
- The populations that have a higher risk for foodborne illness
- Ways to keep food safe
- The roles of government agencies in keeping food safe

# Challenges to Food Safety

**A foodborne illness is a disease transmitted to people through food.**

**An illness is considered an outbreak when:**

- Two or more people have the same symptoms after eating the same food.
- An investigation is conducted by state and local regulatory authorities.
- The outbreak is confirmed by laboratory analysis.

# Challenges to Food Safety

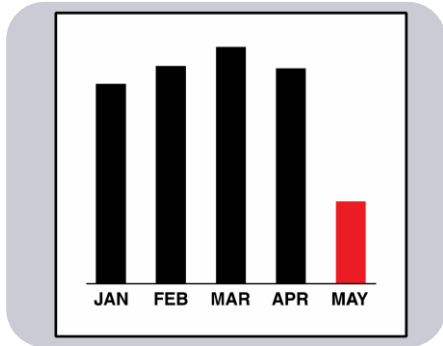
## Challenges include:

- Time
- Language and culture
- Literacy and education
- Pathogens
- Unapproved suppliers
- High-risk customers
- Staff turnover

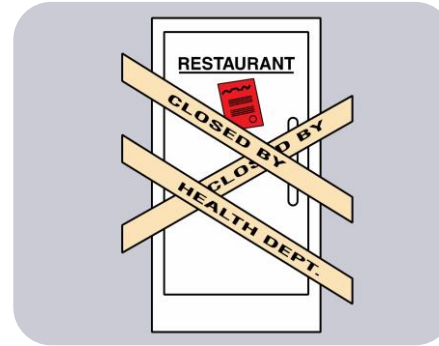


# Costs of Foodborne Illness

## Costs of a foodborne illness to an operation:



Loss of customers and sales



Loss of reputation



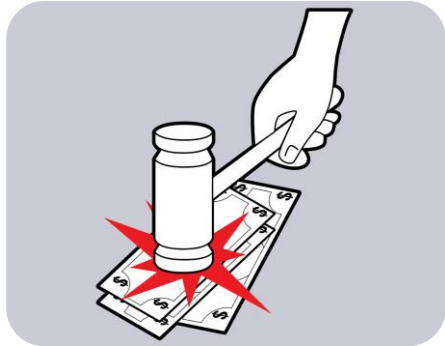
Negative media exposure



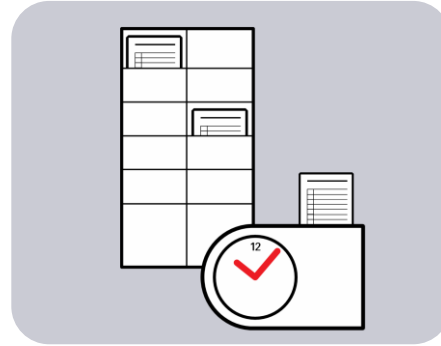
Lowered staff morale

# Costs of Foodborne Illness

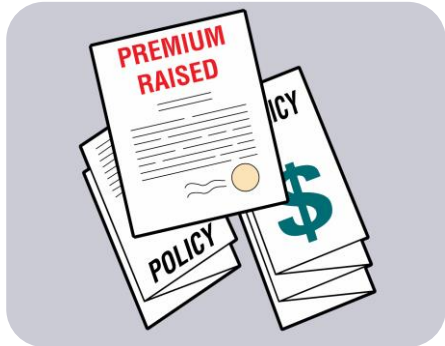
## Costs of a foodborne illness to an operation:



Lawsuits and legal fees



Staff missing work



Increased insurance  
premiums

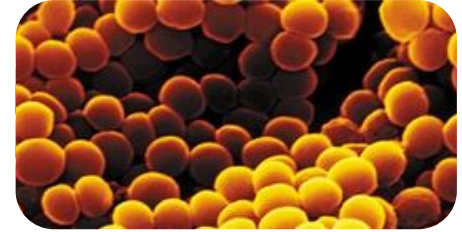


Staff retraining

# How Foodborne Illnesses Occur

## Unsafe food is the result of contamination:

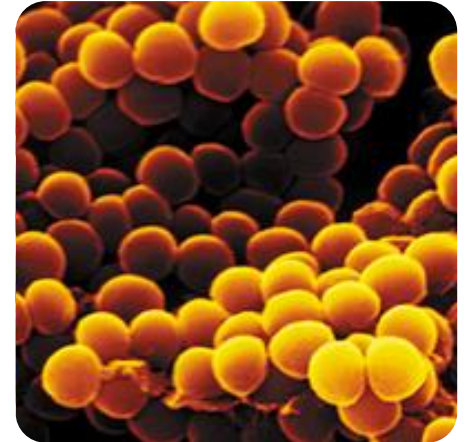
- Biological
- Chemical
- Physical



# Contaminants

## Biological contaminants:

- Bacteria
- Viruses
- Parasites
- Fungi



# Contaminants

## Chemical contaminants:

- Cleaners
- Sanitizers
- Polishes



# Contaminants

## Physical hazards:

- Metal shavings
- Staples
- Bandages
- Glass
- Dirt
- Natural objects (e.g., fish bones in a fillet)



# How Food Becomes Unsafe

## Five risk factors for foodborne illness:

1. Purchasing food from unsafe sources.
2. Failing to cook food correctly.
3. Holding food at incorrect temperatures.
4. Using contaminated equipment.
5. Practicing poor personal hygiene.

# How Food Becomes Unsafe



Time-temperature abuse



Cross-contamination



Poor personal hygiene



Poor cleaning and sanitizing

# How Food Becomes Unsafe

## Time-temperature abuse:

- When food has stayed too long at temperatures good for pathogen growth



# How Food Becomes Unsafe

## Food has been time-temperature abused when:

- It has not been held or stored at the correct temperature.
- It is not cooked or reheated enough to kill pathogens.
- It is not cooled correctly.



# How Food Becomes Unsafe

## Cross-contamination:

- When pathogens are transferred from one surface or food to another



# How Food Becomes Unsafe

## Cross-contamination can cause a foodborne illness when:

- Contaminated ingredients are added to food that receives no further cooking
- Ready-to-eat food touches contaminated surfaces.
- Contaminated food touches or drips fluids onto cooked or ready-to-eat food.
- A food handler touches contaminated food and then touches ready-to-eat food.
- Contaminated wiping cloths touch food-contact surfaces.



# How Food Becomes Unsafe

## Poor personal hygiene can cause a foodborne illness when food handlers:

- Fail to wash their hands correctly after using the restroom
- Cough or sneeze on food
- Touch or scratch wounds and then touch food
- Work while sick



# How Food Becomes Unsafe

## Poor cleaning and sanitizing can spread pathogens from equipment to food when:

- Equipment and utensils are not washed, rinsed, and sanitized between uses.
- Food contact surfaces are wiped clean instead of being washed, rinsed, and sanitized.
- Wiping cloths are not stored in a sanitizer solution between uses.
- Sanitizing solutions are not at the required levels.



# Food Most Likely to Become Unsafe

**The two types of food that are most likely to become unsafe:**

- TCS food
- Ready-to-eat food

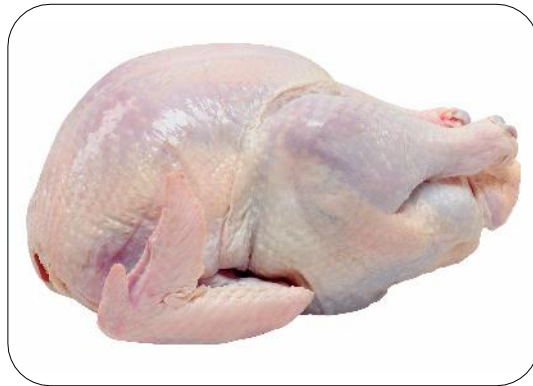
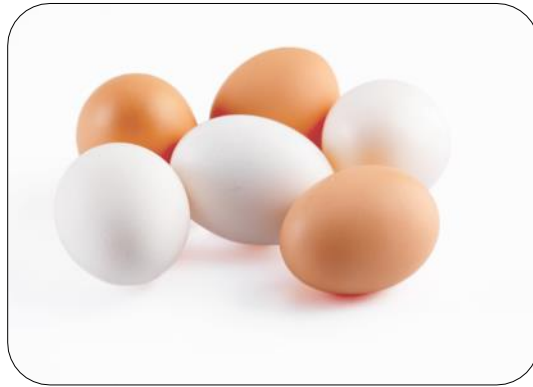
# Food Most Likely to Become Unsafe

## TCS food:

- Food requiring time and temperature control to limit pathogen growth—“time and temperature control for safety”

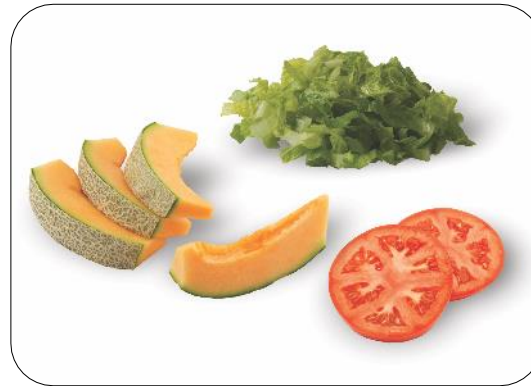
# Food Most Likely to Become Unsafe

## TCS food:



# Food Most Likely to Become Unsafe

## TCS food:



# Food Most Likely to Become Unsafe

**Ready-to-eat food is food that can be eaten without further:**

- Preparation
- Washing
- Cooking

**Ready-to-eat food includes:**

- Cooked food
- Washed fruit and vegetables
- Deli meat
- Bakery items
- Sugar, spices, and seasonings

# Populations at High Risk for Foodborne Illnesses

These people have a higher risk of getting a foodborne illness:

- Elderly people
- Preschool-age children
- People with compromised immune systems



# Keeping Food Safe

## Focus on these measures:

- Purchasing from approved, reputable suppliers
- Controlling time and temperature
- Preventing cross-contamination
- Practicing personal hygiene
- Cleaning and sanitizing



# Keeping Food Safe

## Training and monitoring:

- Train staff to follow food safety procedures.
- Provide initial and ongoing training.
- Provide all staff with general food safety knowledge.
- Provide job-specific, food safety training .
- Retrain staff regularly.
- Document training.



# Keeping Food Safe

## Training and monitoring:

- Monitor staff to make sure they are following procedures.
- If a task is done incorrectly, take corrective action immediately.
- Retrain an employee or multiple employees if they often complete a task incorrectly.



# Keeping Food Safe

## Government agencies:

- The Food and Drug Administration (FDA)
- U.S. Department of Agriculture (USDA)
- Centers for Disease Control and Prevention (CDC)
- U.S. Public Health Service (PHS)
- State and local regulatory authorities



# Keeping Food Safe

## Regulatory authority responsibilities include:

- Inspecting operations
- Enforcing regulations
- Investigating complaints and illnesses
- Issuing licenses and permits
- Approving construction
- Reviewing and approving HACCP plans





# 2

## Forms of Contamination

# Forms of Contamination

## Objectives:

By the end of this chapter, you should be able to identify the following:

- Biological, chemical, and physical contaminants and ways to prevent food from being contaminated by them
- How to prevent the deliberate contamination of food
- The correct response to a foodborne-illness outbreak
- The most common food allergens and how to prevent exposure to food allergens

# How Contamination Happens

## Contamination:

- Presence of harmful substances in food

## Contaminants can:

- Be biological, chemical, or physical
- Cause foodborne illness
- Result in physical injury

# How Contamination Happens

## Contaminants come from a variety of places:

- Animals we use for food
- Air, contaminated water, and dirt
- Chemicals we use in our operations
- Naturally occurring, such as fish bones
- People
  - Deliberately
  - Accidentally

# How Contamination Happens

## People can contaminate food when:

- They don't wash their hands after using the restroom.
- They are in contact with a person who is sick.
- They sneeze or vomit onto food or food contact surfaces.
- They touch dirty food-contact surfaces and equipment and then touch food.



# How Contamination Happens

## Simple mistakes can cause contamination:

- Allowing ready-to-eat food to touch a surface that contacted raw meat, seafood, or poultry
- Storing food or cleaning products incorrectly
- Failing to spot signs of pests



# Biological Contamination

## Microorganism:

- Small, living organism that can be seen only with a microscope

## Pathogen:

- Harmful microorganism
- Make people sick when eaten or produce toxins that cause illness

## Toxin:

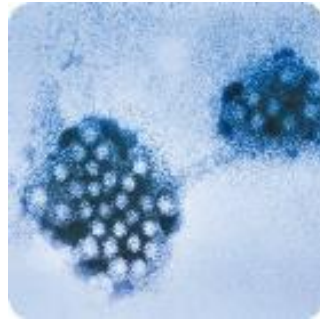
- Poison

# Biological Contamination

Four types of pathogens can contaminate food and cause foodborne illness:



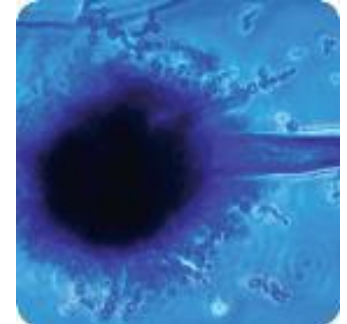
Bacteria



Viruses



Parasites



Fungi

# Biological Contamination

## The Big Six Pathogens:

- *Shigella* spp.
- *Salmonella* Typhi
- Nontyphoidal *Salmonella* (NTS)
- Shiga toxin-producing *Escherichia coli* (STEC), also known as *E. coli*
- Hepatitis A
- Norovirus

# Symptoms of Foodborne Illness

## Common symptoms of foodborne illness:

- Diarrhea
- Vomiting
- Fever
- Nausea
- Abdominal cramps
- Jaundice—a yellowing of the skin and eyes



## Onset times:

- Depend on the type of foodborne illness
- Can range from 30 minutes to six weeks

# Bacteria: Basic Characteristics

## Location:

- Found almost everywhere

## Detection:

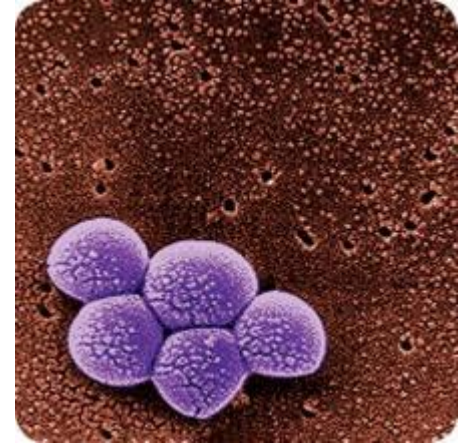
- Cannot be seen, smelled, or tasted

## Growth:

- Grow rapidly if FAT TOM conditions are correct

## Prevention:

- Control time and temperature

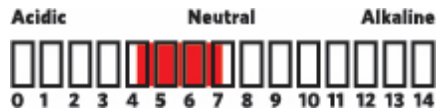


# Bacteria: Conditions for Growth



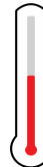
**F**

Food



**A**

Acidity



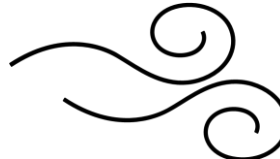
**T**

Temperature



**T**

Time



**O**

Oxygen



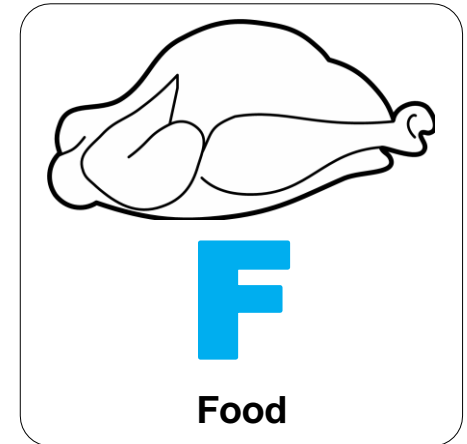
**M**

Moisture

# Bacteria: Conditions for Growth

## Food:

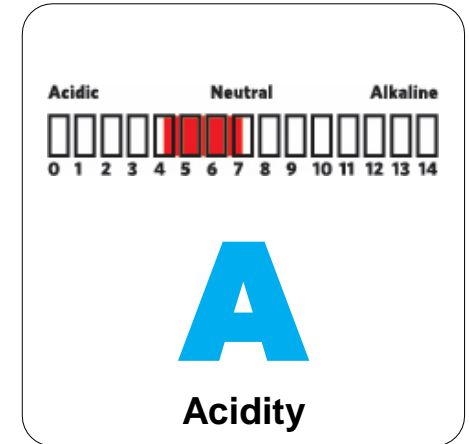
- Most bacteria need nutrients to survive.
- TCS food supports the growth of bacteria better than other types of food.



# Bacteria: Conditions for Growth

## Acidity:

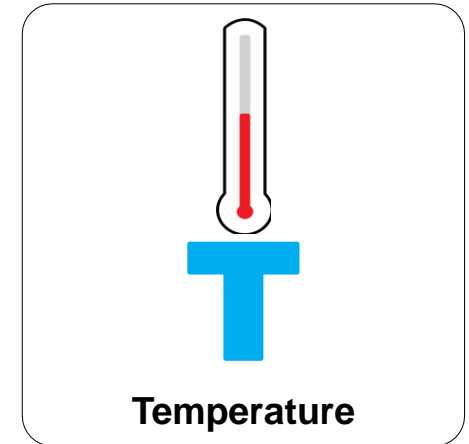
- Bacteria grow best in food that contains little or no acid.



# Bacteria: Conditions for Growth

## Temperature:

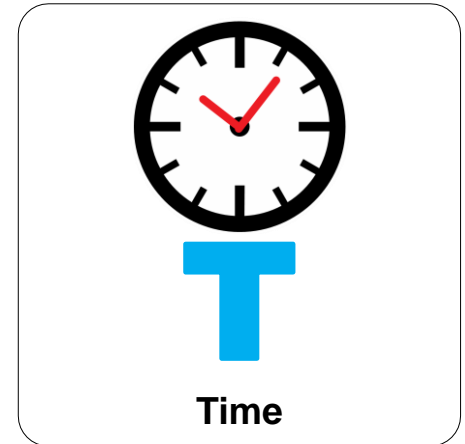
- Bacteria grow rapidly between 41°F and 135°F (5°C and 57°C).
  - This range is known as the temperature danger zone.
- Bacteria growth is limited when food is held above or below the temperature danger zone.



# Bacteria: Conditions for Growth

## Time:

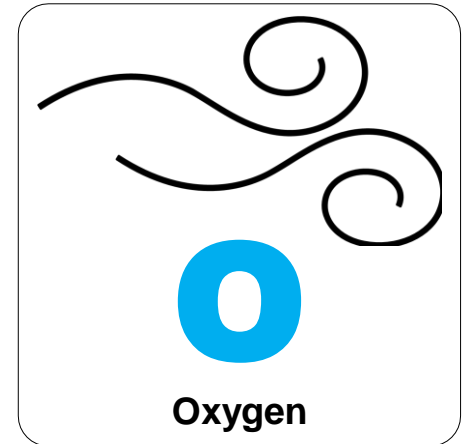
- Bacteria need time to grow.
- The more time bacteria spend in the temperature danger zone, the greater chance they have to grow to unsafe levels.



# Bacteria: Conditions for Growth

## Oxygen:

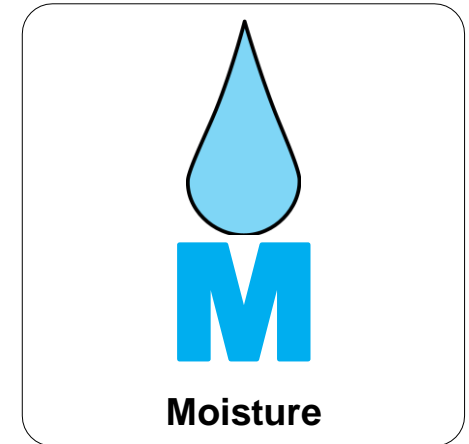
- Some bacteria need oxygen to grow.
- Other bacteria grow when oxygen isn't there.



# Bacteria: Conditions for Growth

## Moisture:

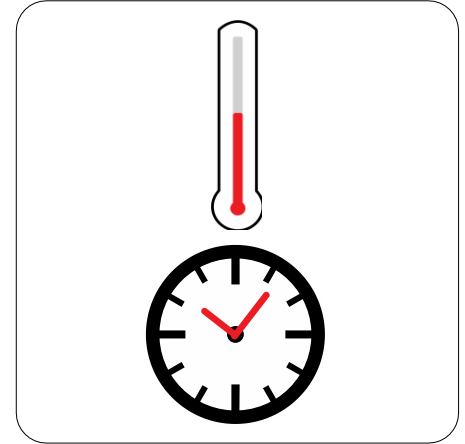
- Bacteria grow well in food with high levels of moisture.
- $a_w$  = water activity; the amount of moisture available in food for bacterial growth.
- $a_w$  scale ranges from 0.0 to 1.0.
- Water has a water activity of 1.0.



# Controlling FAT TOM Conditions

## The conditions you can control:

- Temperature
  - Keep TCS food out of the temperature danger zone.
- Time
  - Limit how long TCS food spends in the temperature danger zone.



# Major Bacteria That Cause Foodborne Illness

The FDA has identified four types of bacteria that cause severe illness and are highly contagious:

- *Salmonella* Typhi
- Nontyphoidal *Salmonella*
- *Shigella* spp.
- Shiga toxin-producing *E. coli* (STEC)

Food handlers with illnesses from these bacteria must not work in a foodservice operation while they are sick.

# Major Bacteria That Cause Foodborne Illness



**Bacteria:** *Salmonella* Typhi (SAL-me-NEL-uh TI-fee)  
**Source:** People

## Food Linked with the Bacteria

- Ready-to-eat food
- Beverages

## Prevention Measures

- Exclude from the operation food handlers diagnosed with an illness caused by *Salmonella* Typhi.
- Wash hands.
- Cook food to minimum internal temperatures.

# Major Bacteria That Cause Foodborne Illness



**Bacteria:** Nontyphoidal *Salmonella* (SAL-me-NEL-uh)

**Source:** Farm animals, people

## Food Linked with the Bacteria

- Poultry and eggs
- Meat
- Milk and dairy products
- Produce

## Prevention Measures

- Cook poultry and eggs to minimum internal temperatures.
- Prevent cross-contamination between poultry and ready-to-eat food.
- Exclude from the operation food handlers who are vomiting or have diarrhea and have been diagnosed with an illness caused by nontyphoidal *Salmonella*.

# Major Bacteria That Cause Foodborne Illness



**Bacteria:** *Shigella* spp. (shi-GEL-uh)

**Source:** Human feces

## Food Linked with the Bacteria

- Food easily contaminated by hands, such as salads containing TCS food (potato, tuna, shrimp, macaroni, chicken)
- Food that has made contact with contaminated water, such as produce

## Prevention Measures

- Exclude from the operation food handlers who have diarrhea and have been diagnosed with an illness caused by *Shigella* spp.
- Wash hands.
- Control flies inside and outside the operation.

# Major Bacteria That Cause Foodborne Illness



**Bacteria:** Shiga toxin-producing *Escherichia coli* (ess-chur-EE-kee-UH KO-LI) (STEC), also known as *E. coli*

**Source:** Intestines of cattle; infected people

## Food Linked with the Bacteria

- Ground beef (raw and undercooked)
- Contaminated produce

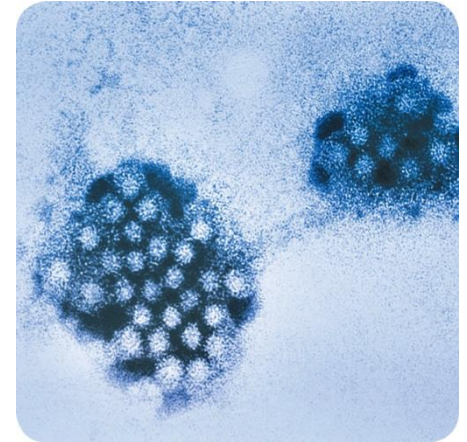
## Prevention Measures

- Exclude from the operation food handlers who have diarrhea and have been diagnosed with a disease from the bacteria.
- Cook food, especially ground beef, to minimum internal temperatures.
- Purchase produce from approved, reputable suppliers.
- Prevent cross-contamination between raw meat and ready-to-eat food.

# Viruses: Basic Characteristics

## Location:

- Carried by human beings and animals
  - Require a living host to grow
  - Do not grow in food
  - Can be transferred through food and remain infectious in food



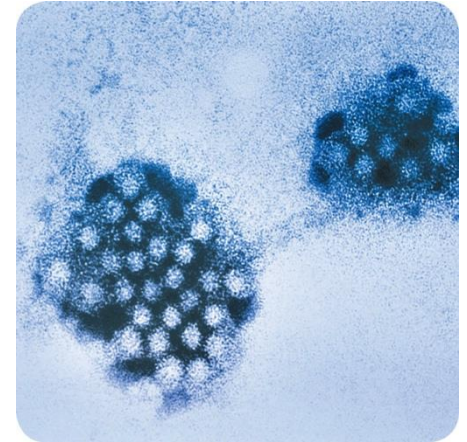
## Sources:

- Food, water, or any contaminated surface
- Typically occur through fecal-oral routes

# Viruses: Basic Characteristics

## Destruction:

- Not destroyed by normal cooking temperatures
- Good personal hygiene must be practiced when handling food and food-contact surfaces
- Quick removal and cleanup of vomit is important



# Major Viruses That Cause Foodborne Illnesses

**The FDA has identified two viruses that are highly contagious and can cause severe illness:**

- Hepatitis A
- Norovirus

**Food handlers diagnosed with an illness from Hepatitis A or Norovirus must not work in an operation while they are sick.**

# Major Viruses That Cause Foodborne Illness



**Virus:** Hepatitis A (HEP-a-TI-tiss)

**Source:** Human feces

## Food Linked with the Virus

- Ready-to-eat food
- Shellfish from contaminated water

## Prevention Measures

- Exclude from the operation staff who have been diagnosed with Hepatitis A.
- Exclude from the operation staff who have had jaundice for seven days or less.
- Wash hands.
- Avoid bare-hand contact with ready-to-eat food.
- Purchase shellfish from approved, reputable suppliers.

# Major Viruses That Cause Foodborne Illness



**Virus:** Norovirus (NOR-o-VI-rus)

**Source:** Human feces

## Food Linked with the Virus

- Ready-to-eat food
- Shellfish from contaminated water

## Prevention Measures

- Exclude from the operation staff who are vomiting or have diarrhea and have been diagnosed with Norovirus.
- Wash hands.
- Avoid bare-hand contact with ready-to-eat food.
- Purchase shellfish from approved, reputable suppliers.

# Parasites: Basic characteristics

## Location:

- Require a host to live and reproduce

## Source:

- Seafood, wild game, and food processed with contaminated water, such as produce



# Parasites: Basic characteristics

## Prevention:

- Purchase food from approved, reputable suppliers.
- Cook food to required minimum internal temperatures.
- Fish that will be served raw or undercooked must be correctly frozen by the manufacturer.



# Fungi: Basic Characteristics

## Yeasts, molds, and mushrooms:

- Some molds and mushrooms produce toxins.
- Throw out moldy food, unless mold is a natural part of the food.
- Purchase mushrooms from approved, reputable suppliers.



# Biological Toxins

## Origin:

- Naturally occur in certain plants, mushrooms, and seafood

## Seafood toxins:

- Produced by pathogens found on certain fish:
  - Tuna, bonito, mahimahi.
  - Histamine is produced when fish is time-temperature abused.
- Occur in certain fish that eat smaller fish that have consumed a toxin:
  - Barracuda, snapper, grouper, amberjack.
  - Ciguatera toxin is an example.



# Biological Toxins

## Illness:

- Symptoms and onset times vary with illness.
- People will experience illness within minutes.



# Biological Toxins

## General symptoms:

- Diarrhea or vomiting
- Neurological symptoms
  - Tingling in extremities
  - Reversal of hot and cold sensations
- Flushing of the face
- Difficulty breathing
- Burning in the mouth
- Heart palpitations
- Hives



# Biological Toxins

## Prevention:

- Purchase plants, mushrooms, and seafood from approved, reputable suppliers.
- Control time and temperature when handling raw fish.



# Chemical Contaminants

## Sources:

- Cleaners, sanitizers, polishes, machine lubricants, and pesticides
- Deodorizers, first-aid products, and health and beauty products
  - Hand lotions, hairsprays, etc.
- Certain types of kitchenware and equipment
  - Items made from pewter, copper, zinc, and some types of painted pottery



# Chemical Contaminants

## Symptoms:

- Vary depending on chemical consumed.
- Most illnesses occur within minutes.
- Vomiting and diarrhea are typical.

# Chemical Contaminants

## Prevention:

- Use chemicals approved for use in foodservice operations.
- Purchase chemicals from approved, reputable suppliers.
- Store chemicals away from prep areas, food-storage areas, and service areas.
  - Separate chemicals from food and food-contact surfaces by spacing and partitioning.
- **NEVER** store chemicals above food or food-contact surfaces.



# Chemical Contaminants

## Prevention:

- Use chemicals for their intended use and follow manufacturer's directions.
- Only handle food with equipment and utensils approved for foodservice use.
- Make sure the manufacturer's labels on original chemical containers are readable.
- Follow the manufacturer's directions and local regulatory requirements when throwing out chemicals.



# Physical Contaminants

## Sources:

- Common objects that get into food
  - Metal shavings from cans
  - Wood
  - Fingernails
  - Staples
  - Bandages
  - Glass
  - Jewelry
  - Dirt
- Naturally occurring objects such as fruit pits and bones



# Physical Contaminants

## Symptoms:

- Mild to fatal injuries
- Cuts, dental damage, and choking
- Bleeding and pain

## Prevention:

- Purchase food from approved, reputable suppliers.
- Closely inspect food received.
- Take steps to prevent physical contamination, including practicing good personal hygiene.

# Deliberate Contamination of Food

## Groups who may attempt to contaminate food:

- Terrorists or activists
- Disgruntled current or former staff
- Vendors
- Competitors

## FDA defense tool:

- A.L.E.R.T.

# Deliberate Contamination of Food

- Assure** Make sure products received are from safe sources.
- Look** Monitor the security of products in the facility.
- Employees** Know who is in your facility.
- Reports** Keep information related to food defense accessible.
- Threat** Develop a plan for responding to suspicious activity or a threat to the operation.

# Responding to a Foodborne-Illness Outbreak

- Gather information.
- Notify authorities.
- Segregate product.
- Document information.
- Identify staff.
- Cooperate with authorities.
- Review procedures.

# Responding to a Foodborne-Illness Outbreak

- Gather information:
  - Ask the person for general contact information.
  - Ask the person to identify the food eaten.
  - Ask for a description of symptoms.
  - Ask when the person first got sick.
- Notify authorities:
  - Contact the local regulatory authority if an outbreak is suspected.



# Responding to a Foodborne-Illness Outbreak

- Segregate product:
  - Set the suspected product aside if any remains.
  - Include a label with “Do Not Use” and “Do Not Discard” on it.
- Document the information:
  - Log information about suspected product.
  - Include a product description, product date, lot number, sell-by date, and pack size.



# Responding to a Foodborne-Illness Outbreak

- Identify staff:
  - Keep a list of food handlers scheduled at the time of the incident.
  - Interview staff immediately.
- Cooperate with authorities:
  - Provide appropriate documentation.
- Review procedures:
  - Determine if standards are being met.
  - Identify if standards are not working.

# Food Allergens

## Food allergen:

- A protein in a food or ingredient some people are sensitive to.
- These proteins occur naturally.
- When an enough of an allergen is eaten, an allergic reaction can occur.

# Food Allergens

## Allergy symptoms:

- Nausea
- Wheezing or shortness of breath
- Hives or itchy rashes
- Swelling in various parts of the body, including the face, eyes, hands, or feet
- Vomiting and/or diarrhea
- Abdominal pain
- Itchy throat



# Food Allergens

## Allergic reactions:

- Symptoms can become serious quickly.
- A severe reaction, called anaphylaxis, can lead to death.



# Food Allergens

## Common Food Allergens—The Big Eight



Milk



Soy



Eggs



Wheat



Fish, such as bass, flounder, and cod



Crustacean shellfish, such as crab, lobster, and shrimp



Peanuts



Tree nuts, such as walnuts and pecans

# Preventing Allergic Reactions

## Food labels:

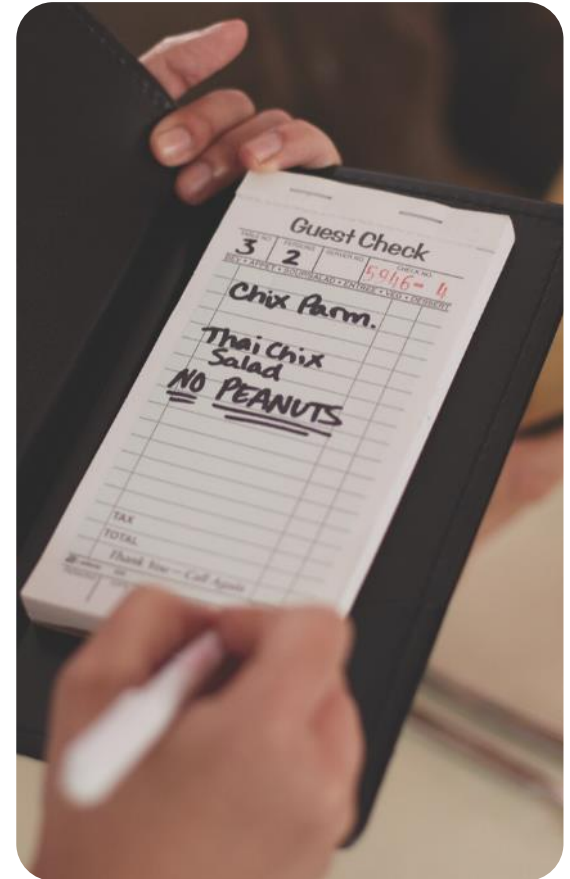
- Check food labels for allergens.



# Preventing Allergic Reactions

## Service staff:

- Describe menu items and preparation to guests.
- Identify any allergens in the item.
- Suggest menu items without the allergen.
- Clearly identify the guest's order for kitchen and service staff.
- Deliver food separately to prevent cross-contact.



# Preventing Allergic Reactions

## Kitchen staff:

- Avoid cross-contact
  - Do **NOT** cook different types of food in the same fryer oil.
  - Do **NOT** put food on surfaces that have touched allergens.



# Preventing Allergic Reactions

## How to avoid cross-contact:

- Check recipes and ingredient labels.
- Wash, rinse, and sanitize cookware, utensils, and equipment.
- Make sure the allergen doesn't touch anything for customers with food allergies.
- Wash your hands and change gloves before prepping food.
- Use separate fryers and cooking oils for guests with food allergies.
- Label food packaged on-site for retail use.





# 3

## The Safe Food Handler

# The Safe Food Handler

## Objectives:

By the end of this chapter, you should be able to identify the following:

- How to avoid behaviors that can contaminate food
- How to wash and care for hands
- The correct way to dress for work and handle work clothes
- Where staff can eat, drink, smoke, and chew gum or tobacco to minimize contamination
- How to prevent staff who may be carrying pathogens from working with or around food or from working in the operation

# How Food Handlers Can Contaminate Food

## Situations that can lead to contaminating food:

- Have a foodborne illness
- Have wounds or boils that contain a pathogen
- Sneeze or cough
- Have contact with a person who is sick
- Use the restroom and do not wash their hands
- Have symptoms such as diarrhea, vomiting, or jaundice—a yellowing of the eyes or skin



# How Food Handlers Can Contaminate Food

## Actions that can contaminate food:

- A. Scratching the scalp
- B. Running fingers through hair
- C. Wiping or touching the nose
- D. Rubbing an ear
- E. Touching a pimple or infected wound/boil
- F. Wearing and touching a dirty uniform
- G. Coughing or sneezing into the hand
- H. Spitting in the operation



# Managing a Personal Hygiene Program

## Managers must focus on the following:

- Creating personal hygiene policies
- Training food handlers on personal hygiene policies and retraining them regularly
- Modeling correct behavior at all times
- Supervising food safety practices
- Revising personal hygiene policies when laws or science change



# Handwashing

## Where to wash hands:

- Wash hands in a sink designated for handwashing.
- **NEVER** wash hands in sinks designated for food prep or dishwashing or sinks used for discarding waste water.



# Handwashing

## How to wash hands (should take at least 20 seconds):



1. **Wet hands and arms.** Use running warm water.



2. **Apply soap.** Apply enough to build up a good lather. Follow the manufacturer's recommendations.



3. **Scrub hands and arms vigorously for 10 to 15 seconds.** Clean fingertips, under fingernails, and between fingers.



4. **Rinse hands and arms thoroughly.** Use running warm water.



5. **Dry hands and arms.** Use a single-use paper towel or hand dryer.

# Handwashing

## Avoid contaminating clean hands:

- Consider using a paper towel to turn off the faucet and to open the door.



# Handwashing

## When to Wash Hands

**Food handlers must wash their hands *before*:**

- Preparing food
- Working with clean equipment and utensils
- Putting on single-use gloves



# Handwashing

## When to Wash Hands

### Food handlers must wash their hands *after*:

- Using the restroom
- Touching the body or clothing
- Coughing, sneezing, blowing their nose, or using a handkerchief or tissue
- Eating, drinking, smoking, or chewing gum or tobacco
- Handling soiled items
- Handling raw meat, seafood, or poultry
- Taking out garbage



# Handwashing

## When to Wash Hands

### Food handlers must wash their hands *after*:

- Handling service or aquatic animals
- Handling chemicals that might affect food safety
- Changing tasks (before beginning new task).
- Leaving and returning to the kitchen/prep area.
- Handling money.
- Using electronic devices
- Touching anything that may contaminate hands



# Handwashing

## Corrective Action

**If food handlers have touched food or food-contact surfaces with unclean hands:**

- Dispose of the contaminated food.
- Clean potentially contaminated equipment and utensils.
- Retrain or coach food handlers who are not following proper handwashing procedures if necessary.



# Handwashing

## Hand antiseptics:

- Liquids or gels used to lower the number of pathogens on skin

## If used, hand antiseptics:

- Must comply with the CFR and FDA standards
- Should be used only *after* handwashing
- Must **NEVER** be used in place of handwashing
- Should be allowed to dry before touching food or equipment



# Hand Care

## Requirements for food handlers:



Keep fingernails  
short and clean.



Do **NOT** wear  
false nails.



Do **NOT** wear  
nail polish.

# Infected Wounds or Cuts

## Infected wounds, cuts, or boils:

- Contain pus
- Must be covered if they are open or draining

## How a wound is covered depends on where it is located:

- Hand or wrist—Cover wounds with an impermeable cover (e.g., bandage or finger cot) and then a single-use glove.
- Arm—Cover wounds with an impermeable cover, such as a bandage.
- Other part of the body—Cover wounds with a dry, tight-fitting bandage.



# Single-Use Gloves

## Single-use gloves:

- Must **NEVER** be used in place of handwashing
- Should be used when handling ready-to-eat food
  - Except when washing produce
  - Except when handling ready-to-eat ingredients for a dish that will be cooked to the correct internal temperature



# Single-Use Gloves

## Which gloves to buy:

- Approved gloves
- Disposable gloves
- Multiple sizes
- Latex alternatives



# Single-Use Gloves

## How to use gloves:

- Wash hands before putting on gloves when starting a new task.
- Select the correct glove size.
- Hold gloves by the edge when putting them on.
- Once gloves are on, check for rips or tears.
- **NEVER** blow into gloves.
- **NEVER** roll gloves to make them easier to put on.
- **NEVER** wash and reuse gloves.



# Single-Use Gloves

## When to change gloves:

- As soon as they become dirty or torn.
- Before beginning a different task.
- After an interruption, such as taking a phone call.
- After handling raw meat, seafood, or poultry and before handling ready-to-eat food.
- After four hours of continuous use.



# Bare-Hand Contact with Ready-to-Eat Food

**NEVER** handle ready-to-eat food with bare hands when you primarily serve a high-risk population.

**Avoid bare-hand contact with ready-to-eat food *unless*:**

- The food is an ingredient in a dish that does *not* contain raw meat, seafood, or poultry *and*
  - The dish will be cooked to at least 145°F (63°C).
- The food is an ingredient in a dish containing raw meat, seafood, or poultry *and*
  - The dish will be cooked to the required minimum internal temperature of the raw item(s).



# Personal Hygiene Practices

## Food handlers must:

- Follow a personal hygiene program.
- Shower or bathe before work.

# Work Attire

## Food handlers must use hair restraints:

- Wear a clean hat or other hair restraint when in a food-prep area.
- Do **NOT** wear hair accessories that could become physical contaminants.
- Do **NOT** wear false eyelashes.
- Wear a beard restraint to cover facial hair.



# Work Attire

## Food handlers must wear clean clothing:

- Wear clean clothing daily.
- Change uniforms, including aprons, when they are soiled.
- Change into work clothes at work.
- Store street clothing and personal belongings in designated areas.
- Keep dirty clothing away from food and prep areas.



# Work Attire

## Food handlers must handle aprons correctly:

- Remove aprons when leaving prep areas.
- **NEVER** wipe your hands on your apron.



# Work Attire

## Food handlers must not wear jewelry:

- Remove jewelry from hands and arms before prepping food or when working around prep areas:
  - Rings, except for a plain band
  - Bracelets, including medical bracelets
  - Watches
- Remove other jewelry, as required by your company.



# Eating, Drinking, Smoking, and Chewing Gum or Tobacco

Food handlers may only eat, drink, smoke, or chew gum or tobacco in designated areas.

Food handlers must **NEVER** eat, drink, smoke, or chew gum or tobacco when:

- Prepping or serving food
- Working in prep areas
- Working in areas used to clean utensils and equipment

**Exception:** Employees can drink from a correctly covered container if they are careful to prevent contamination of their hands, the container, and exposed food, utensils, and equipment.



# Policies for Reporting Health Issues

- Tell staff to let you know when they are sick.
- Be prepared to show proof that you have done this, such as:
  - Signed statements in which staff have agreed to report illness
  - Documentation showing staff have completed training, which includes information on the importance of reporting illness
  - Posted signs or pocket cards that remind staff to notify managers when they are sick

# Reporting Illness

## Staff must report illnesses:

- Before they come to work.
- If they get sick while working
- If they—or someone they live with—has been diagnosed with an illness from one of these pathogens:
  - Norovirus
  - Hepatitis A
  - *Shigella* spp.
  - Shiga-toxin producing *E. coli* (STEC)
  - *Salmonella* Typhi
  - Nontyphoidal *Salmonella*



# Reporting Illness

## When food handlers are sick, you may need to:

- Restrict them from working with exposed food, utensils, and equipment.
- Exclude them from coming into the operation. This is especially important if they have these symptoms:
  - Vomiting
  - Diarrhea
  - Jaundice (a yellowing of the skin or eyes)
  - Sore throat with fever
  - Infected wound or boil that is open or draining (unless properly covered)



# Watching for Staff Illnesses

## Watch for these signs of illness:

- Vomiting
- Excessive trips to the bathroom
- Yellowing of the skin, eyes, and fingernails
- Cold sweats or chills (indicating a fever)
- Persistent nasal discharge and sneezing



# Restricting or Excluding Staff for Medical Conditions

If	Then
The food handler has an infected wound or boil that is not properly covered.	<b>Restrict</b> the food handler from working with exposed food, utensils, and equipment.
The food handler has a sore throat with a fever.	<ul style="list-style-type: none"><li>● Restrict the food handler from working with exposed food, utensils, and equipment.</li><li>● Exclude the food handler from the operation if you primarily serve a high-risk population.</li><li>● A written release from a medical practitioner is required before returning to work.</li></ul>

# Restricting or Excluding Staff for Medical Conditions

If	Then
<p>The food handler</p> <ul style="list-style-type: none"><li>● Has persistent sneezing, coughing, or a runny nose</li><li>● With discharges from the eyes, nose, or mouth</li></ul>	<p><b>Restrict</b> the food handler from working with exposed food, utensils, and equipment.</p>

# Restricting or Excluding Staff for Medical Conditions

If	Then
<p>The food handler has at least one of these symptoms from an infectious condition:</p> <ul style="list-style-type: none"><li>● Vomiting</li><li>● Diarrhea</li><li>● Jaundice (yellow skin or eyes)</li></ul>	<p><b>Exclude</b> the food handler from the operation.</p> <p><b>Vomiting and diarrhea</b></p> <p>Before returning to work, food handlers must have either:</p> <ul style="list-style-type: none"><li>● Had no symptoms for at least 24 hours.</li></ul> <p>Or</p> <ul style="list-style-type: none"><li>● A written release from a medical practitioner.</li></ul> <p><b>Jaundice</b></p> <p>Report food handlers to the regulatory authority. Exclude food handlers who have had jaundice for seven days or less.</p> <p>Before returning to work, food handlers must have both:</p> <ul style="list-style-type: none"><li>● A written release from a medical practitioner</li></ul> <p>And</p> <ul style="list-style-type: none"><li>● Approval from the regulatory authority</li></ul>

# Restricting or Excluding Staff for Medical Conditions

If	Then
<p>The food handler is vomiting or has diarrhea and has been diagnosed with an illness caused by one of these pathogens:</p> <ul style="list-style-type: none"><li>● Norovirus</li><li>● <i>Shigella</i> spp.</li><li>● Nontyphoidal <i>Salmonella</i></li><li>● Shiga toxin-producing <i>E. coli</i> (STEC)</li></ul> <p>The food handler has been diagnosed with an illness caused by one of these pathogens:</p> <ul style="list-style-type: none"><li>● Hepatitis A</li><li>● <i>Salmonella</i> Typhi</li></ul>	<ul style="list-style-type: none"><li>● <b>Exclude</b> the food handler from the operation.</li><li>● <b>Report</b> the situation to the regulatory authority.</li><li>● Work with the medical practitioner and the local regulatory authority.</li></ul>