

FOOD SERVICE 4-HOUR COURSE

April 2012



NAVY AND MARINE CORPS PUBLIC HEALTH CENTER
PREVENTION AND PROTECTION START HERE

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TOPIC 1.1

**PERSONAL HYGIENE
AND
ENVIRONMENTAL
HEALTH
REQUIREMENTS**



ENABLING OBJECTIVES

- 1.1 STATE the health requirements
- 1.2 IDENTIFY the proper personal hygiene practices
- 1.3 DESCRIBE proper handwashing procedures and practices
- 1.4 STATE eating, drinking, and tobacco use policies for food service spaces
- 1.5 EXPLAIN the types of inspections



HEALTH REQUIREMENTS

- Medical screening
 - Initially
 - After illness
- Who can conduct
 - Physicians
 - EHO, PMT, IDC, Nurse Corps Officer, Civilian Nurse or Environmental Health Tech



HEALTH REQUIREMENTS

- Exclusions and restrictions
 - Gastrointestinal illness symptoms
 - Diarrhea, fever, nausea/vomiting, jaundice, sore throat
 - A lesion containing pus such as a boil
 - Persistent sneezing, coughing, runny nose
 - Prohibited diseases:
 - *Salmonella typhi*, *Shigella* species, *E. coli* O157:H7, Hepatitis A, or Norovirus



REINSTATEMENT

- PIC may reinstate with written approval from local medical authority
- Must be written medical documentation
- Must be free from the infectious agent of concern



PERSONAL HYGIENE

- Eating, drinking, and tobacco
 - in designated areas only
- Closed beverage containers
 - allowed when protected from contamination
- Hair restraints
 - required for all except wait staff, hostesses, and counter staff serving only beverages and wrapped foods



HANDWASHING

WASH YOUR HANDS!
(often and correctly)



HANDWASHING: HOW?

- Clean hands and exposed portion of arms with soap
- Wash for at least 15 seconds
- Rinse with clean water
- Emphasize areas under nails and between fingers



HANDWASHING: WHEN?

- After
 - touching bare body parts other than clean hands
 - using the bathroom
 - coughing, sneezing, using a tissue
 - using tobacco, eating, drinking
 - handling soiled utensils or equipment
- After
 - engaging in other contaminating activities
- Before
 - working with food
 - switching food products
- During
 - food preparation



HANDWASHING FACILITIES

- Must clean in a hand washing lavatory
- Not in a food prep or service sink
- Not in a curbed sink for mops or liquid waste
- Signs requiring hand washing must be posted in food service areas and heads



FINGERNAILS/JEWELRY

- Trim nails short and filed
- Nail edges cleanable and not rough
- Jewelry on arms and hands is not authorized
 - Exception: plain wedding band



CLOTHING AND PERSONAL EFFECTS

- Clean uniforms required
- Change uniform when soiled or use clean outer garment
 - Change outer garment when moving from raw to ready-to-eat
- Personal belongings stored outside prep and serving areas
- No changing in prep and serving areas



INSPECTIONS

- Frequency
 - All food establishments will be inspected a minimum of once each month unless specifically exempted by the installation regulatory authority
 - When critical violations are exceeded, frequency will increase until significant improvement
 - Special requests should be honored



INSPECTIONS

- Exemptions
 - Facilities that have an excellent history may be waived from monthly requirement
 - All Navy/Marine Corps food facilities must be inspected at least once each quarter
 - Written exemption is not required



INSPECTIONS

- Circumstances
 - Unannounced except for
 - construction
 - pre-opening
 - HACCP study
 - follow-up inspections requiring presence of certain personnel



REPORTS

- Prepared by PMA at the conclusion of inspection and given to PIC
- Categorized as either critical/non-critical
- Repeat items are noted
- Section violation from P-5010-1 is included in report citation



INSPECTION TYPES

- Pre-operational
- Routine
- Follow-up
- HACCP
- Complaint



SUMMARY

- Health requirements
 - Medical screening
 - Exemption from work
 - Reinstatement
- Personal hygiene
 - Eating, drinking, tobacco
 - Hair restraints
 - Hand washing



SUMMARY

- Personal hygiene (cont.)
 - Fingernails
 - Jewelry
 - Clean clothing
- Inspections
 - Frequency, exemptions, circumstances
 - Reports
 - Types of inspections



**WHAT'S THE MOST IMPORTANT
THING A FOOD EMPLOYEE CAN
DO TO PREVENT FOODBORNE
ILLNESS**





WASH YOUR HANDS !



TOPIC 1.2

INSPECTION AND STORAGE OF FOOD



ENABLING OBJECTIVES

- 1.6 DEFINE Prime Vendor concept
- 1.7 LIST the types of food inspections
- 1.8 EXPLAIN criteria used to accept or reject perishable subsistence items
- 1.9 STATE criteria used to accept or reject semi-perishable items
- 1.10 DESCRIBE general storage requirements for subsistence items



WHAT IS PRIME VENDOR?

- A major reengineering effort within DoD to establish a single major distributor for one geographical region
- Serves numerous commands
- Subsistence is delivered directly to the customer, not via a warehouse (e.g., DSCP)
- PV selected based on best value criteria



PRIME VENDOR CONCEPTS

- PV relies on the following:
 - Approved sources
 - Vet inspection are randomly required in CONUS
 - Fitness for consumption still required if food is not from PV



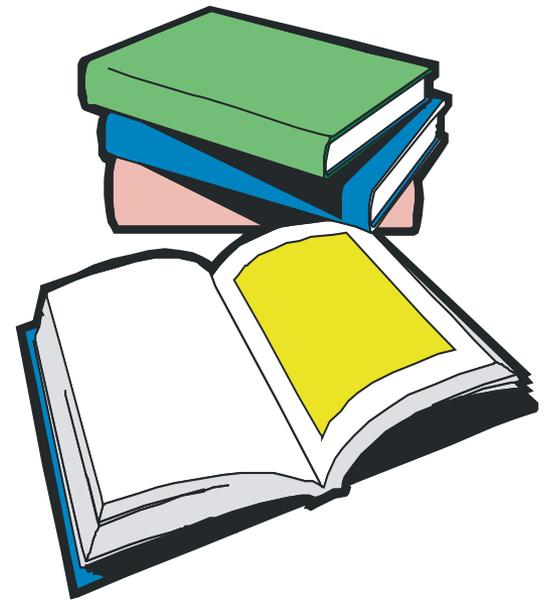
APPROVED SOURCES

- All food will originate from approved sources listed in the U.S. Army Veterinary Services "DoD Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement."
- Website address:
 - <http://phc.amedd.army.mil/topics/foodwater/ca/Pages/DoDApprovedFoodSources.aspx>



APPROVED SOURCES

- In addition, approved sources may be found in the following publications:
 - USDA Publications
 - FDA Publications
 - USDC Publications
 - NAVSUPCOM Publications
 - Miscellaneous sources



ACCEPTANCE AUTHORITY (AA)

- Performed at location chosen by activity
- Acceptance or rejection authority must be in writing
 - Receiving official has final acceptance/rejection authority
- PMA and AA liaison with local food personnel (e.g., U.S. Army Veterinary, USDA & USDC inspectors)



INSPECTION

- U.S. Army Veterinary Inspectors (AVI) perform 5 types of inspections:
 - Cursory
 - Routine
 - Special
 - Surveillance
 - Wholesomeness
- PIC must have delivery vehicle inspected



AVI RESPONSIBILITIES

- Must inspect food at Subsistence Prime Vendor (SPV) delivery points to make wholesomeness determinations
- When quality is questionable, receiving individual (AA) may request inspection or guidance by PMA or AVI
- If PMA or AVI are unavailable, apply common sense to situation. Contact them ASAP.



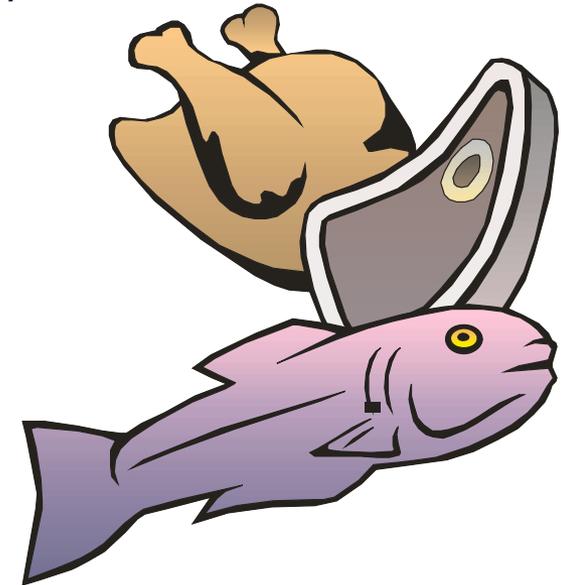
RECEIPT OF PERISHABLES MEAT AND POULTRY

- Role of USDA
 - NAVSUPPUB 486
- Fresh meat is firm and elastic to touch, reasonably dry, free of slime and abnormal odors/discoloration
- Signs of refreezing: blood in bottom of box, changes in box shape, discoloration of meat (green/brown), excessive ice



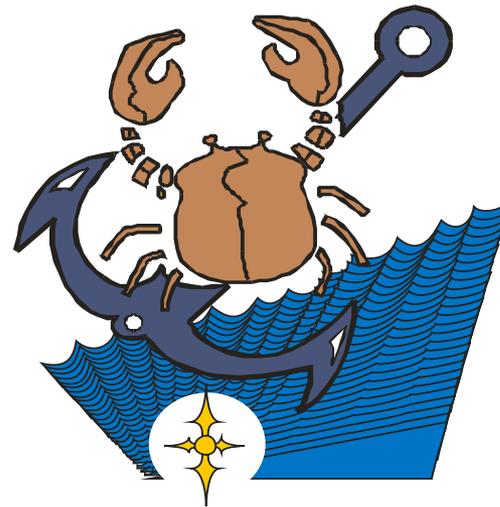
RECEIPT OF PERISHABLES FISH

- Approved source
- Fresh fish have bright red gills, clear eyes, firm elastic flesh
- Frozen fish must be frozen at receipt, check for refreezing
 - Soft, flabby flesh
 - Sour odor or off color
 - Slimy wrapping paper, ice crystals



RECEIPT OF PERISHABLES SHELLFISH

- Un-shucked: fresh only
 - Name of shipper, kind and quantity of stock, maintain certificate for 90 days
- Shucked: fresh or frozen
 - Non-returnable package, maintain certificate, shipper information
- Fresh crustaceans
 - Received alive



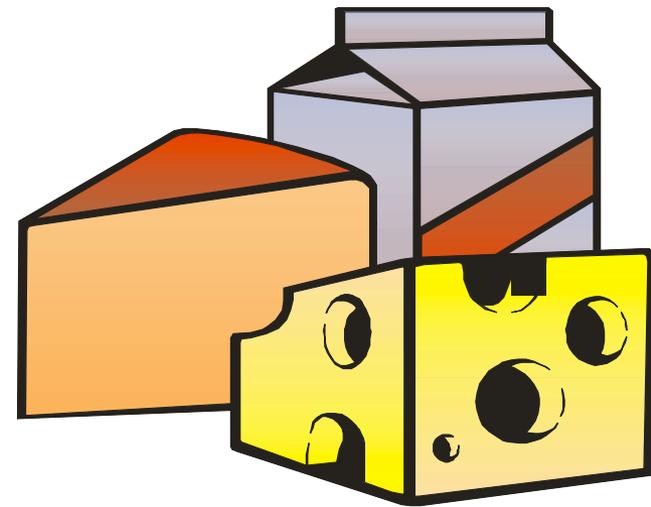
RECEIPT OF PERISHABLES FRUITS AND VEGETABLES

- USDA inspection standards
- Taste is best indicator over appearance, blemishes, size, etc.



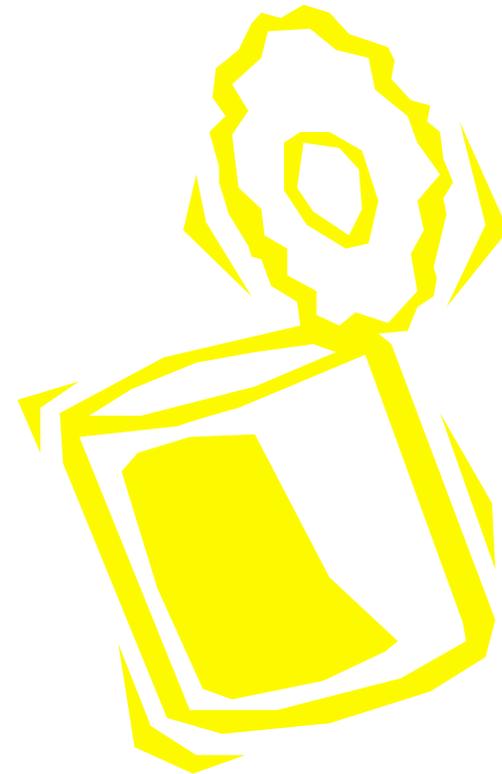
RECEIPT OF PERISHABLES MILK AND DAIRY

- Only Grade A pasteurized fluid milk
- Delivery Temp 41°F or less
- Dry milk from pasteurized milk
- Served in original containers or from approved bulk dispensers
- Butter
- Shell eggs at least Grade B



RECEIPT OF SEMI-PERISHABLES CANNED PRODUCTS

- Labeling
- Can defects
 - Dents
 - Pin holes
 - Swellers
 - Springers
 - Flippers
- Exceptions (natural swellers)
 - Coffee
 - Syrup
 - Molasses



RECEIPT OF SEMI-PERISHABLES DRY FOODS

- Labeling
- Defects
 - Tears
 - Dampness
 - Infestation
- Rejection standards



FOOD STORAGE

- General requirements
 - food storage areas
 - disposition of decayed/spoiled foods
 - placement of food within storage areas
 - FIFO
 - Inspections for infestation, spoilage, damage
 - Cleaning



FOOD STORAGE

- Temperature
 - Frozen foods stored at 0°F or below
 - Fresh products stored at approximately 32°F - 40°F
 - Eggs/dairy received and maintained at 41°F or below



FOOD STORAGE

- Product compatibility
 - Grouping
- Proper air circulation
 - Place food items minimum 6" above deck (floor)
 - Minimum 4" away from bulkhead (wall)
- Refrigerated storage
 - Temperature and logs
 - Frost, glaze no more than 1/4 inch
 - Easily cleanable shelving
 - Internal back-up thermometer



FOOD STORAGE

- Semi-perishables
 - Controlled conditions
 - Routine inspection of package interiors



SUMMARY

- Prime Vendor concept and practices
- Inspection of food items
- Receipt of perishables
- Receipt of semi-perishables
- Storage of food items



TOPIC 1.3

FOOD PREPARATION AND SERVING



ENABLING OBJECTIVES

- 1.11 DESCRIBE the proper food preparation procedures for raw animal products, eggs, fruits and vegetables, and home cooked food
- 1.12 STATE the time and temperature requirements for advanced preparation foods, leftovers, and thawing
- 1.13 DESCRIBE the proper food serving requirements



MINIMUM FOOD PROTECTION MEASURES

- Apply good food sanitation practices
- Maintain high personal hygiene standards
- Keep potentially hazardous foods (PHFs) refrigerated or heated to temperatures that minimize the growth of pathogenic microorganisms



MINIMUM FOOD PROTECTION MEASURES

- Inspect food products for wholesomeness, temperature and sanitary condition prior to acceptance
- Cook PHFs appropriately to kill harmful microorganisms
- Provide adequate personnel, equipment and facilities to ensure sanitary operation



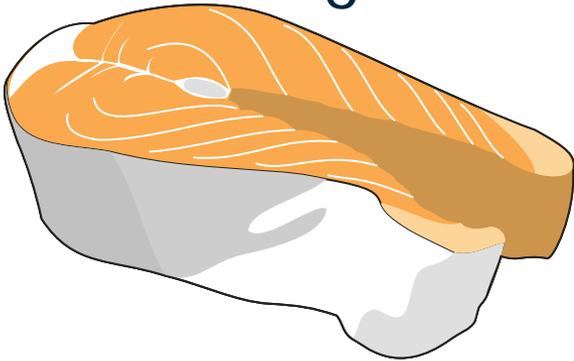
MINIMUM FOOD PROTECTION MEASURES

- Prevent rodent and insect infestation or contamination, as well as contamination of food with toxic chemicals
- Use properly designed, cleaned, and sanitized equipment for its intended use



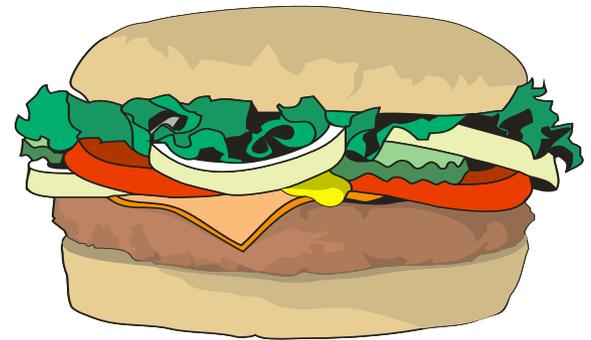
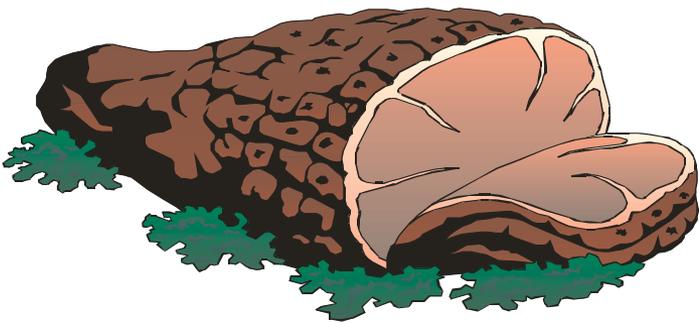
MINIMUM COOKING TEMPS - POULTRY & FISH

- Poultry, stuffing and stuffed meats: 165°F for 15 seconds
- Poultry can be stuffed, but must reach 165°F for 15 seconds. Remove immediately and store at 135°F or higher until served
- Stuffing should be cooked separately!



MINIMUM COOKING TEMPS - PORK, BEEF & ROAST

- Pork and game animals: 145°F for 15 seconds
- Ground beef & ground meats: 155°F for 15 seconds
- Roast and corned beef: 145°F for 4 minutes



MICROWAVE COOKING

- Cover food to retain surface moisture
- Rotate or stir to distribute moisture
- Heated to internal temp of 165°F or higher.
- Let stand for 2 minutes to obtain temperature equilibrium.



EGGS

- Raw eggs (and food containing raw eggs) prohibited
- Recipes calling for uncooked eggs (e.g., ice cream, mayonnaise, eggnog, Caesar salad dressing, hollandaise sauce, etc.) will be prepared using only pasteurized frozen table eggs.
- Substitute pasteurized eggs for shell eggs when preparing food items intended for highly immunocompromised or otherwise susceptible population.



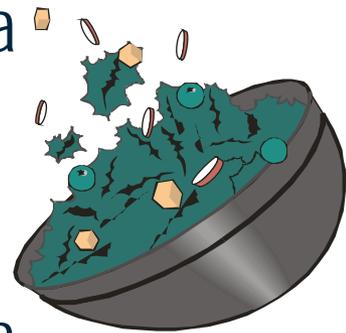
EGGS (cont.)

- Cook (made to order) shell eggs to 145°F for 15 seconds or until white is firm (not running), and the yolk is set.
- If scrambled eggs are made from fresh shell eggs, the following applies:
 - Cook no more than 3 quarts of scrambled eggs made from shell eggs at a time
 - Cook to 155°F for 15 seconds & no visible liquid
 - Steamtable Hold at 135°F or above
 - Don't combine freshly cooked eggs with eggs on the steam table!



FRUITS AND VEGETABLES

- Fresh fruits & vegetables should only be procured from approved sources! To prepare:
 - Break apart vegetables to increase contact area
 - Thoroughly wash in potable water
- Those of unknown origin:
 - Break apart vegetables to increase contact area
 - Thoroughly wash in potable water
 - Chemically disinfect for 1-2 min. in 50 ppm FAC
 - Thoroughly rinse in clean potable water



HOME COOKED FOOD

- Not authorized in food establishments
- Requirement does not apply to:
 - Chapel suppers
 - Family child care
 - Neighborhood cookouts
 - Unit bake sales
- Home canned food is prohibited at all command functions.



SAFE HOLDING TEMPS

- Food which is not served immediately after cooking must be held at 135°F or above or rapidly cooled to 41°F or below
- PHFs held outside of range > 4 hours must be discarded!
- PHF ingredients which are consumed without further preparation (e.g., salads, sandwiches, filled pastry products, reconstituted foods, etc.) must be chilled to 41°F or below prior to preparation



ADVANCED PREPERATION FOOD

- Definition: Food prepared for future service beyond a specific meal.
- Follow HACCP principles
- If food product contains PHFs, may not be retained as a leftover.
- May not be placed in hot holding
- Must be cooled to 41°F within the following time constraints:
 - From required cooking temp. to 70°F within 2 hours
 - From 70°F to 41°F within 4 hours (6 hour total period)



ADVANCED PREPARATION RAPID COOLING TECHNIQUES

- Ice bath and agitation
- Portioning into 3" product depth or less in shallow pans
- Use pre-chilled pans
- Circulate cold water in steam jacket or kettles
- Rapid chill reefer prior to placement in standard reefer
- Immerse cooking dish in cold running water while agitating food product



ADVANCED PREPARATION RAPID COOLING TECHNIQUES

- Spread sliced items in shallow pans & then refrigerate
- Distribute product among several reefers
- Use metal, stainless steel, or aluminum containers
- Reduce content of water during cooking and add ice afterwards
- Utilize ice paddles



ADVANCED PREPERATION FOOD

- Protect food from contamination by:
 - Loosely cover hot foods during cooling
 - Tightly cover after food reaches 41°F
- PHF being transported must be held at or below 41°F
- Label
 - “Advance Preparation Food”, preparation and discard date/time
- May be held at or below 41°F for 72 hours



ADVANCED PREPARATION REHEATING

- Will take no longer than 2 hours to reach 165°F for 15 sec. Exceptions:
 - Whole beef roasts to 145°F
 - Commercially processed, hermetically sealed containers
- Held at 135°F for less than 5 hours
- PHFs for cold serving must be held at $\leq 41^{\circ}\text{F}$ or served within 2 hours of removal from refrigeration



ADVANCED PREPARATION WAIVERS

- Waiver for freezing limited menu items (e.g., egg rolls) may be authorized by PMA under certain conditions
- May require HACCP plan as directed by PMA



LEFTOVERS

- Definition: Any un-served food remaining at end of meal period
- Serving line food is NOT a leftover and must be discarded
- Non-PHF's (e.g., individual, commercially packaged crackers/condiments, etc.) may be recovered from the serving line, but not individual trays



PHF LEFTOVERS

- What may be saved?
 - Food with commercially prepared chopped or ground meat ingredients
 - Hot Holding PHF leftovers held at 135°F. or above
 - Cold holding PHF leftovers held at 41°F. or below
 - Food item was NOT placed on serving line
 - Food item was NOT previously cooked, chilled, and reheated



CHILLING LEFTOVERS

- Hot items to be retained cold must be chilled to 70°F within 2 hours, and to 41°F or below within 4 hours (6 hours total)
- PHF leftovers must be labeled with “LEFTOVER - USE WITHIN 24 HOURS” with discard & preparation date/time
- May be retained for 24 hours chilled (41°F or below) or 5 hours heated (135°F or above)
- Freezing of leftovers is prohibited
- Follow Advance Preparation rules when reheating



PROHIBITED LEFTOVERS

- Foods composed of heavily handled (e.g., peeled, sliced or diced by hand) ingredients
- Anything recovered from serving line, except non-PHF's (e.g., individual, commercially packaged crackers/condiments, etc.)
- PHF's kept between 41°F -135°F
- Foods not chilled to 41°F or below within 4 hours



COMMERCIAL MEAT, CHEESES, AND SALADS

- Meats and cheeses must be consumed within 7 days of opening and maintained at 41°F or below
- Inspect visually before each use. Discard if deterioration is noticed
- Use all salads within 72 hours of opening
- Label package with opening & discard time and date



THAWING PROCEDURES

- Ideally, under refrigeration at 36°F - 38°F in original containers or wrappers
- Do not thaw by excessive heat or warm air
- Frozen food may be thawed in a microwave oven as part of a continuous cooking process



THAWING PROCEDURES SHORE FACILITIES

- Food may be thawed under running water:
 - Water temp of 70°F or below
 - Have sufficient water velocity to dislodge loose particles in an overflow
 - No portion of ready-to-eat or raw animal food can be thawed above 41°F
 - Regarding raw animal food: thawing, preparation, cooking and cooling process may not exceed 4 hours total time



THAWING PROCEDURES FLEET

- During emergency situations:
 - All other options must be exhausted
 - Thawed in galley or meat prep space
 - Room temp not to exceed 80°F
 - PHFs kept in original container
 - Cook immediately
 - Notify PMA



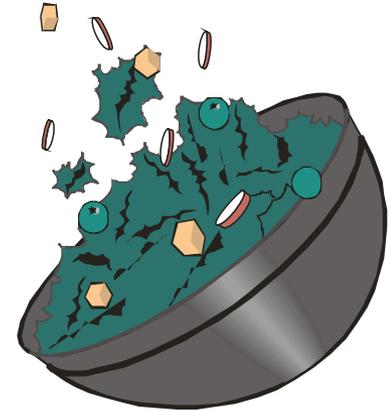
SERVING LINES

- Must have functional sneeze shield
- Food must be maintained at proper temps ($\geq 135^{\circ}$ F or $\leq 41^{\circ}$ F)
- Temps must be checked frequently



SALAD BAR

- May be self service
- Must have sneeze shield
- All items pre-chilled to $\leq 41^{\circ}$ F
- All items placed on ice or on refrigerated unit
- Vegetables may be kept until end of day with visual verification of wholesomeness



SALAD BAR PHFs

- Place in small quantities
- Replenish with new containers, DO NOT add to existing containers
- PHFs must be discarded at end of meal period



SALAD DRESSINGS

- Non-commercially prepared, placed in bowls, must be discarded at end of meal
- Commercially prepared dressings in small bottles, that are kept under refrigeration between meals, may be retained longer
- Some brands are exempt from refrigeration during meal periods:
 - Must be placed in container w/ NSF approved pump
 - Must be refrigerated between meals
 - Must discard after 48 hours
 - Pump must be cleaned & sanitized prior to placement on container
- Single serve salad dressings do not need refrigeration



UTENSILS

- Ensure you have adequate amount for meal period
- Utensils must be stored in food w/ handles extended, or in running water



SELF-SERVICE

- Authorized items:
 - Bread, butter, crackers, relishes, condiments, beverages
 - Individually portioned deserts
 - Individually wrapped ice cream treats
 - Cookies
 - Fruit (fresh, canned, stewed, frozen)
 - Soft ice cream from dispenser



FAMILY STYLE SERVICE

- Must be authorized by PMA
- 4 hour rule compliance
 - Small quantities of food
 - Adequate utensils supplied
 - Serving bowls are not refilled
 - Salad items pre-chilled ($\leq 41^{\circ}$ F)
 - PHFs discarded after meal
 - Bulk ice cream may not be served family style



SUMMARY

- Minimum Food Protection Measures
- Food Preparation
 - Cooking raw animal products
 - Eggs
 - Fruits and vegetables
 - Home cooked foods



SUMMARY

- Safe holding temperatures
 - General guidelines
 - Advanced preparation foods
 - Leftovers
 - Thawing procedures
- Food serving
 - Serving lines
 - Salad bars
 - Self service items
 - Family style service



TOPIC 1.4

GENERAL SAFETY IN FOOD SERVICE AREAS



ENABLING OBJECTIVES

- 1.14 LIST general safety precautions necessary to maintain a safe working environment
- 1.15 EXPLAIN specific safety precautions associated with food service operations and IDENTIFY specific safety precaution equipment



ENABLING OBJECTIVES

- 1.16 IDENTIFY specific safety precautions associated with sharp blades, mechanical, electrical, and physical hazards including heat and noise
- 1.17 DESCRIBE potential of fire hazards within the food service operation and methods of prevention and control



GENERAL SAFETY PRECAUTIONS

- Equipment operating and safety precautions
 - Follow operating precautions from Navy and manufacturer
 - Post instructions and precautions on or near equipment
 - Provide OJT in use and maintenance
 - If unfamiliar, do not use until trained
 - Only authorized personnel may operate



GENERAL SAFETY PRECAUTIONS

- Put all guards in place
- Do not wear loose items while operating equipment
- Safety interlocks maintained on vegetable chopper, meat tenderizer, bread slicer, dough mixing machine, food processor
- Do not bypass any safety mechanisms



GENERAL SAFETY PRECAUTIONS

- Only competent, authorized personnel may make repairs
- Do not leave hot equipment unattended
- Door latches of walk-in reefers and freezers have interior door release mechanisms with posted instructions



FACILITY SAFETY

- Keep decks dry and grease free
- Keep deck areas clear of obstructions
- Maintain appropriate work atmosphere, no horseplay, dangerous practices, etc.



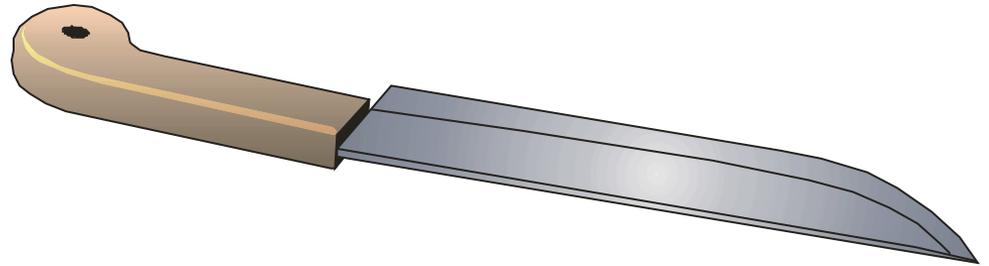
SAFE LIFTING PROCEDURES

- If an object looks too large or heavy to move, get assistance
- Proper procedures
 - Bend knees, keep back straight
 - Keep load centered in front of you
 - Lift from knees/legs; do not bend at the waist and lift



BLADE AND EQUIPMENT SAFETY

- Knife safety
 - Hold knives firmly
 - Clean grip, do not use if wet or greasy
 - Do not store in drawers or on magnetic bars
 - Never carry a knife with something else
 - Only put in sink when ready to wash
 - Use a metal glove when deboning meat
 - Keep free hand away from cleaver's arc



BLADE AND EQUIPMENT SAFETY

- Meat slicer, vegetable chopper, food processor, meat tenderizer
 - Install interlock switch
 - Install toggle switch guard
 - All guards and attachments properly assembled
 - Use a plunger or slide to feed material, not fingers!
 - Use caution when cleaning blade
 - Secure power, wait for all moving parts to stop before conducting maintenance or cleaning
 - After cleaning, replace blade guard immediately



BLADE AND EQUIPMENT SAFETY

- Dough mixing machine
 - Do not cut dough while agitator is moving
 - Do not knead or test dough consistency while machine is operating
 - Do not clean bowl in tilt position when agitator is revolving
 - Do not use a broken/damaged whisk



BLADE AND EQUIPMENT SAFETY

- Food mixing machine
 - Use proper machine speed
 - Never place hands into bowl while machine is operating
 - Do not let hook or whisk to contact bottom of bowl



BLADE AND EQUIPMENT SAFETY

- Steam jacketed kettle
 - Hydrostatic testing completed annually
 - Pressure gauge installed and operating with no more than 45 psi
 - Check steam safety relief valve prior to opening steam valve
 - Do not tamper with safety valve
 - 18 inch chain installed on relief valve
 - Relief valve tail pipe pointed down and away from operator



BLADE AND EQUIPMENT SAFETY

- Steam jacketed kettle cont.
 - No steam to an empty kettle
 - No liquids in a hot, dry kettle
 - When heating, release air and water manually by lifting relief valve
 - Do not stand inside copper pit when cooking



BLADE AND EQUIPMENT SAFETY

- Deep fat fryer
 - Perform high temperature thermostat cut out test using clean, fresh grease
 - Keep water away
 - Know where all fire suppression system activation points are located
 - Fusible link
 - Cylinder firing pin
 - Remote activator at exit from area



BLADE AND EQUIPMENT SAFETY

- Microwave ovens
 - Don't operate empty
 - Don't operate with large pieces of metal or aluminum foil
 - Clean interior and door seals



BLADE AND EQUIPMENT SAFETY

- Garbage grinder
 - Do not put hands in grinder when operating
 - Do not bypass safety interlocks
 - Turn on water before adding waste
 - Do not put in metal, wood, cloth, rubber, plastic, bones
 - If this happens, turn off grinder immediately, secure power, clear object



ELECTRICAL SAFETY

- De-energize and Lock-out/Tag-out
 - Equipment may have more than one power source
 - Ensure that power source(s) cannot be energized during cleaning
 - Follow manufacturer's instructions



ELECTRICAL SAFETY

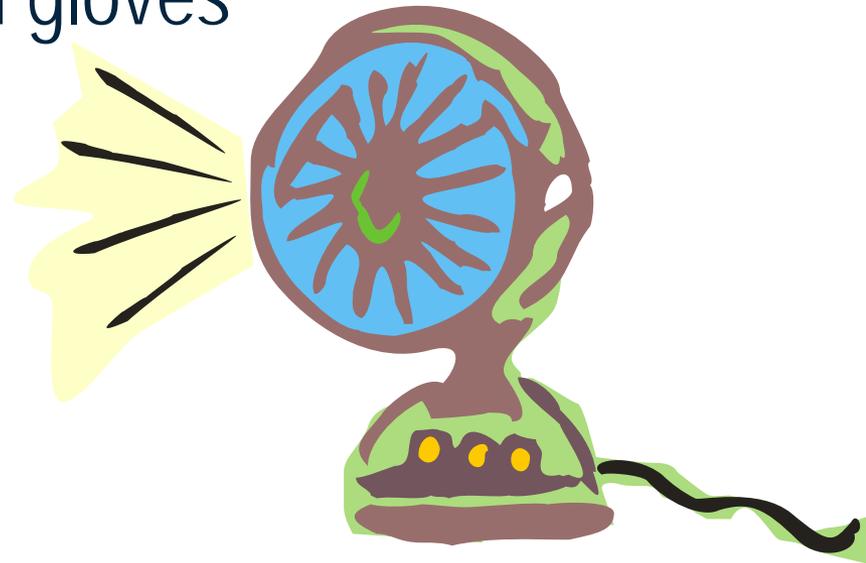


- General electrical safety precautions
 - Permanently mounted equipment must be hardwired, no extension cords
 - Rubber protective boots in place and intact on all switches
 - Do not operate equipment with wet hands or on a wet deck
 - Do not remove parts which expose electrical or mechanical components unless directed



HEAT HAZARDS

- Hot water (manual dishwashing)
 - Use dip basket or tongs to remove utensils
 - Use rubber gloves
 - Do not dive into sink with gloves
 - Use rubber apron



HEAT HAZARDS

- Heat stress
 - All galley and scullery spaces should be designated as heat stress monitoring areas
 - Thermometers hung in each work space
 - Record temperature every 4 hours
 - If above 100°F, contact MDR to conduct heat stress survey
 - Follow MDR recommendations



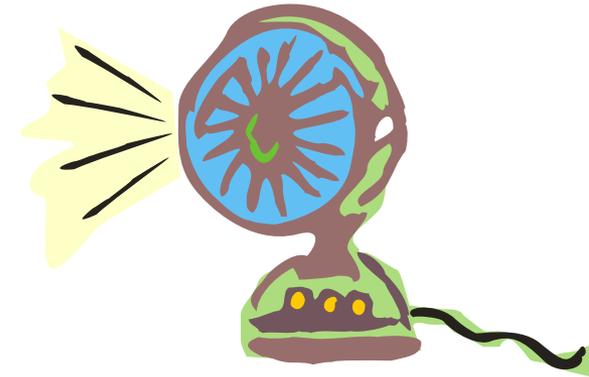
HEAT HAZARDS

- Heat stress prevention
 - Ensure supply and exhaust ventilation are operating properly
 - Hot water and steam pipe lagging is in place



HEAT HAZARDS

- Personal protection for heat stress conditions
 - Eat three meals a day
 - Drink plenty of water
 - Adequate rest
 - Do not increase salt intake
 - Do not wear starched clothes
 - Do not drink electrolyte supplements (Gatorade) instead of water
 - Do not drink alcohol



HEAT HAZARDS

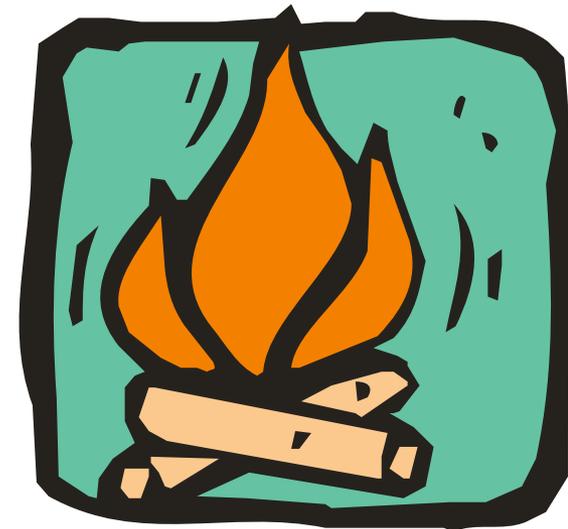


- Systemic heat injury
 - Heat rash - “prickly heat”, inhibits body from releasing heat
 - Heat cramps - severe muscular cramps
 - Heat exhaustion – profuse sweating, moist and clammy skin, dilated pupils and fast/weak pulse; normal/sub-normal body temperature
 - Heat stroke – Hot and dry skin pupils constricted and strong/fast pulse; elevated body temperature
- Both exhaustion and stroke require immediate medical attention



FIRE HAZARDS

- Keep equipment that uses/produces grease clean
- Grease interceptor hood
 - Washdown system - operate daily
 - Fire damper - operate weekly
- Exhaust hoods and grease filters cleaned weekly
- Exhaust vent ducting cleaned at least semi-annually



FIRE HAZARDS



- Grease fires
 - If automatic extinguisher system fails, activate manual release
 - If total system failure, use PKP extinguisher
 - Do not smother or use water on grease fire



CHEMICAL HAZARDS



- Cleaning/Sanitizing compounds
 - Use in accordance with label
 - Do not allow concentrate to contact skin or eyes
 - When mixing, follow directions
 - Do not mix with anything but water
 - On ship, store oven cleaners and other aerosols in flammable liquid storeroom



NOISE



- Noise survey should be performed by Industrial Hygiene to determine if/when hearing protection is required
 - If you cannot carry on a normal conversation at arms length, probably a noise hazard area
- Above 84 decibels, hearing protection is required



SUMMARY

- General safety precautions
 - Equipment
 - Facility
 - Safe lifting
- Blade and specific equipment
- Electrical



SUMMARY

- Heat hazards
- Fire hazards
- Chemical hazards
- Noise



TOPIC 1.5

FACILITY, EQUIPMENT, CLEANING AND SANITIZING



ENABLING OBJECTIVES

- 1.18 DESCRIBE the 6 steps of the warewashing process
- 1.19 IDENTIFY proper procedures to use when washing food service utensils and equipment by the manual warewashing process
- 1.20 EXPLAIN proper procedures to use when washing food service utensils and equipment by automatic warewashing machine process



ENABLING OBJECTIVES

- 1.21 DESCRIBE proper maintenance and cleaning procedures for automatic warewashing machines
- 1.22 IDENTIFY procedures required to clean and sanitize equipment that must be cleaned-in-place
- 1.23 EXPLAIN proper procedures to be employed in cleaning the general facility
- 1.24 DESCRIBE the proper methods to store cleaning supplies



WAREWASHING PROCESS

- Sorting
 - Separate dishware and utensils by type
 - Rack items to allow contact to all surfaces and to drain
 - Flatware placed in cylindrical containers, food contact surface up, no more than 15 items
 - Segregate broken or damaged items



WAREWASHING PROCESS

- Scrape/Preflush
 - Remove gross food particles from dishware
 - Prior to placing into machine
 - Steel wool is prohibited
- Wash
 - To remove remaining food residue
 - For manual washing, clean the least dirty items first



WAREWASHING PROCESS

- Rinse
 - To remove detergent solution and food loosened by washing
- Sanitize
 - Eliminates microorganisms
 - Hot water at 171°F for manual, 165°F for single tank stationary and 180°F for other machines
 - With chemical sanitizers, check concentration with test strips



WAREWASHING PROCESS

- Air Dry/Storage
 - Items must be thoroughly dry before stacking and storage
 - If cleaned at proper temperature, items will dry quickly
 - Do not towel dry
 - Store in a clean, dry area away from contamination
 - Do not store dishware in a space with a SOMAT grinder



THREE SINK METHOD EQUIPMENT

- 2 or 3 compartment sink
- Booster heater
- Thermometers/gauges
- Dip and drain baskets
- Approved brushes
- Approved hand warewashing compounds
- Arm length rubber gloves
- Rubber aprons
- Sanitizing agents



THREE SINK METHOD

- Wash
 - Temperature not less than 110°F
 - Change water frequently
- Rinse
 - Clear water to remove detergent and food
 - Change water frequently



THREE SINK METHOD

- Sanitize
 - Hot water 171°F for 30 seconds
 - Chemical: use test papers
 - Chlorine- 100ppm for 10 seconds
 - Iodine, minimum temperature 75°F, 12.5-25 mg/l for 30 seconds
 - Navy food service disinfectant
 - Quaternary ammonia- minimum temperature 75°F, concentration specified by manufacturer, contact for 30 seconds



THREE SINK METHOD

WASH

110F

THERMOMETER

RINSE

**CHANGE
WATER
FREQUENTLY**

THERMOMETER

SANITIZE

**EITHER
CHEMICAL
METHOD OR**

171F

THERMOMETER

**BOOSTER
HEATER**



TWO SINK METHOD

- Must have all stages of cleaning process:
 - wash
 - rinse
 - sanitize
- Clean sinks prior to final sanitizing process
- Then, three sink method procedure followed



AUTOMATIC WAREWASHING EQUIPMENT

- Single tank stationary rack
 - Wardroom, CPO mess
 - Wash, follow manufacturer's instructions, 165°F, cycle runs 1.5-2 minutes
 - Dwell cycle instead of rinse
 - Sanitizing rinse at 165-194°F, 15-25 psi



AUTOMATIC WAREWASHING EQUIPMENT

- Single tank conveyor
 - Wash 160°F
 - Dwell cycle
 - Sanitizing rinse 165-194°F for manufacturer specified time period



AUTOMATIC WAREWASHING EQUIPMENT

- Single tank chemical sanitizing
 - Wash at 120°F
 - Dwell cycle
 - Sanitizing rinse at 120°F with 100 ppm chlorine, replace as needed



AUTOMATIC WAREWASHING EQUIPMENT

- Multiple tank conveyor
 - Main scullery
 - Individual utensil racks can be used, or utensils placed directly on conveyor
 - May have prewash
 - Follow manufacturer's instructions for wash conveyor speed, run at 150°F
 - Power rinse, 160-180°F
 - Sanitizing rinse, 180-194°F at 15-25 psi



AUTOMATIC WAREWASHING EQUIPMENT

- Cleaning procedures
 - Clean before use, throughout day, or at least every 24 hours
 - Disassemble upper and lower wash and rinse spray arms to clean
 - Remove and clean trays, strainers, and curtains
 - Clean interior and exterior
 - Descale as needed



AUTOMATIC WAREWASHING EQUIPMENT

- Maintenance procedures
 - Ensure spray patterns are complete
 - Verify thermometer temperatures monthly



CLEAN-IN-PLACE PROCEDURES

- Safety
 - Secure power, perform tag out procedures (Electrical Isolation)
 - Cleaning
 - Disassemble
 - Scrape/rough clean
 - Clean with detergent
 - Rinse with potable water
 - Sanitize with chemical solution



CLEAN-IN-PLACE PROCEDURES

- Refrigerated spaces
 - Daily spill clean up
 - Bi-weekly scrub and sanitize
 - For walk-ins, scrub surface with baking soda or borax solutions
- Steam-jacketed kettles
 - Scrub inside and outside after each use, rinse and sanitize
 - Clean strainer, draw off valve and tube



CLEAN-IN-PLACE PROCEDURES

- Meat slicer
 - Clean when switching product type or from raw to ready-to-eat, after substantial time passage, at regular intervals, at end of working day
 - Set index at zero, secure power
 - Clean blade with detergent/sanitizer



CLEAN-IN-PLACE PROCEDURES

- Soft-serve ice cream freezer
 - Drain freezer compartment and feed hopper after each use
 - Clean hopper, all internal food contact surfaces, and all exterior surfaces
 - Prior to use, sanitize surfaces
 - Use cleansers/sanitizers approved by manufacturer



CLEAN-IN-PLACE PROCEDURES

- Utensils and food-contact surfaces of equipment used in non-continuous food operations
 - Clean after each use
 - Clean prior to use if a substantial interruption has occurred



GENERAL FACILITY CLEANING

- Use dustless methods
- Use service sink to dispose of mop water
- All sponges and cleaning cloths must be washed and sanitized after each meal



GENERAL FACILITY CLEANING

- Dining tables
 - Clean using the two pan method
 - During meal: clean with mild detergent and rinse
 - After meal: Wash, rinse and sanitize with sponge or cloth
- Refuse containers
 - Empty during meal as needed and afterwards
 - Clean inside and out as needed



GENERAL FACILITY CLEANING

- Exhaust ventilation systems
 - Operate grease interceptor hoods daily
 - Clean grease hoods/filters weekly
 - Clean interior ducting semiannually
- Decks
 - Clean as necessary to remove debris and spills
 - When cleaning use warning signs to reduce potential for falls



GENERAL FACILITY CLEANING

- Proper storage of cleaning supplies
 - Store in an orderly manner
 - Store chemicals in original containers or with proper label
 - Store away from food, equipment, utensils or linens
 - Space should have adequate ventilation



SUMMARY

- General warewashing
- Manual warewashing
- Automatic machine warewashing
- Clean-in-place
 - Refrigerated spaces
 - Steam-jacketed kettles
 - Meat slicers/Soft serve ice cream freezer
- General facility cleaning
- Cleaning Gear Lockers

