

Terms and Vocabulary

3 types of contamination

1) Biological Contamination, 2) Chemical Contamination, 3) Physical Contamination:

3 Major Factors foods become unsafe

1. Time and Temperature Abuse
2. Cross-Contamination
3. Poor Personal Hygiene

What Pathogens Need to Grow: FATTOM

Food, Acidity (4.6-7.5), Time, Temperature, Oxygen and Moisture

3 foods illegal to serve in high risk populations

1) alfalfa sprouts, 2) fresh eggs and 3) freshly squeezed juice.

Viruses

Hepatitis A & Norovirus - Shellfish & salads

Bacteria

Bacillus cereus – “rice cereal”

Listeria – unpasteurized milk and cheeses, deli meats and hot dogs.

E-coli – (hamburger), salad. Origin/feces.

Botulism – deadly/toxin=poison. canned foods, swollen cans, garlic/oil mixtures, sautéed onions in butter, leftover baked potatoes wrapped in tin foil

Salmonella – raw poultry, shell eggs and salads.

Shigellosis (bacillary dysentery) – polluted (fecal) food or water, flies and food handlers.

Staphylococcal (Staph) –Source is “Staff”/humans – Biggest Factor: Improper Personal Hygiene/
Biggest factor: unwashed hands.

Parasites

Anisakiasis – raw or undercooked fish. **sushi or sashimi** and ceviche. .

Giardiasis, *Cyclosporiasis* (**Cyclo**), and *Cryptosporidiosis* (**Crypto**) – water borne parasites.

Origin: Contaminated water and feces. Best Prevention: Use good water supplies.

FISH Toxins

- ***Ciguatera Fish Poisoning*** (CGS) source is poisonous/toxic algae **barracuda, grouper, snapper.**
- ***Scombroid poisoning*** histamine poisoning caused by time-temperature abuse- normally refreezing.
Tuna, Bonito, Mackerel, Mahi Mahi.

Food Allergens Most common allergens are: **milk and dairy products, eggs and egg products, fish, shellfish (shrimp), wheat, soy and soy products (tofu), peanuts and tree nuts.**

Hand Washing The whole process should take about 20 seconds.

1. water temp 100°F.
2. Vigorously scrub hands for 10 - 15 seconds under fingernails and between fingers.

When to Change Gloves - Change gloves if soiled or torn, Before beginning a new task, Every 4 hours during continual use, After handling raw foods and before touching cooked foods

The following illnesses **MUST** be reported by law & **Exclude** employees:

Salmonella Shigella Shiga –toxin (E-coli) Hepatitis A Norovirus

Refrigeration Storage: Store in the top-to-bottom order: **ready to eat foods, seafood, whole cuts of beef & pork, ground meat & ground fish, whole and ground poultry.**

Temperature Danger Zone (TDZ): 41°F to 135°F degrees for no more than 4 hours.

70°F & 125°F most dangerous part.

(2 exceptions: shellfish and shell eggs which can be received and stored at an air temperature of 45°F or below)

- **Immersion probes for liquids, surface probes for flat top grilles**
- **Infrared (Laser) Thermometers –measure surface temps only.**
- **Calibrate thermometers - Ice-point (32°F) vs. Boiling point (212°F).**

An approved food source is one that has been inspected and is in compliance with applicable, local, state, and federal law.

Raw Shucked Shellfish -Containers bigger than one-half gallon must have date shellfish shucked.

Live Shellfish - Keep shellstock tags attached to delivery container until all are used.

- **Store Shellstock tags for 90 days from date the last shellfish were sold or served.**

Ultra-High Temperature (UHT) Pasteurized and Aseptically Packaged Food

Both UHT and aseptically packaged - can be held at room temperature until opened, but must be refrigerated once the package has been opened. EXCEPTION: If UHT and not Aseptically packaged, product must be received and stored at 41°F or below.

Dry Storage -50°F - 70°F & Store dry food 6 inches away from walls and floors.

Defrosting

- 1) refrigerator, at 41°F or below.
- 2) Under running potable water – no higher than 70°F,
- 3) microwave, **only** if cook immediately
- 4) part of the cooking process.

Cooking Temps

- 165°F - Poultry , anything Stuffed, Microwave cooking, dishes that add raw to cooked i.e. (stews, soups, casseroles) & Reheating for 15 seconds within 2 hours**
- 155°F - Ground meats & Fish, Shell eggs for hot held service**
- 145°F - Meats , Seafood, & Shell eggs for immediate service**

2 Step Cooling Process:

1. **Cool food from 135° to 70° degrees within 2 hours**
2. **Continue cooling to 41° degrees or below within an additional four hours.**

Off-site Service/Catering

Cambros vs. cardboard boxes & must be must be easy to clean & insulated & have lids to avoid physical contamination.

- **Consider use of single-use items whenever possible to minimize washing up.**

Label food & LEFTOVERS with appropriate instructions (reheating, storage, discard time/date) for your guests.

HACCP is based on seven principles. They are:

1. **Conduct a Hazard Analysis**
2. Determine Critical Control Points (CCP's)
3. Establish Critical Limits
4. Establish Monitoring Procedures
5. Identify Corrective Actions
6. Verify that the system works
7. Establish Procedures for Record Keeping and Documentation

HACCP plans & a variance are required:

- Smoke food as a method of **food preservation**
- Use food additives as a method of **food preservation**
- Curing food as a method of **food preservation**
- Custom process animals for personal use as a method of **food preservation**
- Package food using a reduced-oxygen packaging method as a method of **food preservation**
- Offer live, molluscan shellfish from a display tank as a method of **food preservation**
- Package unpasteurized juice for sale to the consumer without a warning label
- Sprout seeds or beans

Crisis Management Program: a written plan that identifies the resources required and procedures that must be followed to handle crises. The time to prepare for a crisis is BEFORE one occurs.

Coving: a curved, sealed edge/base molding between a floor and a wall. It gets rid of sharp corners or gaps that are hard to clean.

Kitchen Equipment Selection: Easy to clean and maintain – no unnecessary ledges, projections, crevices or grooves.

Must have stamps of NSF & UL – are companies who certify professional equipment by testing it and approving it is all the above.

- **Cross connections – is a physical link between safe water and dirty water**
- **Backflow** is the unwanted **reverse flow of contaminants**
- Backflow can be prevented 3 ways: 1) **eliminate the cross connection** (don't attach a hose to a faucet, 2) **a backflow prevention device such as a vacuum breaker** or 3) **via an air gap (only method that is 100% effective.)**

Cleaning - removes food and other dirt from a surface.

Sanitizing - reduces pathogens on a surface (kills) to safe levels.

4 Steps to Sanitizing: WASH, RINSE, SANITIZE, AIR DRY

There are 2 ways to sanitize – heat and chemicals:

Heat = Hot Water 171° 30 seconds = Sanitizer Solution.

Don't use hot water higher than 194° - It will evaporate. Same concept as improperly rinsing!

3 most common types of chemical sanitizers are: **chlorine** (bleach), **iodine** & **quats**.

Factors that influence a chemical's effectiveness: Concentration, Temperature (Sanitizers work best in warm water, between 55° and 120°) , Contact Time, PH, Water Hardness.

Use a test kit/test strip to confirm made properly!

High-Temperature Machines - Final rinse of your high temp dishwasher: 180°F

Chemical sanitizing machines - Normally, need a final rinse between 75°F to 120°F

- Clean and “de-scale” machines as needed **using an acid cleaner/delimer.**

How to Clean & Sanitize in a 3 Compartment Sink: First, ALWAYS - clean and sanitize the sink and drain boards before use

1. Rinse, scrape, and soak items before washing them.
2. Wash in soapy water at least **110°F**
3. Rinse in at least **110°F** water
4. Sanitize
5. Air dry (inverted or upside down so items will drain).

Material Safety Data Sheets – provides all info possible about **CHEMICALS**

- Safe use & handling instructions, hazards, Precautions, Protective equipment to wear, **First-aid information**, Manufacturer's info & List of ingredients

Keep MSDS sheets on file in a single location where they can be easily accessed by employees in case of an emergency. (Usually in a binder chained to the wall on a shelf)

Developing a Cleaning Program –

Creating a **Master Cleaning Schedule** means walking through your facility and identifying: **What, Who, When & How**

You must monitor your **Master Cleaning Schedule** daily and modify it if you add or take away equipment.

Integrated Pest Management

- 1) **Deny pests access to the establishment – PREVENTION!**
- 2) **Deny pests food, water and hiding or nesting place – SANITATION! BEST WAY TO AVOID PESTS IN YOUR BUILDING.**
- 3) **Work with a licensed pest control operator (PCO) to eliminate pests that do enter.**

Signs of Cockroaches: Strong **oily odor**, droppings that look like **grains of pepper**

Signs of Rodents –Signs of gnawing to wear down their teeth, droppings, tracks, nesting materials (like scraps of paper, cloth, hair, feathers, grass and holes.

FDA Food Code: Recommendations issued by the FDA to assist state health departments in developing regulations for a foodservice inspection program. It is a guidance document to assist State Health Departments write their laws. It is not the law!

Each state decides whether to adopt the FDA Food code or some modified version of it.

Training Need – A **GAP** or the **DIFFERENCE** between what an employee needs to know about their job and what they actually know about their job.

Programs should include:

- **Demonstration** best type of training
- **Always Document all Training**

READ QUESTIONS CAREFULLY and MARK THE BEST CORRECT ANSWER