

EMPLOYEE FOOD HAZARD CONTROL IN RETAIL FOOD OPERATIONS POLICIES, PROCEDURES, AND STANDARDS MANUAL

(Never forget: The cook / food handler assures the safety of the food served to the consumer.)

PREPARING FOR WORK

PROBLEM: Customers expect sanitary food handlers.

CONTROLS:

1. If you know you have diarrhea or a communicable illness, call your supervisor. Do not come to work or, if you do come to work, do not handle food that you could contaminate. (This is desirable, but is not a critical control, because employees can shed illness-producing bacteria without having symptoms.)
2. Take a bath. Brush your teeth.*
3. Wear non-slip, closed-toe, leather-top shoes to protect your feet.*
4. Always put on a clean uniform and then, never touch your uniform or apron with your hands. Replace dirty clothing. Stay spotless.*
5. Keep hair and dandruff out of food. Restrain or cover hair.
6. Smoke, eat, and drink only away from the food prep and service area. Do not chew gum.
7. Wear only a minimum of make-up or perfume. Nails are short (1/16 inch), unpolished, not fake. Hands are free of foreign perfume odors.*
8. Only jewelry worn is a wedding band. Do not carry hard objects in outside pockets.

WASHING FINGERTIPS WHEN ENTERING THE KITCHEN

PROBLEM/HAZARD: One out of 50 people passes billions of illness-producing microorganisms (pathogens) in his/her feces even when he/she feels well. Toilet paper does not prevent dangerous levels of pathogens from feces or urine from getting onto fingertips.

CONTROLS:

1. Do not rely on plastic gloves for safety. Bacteria multiply to very high numbers on the moisture that accumulates inside gloved hands. Pathogens from unwashed hands in gloves can leak through pinholes or small tears. Many times glove surfaces are allowed to get dirtier than hands. Fingertips contaminate gloves when they are put on. If you must wear gloves, change them frequently and wash your hands before putting them on and after taking them off.
2. Clean and disinfect all cuts and sores. When you work, wear a good-quality, plastic (not latex) glove to cover any bandages and to keep the bandages from coming loose in the food.

3. Always cough and sneeze into your shoulder, not your hand. Do not keep tissues / handkerchiefs in your pockets. If you must use a tissue, use it at the hand sink and wash your hands afterwards.
4. As you enter the kitchen, use the double hand wash method with fingernail brush to reduce fecal, urine, and vomit pathogens on fingertips and under the fingernails to a safe level by using the double hand wash method with a fingernail brush. Use only the specified hand sink.
 - a. Turn on the water, using the hand that did not touch the toilet paper. Wet hands and fingernail brush with warm water (75 to 110°F).
 - b. Place a generous amount of plain, unmedicated soap [1/2 teaspoon (2 to 3 ml) or more] on the fingernail brush.
 - c. Put the brush and your fingers under the running water. With the tips of the bristles, build a good lather, first on the fingertips of the hand that used the toilet paper and under the fingernails; and then, the other hand, fingertips, and fingernails. The brushing moves the microorganisms into the lather, and the water washes them off.
 - d. Continue to gently brush your fingertips until all soap is gone, about 10 to 15 seconds. Use a lot of water to remove the soap, and hence, the microorganisms, from the hands. Put the fingernail brush down, bristles up.
 - e. Soap the hands again. Use enough soap to build a good lather.
 - f. Rub the hands to produce a good lather, especially in between the fingers. Lather up to the sleeves.
 - g. Rinse the transient microorganisms off of the hands and arms, if they are exposed, with a lot of warm water. Make sure that all of the soap is removed. The microorganisms come off with the soap.
 - h. Paper towel dry carefully. This removes more microorganisms.
5. When handling raw food and when touching contaminated surfaces while working in the kitchen, use the single hand wash method [without the fingernail brush (steps 4e, 4f, 4g, 4h)] to keep hands safe. If you are not getting your arms into food, you only need to wash hands, approximately 10 seconds.

** Quality requirement only*

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The double wash is not necessary in these situations because there are not the high level of pathogens from human feces. Too-frequent use of some stiff fingernail brushes will cause fingertips to become sore and bleed.

- At home, make sure that everyone, including you, washes his or her hands before leaving the bathroom, using a fingernail brush on fingertips after using the toilet, changing diapers, cleaning up after pets, or helping a sick person.

RECEIVING FOOD

PROBLEM/HAZARD: All raw food must be assumed to be contaminated with pathogens, chemicals, and hard foreign objects, and capable of causing illness, injury, or death if not properly handled. Defective canned food can cause death.

CONTROLS:

- Incoming food should be below 41°F (refrigerated) or below 10°F (frozen). Store refrigerated food at less than 41°F and frozen food at 0°F immediately upon receipt (within 10 minutes) before refrigerated food warms to 45°F, and frozen food to 10°F. Cover, label on the side of the container, date, and place raw refrigerated food on bottom shelves in the refrigerator, below cooked food.
- Keep all food and supplies at least 6 inches above the floor, so that the floor can be easily cleaned.*
- Clean refrigerators weekly and keep door gaskets clean and intact, to conserve refrigeration.*
- Return all defective cans, including swollen or puffed cans of food, to the supplier. Do not open. You or others could be killed by *Clostridium botulinum* toxin in the can.
- Be very careful that metal staples and other particulate hazards do not get into food when boxes are opened. Check for rodent / pest infestation.
- Some disease-causing bacteria begin to multiply in food at 29.3°F. To control pathogen multiplication hazards, use cold food according to the following time-temperature rules, based on the FDA code, which allows enough time for 10 multiplications of pathogens.

Temperature	Maximum Time
35°F	19.3 days
41°F	6.5 days
45°F	4.0 days
50°F	2.4 days
55°F	1.7 days

If you want to keep food for a longer period of time, you must use an approved hazard-controlled recipe procedure.

- Store chemicals in a separate area, away from food. Be sure that you have a Material Safety Data Sheet for each chemical.

- Refrigerators must operate at or below 40°F, freezers at or below 0°F, and dry store rooms at or below 70°F and 65% relative humidity.

PRE-PREPARATION

PROBLEM/HAZARD: Up to 100% of USDA- and FDA-inspected raw food (fruits, vegetables, meat, poultry, fish) is sufficiently contaminated to make you or someone else violently ill if you touch your hands to your mouth after handling raw food. Raw food can cross-contaminate cooked-pasteurized food, and fruits and vegetables that have been washed to make them safe.

CONTROLS:

- Always use a lot of fresh, hot sudsy water and a scrub brush to clean cutting boards and knives, or any other surface that is contaminated with raw food. With a scrub brush, pre-rinse dirty cutting boards and utensils to remove loose food and a substantial portion of the bacteria. Bacteria will grow in the wash water. The surface must be washed with clean water and detergent, and rinsed prior to being sanitized. Otherwise, the sanitizer is made ineffective by the dirt and detergent.
- Keep 50-ppm bleach sanitizer solution in a squirt bottle, not in a bucket. In the bucket, the dirt from the dish cloth and hands neutralizes the sanitizer. Make fresh each day, 1 teaspoon bleach per gallon of water. Check the concentration with chlorine test strips. Apply to the washed and rinsed food contact surface, and spread with a single-use paper towel, which is then thrown away.
- Always use a fresh, clean, sanitized knife and wooden or plastic cutting board for each new food task, when changing between raw and pasteurized / processed food. Clean and sanitize equipment and work surfaces "as you go." Never prepare food directly on a table top because it is difficult to wash, rinse, and sanitize correctly.
- Do not cut washed fruits and vegetables or cooked-processed food on a cutting board that has just been used for raw food.
- It is desirable to thaw food in the refrigerator at less than 41°F. However, the USDA allows food to be thawed at room temperature.
- Clean and sanitize slicing, grinding, and sawing machines before they are used for pasteurized food.
- Do not wash raw meat, fish, or poultry. It spreads too many illness-causing microorganisms around the kitchen.
- Take only small amounts of food out of the refrigerator at one time to work on in order to keep food temperatures below 50°F before being returned to the refrigerator or cooked. Use FIFO (first in, first out) when selecting ingredients. Keep hard and foreign objects out of food (bones, peppercorns, twist ties, rocks in dry beans, etc.). Reject any ingredients that are off-color, have strange odors, appear to have

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- bubbles when they should not, show evidence of insects or rodents, or appear to be below standard.
- 9. Do not mix fresh food with old food.

WASHING FRUITS AND VEGETABLES

PROBLEM/HAZARD: Raw fruits and vegetables can carry dangerous levels of human and animal feces, and chemicals.

CONTROLS:

1. Use 2 clean, sanitized sinks or 2 clean, sanitized food tubs in the sink for washing.
2. Wash all fruits and vegetables in cold water in the first sink using a vegetable brush if appropriate. Agitate 1 minute. Then, wash / rinse them in the second sink, using a colander and flowing water to flush the fruits and vegetables.
3. In order to control rot, remove all excess water and air dry the fruits and vegetables in thin layers in the refrigerator, or use within 2 hours.*

COOKING-PASTEURIZING

PROBLEM/HAZARD: The illness-producing infective microorganisms on raw meat, poultry, and fish must be inactivated (killed).

CONTROLS:

1. Do not use bimetallic coil, dial stem thermometers, because they do not indicate cold spots in most food. Use a thin-tipped digital thermistor or thermocouple thermometer to check pasteurization.

FOOD PASTEURIZATION TABLE

Temp (°F)	Ground Meat, and Fish		Roast Beef		Shell Eggs, Other Raw meat and Fish, (not ground)	All Poultry
	5 D Kill (100,000:1 Calculated)	FDA Code	6.5 D Kill (3,160,000:1 Calculated)	FDA Code		
130			112 min.	112 min.		
140	8.6 min.		11.2 min.	12 min		
145		3 min		4 min	15 sec.	
150	51.6 sec.	1 min	67 sec.	67 sec		
155	16 sec.	15 sec.				
160	5.2 sec.	<1 sec.	6.7 sec.	0		
165						15 sec.

2. Use your thermometer to make sure that adequate pasteurization temperatures are reached. To reduce the population of *Salmonella* spp., heat food so that the coldest spot is hotter than shown in the previous table.

COLD FOOD PREPARATION

PROBLEM/HAZARD: Illness-producing bacteria can multiply in cold food, unless the food temperature is below 29.3°F.

CONTROLS:

1. Salad dressings are assumed to be made with contaminated, raw eggs and spices. Therefore, they

must be prepared with enough vinegar or lemon juice to get a final pH of less than 4.1 to control and destroy the pathogens. If a recipe is prepared with raw, contaminated ingredients such as eggs, the final pH must be below 4.1. Hold the product for 2 days at room temperature to ensure destruction of vegetative pathogens such as *Salmonella*, spp.

2. To prevent growth and toxin production of *Staphylococcus aureus*, always prepare salads with ingredients that have been precooled to less than 50°F and kept below 50°F, because *S. aureus* will not produce toxin below 50°F.
3. Even though properly washed hands are safe, try to use utensils or gloves to mix cold food or salads. Wash your hands thoroughly.
4. Never mix fresh food into a container with old food. Use up the old and then, always start with a fresh container.
5. When stored, keep cold prepared food dated, covered, and below 41°F.

HOT HOLDING

PROBLEM/HAZARD: Spores of microorganisms (100 to 1,000 per gram of food, which do not make people ill in the spore form) will survive pasteurizing and must not be allowed to grow out and multiply, and become hazardous.

CONTROLS:

1. Keep food above 135°F (130°F for safety). For customer satisfaction, keep hot entrees above 150°F and soups and gravies above 165°F.
2. Prepare food progressively. Minimize leftovers, which are a major food safety problem.
3. Take temperatures once an hour, if you are unsure. Do not use a bimetallic coil thermometer. Because it only measures an average temperature from the tip to 3 inches up the stem, this device does not indicate cold spots in food. If you use a thermistor, put the 1/4-inch tip in the middle of the food and wait 20 seconds. If you use a thermocouple, starting at the surface of the food, push it through the food, taking about 3 seconds, and find the coldest spot.
4. To retain high levels of nutrients, hot food should be eaten in less than 30 minutes.
5. Keep serving utensils in the food to keep them pasteurized, or in flowing cold water.
6. Never add fresh food to old food, or old food to fresh.
7. Use utensils whenever possible, not fingers, to handle food.*

SERVING FOOD

PROBLEM/HAZARD: Aside from the pathogens, chemicals, and hard foreign object hazards, other problems such as burn injuries and mild to severe allergic reactions can occur.

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