Multnomah County Health Department

Food Handler's Manual

December 14, 2006

SAFE FOOD FOR A HEALTHY COMMUNITY

Food Handler Office Location
Call (503) 988-5257
or check our website
www.oregonfoodhandler.us

Food Handler Card Testing

Walk-in testing is available at our office location.
For information and testing times call **(503) 988-5257**.

Cost (cash only):	**$5.00**		Each test
+	**$5.00**		New card
	$10.00	**Total**	

Read the entire manual, then take the test. The test contains 20 multiple choice questions. Select only one answer for each question. Minimum passing score is 15 correct answers.

Please bring Photo ID with you when you come. It is required.

Alternative training and testing methods offered at our office location include training videos available in Chinese (Cantonese and Mandarin), English, Korean, Spanish, Russian, and Vietnamese. An oral compact disc will be used for testing. Allow 40 minutes for viewing the video and 20 minutes for the test. Arrive at least one hour before closing time.

New! On-line Food Handler testing with immediate certificate provision on passage of the test is offered through our website: www.oregonfoodhandler.us
Cost: $10.00 (debit card or credit card only)

Lost food handler cards can be replaced by paying the $5 duplicate card fee. The expiration date remains the same.

Food Handler's manuals are also available in Spanish, Korean, Chinese, Vietnamese, and Russian at any Multnomah County library.

Please do not photocopy this book. Check our website at www.oregonfoodhandler.us for the latest version.

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UNDERSTANDING FOOD SAFETY

Safe food is important in our daily lives whether you prepare meals or eat out at restaurants. Improperly handled foods may cause illness, disability or even death. You have responsibilities (and liabilities) when preparing and serving food to other people. Protect your customers, your business and yourself by learning and practicing safe food handling procedures.

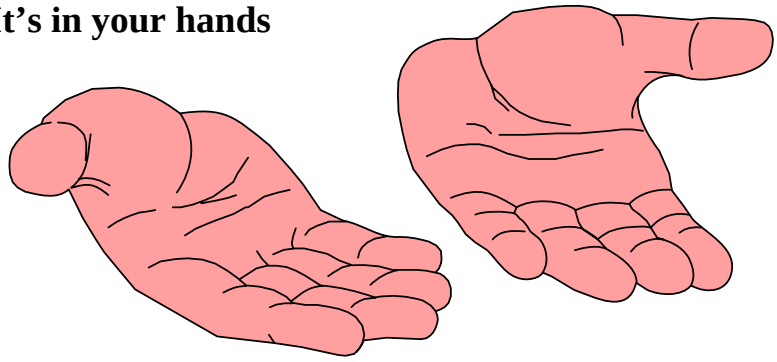
The food service manager sets the tone of what food safety activities occur or do not occur within the facility. Management is responsible for training and ensuring food handlers practice activities that prevent food borne illness.

Someone at your restaurant must be in charge during all hours of operation. The person in charge (PIC) is responsible for knowing the food sanitation rules and the procedures within your establishment. This person is responsible for providing you with information you need to perform your job.

The PIC is usually a manager or supervisor, but can be anyone who can demonstrate the knowledge listed above, and is given the authority to oversee other employees.

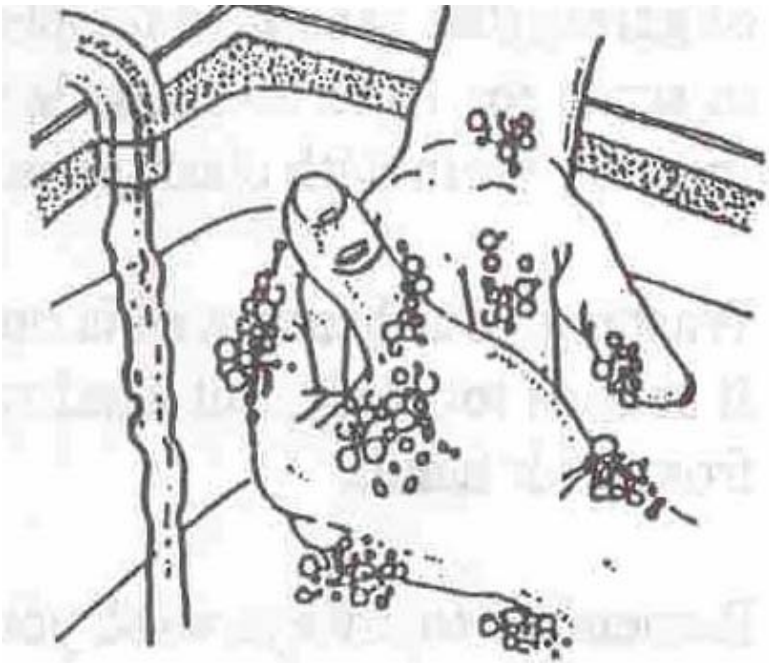
PERSONAL HYGIENE

It's in your hands



Always wash your hands before handling food, drinks, and utensils. Hands can move germs from restrooms, garbage, raw meats, dirty dishes, and runny noses or coughs onto food. Keep fingernails trimmed short. Nail polish and false nails are not allowed for people who handle food. **Use only sinks set up for hand washing (hot and cold water, soap, paper towels).** *Do not wash hands in food preparation sinks or dishwashing sinks.*

Wash hands using soap and warm water. Scrub thoroughly, especially under fingernails, for at least 20 seconds with soap, then rinse with warm water. Use clean paper towels to dry your hands and to turn off the water faucet. If there are no paper towels, rinse faucet with water, turn it off, then dry hands on air dryer or roll towels. This helps prevent re-contamination of the hands. **Do not use your apron or dish towels to dry or wipe your hands.**



Double hand washing is required:

1) after using the restroom. Always wash hands after using the restroom facilities and wash hands again when returning to your work area (kitchen, bar, wait station).

2) if you come into contact with any bodily fluids, i.e. when you cough or sneeze into your hands, smoke or use tobacco products, and after eating or drinking. If this is in a food preparation area, use the designated hand sink. Scrub with soap, rinse with warm water, scrub with soap again, rinse hands again, then dry hands with paper towels.

Remember to always wash your hands after eating, smoking, handling raw meats, removing garbage or dirty dishes, after cleaning and using chemicals. Also wash hands after touching your face, hair, or body, and pets or animals. Always double hand wash before you start work.

Employees shall not eat, drink, or use tobacco in any area with exposed food, equipment, utensils, linens, single-service articles or any other items needing protection from contamination. However, employees may drink from a closed container (with a lid and straw) in these areas if the container is handled to prevent contamination of those items, the container itself, and the employee's hands.

When preparing food, use utensils rather than hands and arms. Use a clean spoon or fork to taste food and do not re-use utensil without washing, rinsing and sanitizing it first.

Hand sanitizers are not a substitute for hand washing. Do not use them in place of hand washing because they may not get rid of all the germs. It takes time for sanitizers to kill germs and you may have to handle food before the germs are killed. Hand sanitizers may be used immediately after washing and drying hands.

Disposable gloves are strongly recommended for handling food. You must still wash your hands before putting gloves on. Disposable gloves must be used for one task only. Change gloves after handling raw meats or any dirty items because dirty gloves can spread germs. Nitrile or plastic disposable gloves are recommended while latex gloves are not approved.

Do not work if you are sick or have any infection

If you feel sick, you should not prepare or handle food. Inform the person in charge of any symptoms you may have. Germs you might bring to work can spread to other employees or customers through the food, equipment and utensils you handle.

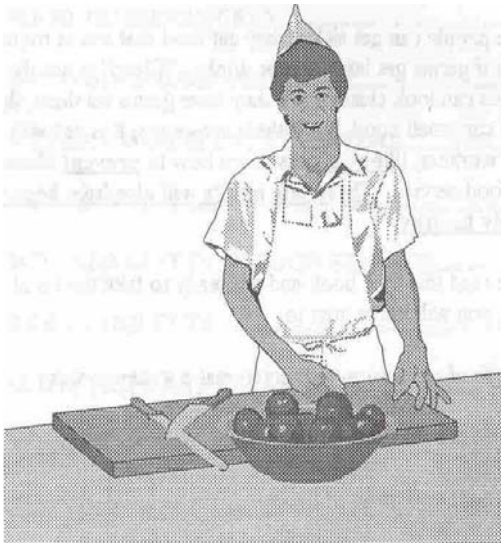
- Do not work if you have a fever and sore throat.
- Do not work if you have loose bowels (diarrhea).
- Do not work if you are throwing up (vomiting).
- Do not work if you have yellowing of the skin or dark tea colored urine (jaundice).
- Do not work if you have Hepatitis A, Salmonella Typhi, Shigella, or E coli O157:H7. These diseases must be reported to the Health Department right away (503-988-3400 or 503-988-3406).
- Do not work with foods if you have an **infected** wound (cut, burn, or sore) on your hand. If the wound is not infected, you may use a band aid *and* wear disposable gloves to cover the wound after washing your hands.
- If someone at home is sick, be sure to wash your hands thoroughly before you start work. Washing hands frequently at home will also help prevent spread of the disease.

Personal appearance

Look clean and be clean when you are at work. Your clothes must be clean, and your apron or uniform should be fresh.

It is not healthy to smoke or use tobacco in any form. If you do use tobacco, do not smoke or chew it while you are working or when you are near food preparation or dishwashing areas. Smoke only during breaks in designated smoking areas. After using tobacco, wash your hands before returning to work.

Keep hair clean and neat. For safety, keep hair under control to keep it from touching food or getting caught in equipment. Hair nets or hats may be helpful in meeting this requirement.



HOW FOOD CAN CAUSE ILLNESS

Foods handled by dirty hands or placed on soiled cutting boards or set in unclean sinks will pick up germs that can make people sick. This is known as **food borne illness**.

Food poisoning can happen when food is exposed to toxic chemicals such as rat poison, cleaning agents, or metal leaching from open cans of acidic foods. Always store food away and above chemicals. If soda machines do not have proper anti-backflow devices installed, copper or lead poisoning from connected water lines may occur. Illness symptoms can appear within a few minutes.

Some germs produce poisons as they grow which may cause food poisoning in people. The germs may be killed by re-heating, but the poison remains. Botulism and Staphylococcus are two examples where reheating does not make the food safe.

Foods such as cold sandwiches and salads are known as **ready-to-eat** foods. These kinds of foods, once contaminated with germs, will not have a cooking step to kill the germs. It is very important to have clean hands and use clean equipment when preparing these foods. Meats, eggs, pasta, rice and vegetables that have been previously cooked are other examples of ready-to-eat foods.

Employees preparing ready-to-eat foods should have the highest level of good personal hygiene. Hand washing and good health are very important here.

Germs can grow in foods like meat, fish, poultry, milk, *eggs*, refried beans, cooked rice, gravies, soups, and baked potatoes.

These are examples of **potentially hazardous foods**.

If left out at room temperature, these foods will help germs grow into large enough numbers to cause people to get sick.

This temperature range is known as the **"Danger Zone"** (between **41°F to 140°F**).

Foods should be kept out of the danger zone whenever possible and thrown out if left in the danger zone more than 4 hours.

Germs involved with food related illnesses

Bacteria or poisons produced by bacteria are often the cause of food borne illness. Some examples follow.

- **Salmonella**

  Often found in raw eggs and poultry.
  Symptoms of salmonella illness include stomach pain, diarrhea, chills, nausea, vomiting, and a fever of 101-104°F. Illness usually occurs within 6-72 hours (average 12-36 hours) after eating contaminated food. Illness usually lasts from 2-7 days.

  Prevention:
  - Cook all eggs to 145°F or above.
  - Cook poultry thoroughly to 165°F or above.
  - Sanitize all food contact surfaces touched by raw poultry.
  - Wash hands after handling raw meat or eggs.
  - Use only pasteurized egg products in recipes calling for raw or undercooked eggs.

- **Staphylococcus**

  Carried on the hands, face, and in the noses of most healthy people, the bacteria itself is not harmful. It is the poison the bacteria produces when allowed to grow in food, that causes illness in people. The poison is very powerful and cannot be destroyed by cooking or freezing.

Symptoms of staphylococcus illness include nausea, explosive vomiting (usually 2-4 hours after eating contaminated food), followed by diarrhea, sometimes sweating and cold clammy skin, weakness, dehydration, but usually no fever.

Prevention:

- Keep hot foods hot (140°F or above) and cold foods cold (41°F or below).
- Discard foods left out over 4 hours at room temperature or in the **danger zone**.

- **E. coli**

These germs are found on the surfaces of beef, sometimes fish and un-pasteurized fruit and vegetable juices. Cooking the outside of meat items like steak will kill the bacteria. They become more of a problem in ground meats such as hamburger because the bacteria on the surface has now been mixed inside where it requires thorough cooking to kill the germ.

Symptoms

Severe cramping and diarrhea. The diarrhea usually becomes bloody. Prolonged illness can lead to kidney failure and death especially in the very young and the elderly.

Prevention

- Cook ground meat or fish cakes to an internal temperature of 155°F or above.
- Use pasteurized fruit and vegetable juices.

Viruses are another kind of germ that causes food borne illness. A couple examples follow.

- **Hepatitis A**
  A viral infection of the liver, it is spread by lack of good hand washing after hands have been contaminated by feces. A person may spread hepatitis up to 2 weeks before they show signs of the disease and continue to spread hepatitis up to 2 weeks after they become sick. Some cases are so mild, the person may not even know they have had the disease.

  Symptoms
  Hepatitis A begins to appear 2-6 weeks after exposure to the virus. Common symptoms include fever, chills, loss of appetite, nausea, vomiting, fatigue, pain in the upper right abdomen (liver area), dark urine, light colored stools, and jaundice (yellowing of the skin and whites of the eyes). A blood test can detect Hepatitis A even if there are no symptoms.

  Prevention
  - Practice good hand washing especially after using the toilet, diapering children, cleaning toilets, and before preparing food.
  - People with Hepatitis A are not allowed to handle or prepare food for other people. There is a Hepatitis A vaccine available.

- **Noro-viruses**
  These germs cause nausea, vomiting, and diarrhea with people generally becoming sick about 24 to 60 hours after eating contaminated food. Transmission is usually through ready-to-eat foods handled or prepared by an ill person.

  Prevention
  - Thorough and frequent hand washing.
  - Restrict ill employees from working.

Parasites are tiny worms that live in fish and meat. They die if they are cooked or frozen long enough. Trichinosis in pork is an example of a parasite that can cause severe illness.

Prevention
- Cook fish and pork to 145°F.
- If fish is eaten raw or undercooked, it must be frozen at -4°F or below for 7 days (or -31°F or below for 15 hours in a blast freezer), except for some species of tuna.

Many other germs can cause food-related illness.

Prevention
- Good hand washing practices
- Keep foods stored at temperatures preventing growth of germs.
- Cook foods correctly,
- Protect food from contamination.

FOOD TEMPERATURES

Keep potentially hazardous foods safe by storing them at temperatures that stop germs from growing.

- Store **hot** foods at **140°F** or above. This will stop germs from growing and will eventually kill them.

- Store **cold** foods at **41°F** or below. This will not kill germs but will slow their growth to keep the food safe. Label food with the date and use within one week. Discard food not used in 7 days. Date marking is required for all potentially hazardous foods kept over 24 hours.

- **Reheat** foods quickly (within 2 hours) and thoroughly to **165°F** or above to kill any germs that may have grown while refrigerated or while cooling. Thick foods require good stirring to evenly heat all parts to the required temperature.

- Freeze foods. Keep **frozen** foods at **0°F** or below. This will stop germs like bacteria and viruses from growing and will eventually kill parasites (worms in fish and meat). Frozen foods may be kept indefinitely but the quality will go down over time.

Thermometers

Use a **metal stem thermometer** to check food temperatures. Glass ones may shatter and contaminate the food. A metal stem thermometer with a temperature range of **0°F to 220°F** is ideal for the temperatures you will need to check.

Remove the plastic casing around the metal stem of the thermometer. Clean off and sanitize the metal stem before and after each use to prevent cross-contaminating food. Bumps and jarring motions may affect the accuracy of metal stem thermometers. Calibration of the thermometer should be done at least once every two weeks or whenever it has been dropped.

You can ensure the thermometer is accurate by calibrating it in a glass of ice water. The ice will drop the temperature of the water down to 32°F while the water will keep the ice from dropping the temperature below 32°F. Place the metal stem in the ice water and wait a few minutes. The thermometer should show a temperature near 32°F. If not, use a wrench to adjust the hexagonal nut under the dial face of the thermometer (some models come with plastic holders that can be used to adjust the nut). Turn the nut until the thermometer pointer is near 32°F when the metal stem is left in the ice water.

Digital thermometers are also available but may not be easy to adjust.

Use the metal stem thermometer to check foods stored in refrigerators, in steam tables, at salad bars, and when cooling or reheating foods. Cooking temperatures can also be measured or checked with the metal stem thermometer. Always measure temperatures in different parts of the food. Check for variations in cooking, cooling, or reheating.

FOOD PREPARATION

Use Wholesome Food

All food in your store or restaurant should be healthy and safe right from the start. This section is about where food should come from, how to check it, how to store it, and how to handle it.

Food Sources

Use only food that comes from approved sources. These are operations licensed and inspected by the Health Department or the Department of Agriculture. Look for "USDA" on meats. Check for certification tags on shellfish and keep tags for 90 days. Use pasteurized milk and pasteurized eggs for foods that are not fully cooked.

Do not use food that has been prepared in someone's unlicensed home kitchen.

Foods delivered to your facility should be inspected as it comes in by someone with the authority to accept or reject the food. Look for unsafe or adulterated foods. Moldy food, smelly meat, damaged or swollen cans are not safe to use. If in doubt, return the food to the supplier or throw it out. Check perishable foods to see if proper temperatures have been maintained.

Physical contamination can occur when foreign objects such as dirt, pebbles, or insects get in the food. Check foods carefully and wash or discard food as needed.

Food Storage

- Store foods off the floor.

- Rotate stock by storing foods so older items are used first – "first in, first out" is a good rule to follow.

- Cover, label and date dry foods. Use utensils with bulk foods. Store scoops and tongs with handles extending out of the food.

- Store foods, utensils, and single service items away from cleaners, poisons, and pesticides. Properly label all chemicals, cleansers and pesticides.

- Be careful storing food in galvanized cans or other containers with metal coatings. Acidic foods can absorb the metal coating causing people who eat the food to become ill.

- Plastic containers must be food-grade quality and approved for food use. Do not re-use detergent or chemical containers for food.

- Store food in clean safe containers with labels and dates. After opening cans of acidic foods, transfer them to plastic, glass, or stainless steel containers.

- Cover all foods unless they are in the cooling process.

- Refrigerated ready-to-eat food must be kept at 41°F or below and discarded if not used within 7 days.

- **Date-mark** ready-to-eat foods and potentially hazardous foods kept more than 24 hours. Commercially packaged foods do not need date-marking until they are opened.

Keep Foods Safe From Cross Contamination

Cross contamination happens when germs from raw or unwashed foods get onto foods that are ready to be served or that will not be cooked again before being eaten. To prevent cross contamination:

- Always store raw meats below other foods, with the meats requiring the highest cooking temperature on the lowest shelves.

- Never store ready-to-eat foods in containers that have held raw meat.

- Store unwashed foods below clean cooked foods or ready-to-eat foods.

- Wash your hands immediately after handling raw meat or unwashed foods. This avoids contaminating other foods or equipment like refrigerator door handles or ovens.

- Use a **separate** cutting board to prepare raw meats. Wash, rinse, and sanitize cutting boards and utensils (knives, etc.) **immediately** after you are done preparing raw meat. Use cutting boards with hard surfaces and replace them when worn, as the surface becomes hard to clean and sanitize.

- Always wash and sanitize the food preparation sink before each use. Be sure to use a sink with an air gap in the drain line (floor sink) to prevent sewage from backing up into the sink and contaminating food.

- Serving utensils must be kept in the food with the handle sticking out of the food. Utensils may also be kept in an ice water bath, cold running water bath, or water that is maintained at 140°F or above.

- Use ice scoops with handles or use tongs to place ice in cups. Keep handle out of the ice. Do not use a cup or glass to scoop ice as the sides may become dirty from handling or the glass may shatter or chip into the ice.

- Do not use absorbent shelf liners such as paper towels, napkins, newspaper, and cardboard.

- Food wrap cannot be absorbent. Use plastic wrap, wax paper or aluminum foil. Do not use paper towels.

- If foods become contaminated, it is best to discard the food. Example: If raw meat juice dripped onto lettuce for salads, do not try to wiped or wash away the meat juice. Just throw away the lettuce.

Food Additives

Chemicals you add to food as you prepare it are called **food additives**. Some additives are used to freshen or whiten food. Additives containing **sulfites** are **not allowed** to be used in retail stores or restaurants. Some people are very allergic to sulfites.

Food allergies may cause severe illness or death. Employees should be prepared and concerned about responding to customer questions on food additives or ingredients contained in menu items. Report all illness complaints to management and the Health Department.

Thawing Frozen Foods

Never cook large roasts, turkeys, or stuffed turkeys while they are still frozen. Their large size makes them hard to cook. The outside may be cooked while the inside may still be frozen. Always thaw frozen food completely before cooking.

There are three approved methods to thaw frozen foods, so you must plan ahead to allow enough time to do it right.

1. Thaw food in the refrigerator; it may take a few hours or up to a few days. This is the best and safest way. Be sure to put meat in a container to catch meat juices and keep them from dripping. Put raw meats on the bottom shelf away from and below ready-to-eat foods.

2. Put food under cold running water. **Do not** use warm or hot water.

3. Defrost in a microwave oven. You must then cook and serve it right away.

Never thaw food at room temperature or in warm water. These methods will allow germs to grow rapidly.

Preparing Cold Foods

Making large batches of cold foods like potato salad, pasta salads, egg salad, and tuna salad or spread should be done using ingredients that are already cold. Refrigerate items before opening for use.

Foods stored in ice for service or display must meet several requirements:

- Foods for self-service must be protected by a lid or sneeze shield.

- Foods must be stored in ice up to the product level in the container. Do not fill the container with food above the lip of the container, food will not stay cold above the ice level.

Cooking Temperatures

The following table lists **minimum** cooking temperatures that must be reached throughout the food to kill germs.

- Poultry (chicken, turkey, etc.), stuffed meats, stuffing containing meat or meat juices: **165°F** (74°C)
- Ground beef (hamburger), ground fish (fish cakes): **155°F** (68°C)
- Pork and pork products: **145°F** (63°C)
- Eggs, fish, other foods: **145°F** (63°C)
- Rare roast beef: **130°F** (54°C), the roast must be held at this internal temperature for 121 minutes (over 2 hours).

Use the metal stem thermometer to check the thickest part of the meat and in the center to get a good reading on the cooking process. (Do not touch a bone with the stem of the thermometer as bones may heat differently than the meat).

Stuffing is hard to heat properly when placed inside meat. It is recommended to cook stuffing separately during the preparation process.

Cooking ground beef is different than cooking rare beef. Beef (steaks, roasts) may have germs on the surface, which are relatively easy to kill during cooking. Ground meats (hamburger, meatloaf, taco meat, etc.) may have the germs

mixed into the insides of the product. The minimum cooking temperature of 155°F must be reached all the way through the food.

Microwave ovens often do not cook evenly. You must stir and turn the food while cooking, then check with the metal stem thermometer to make sure the same temperature is reached in every part of the food. Do not keep the thermometer in the food while it is cooking in the microwave oven.

Hot Holding

After food is cooked, it may be necessary to keep the food hot for a while. Special equipment (steam tables, soup warmers, heated pads, and crock pots) is available for hot holding. Turn on hot holding equipment ahead of time so they will be ready to keep hot foods at **140°F** or above at all times. Before placing food in the hot holding unit, check if the unit has warmed up and is working properly. Monitor the food regularly with a metal stem thermometer to be sure temperature stays at or above 140°F. Stir liquid foods (like soups and gravies) to eliminate cold spots from developing.

Reheating

Always reheat foods thoroughly to at least **165°F**. Re-heating food must take **less than 2 hours** to get foods from 41°F to 140°F (through the temperature danger zone).

Use stove burners, convection ovens, microwave ovens, or double boilers. Hot holding units such as steam tables and soup warmers are generally not designed to heat foods up, only

to keep them hot. Stir food to be sure all parts have been properly heated.

Cooling

Cooling foods down through the temperature danger zone is a risky process. Improper cooling is a major cause of food borne illness.

The best way to have safe food is to make it fresh each day. Avoid making food too far ahead of time. Avoid making too much so that there are leftovers to put away.

If you have hot foods that must be saved for later use, proper cooling is required. **Foods must be cooled from 140°F down to 70°F within two hours and from 70°F down to 41°F within four hours.** Use a metal stem thermometer to check the temperature during the entire process. The following steps have been designed to meet the cooling requirements once food drops below 140°F:

- Cut large roasts and turkeys into pieces no larger than 4 pounds and store in the refrigerator immediately. Wait until food has cooled down to 41°F before covering it. (Remember to use metal stem thermometer to check the temperature).

- For soft thick foods (refried beans, chowder, stews, chili, mashed potatoes, sauces, etc.), spread into shallow pans not over 2 inch deep. Store uncovered in a refrigerator designed to cool down hot foods quickly.

- Some refrigerators lack strong fans to blow cold air around food to cool them down. They are designed to keep foods cold – not to cool foods down. Examples are glass-door refrigerators and cold display cases. Do not use these units for cooling warm foods. Walk-in coolers are best for cooling foods down to 41°F.

- Do not stack pans together. Cold air must circulate all around each pan for proper cooling.

- Do not cover foods that are cooling until they have dropped to 41°F. Once foods have reached 41°F, they may be transferred to deeper containers or stacked with covers.

- Thin soups and thin sauces may be cooled in shallow pans not over 4 inches deep in a refrigerator designed to cool foods.

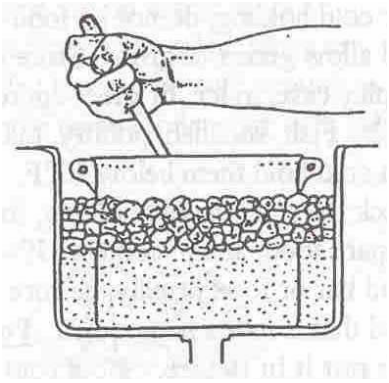
Cooling Foods Using An Ice Water Bath

Liquid foods may also be cooled using an ice water bath. The ice provides the cooling force while liquid water can draw heat out of food better than air. You need both for this process to work.

The following steps describe the process:

1. Use a food preparation sink or large deep container. Fill with cold water. Add ice.

2. Set container of hot food in the ice water. Be sure ice water level outside the container is at least as high as the food in the container. If not, add more cold water and ice.



3. Stir the food often to speed the cooling from the outside to the center. Frozen ice paddles or cooling wands will help cool the food from the center as well. (Entire process must be done within 6 hours).

4. Add more ice as necessary as the old ice melts. Keep stirring frequently.

5. Do not remove food from ice bath until it has cooled down to 41°F. Use the metal stem thermometer to check.

6. Once food has cooled to 41°F, cover and store in refrigerator or freezer.

Cold Holding

Refrigerators must have thermometers to measure the air temperature in the unit. Thermometers must be located where they are easily visible. If the refrigerator does not have a built-in thermometer, you will need to put a thermometer inside where the food is stored. If the built-in thermometer is not working, you must place a thermometer inside.

Purchase thermometers with red or blue liquid stems. These are accurate and easy to see if they still work. Spring type thermometers may become corroded and give inaccurate readings. There is no way to tell by looking if spring type thermometers become inaccurate.

Please note refrigerator thermometers are used to measure the **air** temperature in the refrigerator. Always use the metal stem thermometer to check **food** temperatures.

Is the food safe?

You cannot tell if food is safe to eat by the way it looks, smells, or tastes. Germs and toxins cannot be seen and often do not create odors. Tasting food to see if it is safe is dangerous.

What about food left at the table?

When customers leave food on a plate or at the table, you must throw it away. **Unopened** packages of crackers, jelly, candy or condiments may be saved and served again.

All unused tableware left at a table where a customer has eaten must be removed, washed and sanitized after the meal, unless the tableware is wrapped (utensils), covered or inverted (cups or glasses).

When Equipment Breaks Down or Power Goes Off

If any of the following happens: the electric power goes off, the water supply is damaged or shut off, there is no hot water, the sewer or waste system backs up in the drains, then:

- Close the business operations immediately.
- Call the Health Department for advice.
- Check the Health Department website at www.mchealthinspect.org for information.

If something goes wrong with the equipment (stove, refrigerators, freezers, steam tables, salad bar or display coolers, etc.), the person in charge should have a plan to keep foods at safe temperatures. Plans should be developed before anything happens. The Health Department is available to advise and assist.

A CLEAN WORKPLACE IS SAFER

Washing and Sanitizing

Dishes and utensils need to be ***sanitized***. Sanitizing kills germs that may cause an illness. The dishes and utensils must be carefully washed before they can be sanitized.

Cleaned, sanitized utensils and dishes need to be handled with clean hands. If you are a dishwasher this means you need to wash your hands between handling dirty dishes and clean dishes.

These steps need to be followed for washing and sanitizing dishes and utensils:

WASHING BY HAND - Using a three compartment sink:

1. **Scrape** and/or pre-rinse food from the dishes and utensils.

2. **Wash** with detergent and hot 110°F. water in the first sink.

3. **Rinse** with clean, hot water to remove any soap or food in the middle sink.

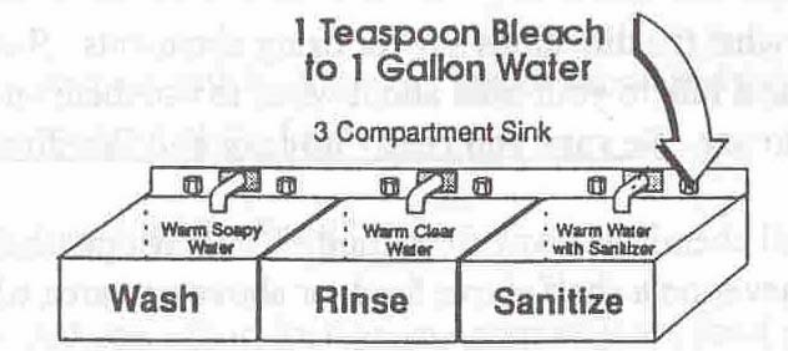
4. **Sanitize**, in the third sink, by immersing for a half minute to kill harmful bacteria.

A sanitizing solution can be made of 1 teaspoon of household bleach mixed with 1 gallon of clean warm water. This provides the required 50 parts per million (ppm) chlorine needed for sanitizing.

Too much bleach is not good. Use ***test papers*** to test the strength of the solution. If the test indicates less than 50 ppm, make a new solution. Other chemical sanitizers may be used if they are approved by the Health Department.

5. **Air dry** the dishes and utensils. Do not wipe with towels. Towels can spread germs and the sanitizing process is wasted.

When using "Quats" (Quaternary Ammonium Compounds) for sanitizing, follow the label directions carefully. Using too much can leave a residue behind that can cause illness. The maximum level in the final sanitizing rinse is 200 ppm. Use test papers to check the strength of the sanitizing solution.



Remember: Pre-rinse, wash, rinse, sanitize, air dry.

MACHINE WASHING - Using a commercial dishwasher:

1. **Scrape** and/or pre-rinse food from the dishes and utensils.

2. **Follow directions** for the dishwasher. Dishwashers sanitize by one of two ways: Hot-water rinse, or Chemical spray-rinse.

When using hot-water rinse machines:

- The temperature of the wash water must be at least 150°F (single-tank conveyor 160°F).
- The temperature of the rinse water must be 180°F-194°F. (stationary rack, single temperature machine 165°F) to get surface of utensils and dishware up to 160°F.

Chemical spray-rinse machines usually use bleach to sanitize.

- The temperature of the wash water must be at least 120°F.
- The temperature of the rinse must be at least 75°F for 50 ppm chlorine in machines using bleach.
- Use test papers to determine if the machine is working and sanitizing properly.

3. **Air dry** the dishes and utensils.

In Place Sanitizing - Equipment Cleaning

It is important to regularly wash and sanitize all equipment that touch food and that cannot be washed in a sink or dishwasher. This equipment includes meat slicers, knives, choppers, food processors, milk-shake machines and probe food thermometers. Pieces of food are left on the equipment after it is used. This equipment must be washed *and sanitize immediately after each use.*

Equipment that is used constantly must be broken down, washed and sanitized every two hours. If it is not washed and sanitized, any new food will be contaminated by the old food left on the equipment. For equipment too big to fit in the sink or dishwasher:

- **wash** with a clean cloth and warm soapy water,
- **rinse** with clear water then,
- **sanitize**, with a solution of 1 teaspoon bleach to 1 gallon of water.

Always wash, rinse, and sanitize any food preparation surface or equipment between using it for raw food and cooked food or between different foods.

Sinks

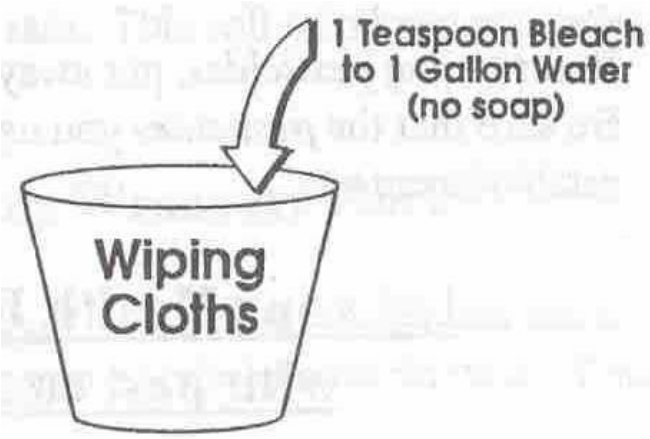
Wash, rinse and sanitize sinks before using them to prepare food or for dish washing.

Never wash your hands in food preparation or dish washing sinks. Never put mops or other cleaning equipment in food preparation or dish washing sinks.

Wiping Cloths

Wiping cloths must be kept in a clean sanitizing solution. If bleach is used, the solution should be 1 teaspoon of bleach per gallon of clean water. Do not add soap to the water. Use these cloths to wipe all kitchen and dining surfaces like cutting boards, prep counters, tables, and work tables.

- If using bleach, add 1 teaspoon bleach to 1 gallon warm water.
- When using 'Quats' or Iodine as a sanitizer follow the directions on the label.
- Use test papers to double check the strength of the solution.
- Make a separate solution for wiping cloths used in preparing raw meat.



Pests

Cockroaches, flies, mice and rats can carry germs that cause disease. These pests can get into your building. Don't let them in and don't let them eat.

Some of the ways to keep pest out are to clean the entire place often on a regular schedule. Keep doors and windows closed or screened. Cover small holes where mice and rats can get in. Cover garbage with lids that fit well and remove garbage often. Keep the areas around garbage containers clear of trash and litter.

If pests become a problem, a licensed pest control service may be needed to help solve it. Be very careful with pesticides, if they must be used. Pesticides are poisons that kill rodents and insects, but they can also poison humans. Read the directions on the can or the box, or have your boss read them to all of the staff. Be sure you understand how to use pesticides properly.

Before using pesticides, put away all food and cover work surfaces. Be sure the pesticides you use are approved for use in food establishments.

Your Health Department can help you with pest control questions.

First Aid for Choking

1. Ask, "Are you Choking?"

2. Shout, "Help!"

Call for help if victim --

- Cannot cough, speak, or breathe.
- Is coughing weakly.
- Is making high-pitched noises.

3. Phone EMS for help.

- Send someone to call an ambulance.

4. Do Abdominal thrusts.

- Wrap your arms around victim's waist.
- Make a fist.
- Place thumb side of fist on middle of victim's abdomen just above navel and well below lower tip of breastbone.
- grasp fist with your other hand.

- Press fist into abdomen with a quick upward thrust.

Repeat abdominal thrusts until object is coughed up, or victim starts to breathe or cough.

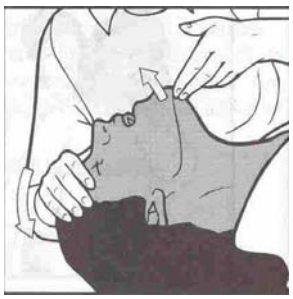
If victim becomes unconscious, lower victim to floor.

5. Do a finger sweep.

- Grasp tongue and lower jaw and lift jaw.
- Slide finger down inside of cheek to base of tongue.
- Sweep object out.

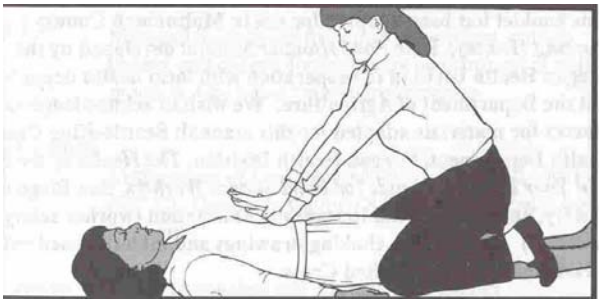
6. Open airway.

- Tilt head back and lift chin.



7. Give 2 full breaths.

- Keep head tilted back.
- Pinch nose shut.
- Seal your lips tight around victim's mouth.
- Give 2 full breaths for 1 to 1½ seconds each.



8. Give 6 to 10 abdominal thrusts.

- Place heel of one hand against middle of victim's abdomen.
- Place other hand on top of first hand.
- Press into abdomen with quick upward thrusts.

Repeat steps 5, 6, 7, and 8, until airway is cleared, or ambulance arrives.

Glossary

Abrasion - An injury where the skin has been scraped or rubbed away.

Bodily Fluids – blood, saliva, urine, vomit, droplets from sneezing and coughing, diarrhea and other feces.

Calibration – Adjusting the thermometer so it shows the right temperature.

Cold holding - to keep cold food at 41°F. or less to prevent food poisoning.

Communicable disease - An illness that is easily passed to other people. Some communicable diseases of concern to food service workers are Shigella, Hepatitis A, Salmonella Typhi, E. coli O157:H7 and any illness with vomiting and/or diarrhea.

Contaminate - Make food unsafe to use because of contact with germs or chemicals.

Feces - Solid body waste, a bowel movement; commonly referred to as poop, crap, BM, etc.

Hot holding - Equipment such as steam tables, soup warmers, bain maries, crock pots, etc. that are meant to hold properly cooked and reheated food at 140°F or higher. They may not be designed for reheating foods.

Germs - Bacteria and viruses that may cause an illness.

Nausea - A sick feeling in the stomach.

Potentially hazardous foods - These foods allow the fast growth of germs that may cause food poisoning. The foods need to be kept cold (41°F or less) or hot (140°F or more). Examples of potentially hazardous foods are eggs, meats, poultry, fish, shellfish, and dairy products. Other foods (such as refried beans, cooked rice, baked potatoes and reconstituted milk) become potentially hazardous once water has been added and/or they have been cooked.

Parts per million or ppm - a measure of the strength of a solution.

Probe thermometer - Also known as a chef's thermometer, bayonet thermometer, or metal stem thermometer. It should read from 0°F to 220°F.

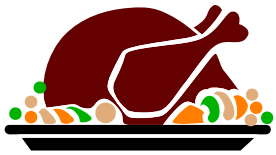
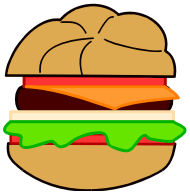
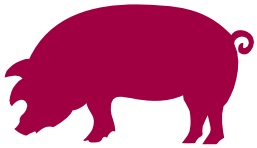
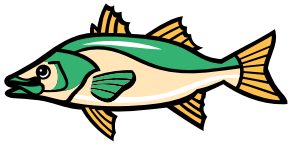
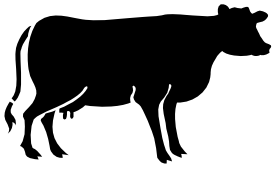
Ready-to-Eat foods - are foods expected to be eaten without further washing, cooking or preparation. Potato salad, tuna fish salad, egg salad, lunchmeats, and sandwiches are examples of ready-to-eat foods. Ready-to-eat foods can also be potentially hazardous foods that have already been cooked.

Saliva - A clear liquid given off into the mouth by glands, commonly referred to as spit.

Sanitizing - Killing germs on surfaces by using high temperature or chemicals such as bleach.

Test papers - Strips of paper that can measure the strength of a sanitizing solution.

Minimum Cooking Temperatures

	**Poultry**	**165°F**
	**Hamburger**	**155°F**
	**Pork**	**145°F**
	**Fish**	**145°F**
	**All other foods**	**145°F**