

The Basics of Food Safety in 50 Minutes

Chef Adam Weiner, CFSE

JobTrain

1993 Jack in the Box

- 732 People were infected with E-Coli
- 73 Outlets in California, Idaho, Washington, and Nevada
- 4 children under age 10 died, while 178 other victims had permanent injuries

SOUND VERY
FAMILIAR?
The FDA on
Chipotle:

“As of January 27, 2016, the CDC reports a total of 55 people infected with the outbreak strain of STEC (Shiga toxin producing *E. coli*) O26 from a total of 11 states in the larger outbreak: California (3), Delaware (1), Illinois (1), Kentucky (1), Maryland (1), Minnesota (2), New York (1), Ohio (3), Oregon (13), Pennsylvania (2), and Washington (27).

There have been 21 reported hospitalizations. The majority of these cases were reported from Oregon and Washington during October 2015.”

WHAT IS FOOD SAFETY?

Food safety is keeping people from getting sick from what happens in the kitchen.

Forget the Stomach Flu

STOMACH FLU IS
EXTREMELY RARE.
Results of food poisoning
range from just feeling
lousy to vomiting to
diarrhea and even to
death.

Obtaining Your Serve Safe License

- There are two types of licenses—manager and handler
- Course and a test—on-line or live
- This lecture is just an introduction, not a replacement for Serve Safe

The Basics of Food Safety

- A. Personal Hygiene
- B. Food Storage
- C. Cross Contamination
- D. Food Handling and Preparation
- E. FAT TOM (Yes, FAT TOM)
- F. Defrosting
- G. Rodent and Insect Prevention
- H. HACCP

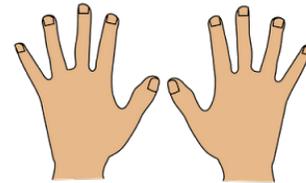
FOOD SAFETY

ALL RELATED

- MANY OF THE ISSUES OF FOOD SAFETY OVERLAP AND RELATE TO EACH OTHER
- For example, cross contamination and handwashing
- Bacteria Growth and Defrosting
- Food Storage and Cross Contamination

PERSONAL
HYGIENE—
HAND
WASHING

The 10 Most Likely Things to Make Someone Sick



PERSONAL HYGIENE— HAND- WASHING

- You are probably doing it wrong so:
 - Get the water as hot as you can stand, and lather up with soap
 - Use a nail brush
 - Get high up past your wrists
 - Wash for 20 seconds
 - Dry your hands with paper towels

Personal Hygiene

- Gloves are a supplement, not a replacement

PERSONAL HYGIENE— HAIR

- HAIR NETS AND HATS
 - Even if your hair is clean
 - No manager wants to explain your hair cleanliness to a customer

PERSONAL HYGIENE— UNIFORMS

- New cooks seem to feel that stained uniforms are a badge of honor
- No Aprons in the Restroom
- The purpose of chef coats, aprons, etc. is not to keep you or your clothes clean
- CHEF COATS AND APRONS ARE TO KEEP THE FOOD CLEAN

PERSONAL HYGIENE— Being Sick

- Diarrhea, vomiting, and excused by your doctor are really the only reasons for missing work. Not every sniffle and sneeze.

POTENTIALLY
HAZARDOUS
OR
DANGEROUS
FOODS

- It's All About Potentially Hazardous or Dangerous Foods

POTENTIALLY HAZARDOUS OR DANGEROUS FOODS

Potentially Dangerous Foods . . .

...are foods that, if not handled, cooked or stored properly, can make you sick.

How do you decide if something is a potentially hazardous food?

POTENTIALLY
HAZARDOUS
OR
DANGEROUS
FOODS

ASK YOURSELF THIS SIMPLE QUESTION:

“If the food was stored in my car trunk for three days, would I eat it?”

Note: many foods change from non to hazardous by being cooked (rice, pasta, beans, etc.), or by having the package opened (refrigerate after opening.)

FOOD STORAGE

There are FOUR simple rules about food storage:

1. Do Not Store Potentially Dangerous Foods Above Non-Potentially Dangerous Foods
2. Store Foods at the Correct Temperature
3. Label Prepared Foods
4. Store Chemicals Separately

FOOD STORAGE

Cross- Contamination

Rule One

- From Bottom To Top: Raw Poultry, Raw Hamburger, Raw Sausages, Raw Whole Meat, Raw Fish
- Already Cooked Foods or Foods That Won't Be Cooked should be stored above everything else or preferably in a separate area
- Anything that might drip, even if it is wrapped, should be placed in an appropriate food storage container BEFORE going into the refrigerator

FOOD STORAGE

Rule Two

The Danger Zone

- **Between 41 and 135 is THE DANGER ZONE**

FOOD STORAGE

Rule Two

The Danger Zone

- In Most Parts of the Country, No More Than Four Hours In The Danger Zone
- Why?
- It's How Bacteria Reproduce

FOOD STORAGE

Rule Two

The Danger Zone

- **It's Not Sex, It's Time, It's Temperature**
- **1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096. . . .**
- **Four Hours Max**
- **For the **LIFE** of the food**

FOOD STORAGE

Rule Two

The Danger Zone

- Chill, baby chill
- Ice baths (half ice and half water)
- Small batches
- Ice paddles
- Metal not plastic containers

FOOD
STORAGE

Rule Two

TEMPERATURE ABUSE

FOOD STORAGE

Rule Three

- LABEL PREPARED FOODS BEFORE THEY GO INTO THE REEFER OR STORE ROOM
- Robert Irvine and Ramon Lopez

And, RULE FOUR

NEVER PUT CHEMICALS NEAR
OR ABOVE FOOD FOR ANY
REASON AT ANY TIME.

SPEAKING OF TEMPERATURE

- KNOW HOW TO USE A THERMOMETER
- KNOW WHAT TYPE AND ITS LIMITATIONS
- KNOW WHERE THE SENSOR POINT IS
- KNOW HOW AND WHEN TO CALIBRATE IT
- WATCH FOR CROSS CONTAMINATION (what a lead in to talking about)

CROSS CONTAMINATION

- WHAT IS IT?
- GOOGLE IT AND YOU GET OVER 12 MILLION HITS!!!!!!
- EXPOSING A NON-POTENTIALLY HAZARDOUS FOOD TO ONE THAT IS POTENTIALLY HAZARDOUS
- EXPOSING ONE POTENTIALLY HAZARDOUS FOOD (like raw fish) TO A MORE HAZARDOUS FOOD (like raw chicken)
- NOT STORING POTENTIALLY HAZARDOUS FOODS CORRECTLY (Remember placement and containers)

CROSS CONTAMINATION

- EXAMPLES

- Using your hands to pick up shrimp and then cut up cheese

- Using a meat slicer for cooked turkey breast and then several hours later using the slicer to slice onions

- Cutting up ribs on a cutting board, wiping the cutting board off with a dry towel, and then cutting unwashed mushrooms, wiping the board and cutting fruit

- EXAMPLES

- Touching raw chicken and then touching anything else

- Using a knife, tongs, cutting board, towel, etc. with raw proteins and then touching anything else

- Using tongs or a spatula on raw product and then using the same tongs or spatula on cooked product

- 100's of others. . . .

FOOD (NOT CROSS) CONTAMINATION

- THERE ARE THREE BASIC TYPES OF **FOOD CONTAMINATION**
 1. Biological (bacteria) contaminate the food (from sneezes, unwashed hands, restroom use, etc.)
 2. Physical where something is not food (rubber bands, band aids, hair, broken glass) gets into the food
 3. Chemical

COOK FOODS TO THE APPROPRIATE TEMPERATURE USDA STYLE

| Category | Food | Temperature (F) |
|---|---------------------------------------|---|
| Ground Meat & Meat Mixtures | Beef, Pork, Veal & Lamb | 160 |
| | Turkey and Chicken | 165 |
| Fresh Beef, Veal & Lamb | Steaks, Roasts & Chops | 145 |
| Poultry (Chicken, Turkey, Duck & Goose) | Whole Poultry, Breasts, Thighs & Legs | 165 |
| Pork & Ham | Fresh Pork & Ham | 145 |
| | Precooked ham (to reheat) | 140 |
| Eggs | Eggs any style | Cook until whites and yolk are firm |
| Egg Dishes | Dishes containing eggs | 160 |
| Leftovers | Any leftovers | 165 |
| Casseroles | Any casseroles | 165 |
| Seafood | Fin Fish | 145 or until flesh is opaque and flakes with a fork |
| | Shrimp, Lobster & Crab | Cook until flesh is pearly and opaque |
| | Clams, Oysters & Muscles | Cook until shells open during cooking |
| | Scallops | Cook until flesh is milky white or opaque and firm |

*As a general rule, let your food rest for 3 minutes after it is removed from the heat in order to continue to kill dangerous germs.

REHEAT
FOODS
PROPERLY

USDA STYLE

“Reheat Leftovers Safely

When reheating leftovers, be sure they reach 165° F as measured with a food thermometer. Reheat sauces, soups and gravies by bringing them to a rolling boil. Cover leftovers to reheat. This retains moisture and ensures that food will heat all the way through.”

And, reheat only once.

FAT TOM

- FOOD
- ACID (really lack of acid)
- TIME
- TEMPERATURE
- OXYGEN
- MOISTURE

DEFROSTING

You need to defrost things correctly to minimize bacteria growth and to prevent food or cross contamination

DEFROSTING

- ONLY FOUR APPROVED METHODS
 1. Placing food in the refrigerator in an approved food storage container where it won't drip
 2. Under **RUNNING COLD WATER** in the sink in an approved container where it won't drip on something else.
(But Chef Adam, if it is in a sink how can it drip on something else?)
 3. Defrost as part of the cooking process.
 4. Defrost in the microwave—but you need to cook it immediately.

RODENTS AND INSECTS

- AN OUNCE OF PREVENTION

- Screens on doors and windows

- Inspect boxes

- No holes in walls

- Trash areas clean and covered

- WHEN YOU HAVE A PROBLEM

- Don't handle it yourself

- Call a professional exterminator

- Licensed and experienced with commercial kitchens

HACCP

- DEVELOPED BY PILLSBURY AND NASA IN THE LATE 1950'S
- HACCP stands for HAZARD ANALYSIS CRITICAL CONTROL POINT
- Chefs, owners and managers determine where biological, chemical and physical hazards could contaminate food.
- Set up written procedures covering each such event and how to handle the food properly so there is no contamination
- Monitor the process and keep records

REVIEW QUESTIONS

1. What is cross-contamination?
2. How often should you calibrate a thermometer?
3. What does each element of FAT TOM stand for?
4. What are the four proper methods of defrosting?
5. List three ways to prevent rodent and insect infestation.
6. What is Temperature Abuse?
7. You should always wash your hands for how many seconds?
8. You need to always label foods you have prepared. WHY?
9. What is the DANGER ZONE and why is it important?
10. Give five examples of potentially hazardous foods and five examples of non-potentially hazardous foods.

CHEF ADAM WEINER, CFSE

JobTrain

1200 O'Brien

Menlo Park, CA 94025

(650) 330-6413

aweiner@jobtrainworks.org

Prepared for the Center for the Advancement of Food Service Education,
June 2016