

ServSafe Exam Study Guide

Introduction:

According to Centers for Disease Control and Prevention (CDC), each year:

- Over 76 million people become sick due to foodborne illness
- Over 325,000 people are hospitalized
- Over 5,000 people die
- Each incident cost the food service industry an average of \$74,000

TCS - Time & Temperature Control for Safety

1. FAT TOM

- i. Food
- ii. Acid (4.6 - 7.0)
- iii. Time (double every 20 min)
- iv. Temperature
- v. Oxygen
- vi. Moisture (Aw) 0.8 - 1.0

2. 5 most common risk factors

- i. Improper hot/cold holding temperatures of TCS food.
- ii. Improper cooking temperatures of food.
- iii. Dirty and/or contaminated utensils and equipment.
- iv. Poor employee health and hygiene.
- v. Food from unsafe sources.

Cooking Temperature

1. 135F - fruits and veggies
2. 145F - Solid cuts of meat
3. 145F - Fish
4. 145F - Eggs for immediate consumption
5. 155F - Eggs for later consumption (buffet)
6. 155F - Ground beef or pork
7. 165F - Poultry (whole or ground)
8. 165F - Stuffed fish

Proper Personal Hygiene

1. Wear hair restraints (tuck in long hair)
2. FDA approved hand sanitizer (not a substitute)
3. HESSN - 6 highly infectious illness
 - i. Hepatitis A (Hand Washing)
 - ii. E Coli (Beef)
 - iii. Salmonella Typhoid (Fever)
 - iv. Shigella (Fecal)
 - v. Salmonella NT (Non-typhoical)
 - vi. Norovirus (Cruise ship)
4. Exclusion: call health dept, 24 hours medical clearance.
5. Restriction: avoid preparing food, working on other tasks instead.
6. Symptoms - vomiting, diarrhea, jaundice



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Contaminants to Food

1. SDS - require by OSHA, first-aid info
2. Chemical - Sanitizer, cleaning agents should be locked up, separated
 - i. Only Certified Pesticide Operator (CPO) can apply pesticide on premises.
 - ii. Copper, Brass, Tin (CBT) should not mix with acidic food.
 - iii. Clay pot should be free of lead (sweetness)
3. Physical Threats - visible, if you can see it
 - i. Bone, wood, plastic
4. Cross-Contamination - Meat to veggie (cutting board, towel)

Bacteria, Parasites, Viruses, Mold, Toxins

1. Bacteria - low temperature does not kill
 - i. E. Coli (Beef)
 - ii. Salmonella (Poultry)
 - iii. Clostridium Botulinum (Canned food)
 - iv. Listeria (37F in refrigerator)
 - v. Shigella (Human feces, not washing hands)
 - vi. Staphylococcus (Sneezing, coughing, nose, skin)
2. Viruses - spread by poor personal hygiene
 - i. Norovirus (Human intestinal tract)
 - ii. Hepatitis A (Poor hand washing)
3. Parasites - Freeze at -4F for 7 days or cook well
 - i. Trichinella (Pork and wild game)
 - ii. Anisakis (Fish, sushi)
 - iii. Giardia (contaminated water)
4. Mold - Aflatoxins
 - i. Corn, grains
 - ii. Peanuts
5. Toxins - Seafood
 - i. Scombrotoxin (Mahi-Mahi and tuna from time/temp abuse)
 - ii. Ciguatera (Algae that contain ciguatera toxin)

Purchasing, Receiving, Storing

1. Ice crystals - reject the shipment
2. FIFO - First in first out
3. Dairy - Grade A & Pasteurized
4. Poultry - dark wing tips, soft, sticky flesh
5. Fresh fish - Bright skin, red moist gills
6. Fresh shellfish - Keep Shell-stock IF tags for 90 Days
7. Refrigerated food receiving temperature - 41F
8. Frozen food receiving temperature - 0F

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9. Milk, egg, shellfish receiving temperature - 45F
10. Storage safe food order
 - i. Poultry at bottom, ground meat above poultry, pork above ground beef
 - ii. Store RTE (Ready-to-eat) foods away from or above raw foods
 - iii. Prevent food overload
 - iv. Use lid to cover all food

Temperature Control

1. Holding with No Temperature Control:
 - i. Cold food start at 40F, not higher than 70F, max for 6 hours
 - ii. Hot food start at 135F, not lower than 70F, max for 4 hours
2. Thermometer = Thermocouple / Thermistor
3. Thermometer Calibration: +/-2F for Food, +/-3F for Air temperature
 - i. Cold method (best) - 32F with 50% ice & 50% water
 - ii. Hot Method - 212F with boiling water
4. 2 Stage Cooling - FDA Food Code
 - i. 130F to 70F within 2 hours
 - ii. 70F to 41F within 4 extra hours
5. Cooling foods - 3S's and 3I's
 - i. Small, Shallow, Stir
 - ii. Ice bath, Ice wand, Ice directly
6. Thawing methods - CROW
 - i. Cook, Refrigerate, Oven, Water (running)

Equipment & Facility

1. Cross connection - mixing of potable and non-potable water supply
 - i. Backflow - When pressure in the potable water supply drops below the non-potable water supply (siphon)
 - ii. Vacuum breaker - Prevent backsiphonage
 - ii. Airgap - Must be at least 1 inch or twice faucet diameter
2. Buffet Station
 - i. No re-use dirty plates
 - ii. UL or NSF (Approved by ANSI)
3. Floor Mounted
 - i. 6 inches from floor
4. Table-Top equipment
 - i. 4 inches from surface

Pest Control

1. Mice, rats, roaches
 - i. Mice & Rats have droppings like black pellets, oily brush marks
 - ii. Roaches lay brown egg cases, dropping like grains of black pepper

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Cleaning and Sanitizing

1. Cleaning - removal of food particles from surface in contact with food
 - i. Washing + Rinsing = Cleaning
2. Sanitizing - reduced number of pathogens on surfaces
3. Types of cleaners - 3DA
 - i. Detergent - general purpose, dirt and grime
 - ii. Delimers - mineral deposits
 - iii. Degreaser - fats, oils
 - iv. Abrasive - Baked on debris
4. 3 Types of sanitizers - ICQ
 - i. Iodine - 12.5ppm for 30 sec
 - ii. Chlorine - 50ppm (bleach) for 7 sec
 - iii. Quaternary ammonium (Quats) - 200ppm for 30 sec
5. 5 Steps to proper manual washing - SWRSA
 - i. Scrap / soak
 - ii. Wash
 - iii. Rinse
 - iv. Sanitize
 - v. Air dry
6. Machine dishwashers
 - i. High Temperature - 180F but not above 195F
 - ii. Low Temperature - 120F
7. Frequency - every 4 hours

Foodborne Illness and Allergies

1. High Risk Population Group
 - i. Young Children
 - ii. Elderly
 - iii. People with weak Immune system
2. Allergies - 8 major allergens (Avoid cross-contact)
 - i. Wheat
 - ii. Soy
 - iii. Egg
 - iv. Milk
 - v. Fish
 - vi. Shellfish
 - vii. Nut
 - viii. Treenut
3. HACCP - Hazard Analysis Critical Control Point
 - i. Prevention-base system develop by NASA
 - ii. 7 Steps - HA, CCP, CL, Monitor, CA, Verify, Record Keeping
 - iii. Procedures require HACCP - Packaged food, unpasteurized juice, undercook shellfish, live fish display, smoking BBQ, food additive, curing food.