

Introduction to Kitchen Safety

Review:

- In yesterday's video, the chef was wearing rings. Why is this a safety problem when cooking?



Pre Heat Question

- How many of you eat raw cookie dough or taste your cake batter?



Cooking Safety and Sanitation



Ms. Makuta

Objectives:

- 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?

From food borne illness each year:

- “1 in 6 Americans (or 48 million people) will get sick, 128,000 people will be hospitalized, and 3,000 will die of foodborne diseases” – CDC.
- Reducing foodborne illness by just 10% would keep 5 million Americans from getting sick each year.
- Preventing a single fatal case of *E. Coli* would save an estimated \$7 million.



What is foodborne illness?

Food Borne Illness: Is 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

What is foodborne illness?

Food Based Hazards

- Contaminated ingredients
- Biological
- Chemical
- Physical

People Based Hazards

- Food handling
- Time & Temp abuse
- Cross contamination
- Poor hygiene
- Improper cleaning & Sanitizing

Who's at Risk

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

Common Foodborne Microorganisms

- **Salmonella:** bacteria found on raw uncooked poultry, seafood, dairy products, and eggs.
- **Listeriosis:** bacteria found on deli - ready to eat meats and other highly processed goods.

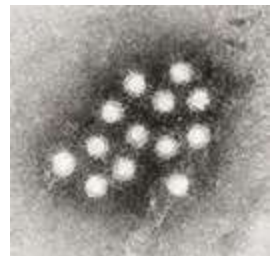


Listeriosis

- **Botulism:** bacteria found in improperly canned goods, or other air tight food items.

- **Hepatitis A:** Virus found in human feces and can contaminate any food a human touches.

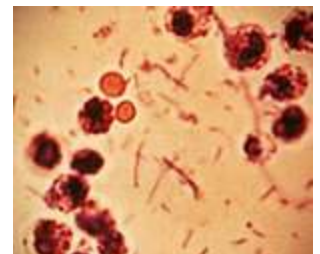
Hepatitis A



- **Staphylococcus:** Found on humans in high concentrations under fingernails and in the nostrils of up to 25% of healthy people.

Common Foodborne Microorganisms

- **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.





Fight Bac...

**How many germs are on your
hands right now?**



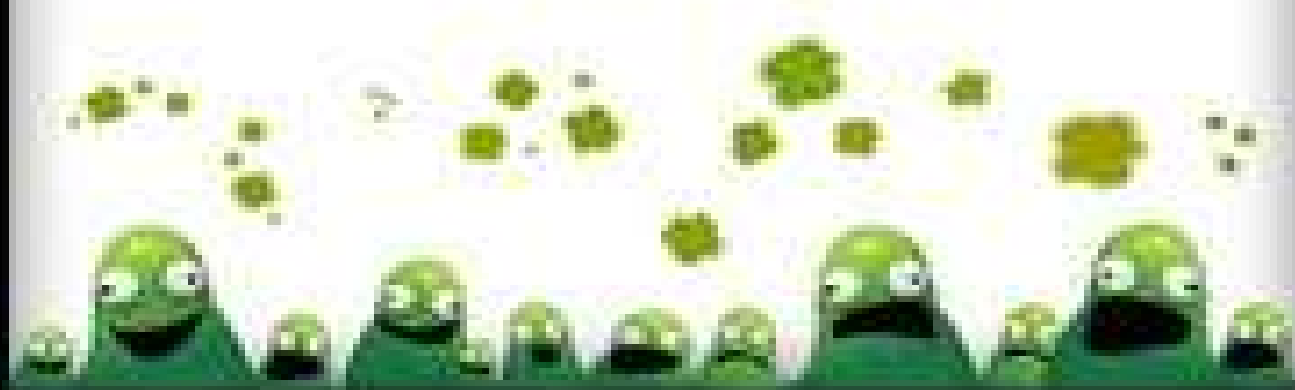


Fight Bac...

**How many germs are on your cell
phone?**

Does any one want to guess?

RIGHT NOW
THERE ARE
2,247,000
GERMS LIVING ON
MY CELL PHONE

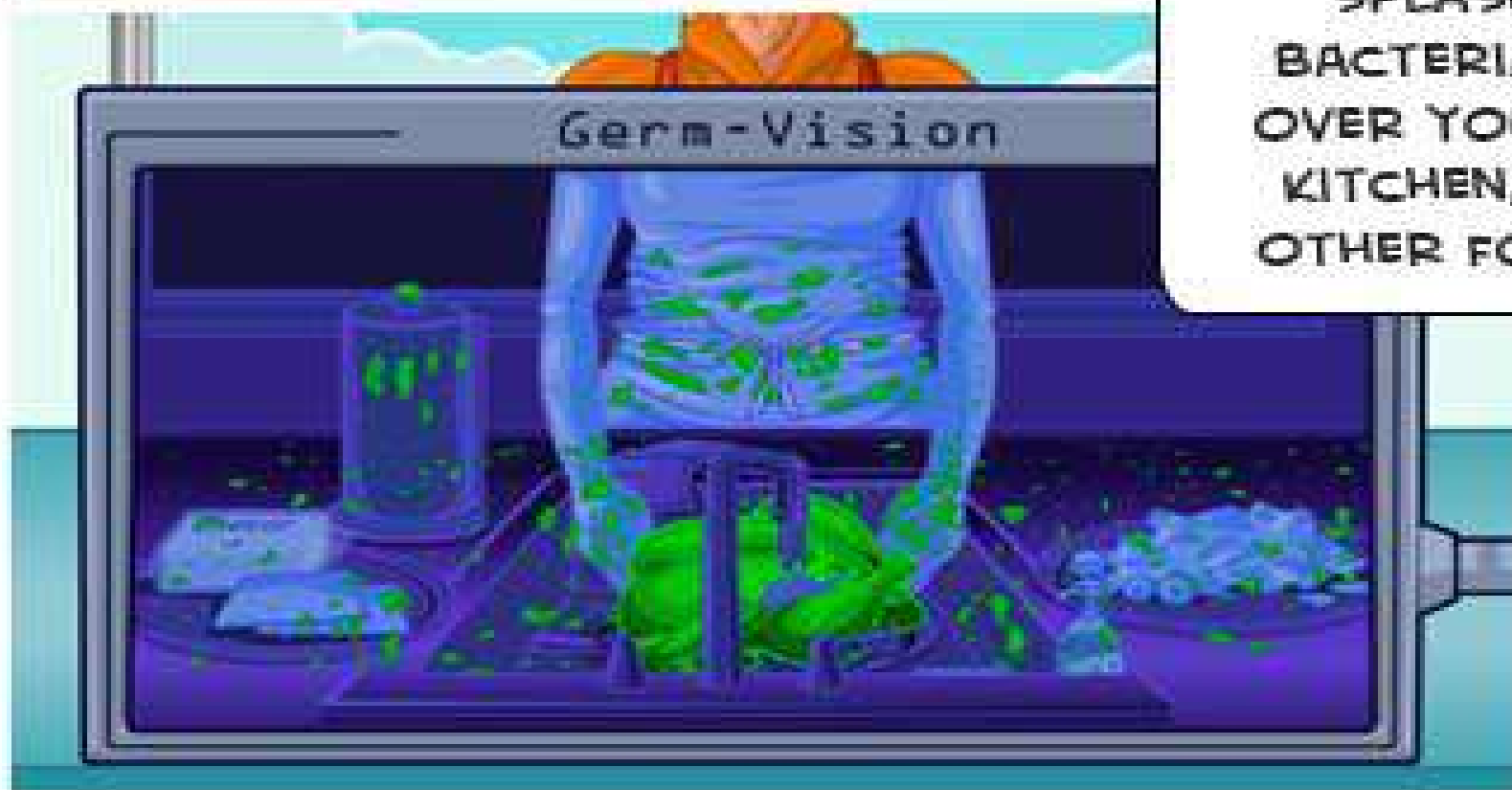


Pre Heat Question

- Is it sanitary to wash your chicken prior to cooking?
 - No, raw chicken and turkey can carry bacteria on their surfaces, research has shown that washing raw poultry under running water in your kitchens sink is a bad idea.
 - If germs were visible to the naked eye, you would see that washing poultry just splashes bacteria all over you, your kitchen towels, countertops, and any other food you have nearby, such as raw foods or salads.
 - Instead, just take raw poultry straight from the package into the cooking pan. The heat from the cooking process will kill any bacteria that are present. Then simply clean up any splashes and wash your hands with soap and hot water.



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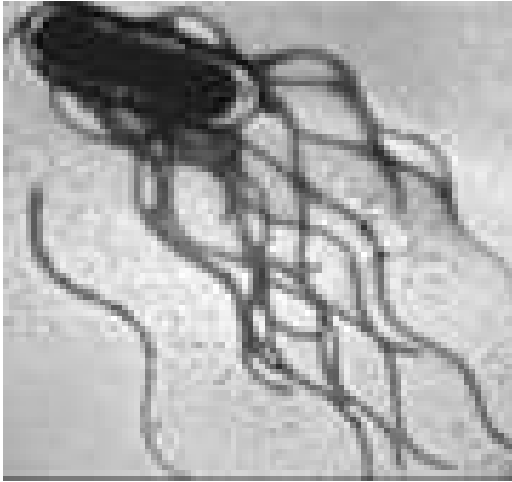
Oh no, I'm sick...



- Doug:
 - Last night: Doug decided to try the new deli with his friend Paul. Doug and Paul both ordered hot Italian subs.
 - Today: Doug texts Paul from the bathroom where he has spent most of his evening. Paul replies that he has had similar evening.
 - Their symptoms: diarrhea, vomiting, fever
 - Two days later: Doug and Paul are feeling better, back to school, and are 5 pounds lighter.

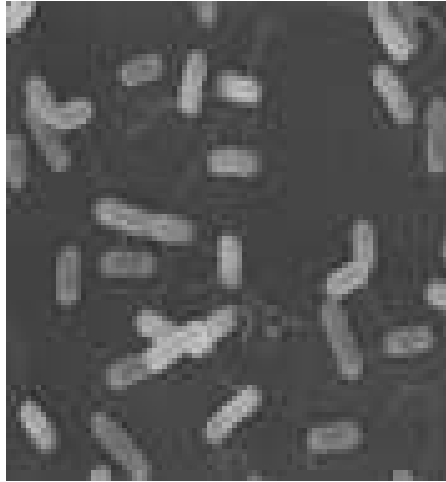
What do you think happened to Doug and Paul? Justify your response.

Least Wanted Foodborne Pathogen



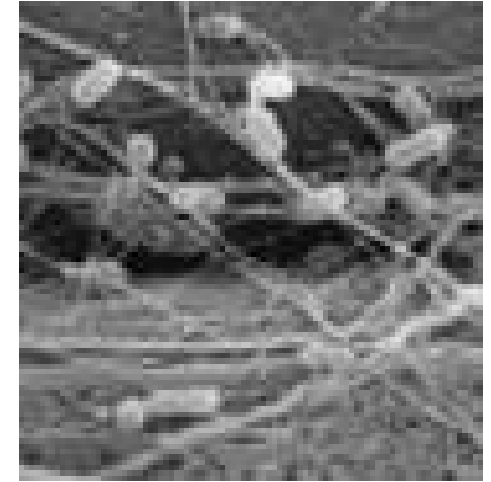
Salmonella

The most common cause of foodborne deaths. Sources: raw and undercooked eggs, undercooked poultry and meat, fresh fruits and vegetables, and unpasteurized dairy products.



Listeriosis

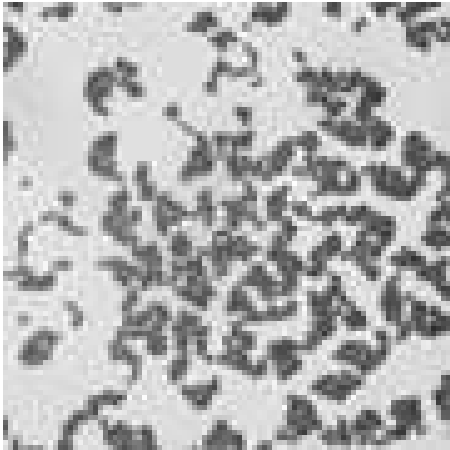
A serious disease for pregnant women, newborns, and adults with a weakened immune system. Sources: unpasteurized dairy products, including soft cheeses; sliced deli meats; smoked fish; hot dogs; pate'; and deli-prepared salads (i.e. egg, ham, seafood, and chicken salads).



E. Coli

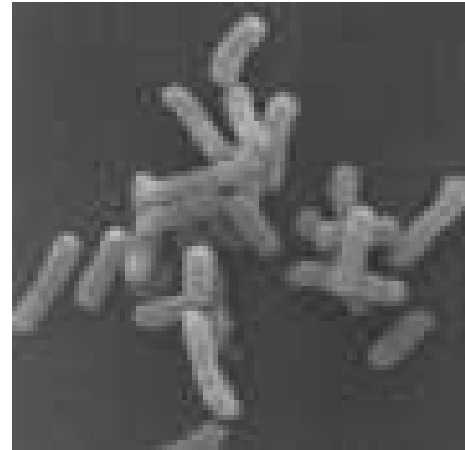
A bacteria that can produce a deadly toxin. U.S. Sources: beef, especially undercooked or raw hamburger; produce; raw milk; and unpasteurized juices and ciders.

Least Wanted Foodborne Pathogen



Staphylococcus

A bacteria that produces a toxin that causes vomiting shortly after being ingested. Sources: cooked foods high in protein (e.g. cooked ham, salads, bakery products, dairy products) that are held too long at room temperature.



Shigella

Causes an estimated 448,000 cases of diarrhea illnesses per year. Poor hygiene causes Shigella to be easily passed from person to person and from infected individuals to food items. Sources: salads, unclean water, and any food handled by someone who is infected with the bacterium.

Potentially Hazardous Foods

PHF: Support 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.
 - Can anyone give an example?
- There are a list of characteristics of PHF's that you can remember by the acronym **FAT TOM**

FAT TOM

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

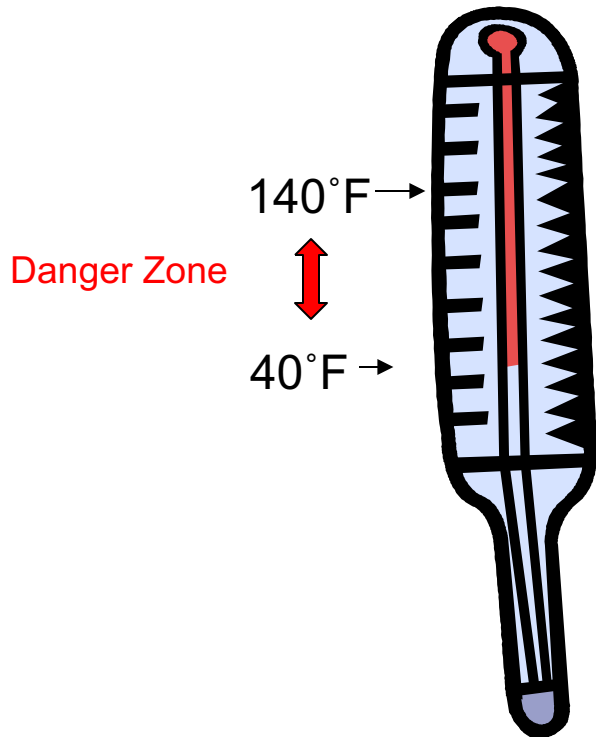
M: Moisture

- Bacteria need moisture to grow

Danger Zone

Definition:

The temperatures at which bacteria multiply rapidly.



When is the food cooked safe?

- Poultry and Stuffing: 165° F
- Pork: 145° F
- Beef, Lamb and Seafood: 145° F
- Rare Beef: 135° F
- Hamburger (ground beef): 155° F

Sanitation Check:

The acronym **FAT TOM** stands for what...

F
A
T
T
O
M

Cross Contamination

Definition: The transferring of bacteria from person or object to another.

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.

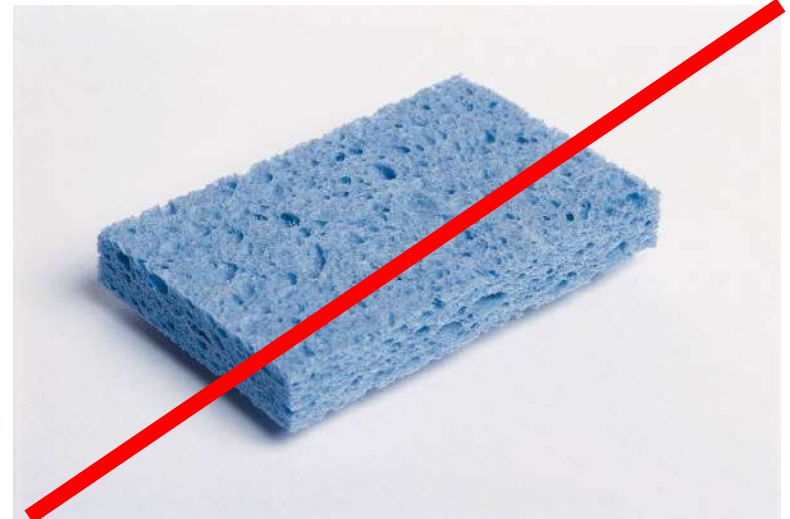
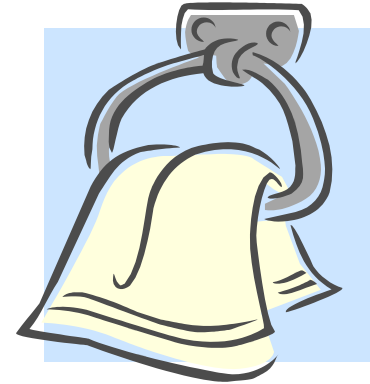
Clean Your Plate

Never place cooked food back on the same plate or cutting board that previously held raw food.

Dish Washing

Use a Dish Cloth not a Sponge!

- Sponges contain approximately 7.2 Billion Germs!
- That is the equivalent to smearing an 8oz raw piece of chicken breast on your surface!
- We use dish towels because we wash them after every use.



Quiz: What is the correct way to disinfect a sponge?

- A. Wash it in the sink
- B. Throw it in the dishwasher
- C. Throw it in the microwave
- D. Let it dry out



Correct Answer:
C. Throw it in the microwave.



The difference between Clean & Sanitize

CLEAN

- NO visible dirt or gunk
- wash surface with soap & water.

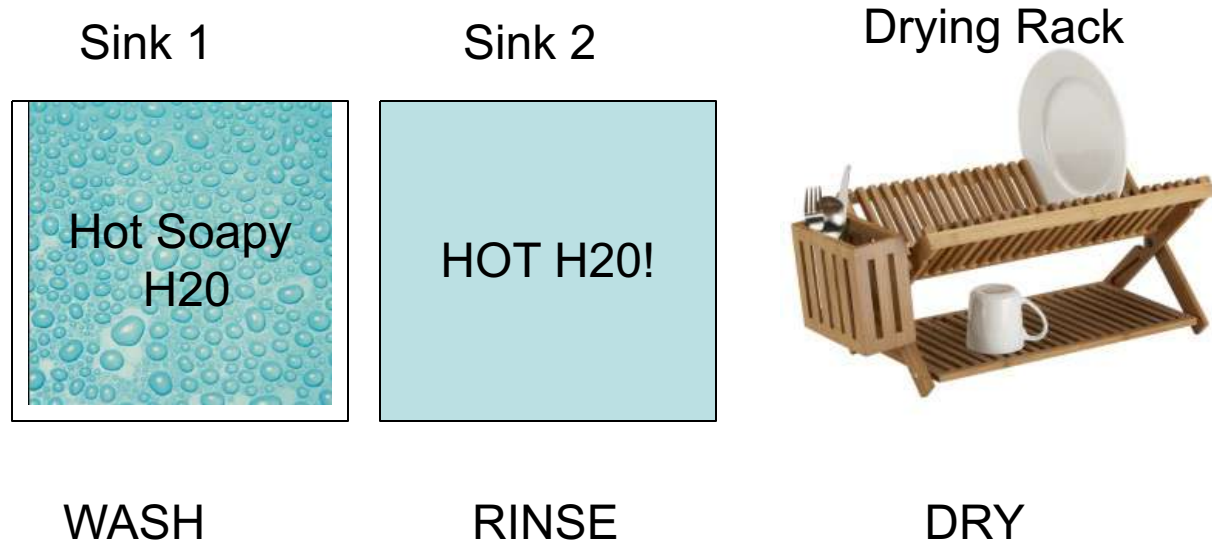
SANITIZE

Removal of all harmful microorganisms

- Use 180°F water
- Use sanitizer liquid (bleach, 409)

How to Wash Dishes

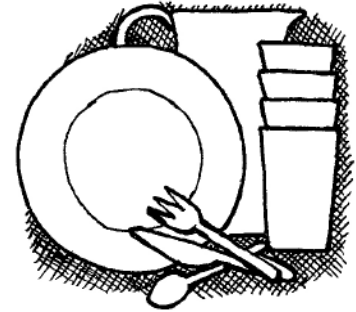
1. SET up sinks and drying rack as seen below



*Note: The hotter the water the faster the dishes will dry because hot water evaporates quicker

How to Wash Dishes

2. Scrape Dishes to clear food
3. Lightly rinse dishes and stack by category
4. Wash dishes by category
5. Rinse dishes
6. Put in drying rack
7. Dry dishes
8. Put away dishes
9. Let water go down & empty food particles from sink
10. Clean sink and put washing & drying towels in washer



Works Cited

- Serve Safe Manager's training