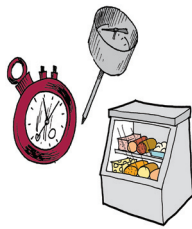


super  **mark**[®]
SAFE

QUICK REFERENCE

Third Edition



RETAIL BEST PRACTICES TO FOOD SAFETY AND SANITATION

Nancy R. Rue, Ph.D. • Anna Graf Williams, Ph.D.

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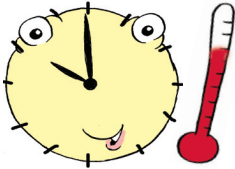


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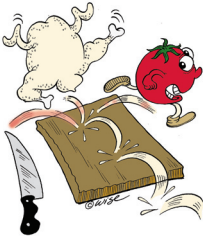
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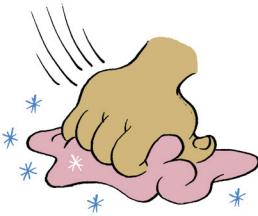
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& Safety**
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Preface



This book is designed to help food workers understand the why, what, and how to prevent food contamination in the food establishment. Food workers are on the front line of defense in the food establishment's battle to prevent food contamination of their products. Through the use of illustrations, short descriptions, and logical procedures, workers can apply these principles directly to the task of preventing food contamination. Food managers and educators will find this book invaluable as they work to educate staff about the rules and regulations designed to keep food safe. After a very short course of instruction, the food worker should be able to apply this information to the performance of his or her tasks; and ultimately, protect the safety of products before they reach the patron.

Food Manager Certification is required in many states and jurisdictions across the United States. The manager is responsible for teaching food workers how to keep food safe during:

- Receiving
- Storage
- Preparation
- Holding
- Handling

The *Quick Reference—Retail Best Practices to Food Safety and Sanitation, Third Edition*, is designed to give food managers an easy-to-read and understand learning tool to assist in teaching basic knowledge to all food workers. The illustrated text can help regardless of language skills.

On the back cover, you will find the pocket reference guide for safe time and temperature controls. Cut it out for use as a quick reference to critical times and temperatures. With this book you and your staff will be practicing proper food safety techniques in a very short time!



“We are gathered here today to talk about something important— food safety.”

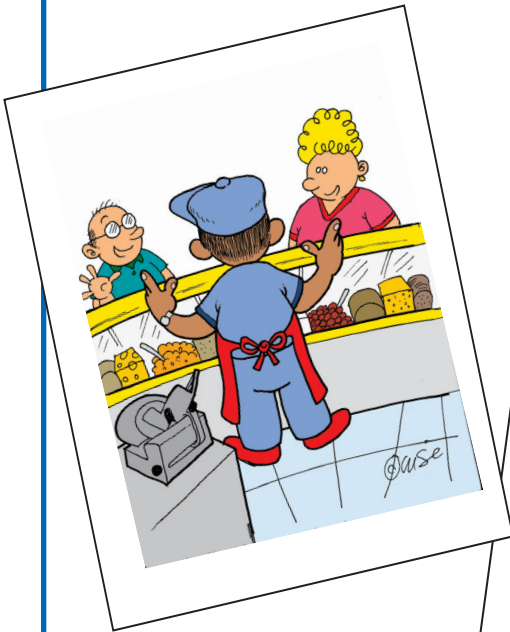
Bad things can happen when foodborne illness occurs:

- Patrons may not want to shop at the establishment anymore.
- The establishment could go out of business.
- You could be fired.
- Someone could die.



Section 1

**FOODBORNE
ILLNESS AND
PERSONAL
HYGIENE**



**Where do you
want to shop
today?**



Foodborne illness happens when people eat contaminated food and get sick. It can be stopped from ever happening. The number one thing that can stop foodborne illness is YOU! In the next several pages, you will find out how YOU can stop foodborne illness and why YOU are so important in keeping food safe for people to eat. The first section of this book will tell you what you should do before you come to work and what you should do while you are working to help keep food safe. Pay close attention; there will be a quiz at the end of each section!

NEW WORDS:

Bacteria

Biological Hazards

Contaminated

Germs

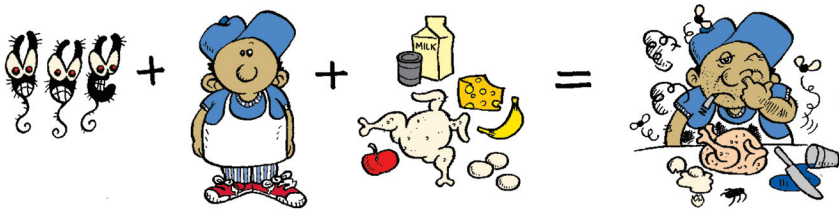
Parasites

Personal Hygiene

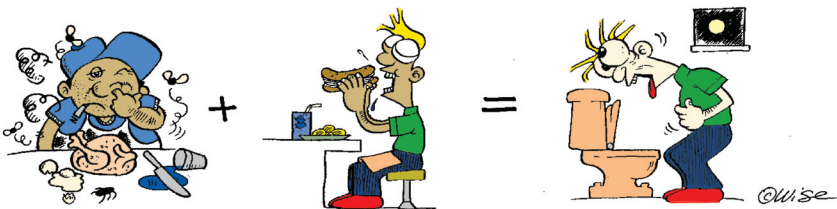
Virus



“What is foodborne illness?”

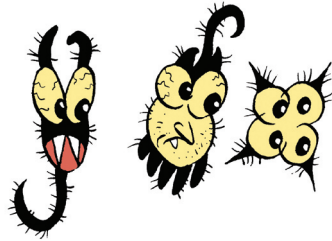


Foodborne illness is when people get sick from eating food that contains germs, chemicals, or other harmful materials.



Germ:

tiny organisms that
are too small to be
seen by the naked eye
and can cause illness



Have you ever had a foodborne illness? Many of us have, but did not even realize it! People who get sick with diarrhea, fever, vomiting, and other symptoms may not think “bad food” is the cause of their illness, but it could be.



Contaminated:

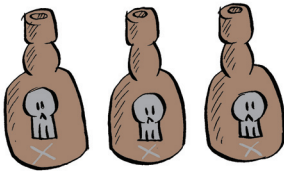
the presence of
harmful germs,
chemicals, or
non-food items



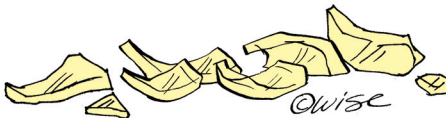
“Did you know there are very specific causes of foodborne illness?”



Biological hazards



Chemicals



Physical hazards like pieces of glass

Biological Hazard:
bacteria, viruses,
and parasites in
food that make
people sick



BIOLOGICAL



“Some possible causes of foodborne illness are:”

Bacteria



Bacteria:

germs, some of
which can make you
sick

Example: *Salmonella* spp.

Viruses



Virus:

a germ that lives on
or in other animals
and humans

Example: Hepatitis A virus
Norovirus



Parasites

Parasites:

plants or animals
that live and feed in
or on another plant
or animal

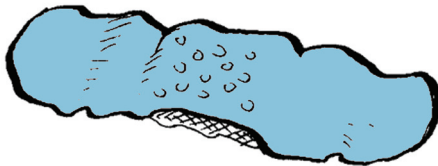
Example: *Trichinella*

More things that can cause foodborne illness or injury ...



Dirty surfaces

Staples



Infected cuts and wounds

Germs from pests.



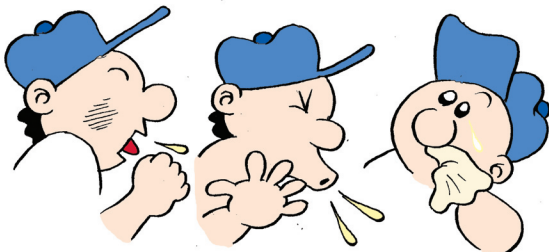
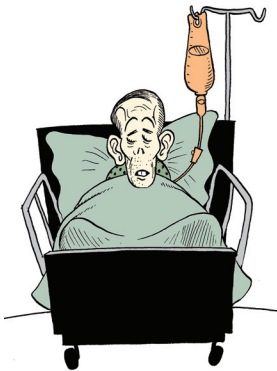


**“You should not work
with food if ...”**

**You have open cuts or wounds,
unless you cover them with
bandages and gloves**



**You are sick with nausea,
vomiting, or diarrhea.**





“If you have been told you currently have or have had the following in the past three months:

- **Norovirus**
- **Hepatitis A virus**
- ***Shigella* spp.**
- ***Salmonella* Typhi**
- **Shiga toxin-producing *Escherichia coli*,**

you must tell your boss. Also tell your boss if you think you may have been near others with these diseases.”

**Your daily personal hygiene
can also affect foodborne
illness.**



Personal Hygiene:
health habits including
bathing, washing hair,
wearing clean clothing,
and proper hand
washing



“Good hygiene includes:”

- 1. Showering every day before work and using deodorant or antiperspirant**
- 2. Keeping your hair neat and clean**
- 3. Keeping your fingernails short and clean**
- 4. Wearing clean clothes and uniforms**
- 5. Wearing no jewelry except a plain wedding band**
- 6. Not using tobacco in any form around food preparation areas, equipment, and sink areas**
- 7. Covering cuts and wounds on fingers and hands with water-resistant bandages and single-use gloves**
- 8. Putting your personal items in areas away from food or where food is prepared and stored**
- 9. Washing your hands properly and frequently.**

Always ...



**take a shower before
going to work.**

Always ...



**wear clean clothes and
closed-toed shoes.**

Always ...



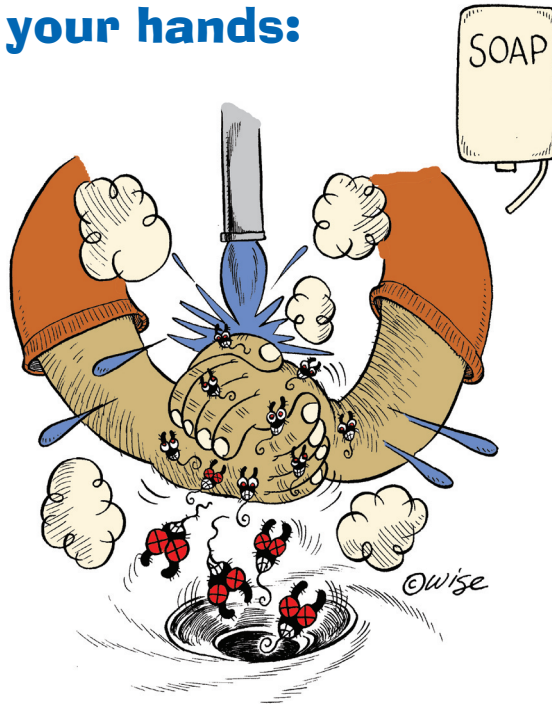
WEAR A CLEAN APRON EVERY DAY

**change your apron when
it gets dirty!**



“An important part of personal hygiene is washing your hands.”

Wash your hands:



when you arrive at your work center.

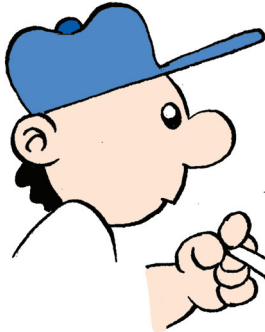
Wash your hands:



**after using
the toilet.**

Wash your hands:

after



smoking,



**eating or
drinking,**

**coughing
or sneezing,**



**touching
your body,**



**or using tissues or
handkerchiefs.**



Wash your hands:



RAW AND READY-TO-EAT

**between working with raw
foods and ready-to-eat foods.**

Wash your hands:



**after handling dirty
or soiled equipment.**

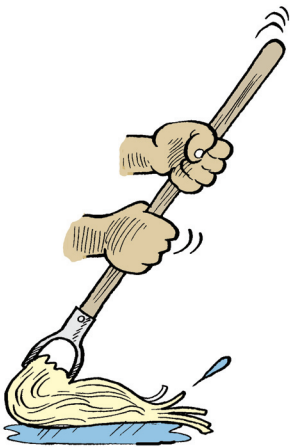
Wash your hands after:



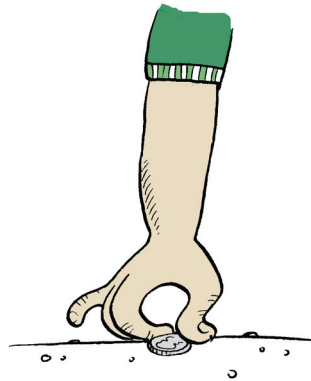
**taking out
garbage,**



**wiping
counters,**



mopping,



**or handling
money.**

Wash your hands:



**after you touch
a live animal.**

Wash your hands:



**after doing anything that could
contaminate your hands.**



“There is a correct place to wash your hands.”

Always wash your hands in a handwashing sink that has:

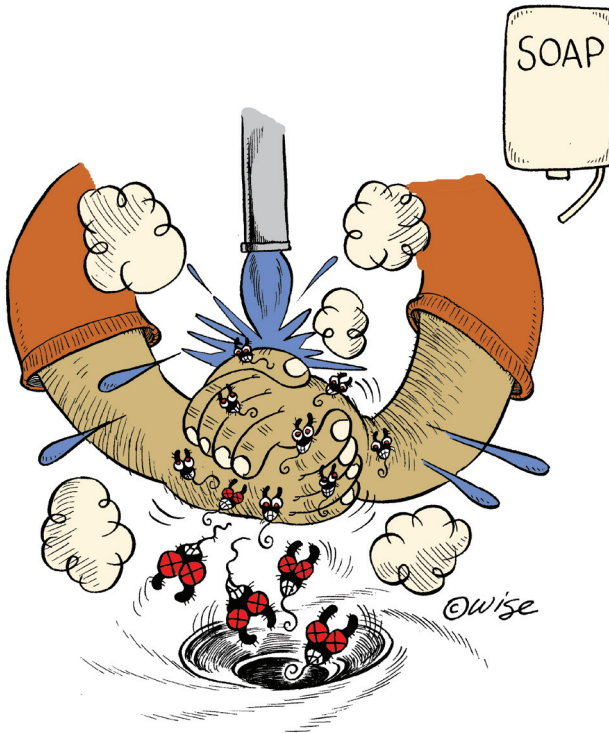
- **clean, warm, running water,**
- **Soap, and**
- **Paper towels or an air dryer.**



Do not wash your hands in food preparation or warewashing sinks.



**“Did you know there
is a right way to
wash your hands?”**





“Here are the steps to washing your hands ...”

SAFE HANDS...



1. WET HANDS



2. APPLY SOAP



3. BRISKLY RUB HANDS FOR 10-15 SECONDS



4. SCRUB FINGERTIPS AND BETWEEN FINGERS



5. SCRUB FOREARM TO JUST BELOW ELBOW



6. RINSE FOREARMS AND HANDS



7. DRY HANDS AND FOREARMS



8. TURN OFF WATER USING PAPER TOWEL



9. TURN DOORKNOB AND OPEN DOOR USING PAPER TOWEL

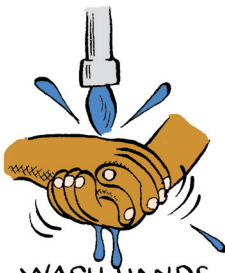


10. DISCARD TOWEL

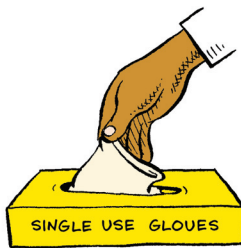
...MEAN SAFE FOOD



“Gloves are like utensils. Every time you finish a food-handling activity you must change your gloves!”



WASH HANDS



SELECT GLOVES



PUT ON GLOVES



FOOD-HANDLING
ACTIVITY



DISCARD GLOVES
AFTER EACH TASK



WASH HANDS WHEN
RETURNING TO WORK

Gloves are used to protect your customers, not to protect your hands from getting dirty.

You should also change your gloves after you ...



**handle
money,**



**touch dirty
things,**

**touch your hair
or any other
part of your
body,**



RAW

READY-TO-EAT

**or change
from handling
raw food (like
chicken) to
ready-to-eat
foods (like fresh
vegetables).**

**Never reuse a pair of gloves!
Always throw away used gloves
and get a new pair.**

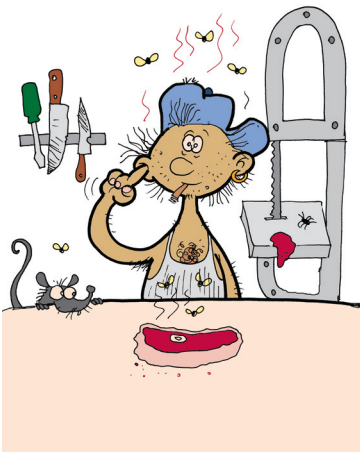


**“Remember ...
everything you do
makes food safe or
unsafe.”**

**Wash your
hands.**

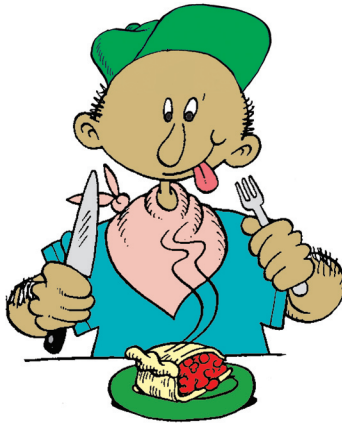


**Use gloves the
right way.**



**Don't smoke in
your work area.**

Don't eat or drink in work areas.



Change your uniform or apron when it gets dirty.



Keep personal items out of food production areas.

Test Your Knowledge!

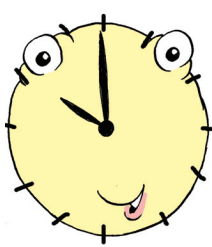


True or False

- T F 1. You should always wash your hands after going to the toilet.
- T F 2. If you have a cut or wound and cover it with a bandage and a single-use glove, you can work with food.
- T F 3. Foodborne illness cannot be prevented.
- T F 4. You should always wash your hands in food preparation and warewashing sinks.

1. T, 2. T, 3. F, 4. F

Section 2

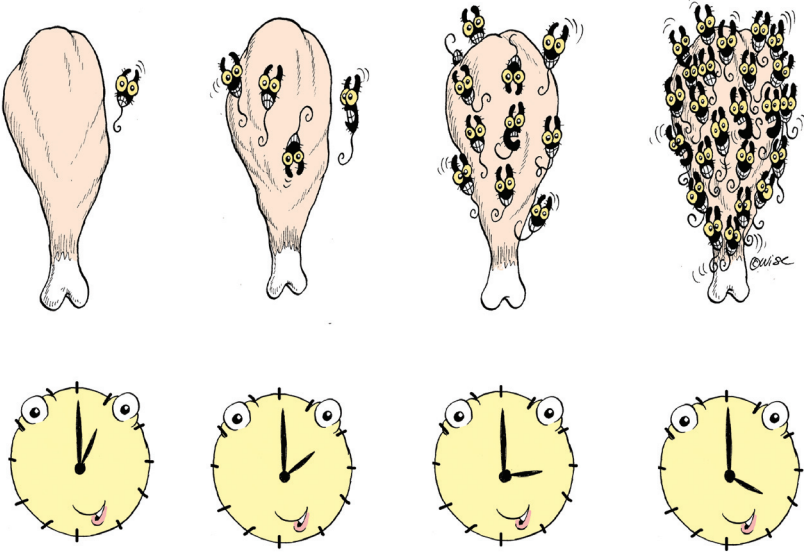


TIME

&

TEMPERATURE

Food is handled many times from the moment it comes into the place you work until the time someone eats it. It is your job to make sure food stays safe to eat. One important thing you have to do is make sure food stays at the right temperatures for the right amount of time. This section will tell you how to take the temperatures of food and at what temperatures different foods should be kept while being handled.



NEW WORDS:

Date Marking

Food Temperature Danger Zone

Flow of Food

FIFO

Potentially Hazardous Food

**(Time/Temperature Control for
Safety Food) or PHF (TCS)**

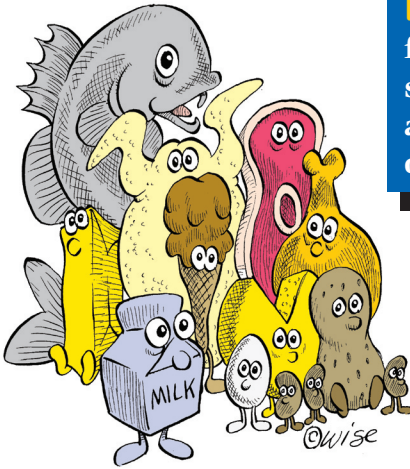
Ready-To-Eat



“What is potentially hazardous food?”

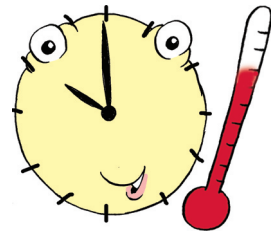
Potentially Hazardous Food - PHF(TCS):

food that is capable of supporting the rapid and progressive growth of harmful germs



Potentially Hazardous Foods (Time/Temperature Control for Safety Food)

need specific time and temperature controls to keep the food safe from germs. These types of foods include cooked animal and vegetable foods, as well as raw seed sprouts, cut melons, cut tomatoes, cut leafy greens, or garlic-in-oil mixtures.

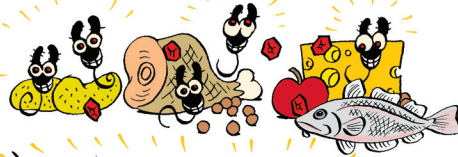




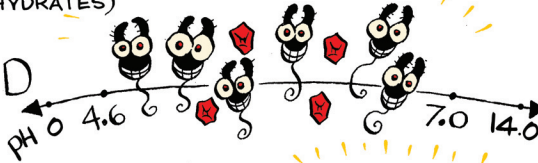
“What do germs need to live and grow?”

FOOD

(HIGH IN PROTEIN OR CARBOHYDRATES)



ACID



TEMPERATURE

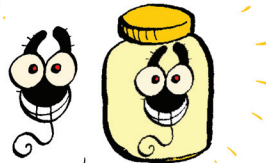


TIME



OXYGEN

(DEPENDING ON THE TYPE OF BACTERIA, SOME CAN SURVIVE ONLY WITH OXYGEN, SOME ONLY WITHOUT OXYGEN, SOME WITH OR WITHOUT OXYGEN, SOME WITH OXYGEN IN VERY LIMITED AMOUNTS.)



MOISTURE

(WATER ACTIVITY GREATER THAN 0.85)



Foods held between 41°F (5°C) and 135°F (57°C) are considered to be in the Food Temperature Danger Zone (TDZ).

Food Temperature Danger Zone:
temperatures between 41 °F (5 °C) and 135 °F (57 °C) at which bacteria grow best



The TDZ is where foodborne illness-causing bacteria grow best.

Food can only be held in the TDZ for a maximum of four hours.

Time & Temperature



“When dealing with Potentially Hazardous Food (TCS)... keep it hot at 135° F (57°C) or above, keep it cold at 41°F (5°C) or below, or don’t keep it at all!”



WHEN IN DOUBT,
THROW IT OUT!

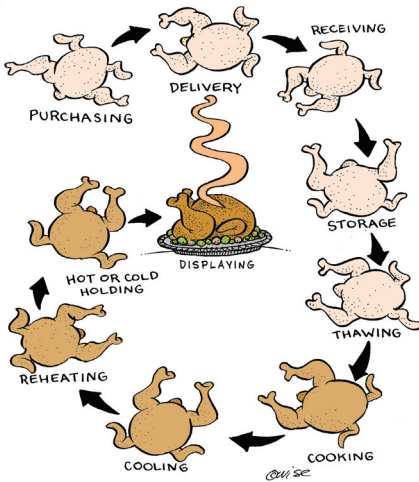


“Your goal is to keep food **OUT of the food temperature danger zone.”**

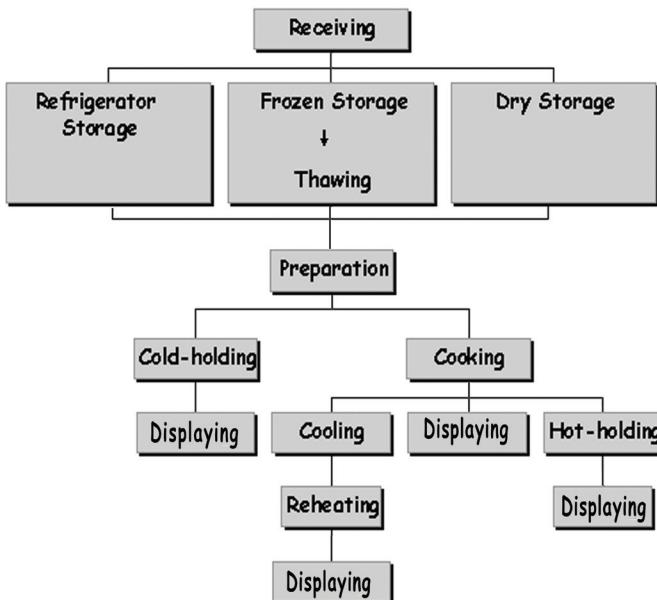




“Keep track of food temperatures throughout the flow of food.”



Flow of Food:
the steps food goes through from the time it is received until the time it is eaten





“What do you use to take the internal temperature of food products?”



A Dial Face Bi-Metallic Stem Thermometer



A Digital Thermometer



A Thermocouple



T-Sticks





“This is how you use a thermometer ...”

Insert the probe of the thermometer 2 inches into the food product or between packaged foods and wait until the needle or numbers stop moving.



Be sure to use a properly cleaned, sanitized, and calibrated thermometer to take food temperatures.

T-Sticks change color at the temperature they measure.





“How do you take the temperature of different types of food?”



Packaged foods

When measuring the temperature of packaged foods, place the probe of the thermometer tightly between the two food packages.



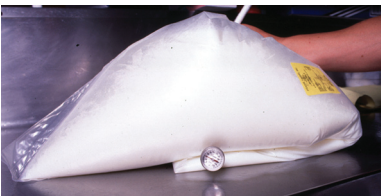
Unpackaged foods

When measuring the temperature of unpackaged foods, insert the probe of the thermometer completely into the food.

When measuring the temperature of foods in single-use containers, open one containers and place the probe of the thermometer completely into the food. Make sure you have the manager's permission to test the food product because it will have to be discarded following temperature taking.



Single-use containers



Bulk storage items

When measuring the temperature of bulk storage items, fold the bulk food item over the probe of the thermometer.



“When food products are received, you must receive and store them in the right way.”

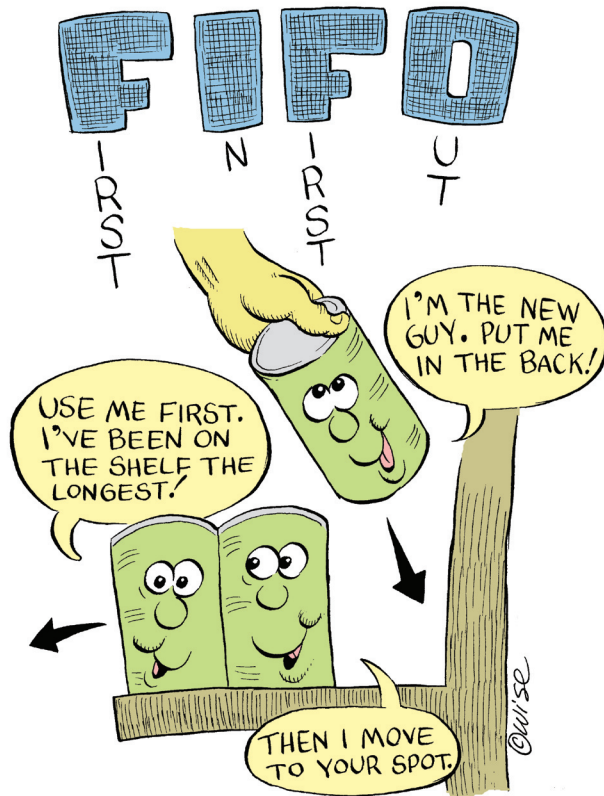
1. Check to be sure all products are there
2. Check the product's packaging and do not take any damaged product
3. Check to be sure the temperature is not in the danger zone
4. Put food away quickly and correctly.



Be sure to store cooked or ready-to-eat items above raw foods and store everything at least 6 inches above the floor.



“When putting away products, use the FIFO inventory method.”



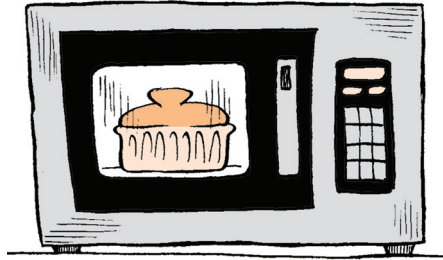
FIFO:
First In - First Out
put new products
behind old products

Thawing Food



“When you thaw food, move it through the Food Temperature Danger Zone (TDZ) quickly.”

**Thaw foods
in a
microwave.**

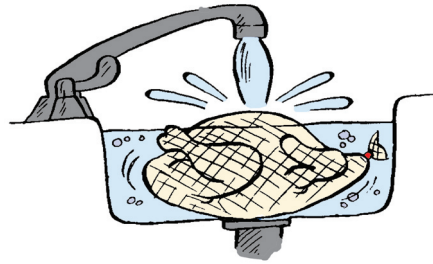


Foods thawed in a microwave oven must be cooked to completion in the microwave or transferred immediately to a stove, oven, or other type of equipment to complete the cooking process.

**Thaw foods as
part of the
cooking process.**

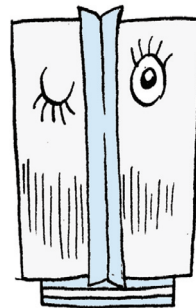


Thaw food submerged under cool running water.



- Ensure food is completely submerged under cool running water [70° F (21° C) or below]
- Ready-to-eat foods must not reach the Temperature Danger Zone (TDZ) at all, and raw animal foods must not be in the temperature danger zone for more than four hours.
- Thawing counts toward time in the temperature danger zone.

The most preferred method is to thaw foods in the refrigerator.



Cooking Food

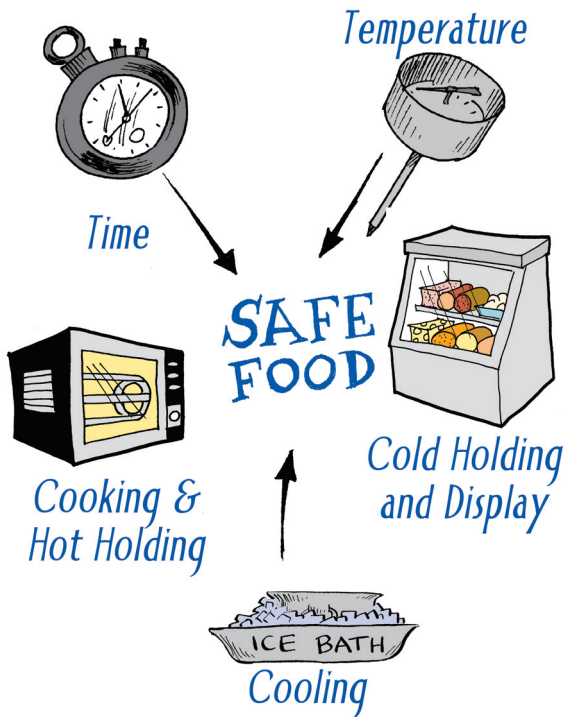
When you are preparing or cooking food, it is your job to keep it safe!



Food can become contaminated with germs during the cooking and preparation process if you allow it to remain in the Food Temperature Danger Zone (TDZ) for more than four hours.

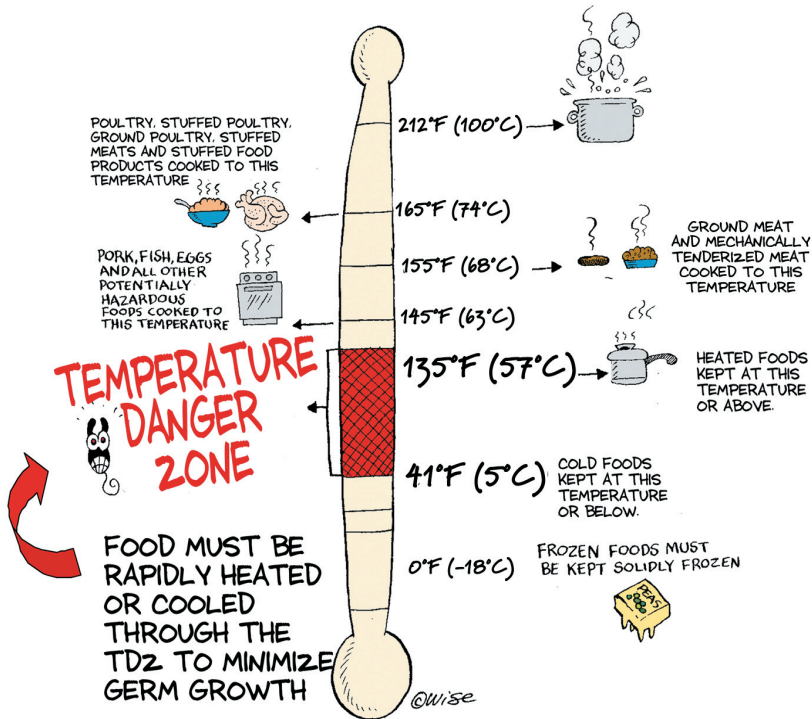


“There are several things you need to keep in mind when trying to keep food safe.”





“Use this thermometer to help you remember time and temperature guidelines when cooking...”

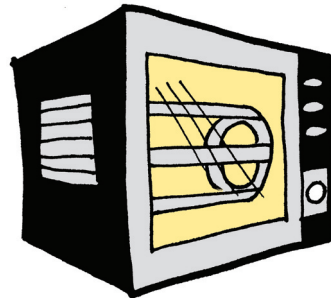
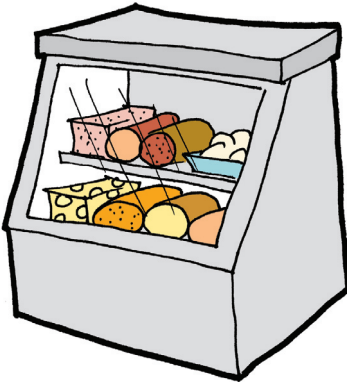


“Remember to move foods through the Food Temperature Danger Zone (TDZ) quickly!!”

Hot & Cold Food Holding



“Now that the food is cooked, we have to think about how to keep harmful germs from growing before the food is eaten.”



Keep food at temperatures below 41 ° (5 ° C) or above 135 ° F (57 ° C).

Cooling Food

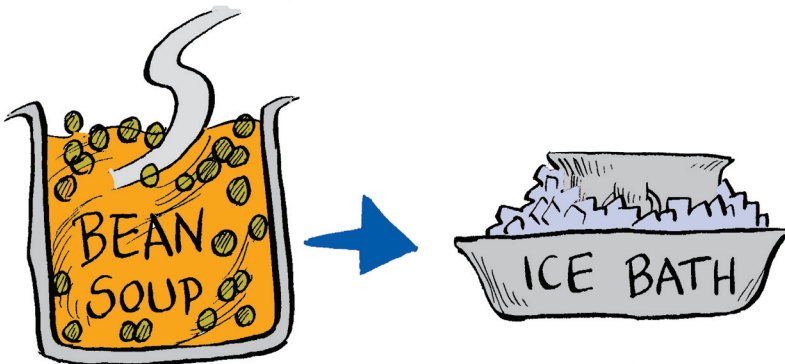


“Good ways to cool food are to:”

Add ice as a final ingredient.



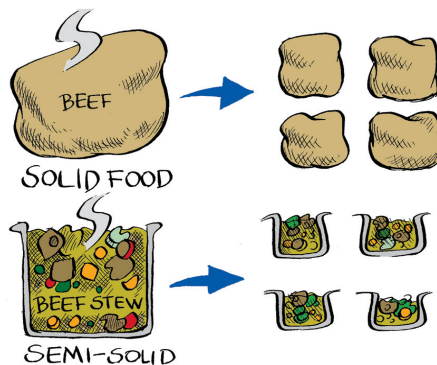
Place hot food containers in an ice bath and stir.





Stir food frequently to speed up cooling.

Separate larger portions into smaller portions to help them cool faster.



Cool foods rapidly from 135 ° F (57 ° C) to 70 ° F (21 ° C) within the first two hours AND from 135 ° F (57 ° C) to 41 ° F (5 ° C) or below within six hours.

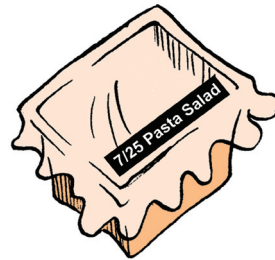
Cold Storage-Date Marking



“Some foods that are prepared in your store and held cold must be date marked.”

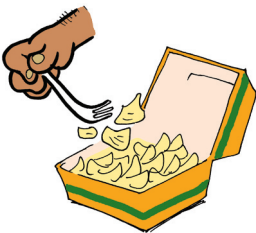
Date Marking:

write the date or day that the food must be eaten by, sold by, or thrown away



Ready-to-eat foods that have been prepared in your store and held cold, such as in a refrigerator or on ice, must have a date on them that indicates when the food must be eaten by, sold by, or thrown away.

When held between 41 ° F (5 ° C) or below, food can be held for up to 7 days starting with the day the food is made.

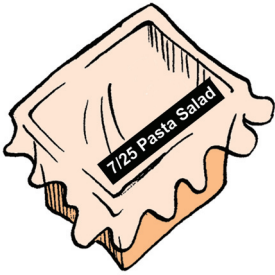


Ready-To-Eat:

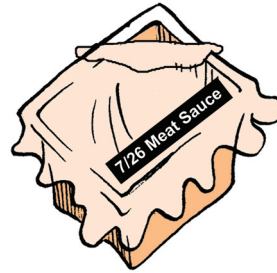
foods that do not need to be washed, cooked, or further prepared before being eaten

Cold Storage

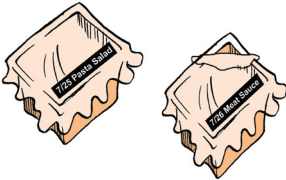
Label, date and cover all food.



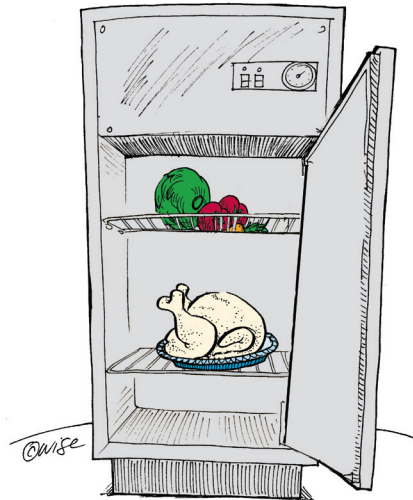
Vent foods that are cooling until they reach 41 °F (5 °C) or below.



Leave space between containers to allow air to circulate.

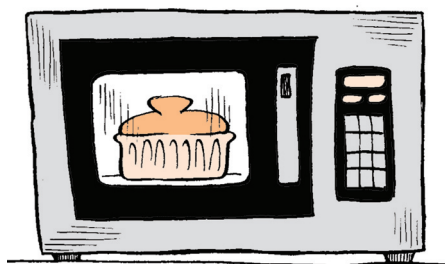


Store raw products below ready-to-eat products.



Reheating for Hot-Holding

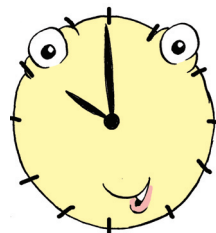
Hold food at 41 °F (5 °C) or below until you are ready to reheat it.



Reheat food to 165 °F (74 °C) within two hours.

Ready-to-eat food that has been commercially processed and is in an intact package can be reheated to 135 °F (57 °C).

Reheat food as few times as possible!





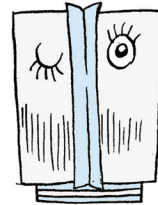
“Pull out this handy time and temperature chart and use it to help you remember food safety rules.”

Time and Temperature



Receiving and Storing:

Frozen and refrigerated receiving/storage practices prevent or slow the growth of harmful microorganisms



Food Product	Internal Temperature
Frozen Foods	Solidly frozen
Refrigerated Foods	41°F (5°C) or lower
Raw Shell Eggs	45° F (7° C) ambient temperature or below



Thawing:

Take food from frozen to nonfrozen to minimize the product’s time in the temperature danger zone. Keep PHF (TCS) below 41°F (5°C) at all times.

Method	Internal Temperature	Times
In refrigerator	41°F (5°C) or lower	typically takes 2-3 days
Submerged under cool running water 70°F (21°C)	Ready-to-eat product not to exceed 41°F (5°C); Water temperature not to exceed 70°F(21°C)	Thawed portions of raw animal foods requiring cooking should not be allowed to rise above 41°F (5°C) for more than 4 hours, including the time the food is being thawed and prepared for cooking.

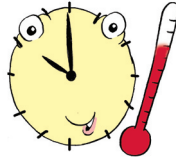


Cooking:

Safely heating a food product from raw to ready-to-eat with minimum holding times before serving

Food Product	Minimum Internal Temperature	Times
*Meat Roast (rare)	130°F (54°C)	112 minutes
	140°F (60°C)	12 minutes
Meat and Pork (other than roast), Fish	145°F (63°C)	15 seconds
Ground Meat, Mechanically Tenderized Meat, Ground Pork, Ground Game Animals	155°F (68°C)	15 seconds
Meat Roast (medium), Pork Roast, Ham	145°F (63°C)	4 minutes
Poultry, Ground Poultry, Stuffed Meats, and Stuffed Food Products	165°F (74°C)	15 seconds

* See additional cooking times and temperatures in FDA Food Code - paragraph 3-401.11(B)(2)
2009 FDA Food Code

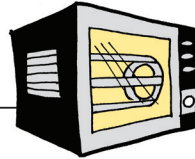


Time and Temperature (continued)

Hot-Holding:

Keeping hot food out of the temperature danger zone

Food Product	Internal Temperature
Hot-holding of all foods	135°F (57°C) or above



Cold Food Holding:

Keeping cold food out of the temperature danger zone

Food Product	Internal Temperature
Cold-holding of all foods	41°F (5°C) or below



Cooling Hot Foods:

Rapid reduction of temperature through and out of the temperature danger zone

Part	Internal Temperature	Times
Hot food cooling part 1	From 135° to 70°F (57° to 21°C)	2 hours or less
Hot food cooling part 2	From 135° to 41°F (57° to 5°C) or below	Within 6 hours or less



Frozen Food Holding: Keeping food solidly frozen

Food Product	Internal Temperature
Frozen food	Solidly frozen recommended



Reheating: Bringing food back up to serving temperature

Method	Internal Temperature	Times
Reheating	165°F (74°C) or above	Within 2 hours
Reheat commercially processed, intact packaged, ready-to-eat food	135°F (57°C) or above	Within 2 hours

Remember, there's NEVER been a case of foodborne illness that couldn't have been prevented!

2009 FDA Food Code

Test Your Knowledge!



True or False

- T F 1. The Food Temperature Danger Zone is between 41 °F (5 °C) and 135 °F (57 °C).
- T F 2. If you do not know how long food has been out at room temperature, you should refrigerate it as soon as possible.
- T F 3. Germs can grow on foods held at temperatures between 41 °F (5 °C) and 135 °F (57 °C).
- T F 4. It is not important to track food temperatures throughout the flow of food.

1. T, 2. F, 3. T, 4. F

Section 3

PREVENTING GROSS CONTAMINATION

Everything that touches food can make it unsafe to eat. It is very important to protect food at all times. Did you know there are tiny creatures you cannot even see that can make food unsafe to eat? This section will tell you what you should keep away from food, and how you can keep germs from growing on food.



RAW AND READY-TO-EAT

NEW WORDS:

Cross Contamination

Major Food Allergen

Sanitize

“Help me...

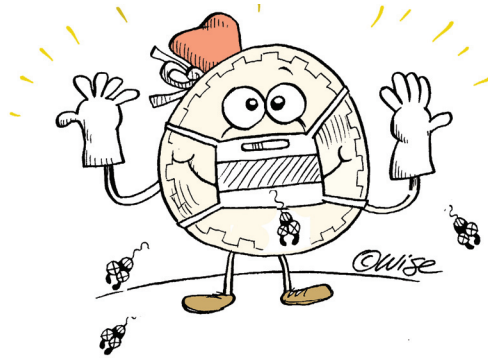


**stay away from
Cross Contamination!”**

**Cross
Contamination:**
transfer of harmful
germs between
items



“How Can You Help?”



“First, let me show
you what cross
contamination is ...”

“Cross contamination is when harmful germs move from ...



Equipment



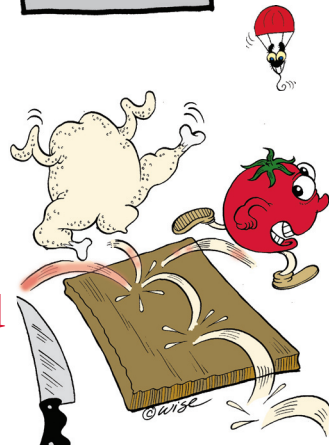
Utensils



You



Spills

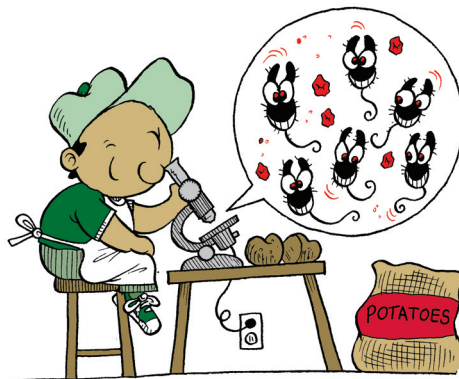
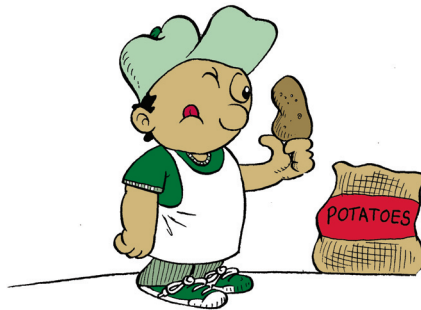


Raw Food

... to food that is ready to be served or eaten.”

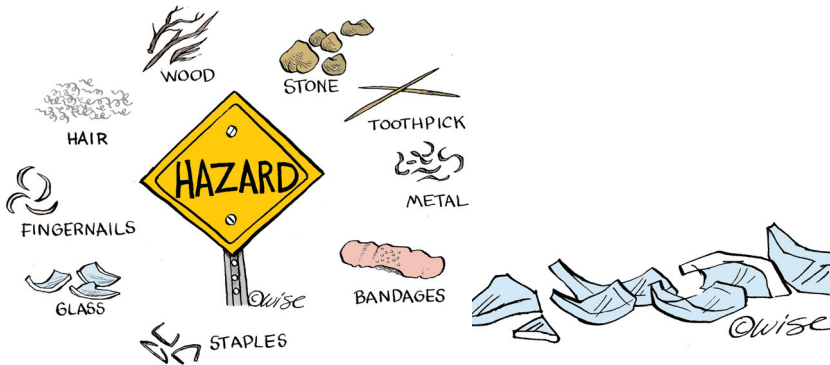


**“You cannot see,
smell, or taste the
harmful germs that
cause foodborne
illness!”**

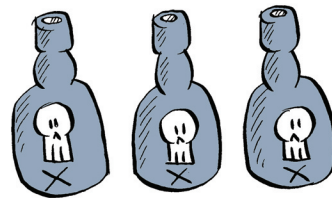
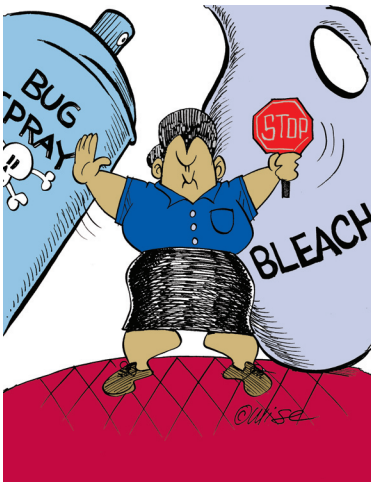




“There are other types of hazards that can contaminate food ...”



PHYSICAL

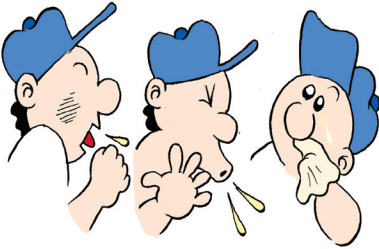


CHEMICAL

“Remember to keep them away from foods!”



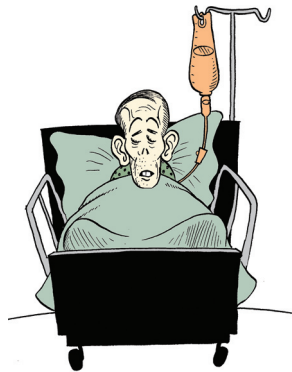
“Certain foods can also be a hazard for some people.”



Major Food Allergen:

a food that can cause a harmful reaction in certain people

“When some people come in contact with or eat certain foods, they can become very ill, or even die.”



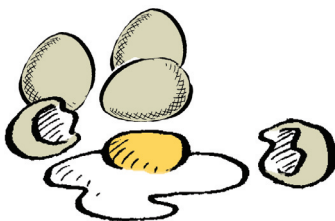


“Eight major allergens you need to be aware of:”

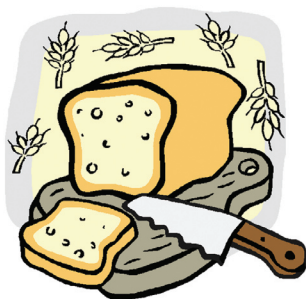
- Milk and milk products



- Egg and egg products



- Wheat



- Peanuts and peanut products



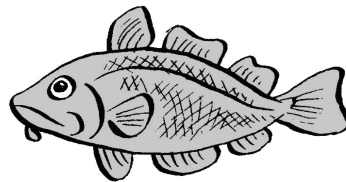
- Soybeans



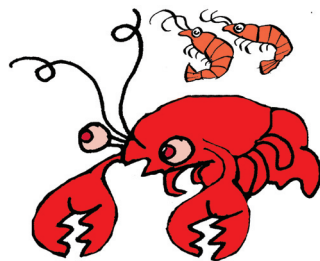
- Tree nuts (such as almonds and pecans)



- Fish



- Crustacean shellfish (such as lobster and shrimp).



“Be very careful to avoid cross contamination with these foods.”

“Ingredient labeling is an important tool in providing accurate allergen information. The following require labeling:”

- **Packaged foods with two or more ingredients, such as a pre-made sandwich placed in a plastic clamshell and sold from a self-service retail display**
- **Preportioned, packaged food not intended for immediate consumption, such as a cake frosted at the store that is sold in a packaged form**
- **Food sold in bulk from self-service bins**

“The following foods do not need allergen information:”

- **Unpackaged foods or foods given to a customer in a sanitary wrapper**
- **Food prepared or portioned according to a customer order, whether the food is to be eaten right away, such as an ice cream cone, or not, such as a deli salad portioned to the customer’s order**
- **Foods regulated by the U.S. Department of Agriculture, such as meat and poultry**
- **Raw agricultural products, such as fruits and vegetables**
- **Highly refined oils (and ingredients that have these oils in them)**

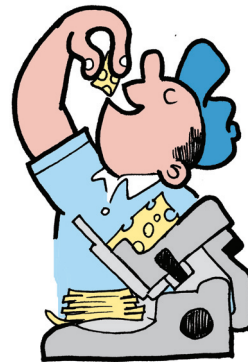


**“Cross contamination
can occur from...”**



**Workers touching
live animals.**

**The worker’s
mouth when
improperly
tasting foods.**



Rodents and pests.

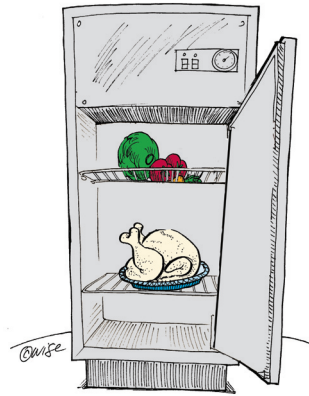


“There are several ways you can help stop cross contamination ...”



Wash your hands often.

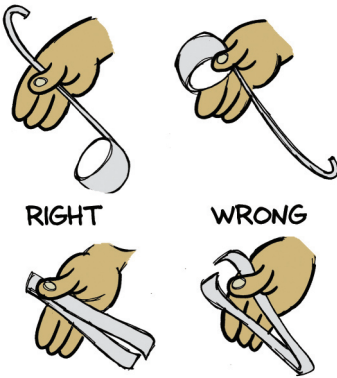
Store raw foods below and away from cooked foods. Store cooked and ready-to-eat foods on the top shelf, then raw meat on the next shelf down, raw fish and shellfish on the next shelf down, and raw poultry on the bottom shelf.



Wear single-use gloves or use proper utensils.

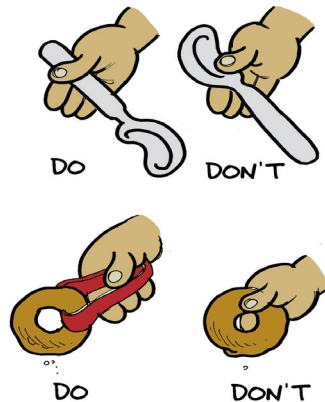


“Food safety doesn’t end there ... You still have to bring it to the customer.”



Handle salad bar utensils properly.

Handle service utensils properly.



“Be sure to handle utensils properly.”



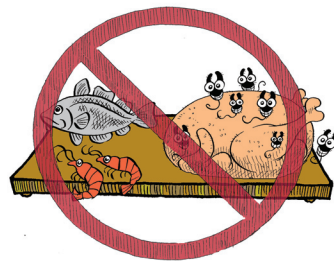
“You should always clean and sanitize utensils and equipment when changing from raw to cooked or ready-to-eat foods ...

Sanitize:

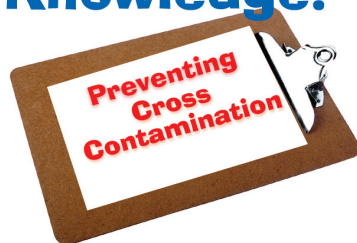
reducing the number of harmful germs to a safe level



... or from one species of food to another, like cutting raw chicken and then fish.”



Test Your Knowledge!



True or False

- T F 1. Washing your hands with soap and water will help prevent cross contamination.
- T F 2. It is okay to cut raw chicken on a cutting board and then chop lettuce on the same board without cleaning it.
- T F 3. You cannot see germs with the naked eye.
- T F 4. Three types of hazards are biological, chemical, and physical.

“Thanks for helping me defeat Cross Contamination!”

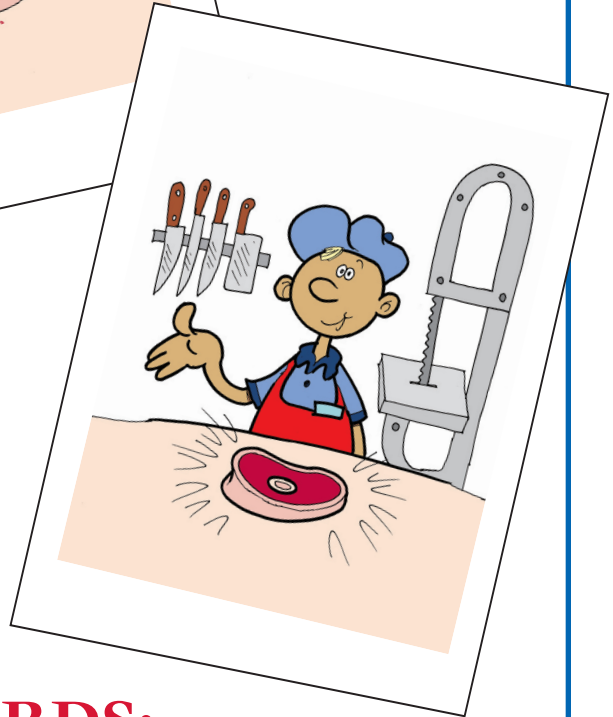


1. T, 2. F, 3. T, 4. T

Section 4

CLEANING, SANITATION, & SAFETY

Keeping your work and display areas clean is very important. Did you know just because something looks clean does not mean it is clean? Everything food touches must be cleaned as well as sanitized. Keep reading to find out how to clean and sanitize, and why it is so important to food safety!



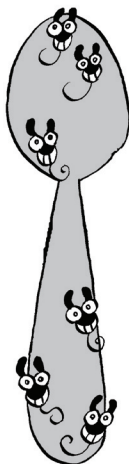
NEW WORDS:
Clean
Sanitized

Cleaning & Sanitizing

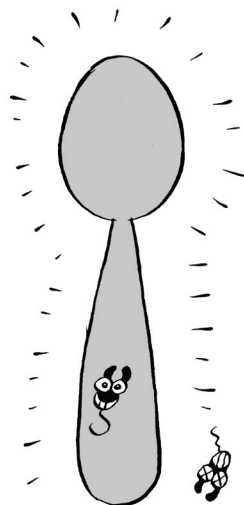
Cleaning Steps



SOILED



CLEAN



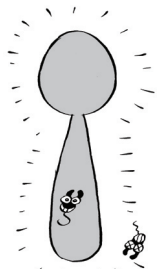
SANITIZED

@wise



Clean:

when you cannot see dirt or food pieces



SANITIZED

@wise

Sanitized:

the number of harmful germs has been reduced to a safe level



First clean ...

then rinse ...

**then
sanitize ...**



**... and let
air-dry.**

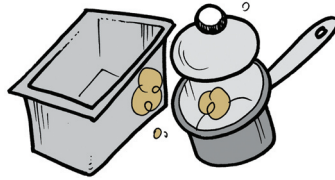


**You have now
removed the
harmful germs!**



“When should I clean and sanitize...”

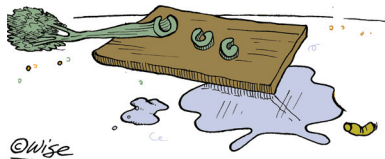
Pots and Pans



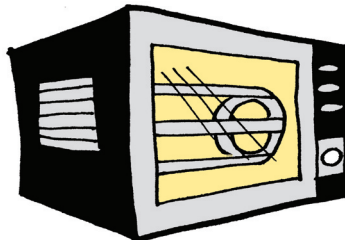
Utensils



Surfaces



Equipment?



“When they are dirty!”





“How do I clean and sanitize?”

Manually ...



- Step 1. Wash in hot water with cleaner**
- Step 2. Rinse in clean water**
- Step 3. Sanitize in a warm chemical solution 75 ° F (24 ° C) to 120 ° F (49 ° C) or sanitize with 171 ° F (77 ° C) water**
- Step 4. Air-dry.**

or Mechanically ...



Step 1. Pre rinse

Step 2. Place objects to be cleaned in rack

Step 3. Place loaded rack into machine

The machine will:

- a) Wash
- b) Rinse
- c) Sanitize

Step 4. Remove rack and allow objects to air dry.



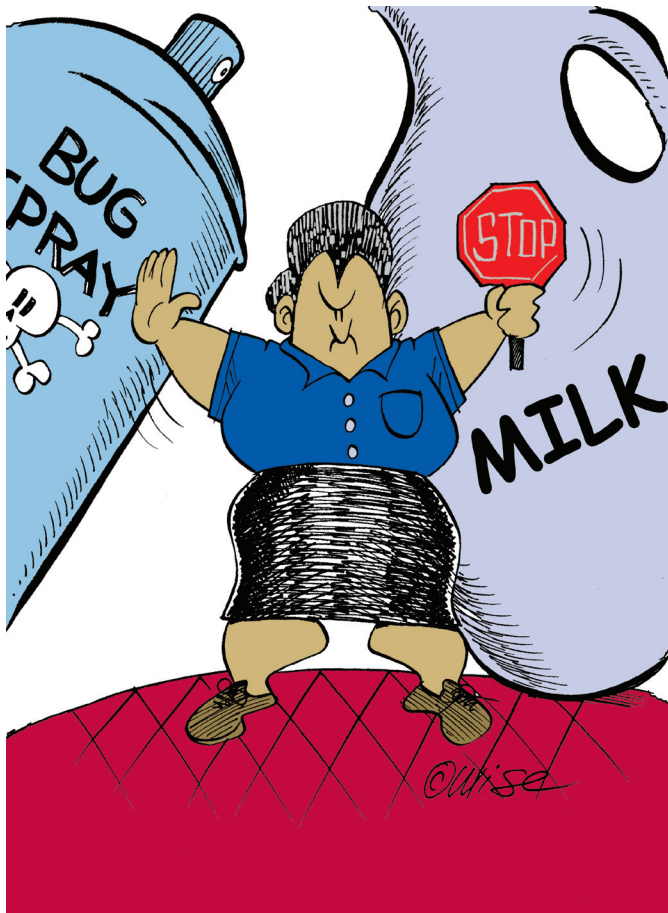
**“Where do I put,
keep, or find
cleaning supplies?”**



**Keep cleaning supplies
in a secured area away
from food.**



**“Be sure not to store
chemicals next to
foods.”**





“Protect yourself and your job! Follow all safety rules to prevent accidents.”

Know where the first-aid kit is located.



Use caution signs when mopping floors.

Use special gloves when cutting foods.





**Know the locations
of exits.**



**Know where fire
extinguishers are located
and how to use them.**

**Turn power off
when maintaining
equipment.**





“What kind of food worker do YOU want to be?”

Test Your Knowledge!



True or False

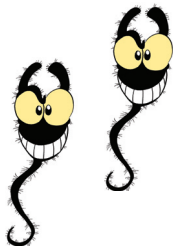
- T F 1. Cleaning is the same thing as sanitizing.
- T F 2. Sanitizing should be done after cleaning.
- T F 3. Chemicals may be stored next to food.
- T F 4. All food contact surfaces must be air-dried.

1. F, 2. T, 3. F, 4. T

NEW WORDS

Section 1

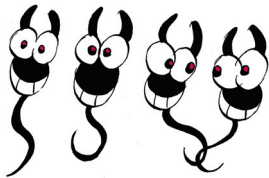
Foodborne Illness & Personal Hygiene



Bacteria:

germs, some of which can make you sick

Example: *Salmonella* spp.



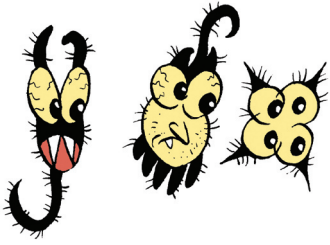
Biological Hazard:

bacteria, viruses, and parasites in food that make people sick



Contaminated:

the presence of harmful germs, chemicals, or non-food items



Germs:

tiny organisms that are too small to be seen by the naked eye and can cause illness



Parasites:

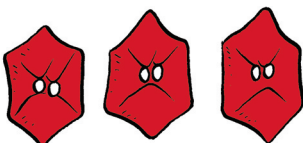
plants or animals that live and feed in or on another plant or animal

Example: *Trichinella*



Personal Hygiene:

health habits including bathing, washing hair, wearing clean clothing, and proper hand washing



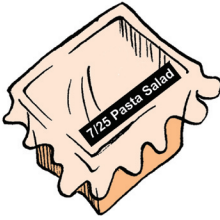
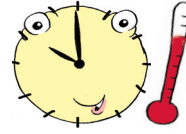
Virus:

a germ that lives on or in other animals and humans

Example: Hepatitis A virus
Norovirus

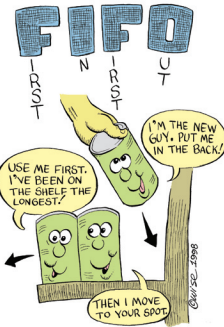
Section 2

Time & Temperature



Date Marking:

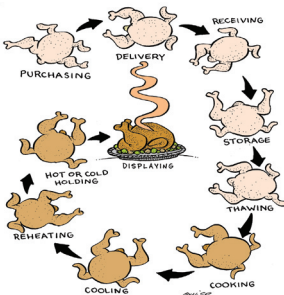
write the date or day that the food must be eaten by, sold by, or thrown away



FIFO:

First In - First Out

put new products behind old products



Flow of Food:

the steps food goes through from the time it is received until the time it is eaten



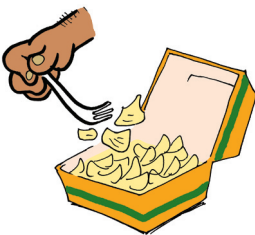
Food Temperature Danger Zone:

temperatures between 41 ° F (5 ° C) and 135 ° F (57 ° C) at which bacteria grow best



Potentially Hazardous Food (Time/ Temperature Control for Safety Food) or [PHF (TCS)]:

food that is capable of supporting the rapid and progressive growth of harmful germs

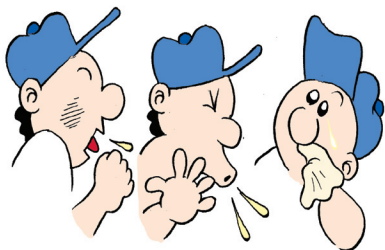


Ready-To-Eat:

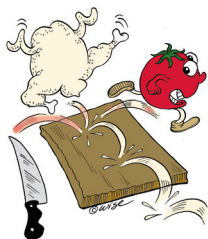
foods that do not need to be washed, cooked, or further prepared before being eaten

Section 3

Cross Contamination



Major Food Allergen:
a food that can cause
a harmful reaction in
certain people



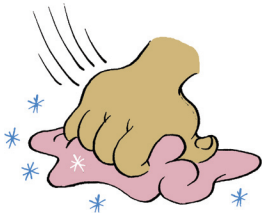
Cross Contamination:
transfer of harmful
germs between
items



Sanitize:
reducing the
number of harmful
germs to a safe level

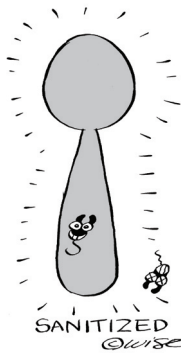
Section 4

Cleaning, Sanitation & Safety



Clean:

you cannot see dirt
or food pieces



Sanitized:

the number of
harmful germs has
been reduced to a
safe level

Notes:



Answers Key-Quick Reference Quiz
1. b, 2. d, 3. c, 4. a, 5. d, 6. a, 7. d, 8. b,
9. a, 10. c, 11. b, 12. c

Notes:



A note to managers, supervisors, and food workers:

Pictures and drawings provide fast and easy-to-understand information for employees. In this book, the authors have organized concepts for any food worker to find in a hurry including:

- What causes foodborne illness
- How to prevent contamination of food
- The importance of personal health and hygiene
- How to use thermometers when checking the temperature of food
- Methods of thawing, cooking, cooling, and reheating food
- How to prevent cross contamination
- Methods to clean and sanitize equipment and utensils
- And finally, a quick reference chart of times and temperatures required to keep food safe.

John Wise Drawings

John Wise, the artist who drew the pictures, is a master at “boiling” a concept down to just a few lines. Thanks to John, you have in your hands a most entertaining piece of information about a very dry subject. Who can resist the “march of the microbes” or how to “wash those germs right off of your hands”? Use it and enjoy enhancing your knowledge about germs, food, cleaning, and sanitizing.

Answers to the Quick Reference Quiz are found on page 96.



super  **mark** **Quick Reference Quiz**
SAFE

Answer the quiz questions below to check your knowledge. Circle the best answer.



- 1) Foodborne illness happens when
 - a) Food handlers are late to work.
 - b) People eat contaminated food and get sick.
 - c) Food handlers use disposable gloves.
 - d) People shop at bad supermarkets.

- 2) You must tell your boss if you have been told you have:
 - a) Hepatitis A virus.
 - b) *Salmonella* Typhi.
 - c) Shiga toxin-producing *Escherichia Coli*.
 - d) All of the above.

- 3) Once you remove a pair of disposable gloves you should
 - a) Save them for later use.
 - b) Wash them in the dishwasher.
 - c) Throw them away.
 - d) Wash them in an approved hand sink.

- 4) The food temperature danger zone includes temperatures between
 - a) 41°F (5°C) and 135°F (57°C).
 - b) 45°F (7°C) and 145°F (63°C).
 - c) 35°F (2°C) and 140°F (60°C).
 - d) 55°F (13°C) and 165°F (74°C).

- 5) Before and after each use, thermometers should be
 - a) Rinsed off.
 - b) Sterilized.
 - c) Properly cleaned.
 - d) Properly cleaned and sanitized.

- 6) Poultry must be cooked to an internal temperature of
 - a) 165°F (74°C) for 15 seconds.
 - b) 160°F (71°C) for 15 seconds.
 - c) 165°F (74°C) for 15 minutes.
 - d) 160°F (71°C) for 15 minutes.

- 7) When reheating foods for hot-holding, you should
- Reheat the food to 135°F (57°C) within two hours.
 - Reheat the food to 135°F (57°C) within four hours.
 - Reheat the food to 160°F (71°C) within two hours.
 - Reheat the food to 165°F (74°C) within two hours.
- 8) The best method to avoid cross contamination is
- Reusing utensils without properly cleaning and sanitizing them.
 - Washing your hands often, especially between tasks.
 - Handling only one food a day.
 - Rinsing meats before cooking them.
- 9) A food-contact surface is **clean** when
- You cannot see dirt or food pieces.
 - You wipe it with a clean cloth.
 - The number of harmful germs has been reduced to a safe level.
 - There are no germs left on the surface at all.
- 10) A food-contact surface is **sanitized** when
- You cannot see dirt or food pieces.
 - You wipe it with a clean cloth.
 - The number of harmful germs has been reduced to a safe level.
 - It has been cleaned with boiling water.
- 11) The proper order in the cleaning and sanitizing process is
- Clean, Rinse, Air-Dry, Sanitize.
 - Rinse, Clean, Sanitize, Air-Dry.
 - Sanitize, Clean, Rinse, Air-Dry.
 - Clean, Rinse, Sanitize, Air-Dry.
- 12) Who is the key barrier in preventing and controlling foodborne illnesses at the retail level?
- Your customers.
 - The health inspector.
 - You, the retail foodservice worker.
 - The packaging.

Score _____

Out of 12

(Employee Signature)

Graded and reviewed with employee:
(Supervisor Signature)

(Date)

(Date)