

Food Handlers Certification: Information for Volunteers

- This training and subsequent testing and certification ONLY serves to meet the requirements for volunteer food handlers for organizations such as Family Readiness Groups, the Fort Knox Spouses Club, etc., and is not intended to substitute for, nor does it meet the requirements for, and neither does it exempt anyone required to take other mandated food sanitation and food safety training required for commercial vendors.
- For questions regarding this training or the test for certification, please contact Ireland Army Community Hospital Environmental Health Services, a sub-program of Preventive Medicine, at 502.624.5371 or 502.624.5343.
- Steps to receive Food Handlers Certification here at Fort Knox
 1. Review and study this slide presentation. Be familiar with all of the content therein.
 2. When you are ready, go to the EHS office, located at building 1020 , room 110, located across from Veterinary Services on Ireland Avenue.
 3. Hours for administering the test are: 9:00 a.m. to 3:00 p.m.
 4. If you should not pass the test the first time, you will be allowed to review the material and re-test. When taking the test, you will not be allowed to use notes.
 5. Upon successful completion of the test, the EHS team will issue you a Food Handlers' Card. The card is good for one year.

Groups may request special training sessions and/or testing by contacting the Environmental Health Services.

Food Handlers Course



Preventive Medicine Services
USA MEDDAC
Environmental Health
Fort Knox, KY 40121
502.624.5371 or 502.624.5343
Last updated 6 May 2011



FHC Purpose

- To ensure Family Readiness Groups adhere to the guidelines for food service sanitation referenced by AR 40-5 and the TBMED-530.
- Applies to all food establishment operations within the U.S. ARMY and areas under its control.

TBMED-530 History

- Food previously believed to be NONPOTENTIALLY HAZARDOUS due to its acidity, WATER ACTIVITY, or availability of oxygen have now been implicated in **FOODBORNE DISEASE OUTBREAKS.**
- On 19970125, the President of the United States announced the beginning of a National Food Safety Initiative to reduce the number of foodborne illnesses.

TBMED-530 History

- As a leader and a partner in the public health community, the U.S. ARMY embraces the National Food Safety Initiative through the development and implementation of this bulletin.
- This bulletin incorporates the fundamental principles of the latest FDA's *Food Code*.

Terminal Learning Objectives

- Demonstrate proper sanitary practices
- Be able to keep food safe during:
 - Preparation
 - Serving
 - Transportation
- In accordance with TB med 530

Factors That Contribute To A Food-Borne Disease

- Food-borne illnesses can be prevented
- The center for disease control in Atlanta, GA., Conducted a study to determine what causes food-borne disease
- They found that many factors could lead to a food-borne disease outbreak but there were certain things that could be traced to food-handlers!

The Top Eight Factors:

- Failure to properly cool food.
- Failure to thoroughly heat/cook foods.
- Poor personal hygiene.
- Cooking foods more than 24hrs prior to service.

The Top Eight Factors:

- Raw contaminated ingredients added to receiving no further cooking
- Foods held at improper temperatures
- Failure to reheat food properly
- Cross-contamination

Duties of Person In Charge

- Employees are effectively cleaning their hands by routinely monitoring the employees' hand washing.
- Employees are visibly observing foods to determine they are from APPROVED sources, delivered at required temps, protected from contamination, and unadulterated.

Employee Health

- Employee reportable health information* such as—
 - a) diarrhea
 - b) fever
 - c) vomiting
 - d) jaundice
 - e) sore throat with fever

Employee Health

- Lesion's containing pus, such as a boil or infected wound on the hands, wrists or on exposed portions of the arms or on other parts of the body.
- Employees having these types of symptoms will have doctor's excuse allowing them to resume work **CH II, 2-4**

Personal Hygiene

- Food employees **will***—
- vigorously wash their hands w/soap and warm water for at least 20 sec followed by thorough rinsing
- clean their hands in a hand-washing lavatory or sink
- will use only designated hand-washing stations
- **CH II, 2-8 a, 2-9 a,b**

Personal Hygiene

- Wash hands frequently:
 - before beginning duty
 - after using the toilet facilities
 - after serving burner units or gasoline cans
 - after handling contaminated equipments or utensils

Personal Hygiene

- Wash hands frequently:
 - after smoking
 - before preparing food
 - after preparing one food item, but before preparing another
 - after performing custodial duties including handling of garbage or other refuse

Personal Hygiene

- Food employees **will** *—
- keep fingernails trimmed, filed & maintained so edges & surfaces are cleanable and do not extend beyond the fleshy portion of the fingertip.
- not wear artificial nails, nail jewelry, or any other nail products, such as nail polish or sparkles, during **food** preparation or while serving **food**. **Ch II 2-11a,b**

Personal Hygiene

- With exception of plain wedding band, medical id bracelet, **food employees will not wear any jewelry** which may be touched, while preparing or serving **food**.
- **Prohibited jewelry** includes nose, tongue, and lip rings; other exposed body jewelry; and watches.
- **Employees** who handle only closed food containers, such as stop n shop operations are exempt. **CH II 2-12**

Personal Hygiene

- Food employees/personnel will wear authorized hair restraints (such as clean hats, hair coverings or nets, beard restraints, and clothing that covers body hair) that are designed and worn to effectively keep their hair from contacting exposed food; clean equipment, utensils, and linens; and unwrapped single service and single used articles.
- ***Ch II 2-16***

Personal Hygiene

- Eating, drinking and using tobacco* will be conducted in designated areas. Ch II 2-14
- No smoking is allowed within **50ft** of any building on a military installation.

Training

- Training records will be-
- (1) Maintained at the applicable food establishment or operation.
- (2) Readily available for review by the medical commander or designated representative.
- ***Ch II 2-19 ©***

Potentially Hazardous Foods (PHF'S)

- Food items that can support rapid growth of disease causing micro-organisms, PHF'S have:
 - High protein
 - High moisture content or water activity
 - Ph of 4.5 to 7.0

Potentially Hazardous Foods

high in protein with Ph 4.6 to 7.0 A_w 0.85 to 1.0

- Poultry
- Fish / Shellfish
- Egg product
- Raw eggs
- Gravies / sauces
- Soup (creamed)
- Custards
- Potato and protein salads
- Meat products
- Dairy products
- Puddings
- High protein foods
- Cream filled goods
- Cooked or heated vegetables or plant products

Non PHFS

- Store in a cool / dry place, 6 in off ground where not exposed to splash, dusts, or other contamination
 - Use First In First Out Method (FIFO)
 - Wooden pallets shouldn't be used. Will be prohibited 2 yrs after publication of this manual(30 OCT 02). CH III, 3-31a,d

Food Storage (Safe Temperatures)

- Refrigerated storage - 40°F or below (Ch III, 3-5a, 3-54b)
- Frozen - 0°F or below (Ch III, 3-49)
- Heated food holding storage - 140°F or above (Ch III, 3-54a)
- Dry storage – 60 - 70°F
- Temperature Danger Zone 41°F – 139°F

Food Storage (Safe Temperatures)

- Manage meal preparation properly
 - Limit PHF exposure
 - 4 hours total cumulative time in temperature danger zone.
 - Avoid PHF'S when unable to prep meals immediately before serving or refrigeration is unavailable

Preparation & Handling

- Qualified Personnel Only
 - No **Unauthorized** persons in food preparation area
 - Cook Foods to proper internal temperatures

Food Display / Self Service

- Food on display **will** be protected against contamination by use of packaging, counter, service line, salad bar food guards, display cases or other means. CH III, 3-35
- Condiments **will** be protected from contamination by being kept either –
 - 1) dispensers designed to provide protection,

Food Display / Self Service

- 2) protected food displays provided with proper utensils,
 - 3) original containers designed for dispensing, or
 - 4) individual packages or portions. CH III, 3-36 a 1-4
-
- Condiments may be made available from condiment self-service dispensing **equipment**. CH III, 3-36c

Food Display Items

- In-Use utensils, between-use storage:
- 1) In **food** with their handles above the top of the food and the container,
- 2) In **food** that is not **PHF** with their handles above the top of the food within containers or **equipment** that can be closed

Food Display Items

- 3) On a clean portion of the food prep table or cooking equipment, and will be cleaned and sanitized frequently,
- 4) In a clean, protected location if the **utensils**, such as ice scoops, are only used with **Non-PHF's**. CH III, 3-25 a-e

Food Display Items

- Gloves **will** only be worn:
- -when handling food excessively
- --such as making sandwich's
- -will be replaced when damaged or soiled and when interruptions in the operation occur

Self-service Operations

- Consumer self-service operations **will** be provided with suitable **utensils**, effective dispensing methods that protect the **food** from contamination. **Utensils** and **food** containers should be labeled with the corresponding name of the **food**.

Food Thawing Methods

- Thaw frozen foods
 - Plan ahead
- Thawing methods
 - Microwave
 - Running circulating water(least preferred)
 - Thaw box (at a temp of 40°F or below)
 - Ch III, 3-51 a-c

Food Heating Temperatures

- Minimum Safe Internal Temperature

- | | |
|---------|---|
| ▪ 165°F | <u>ITEM</u>
<i>Poultry, stuffing and stuffed meats</i> |
| ▪ 155°F | <i>Pork, ground beef, flaked fish</i> |
| ▪ 155°F | <i>Batch prepared eggs</i> |
| ▪ 145°F | <i>Fish, Seafood, Beef, raw shell eggs</i> |
| ▪ 165°F | <i>Leftovers</i> |

Proper Food Cooling Methods

- Cooked PHF's will be cooled—
 - 1) Within 2hrs, from 140°F to 70°F; and
 - 2) Within 4 hrs, from 70°F to 40°F or less before storage.
- **Ch III, 3-52 A,B**

Proper Food Cooling Methods

- Cooling **will** be accomplished by using one or more of the following methods based on type of **food** being cooled:
 - 1) Placing the **food** in **shallow** pans.
 - 2) Separating the **food** into smaller or thinner portions.

Proper Food Cooling Methods

- 3) Using rapid cooling **equipment**.
- 4) Stirring the **food** in a container placed in ice water bath.
- 5) Using containers that facilitate heat transfer.

Food Labeling(PP,LO & Variance Requirements

- Pre-prepared items will be labeled w/**DA Label 177** or any other system approved by the Med Cdr or the designated rep(IMA)
- Pre-prepared refrigerated, ready-to-eat, & PHF's held in cold storage will be clearly labeled at the time of prep indicating—
 - 1) date of **food prep**

Food Labeling(PP,LO & Variance Requirements

- 2) the date of consumption 7 calendar days or less from, and including, the date of prep or date of the original container is opened. **Food** not consumed within this time period **will** be discarded.

CH III, 3-55 a 1-2

- 3) initials of the preparer and item name

Returned Food, Re-service, or Sale

- After being served or sold and in the possession of a consumer, food that is unused may not be offered as food for human consumption.
- Any food left over after fundraising function may not be sold. **CONSUME AT YOUR OWN RISK.**

Food Service

- Food will be offered for human consumption in a way that does not mislead or misinform the consumer.
- Food or color additives, colored overwraps, or lights may not be used to misrepresent the true appearance, color, or quality of a food.

Temperature measuring devices

- Temperature measuring devices will-
- Be provided and readily accessible for use in ensuring attainment and maintenance of food temperatures as specified in Ch. III

Steel Wool

- Steel wool or steel wool pads will not be used for cleaning **FOOD-CONTACT SURFACES** in any food service operation.

Receptacles

- Receptacles will be provided in each area of the food establishment or premises where refuse or garbage is generated or commonly discarded.
- Receptacles will be durable, cleanable, insect and rodent resistant, leak proof, non absorbent, and covered when not in continuous use.

Causes Of Food-Borne Outbreaks

- Failure to rapidly refrigerate or freeze cold PHF's after receiving shipment to specified temp of 40° or below and 0° or below
- Failure to maintain hot PHF's to 140° or above while serving or in warmer units

Causes Of Food-Borne Outbreaks

- Protecting foods from cross contamination
- Improper transportation and storage
- Protecting food from physical or biological contamination

Food-Borne Disease Threats

Biological Agents

F- Food High in Protein

A- Acidity: pH 4.6 and 9

T- Time (4 hours)

T- Temperature: 40°F – 140°F

O- Oxygen requirements

M- Moisture (water Activity .85 or higher)

Bacteria

- **Quick Facts...**
- *Salmonella*, *Campylobacter*, *E. coli* and *Listeria* bacteria in food cause food infection.
- *Staphylococcus* and *Clostridium botulinum* bacteria produce a toxin (or poison) as a by-product of growth and multiplication in food and cause food intoxication.
- *Clostridium perfringens* can multiply in foods to sufficient numbers to cause food poisoning.
- By following simple steps (clean, separate, cook, and chill) you can prevent most food-related illness. And, when in doubt, throw it out!.

Bacteria

- Salmonellosis
- Salmonellosis is a form of food infection that may result when foods containing *Salmonella* bacteria are consumed. Once eaten, the bacteria may continue to live and grow in the intestine, set up an infection and cause illness. The possibility and severity of the illness depends in large part on the size of the dose, the resistance of the host and the specific strain of *Salmonella* causing the illness.

Bacteria

- **Campylobacteriosis**
- Campylobacteriosis or *Campylobacter* enteritis is caused by consuming food or water contaminated with the bacteria *Campylobacter jejuni*. *C. jejuni* commonly is found in the intestinal tracts of healthy animals (especially chickens) and in untreated surface water. Raw and inadequately cooked foods of animal origin and non-chlorinated water are the most common sources of human infection (e.g. raw milk, undercooked chicken, raw hamburger, raw shellfish). The organism grows best in a reduced oxygen environment, is easily killed by heat (120 F), is inhibited by acid, salt and drying, and will not multiply at temperatures below 85 F.

Bacteria

- **Listeriosis**
- Prior to the 1980s, listeriosis, the disease caused by *Listeria monocytogenes*, was primarily of veterinary concern, where it was associated with abortions and encephalitis in sheep and cattle. As a result of its wide distribution in the environment, its ability to survive for long periods under adverse conditions, and its ability to grow at refrigeration temperatures, *Listeria* has since become recognized as an important food-borne pathogen. *L. monocytogenes* is frequently carried by humans and animals. The organism can grow in the pH range of 4.1 to 9.6. It is salt tolerant and relatively resistant to drying, but easily destroyed by heat. (It grows between 34 F and 113 F).

Bacteria

- Staphylococcal Intoxication
- *Staphylococcus* bacteria are found on the skin and in the nose and throat of most people; people with colds and sinus infections are often carriers. Infected wounds, pimples, boils and acne are generally rich sources. *Staphylococcus* also are widespread in untreated water, raw milk and sewage.

Bacteria

- Clostridium Perfringens Food-Borne Illness
- *Clostridium perfringens* belong to the same genus as the botulinum organism. However, the disease produced by *C. perfringens* is not as severe as botulism and few deaths have occurred. Spores are found in soil, nonpotable water, unprocessed foods and the intestinal tract of animals and humans. Meat and poultry are frequently contaminated with these spores from one or more sources during processing.

Bacteria

- *E. coli* Hemorrhagic Colitis
- *Escherichia coli* belong to a family of microorganisms called coliforms. Many strains of *E. coli* live peacefully in the gut, helping keep the growth of more harmful microorganisms in check. However, one strain, *E. coli* O157:H7, causes a distinctive and sometimes deadly disease.

Bacteria

Number of bacteria	Elapsed time
10	0
20	20 minutes
40	40 minutes
80	1 hour
160	1 hour 20 min
320	1 hour 40 min
640	2 hours
1280	2 hours 20 min
2560	2 hours 40 min
5120	3 hours
10,240	3 hours 20 min
20,480	3 hours 40 min
40,960	4 hours
81,920	4 hours 20 min
163,840	4 hours 40 min
327,680	5 hours
655,360	5 hours 20 min
1,310,720	5 hours 40 min
2,621,440	6 hours

Acid foods

- Do not use galvanized cans
- Heavy metal poisoning

Cleaning of Equipment & Utensil

- All **equipment, food-contact surfaces, nonfood-contact surfaces, and utensils** will be clean to sight and touch.
- **Food-contact surfaces** will be cleaned as follows:
 - 1) before each use of different type of raw animal **food**, such as beef, pork, fish, etc.,
 - 2) each time there is a change from working with raw **foods** to **ready-to-eat foods**
 - 3) At any time during the operation when contamination may have occurred.

TRANSPORTATION OF FOOD

- in **clean, covered** vehicles that **will not adulterate or contaminate the transported food!**
- **Do not use contaminated vehicle**
- Cover with clean tarpaulins, boxes, or bags to protect from contamination
- Do not overstock
- CH IX, 9-2 j

INSPECTION

- Identify basic defects that could cause or spread communicable disease
- Recommend corrective actions
- Provide information and instruction
- Provide assistance

Review

- FACTORS OF FOOD BORNE OUTBREAK
- DUTIES OF PERSON IN CHARGE
- Employee Health and personal hygiene
- Training records
- Hand washing
- Transportation
- Purpose

Review

- Thawing methods
- Cooling methods
- Food re-service
- Receptacles
- Temperature danger zone
- Thermometers
- Labeling
- Food storage temps