Food Safety and Sanitation
Study Guide

- Define foodborne illness/foodborne pathogens.
- Explore the various ways of contracting foodborne illness.
- Identify common foodborne illnesses contracted during cooking.

Why is food safety important?

- 1 and 6 (48 million people will get sick, 128,000 will be hospitalized, and 3,000 will die from foodborne illness each year.
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What is food borne illness?

- A disease carried or transmitted to people by food.
- Food borne illnesses are infections or irritations of the gastrointestinal (GI) tract caused by food or beverages that contain harmful ***bacteria***, ***parasites***, ***viruses***, or ***chemicals***.
- Common symptoms of food borne illnesses include vomiting, diarrhea, abdominal pain, fever, and chills

Food Based Hazard:

- Contaminated ingredients
- Biological
- Chemical
- Physical

People Based Hazards:

- Food handling
- Time and temperature abuse
- Cross contamination
- Poor hygiene
- Improper cleaning and sanitizing

Who's at Risk

- Pregnant women
- Elderly
- Babies
- Individuals with chronic illnesses

Food borne microorganisms:

- **Salmonella** - bacteria found on raw uncooked poultry, seafood, dairy products, and eggs.
- **Listerosis** – bacteria found on deli - ready to eat meats and other highly processed goods.
- **Botulism –** bacteria found in improperly canned can goods, or other air tight food items.
- **Hepatitis A** - Virus found in human feces and can contaminate any food a human touches.
- **Staphylococcus** - Found on humans in high concentrations under fingernails and in the nostrils of up to 25% of healthy people.
- **Trichinosis –** Ringworm like parasite found primarily in pork caused by animals eating other animals.
- **Yeast -** Fungus known to appear pink and/or bubble especially in bad sour cream, jelly, or foods that contain sugar.
- **Ecoli -** Bacteria found primarily in beef and unpasteurized products.
- **Shigellosis -** Bacteria found in salads and sandwiches that involve a lot of hand contact in their preparation, and raw vegetables contaminated in the field.

What are potentially hazardous foods (PHF)?

- PHF: Will support the rapid growth of microorganisms.
    - Every ***20 minutes*** bacteria double
    - Foods have naturally occurring bacteria living on them that are there to break down the food.
    - Characteristics of PHF's can remember by the acronym **FAT TOM:**

FAT TOM – ***the characteristics of how food can become potentially hazardous*****:**

F: Food
- Animal origin foods that are raw or heat treated.
- Plant origin foods that are heat treated.

A: Acidity
- 4.6-7.5 ideal for bacteria growth.
- High acidity neutralizes the bacteria.
- Acid will eat the protein.

T: Temperature
- 40˚F or **colder**
- 140˚F or **hotter**

T: Time
- Food can be in the danger zone for a maximum of 4 hours before becoming hazardous.

O: Oxygen
- Allows bacteria to grow.
- Wrap food products tightly to eliminate exposure to oxygen.

M: Moisture
- Bacteria need moisture to grow.

What is the danger zone?
The temperatures at which bacteria multiply rapidly - **140°F - 40°F**

What is cross contamination?
Cross contamination is the transferring of bacteria from person and/or object to another.

How do you prevent cross contamination?

- **Lather Up** - always wash hands, cutting boards, dishes, and utensils with hot, soapy water after they come in contact with raw meat, poultry, and seafood.

- **Safely Separate** - separate raw meat, poultry, and seafood from other foods in your grocery shopping cart and in your refrigerator.

- **Seal It** - to prevent juices from raw meat, poultry, or seafood from dripping onto other foods in the refrigerator, place these raw foods in sealed containers or plastic bags.

- **Marinating Mandate** - sauce that is used to marinate raw meat, poultry, or seafood should not be used on cooked foods, unless it is boiled before applying.

- **Take Two** - If possible, use one cutting board for fresh produce and use a separate one for raw meat, poultry, and seafood.

- **Clean Your Plate**- never place cooked food back on the same plate or cutting board that previously held raw food.

What is the difference between clean and sanitation?
CLEAN:
- NO visible dirt or gunk
- Wash surface with soap & water.

SANITIZE:
- Removal of all harmful microorganisms
- Use 180˚F water
- Use sanitizer liquid (bleach, 409)