

# Food Safety Training

- It is the right of our participants to receive a safe product that will not cause harm or illness.
- It is our responsibility to practice safe food handling techniques.
- Today's training will help minimize the risks of food borne illness.

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# Feeding America

**Feeding America's mission is to feed America's hungry through a nationwide network of member food banks and engage our country in the fight to end hunger.**



# Feeding America

- Feeding America's food safety initiative has resulted in mandatory food safety training in its guidelines.

**Excerpt from the 2008 Member Contract (Appendix B, page 16):**

*Food Safety Training – Members must comply with the following food safety training requirements:*

*b. Agencies. The Member must provide some form of food safety training to at least one representative from each Agency, effective August 1, 2009. If Agencies utilize food provided by the Member to make meals, their key food service program staff are required to meet local commercial food safety standards.*



# Food Safety Concerns

- Allergies    
  - Specific foods are more likely to cause allergic reactions.
- Hazards 
  - Contamination of foods.
- Food Borne Illness 
  - Contaminants in food can make people sick.



# Food Allergies

- The body's immune system reacts negatively to a specific food.
- Symptoms can occur suddenly or within a few hours.
- Symptoms may include hives or rash, difficulty breathing, swelling of the lips or tongue, vomiting, and (in extreme cases) death.



# Common Food Allergens

- Dairy Products



- Eggs



- Fish



- Shellfish



- Soy



- Peanuts



- Tree Nuts



- Wheat Proteins



Allergic reactions can also be triggered by additives and preservatives such as Nitrites, Sulfites and **MSG**



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# Food Allergies

- It is the responsibility of the person in charge of the food establishment to be aware that food items may contain allergens.
- All products distributed to participants must have an ingredient label.



# What is Food Borne Illness?

- Any infection or illness that is transmitted to people by the foods they eat.
- Food Borne Illness is responsible for 48 million illnesses and 3000 deaths a year.



- Food Borne Illness occurs when a person becomes ill from eating food that contains a hazard (biological, physical, or chemical).



# Food Safety Hazards

- Any factors that may cause *injury* or *illness* if it is not controlled, reduced or prevented.
- When a hazard affects a food, that food is said to be **CONTAMINATED**.
- Contamination is the presence of harmful substances *or* organisms in food.



# Food Safety Hazards

## ● Physical Hazards

- Any foreign **objects** that are introduced to food
- Acrylic fingernails, hair, staples, metal shavings, rodent droppings

## ● Chemical Hazards

- Any **chemical substance** that can contaminate food
- Pesticides, cleaning products, food additives

## ● Biological Hazards

- Any **living organism** that may contaminate food
- Bacteria, viruses, parasites, fungi, biological toxins are the most common food contaminants



# Potentially Hazardous Foods (Time/Temperature Control)

- Potentially Hazardous Foods are more likely to cause Food Borne Illness than other foods
- Potentially Hazardous Foods are generally:
  - *high in protein*
  - *moist*
  - *have little or no acidity*
- Includes some foods that are processed or already prepared.



# Potentially Hazardous Foods

- Milk and Dairy Products
- Tofu
- Baked or Boiled Potatoes
- Cooked Rice
- Cut Leafy Greens (bagged lettuces)
- Soy-protein Foods
- Garlic in oil mixture
- Raw sprouts
- Cooked Beans
- Fish
- Poultry
- Meats: Beef, Pork, Lamb
- Shell Eggs
- Cut Melons



# High Risk Population

- Some people are more susceptible to contracting food borne illness
- This population includes:
  - young children
  - the aged
  - pregnant women
  - individuals on certain medications
  - those with weak immune systems



# Five Risk Factors of Food Borne Illness

1. Food held at **improper temperature**.
  - The **Danger Zone** for bacterial growth is **41°-135°**.
  - When potentially hazardous foods are held in the danger zone, bacteria can multiply rapidly to unsafe levels.
  - *Keep hot foods hot.*
  - *Keep cold foods cold.*



# Proper Holding Temperatures

- Hold hot foods at 135°F or higher
  - Steam table (reheat first)
  - Holding oven
  - Hot box (check temperature before serving)
  - Do not reheat a second time!
- Hold cold foods at 40°F or lower
  - Refrigerator
  - In cold table (with ice bath)
- Pay special attention to  
*Potentially Hazardous Foods!!*



# Time Limits

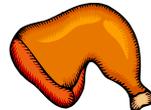
- Hot food must be cooled quickly!
  - From 135°F to 70°F in under 2 hours.
  - From 70°F to 40°F within an additional 4 hours.
  - Reheat only once!
- Food held at room temperature
  - Must start hot or cold.
  - Must be used within 4 hours.
  - Must be discarded.



# Five Risk Factors of Food borne Illness

## 2. Inadequately cooked or **undercooked food.**

- **All raw foods have bacteria on them.**
- Raw meats (such as beef, fish and poultry) contain many potentially dangerous microorganisms.
- Raw eggs may contain salmonella bacteria.
- It is important to cook these foods to their proper temperatures or people may suffer food borne illnesses.



# Five Risk Factors of Food borne Illness

## 3. Contaminated food equipment.

- Cross-contamination can easily occur
  - Improperly sanitized distribution tables (bacteria from chicken boxes transfers to the table, and then to canned goods or baby food)
  - Reusing raw meat boxes to transport other food items



# Five Risk Factors of Food borne Illness

## 4. Food from an **unsafe source**.

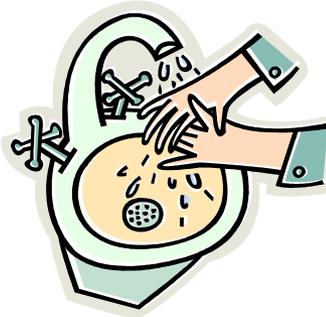
- Only accept food from an approved source.
- Non-approved suppliers may not handle food according to the correct standards and requirements needed for food safety.



# Five Risk Factors of Food borne Illness

## 5. **Poor hygiene.**

- When working with food, individuals should follow correct food handling practices.
- This includes wearing **clean clothes**, wearing hair restraints, **washing hands**, and **not working when ill**.



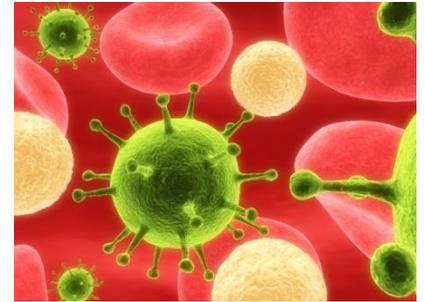
# Food Borne Infection and Intoxication

- **Two forms of Food Borne Illness**
- Infection: An illness caused by eating food containing live pathogenic organisms
- Intoxication: An illness *caused by toxins* produced by live pathogenic organisms
  - These organisms include **bacteria**, parasites and viruses
  - Once inside the body, these organisms can multiply and cause illness



# Bacteria

- Microscopic, single-celled organisms
- Responsible for more food borne illnesses than any other type of microorganism or contaminant
- Reproduce rapidly, which can compromise the immune system and cause illness



# Multiplying Bacteria: 3 Hours



# FAT TOM

## THE SIX FACTORS THAT AFFECT BACTERIAL GROWTH !!!!!!!!

- **F**ood
- **A**cid
- **T**ime
- **T**emperature
- **O**xygen
- **M**oisture



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# FAT TOM

# F

Food



- Bacteria require nutrients such as proteins and carbohydrates to reproduce.
- These foods can include meats, dairy products, poultry, and eggs.



# FAT TOM

A Acidity



- The bacteria most common in food borne illness grows best in a low acidic environment with a pH between 6.5 and 7.0
- Highly acidic foods (such as tomatoes and citrus fruit) do not **usually** support bacterial growth.



# FAT TOM

## T TIME

- In the right environment, a single bacterial cell can grow to over one million cells within five hours.

**Time** and **Temperature** are the most important factors for you to consider.

- They work together, keep cold foods cold and hot foods hot!



# FAT TOM



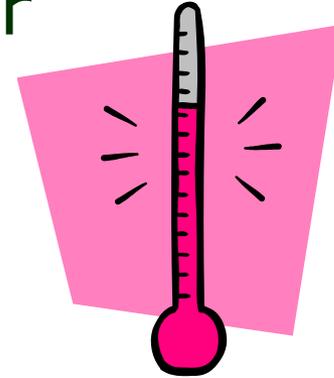
## T Temperature

- Most bacteria grow well in the **DANGER ZONE (between 41° F and 135° F)**.



# Temperatures

- Coolers must be 40 F or lower
- Freezers must be 0 F or lower
  - Use a hanging thermometer
  - Check it regularly!!—Daily or before you receive a shipment.



# FAT TOM

O

Oxygen



- Most bacteria that cause food borne illness need oxygen to survive and grow.
  - Aerobic- requires oxygen to grow
  - Anaerobic- can only grow with no oxygen present



# FAT TOM

M

Moisture



- Bacteria require water to survive.



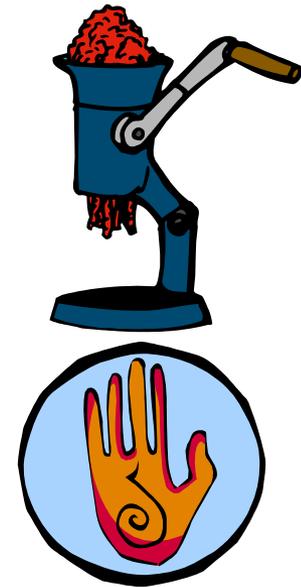
# Food Handler Hygiene

- Poor personal hygiene is one of the most common ways that food can be contaminated.
- Contamination can occur with:
  - Poor hand washing techniques
  - Gastrointestinal illness
  - Infected lesions.



# Food Handler Hygiene

- *E Coli*
  - Bacteria is spread through fecal matter
    - Ground Beef
    - Contaminated Vegetables and melons
    - Poor Food Handler Hygiene
  - Symptoms include:
    - Abdominal pain
    - Vomiting
    - Bloody diarrhea
    - Possibly kidney failure
  - CDC Estimates
    - 173,107 food borne infections annually
    - 2,785 hospitalizations
    - 78 deaths

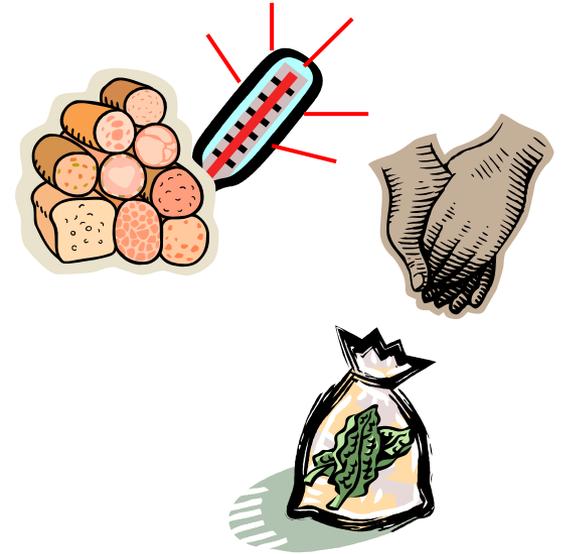


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# Food Handler Hygiene

- Listeria
  - Bacteria is spread via
    - Lunchmeats subjected to time/temperature abuse
    - Contaminated bagged lettuces
    - Poor food handler hygiene
    - Raw milk
  - Symptoms include:
    - Nausea, Vomiting
    - Infection of the bloodstream
    - Miscarriages in pregnant women
  - CDC estimates
    - 2,493 food borne cases annually
    - 2,298 hospitalizations
    - 499 deaths



# Food Handler Hygiene

- Shigella
  - Bacteria is transmitted through fecal matter
    - Poor food handler hygiene
    - Flies
  - Symptoms include:
    - Abdominal pain
    - Diarrhea
  - CDC estimates
    - 89,648 food borne cases annually
    - 1,246 hospitalizations
    - 14 deaths



# Norwalk Virus

- The virus is spread through fecal matter and vomit
  - Food handlers working while ill
  - Poor personal hygiene
  - Contaminated shellfish
- Symptoms include
  - Violent nausea and diarrhea
- CDC estimates
  - 9,200,000 food borne cases annually
  - 20,000 hospitalizations
  - 124 deaths



# Food Handler Hygiene

- Hepatitis A
  - Caused by a virus
  - **Can be transmitted through food by**
    - **poor personal hygiene** practices
    - contaminated water.
  - Can cause jaundice and inflammation of the liver.
  - CDC estimates
    - 4,170 food borne cases annually
    - 90 hospitalizations
    - 4 deaths



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# Spreading Bacteria

- Scratching your scalp
- Sneezing
- Touching a sore
- Rubbing an ear
- Using an apron to wipe hands
- Improper glove use
- Not wearing a hairnet
- Smoking or eating in a food handling area
- Wearing soiled clothes



# Hand Washing

Hand-washing sinks are required in every food establishment.

Must include:

- Hot and cold running water
- Soap
- Single-use paper towels OR Warm air dryer
- A waste receptacle if paper towels are used



# Hand Washing

- The FDA Food Code specifies that hand washing take at least 20 seconds to be effective
  - Sing a song!
    - Happy Birthday x 2
    - A, B, C, D, E, F, G... Next time won't you sing with me?



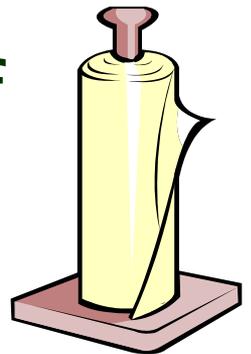
# Hand Washing

- Wetting hands with **warm water**
  - Applying soap
  - Rubbing hands together for **20 seconds**, making sure to get soap to all exposed surfaces including between fingers and forearms
- (continued...)*



# Hand Washing

- Cleaning fingernails
- Rinsing all soap off hands
- Drying hands using single-use paper towels or a warm-air dryer
- Turn off water with paper towel if available



# When To Wash Your Hands

- After using the restroom
- After touching your clothes
- After touching your face, body or hair
- After smoking, eating, drinking, or chewing gum
- After using cleaning compounds or any type of chemical
- After taking out the garbage
- *(continued...)*



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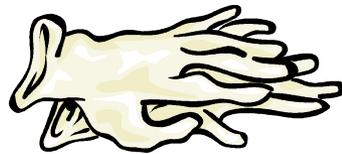
# When To Wash Your Hands

- After coughing, sneezing, or using a handkerchief
- Before putting on gloves
- After unloading supplies
- After touching anything else that could contaminate hands
- After clearing tables or handling dirty dishes
- Before handling clean dishes
- Before *and* after handling raw foods



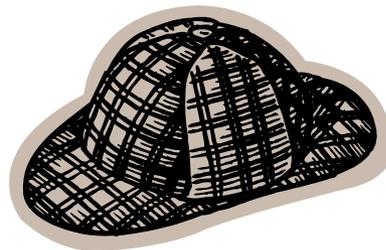
# Gloves

- The Food Code requires the use of gloves to prevent any contact between bare hands and ready-to-eat foods.
- Hands must be washed prior to putting on gloves.
- **Gloves get contaminated just as often as bare hands and are not a replacement for proper hand washing techniques.**



# Safe Food Handling: Receiving

- A physical and visual inspection of food should be done upon receiving.
- All raw meats should have a USDA inspection mark.
- There should be *no noticeable odor* to raw frozen poultry, frozen fish, frozen pork, or frozen beef.



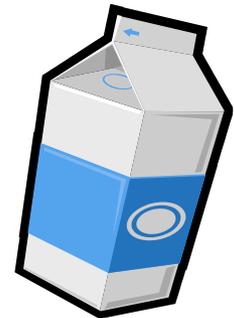
# Safe Food Handling: Receiving

- Beef, pork, poultry, and fish must be received at a temperature of 40 F or below.
- **Frozen products must be received in a fully frozen state.**
- *All beef, pork, poultry, and fish distributed by the Food Bank is frozen.*



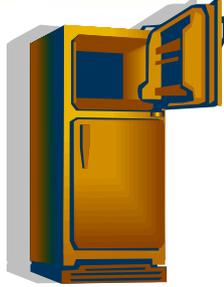
# Safe Food Handling: Receiving

- Eggs should be clean and intact. The packing must be marked, indicating USDA inspection. Receiving temperature should be 45 F or below.
- Dairy products must be received at 40 F or below.



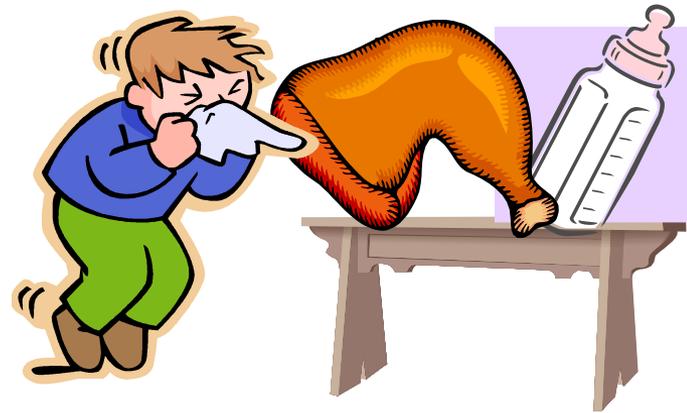
# Safe Food Handling: Receiving

- After inspecting shipments, all cold products should be stored immediately to prevent thawing.
- **Always put *refrigerated* and *frozen* products away before putting away dry goods.**
- FIFO: First in, First out—dating helps.



# Cross Contamination

- *Cross-Contamination:* When a food item is exposed to a contaminant from another source inside the food establishment.
  - Food-to-food
  - Equipment-to-food
  - People-to-food



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# Cross Contamination

- Possible Sources of Cross Contamination:
  - Other food (potentially hazardous food items)
  - Tables and work surfaces
  - Aprons, clothes and towels
  - Trucks and carts
  - Cardboard boxes and pallets

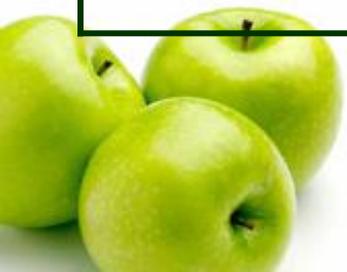
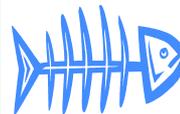


# Refrigerator Organization

(top-to-bottom):



<b>FOOD ITEM</b>	<b>MINIMUM RECOMMENDED COOKING TEMP:</b>
Ready-to-Eat Foods	Need No Further Cooking
Raw Fish/ Seafood	145°F for 15 seconds
Raw Beef/ Pork (whole cuts)	145°F for 3 minutes
Raw Ground Meat	155°F for 15 seconds
Raw Poultry	165°F for 15 seconds



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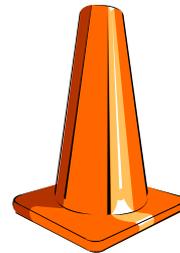
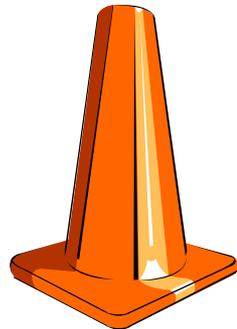
# Cleaning and Sanitizing

- Reduces the risk of cross contamination.
- Increases working life of equipment.
- Minimizes attraction of insects and rodents.
- Reduces the risk of a Food Borne disease outbreak.



# HACCP

- An acronym for **H**azard **A**nalysis and **C**ritical **C**ontrol **P**oints.
- A science-based, systematic process for identifying food safety hazards and establishing ways to control them.



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# Discussion

Identify a Food Safety Hazard

-Frozen Raw Chicken

Control the Food Safety Hazard

- Receiving
- Storing
- Handling on distribution line



# Receiving

- Visual inspection:
  - Check to make sure there is no thawing
  - Check packaging for damage
- Store immediately



# Storing

- Make sure the temperature in your freezer is 0 F or below.
- Store promptly in freezer upon receiving
- Keep in freezer until just before distribution.



# Distribution line

- Take out in small batches.
- Make sure bags are not leaking.
- Avoid cross-contamination
  - Keep the chicken and other meat on its own table.
  - Designate one volunteer to handle the chicken and other meats.
  - Clean and sanitize tables after distribution.



# Food Safety Binder

- Shelf Life of Food Bank Products
- Food Safety of Food Bank Products
- Condensed Training literature packet
- Hand Washing Posters



# Shelf Life of Food Bank Products

- SEMO Food Bank often distributes food items after the date on the package. Food manufacturers use different date codes to insure that consumers receive their product at peak quality. After a product is past the code date, many manufacturers donate it to food banks. Food Bank staff monitors those foods to ensure the quality remains good. **This food is still safe to eat!**
- This guide explains “shelf life”, or how long a food is good past its code date.



# Hand washing Signs



# References

Professional Food Manager Certification  
Training Course book Version 4.0

NSF International 2006

Hungernet.org

