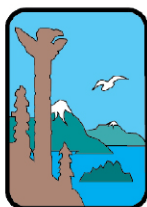


Alaska Safe Food Worker Handbook

Food
Safety Is
In Your
Hands



ALASKA
Department of
Environmental
Conservation

1-87-SAFE-FOOD (1-877-233-3663)
<http://www.dec.alaska.gov/eh/fss>

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Part 1: Food Worker Knowledge and Health

Food safety is in your hands. As a food worker, it is part of your job to handle food safely to prevent the spread of illness through food.

The consequences of an illness from food can be disastrous.

- In the U.S, about 76 million people a year get sick from food. Of those, about 5,000 people die.
- A foodborne illness outbreak can result in customer complaints, loss of customers, and even closure of business.
- Foodborne illness can seriously harm your customers.

What can you do to make sure that the food you serve is safe? **Handle it safely!** After completing this section of the training you will be able to:

- 👍 Define foodborne illness
- 👍 Decide what to do when you are sick
- 👍 Prevent the spread of germs by washing your hands properly
- 👍 Avoid bare hand contact when working with ready-to-eat food by using tongs, gloves, tissues, scoops and other tools
- 👍 Decide when to change your single-use gloves

Foodborne Illness



Have you ever been sick with a foodborne illness? If you have had diarrhea or vomiting, it is likely that you have experienced a foodborne illness.

A **foodborne illness** is any disease caused by eating or drinking contaminated food. In fact, the Centers for Disease Control estimates that about 1 in 5 of all foodborne illness outbreaks is caused by ill employees contaminating food with germs from their hands.

Germs are microorganisms too small to be seen with the naked eye and include both bacteria and viruses. One of the most important ways that you can avoid spreading germs that cause illness is to wash your hands often. By removing germs from your hands, you can prevent the spread of illness through food. One person can make a lot of people sick by spreading germs to their food!

High risk populations are groups of people who get sick more easily than others from contaminated food, or get more serious sicknesses. People in this group include babies and young children, elderly people, pregnant women, and immune compromised individuals due to illness or another factor.

Sick – What Should You Do?

You should go home or not work with food or food contact surfaces (like dishes or equipment) while you have:

- Diarrhea
- Vomiting
- Sore throat with fever
- Jaundice (yellow skin/eyes)
- Uncovered or infected wounds
- Abdominal cramping

If you have any of these *symptoms* let your SUPERVISOR know immediately!

Some examples of *illnesses* that can be spread through food include:

<p>Norovirus</p> <p>Causes severe vomiting and known as the 24 hour flu.</p>	<p><i>Salmonella Typhi</i></p> <p>Frequently from poultry and eggs. Only 15-20 cells may infect you.</p>	<p><i>Shigella</i></p> <p>Salads and veggies contaminated by feces from water or dirty hands.</p>
<p><i>E. coli 0157:H7</i></p> <p>Undercooked hamburger, raw produce – only 10 organisms can make you sick!</p>	<p>Hepatitis A</p> <p>Passed through feces on hands and can cause liver damage.</p>	<p>Let your supervisor know if you have contact with anyone who has these illnesses!</p>

If you are diagnosed by a health care professional with any of these illnesses you can NOT go to work.

Handwashing



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Your hands touch many surfaces throughout the day, and are the part of the body that is most likely to be exposed to germs. You need to wash your hands correctly to get rid of the dirt and germs that transfer from your hands to your customer's food.

When to Wash Your Hands

When you are at work, it should seem like you are ALWAYS washing your hands! Be sure to wash your hands:

- Before starting work
- When changing gloves
- After using the bathroom
- After break time, smoking, eating, or drinking
- After clearing tables or handling dirty dishes
- Before handling clean dishes
- Before and after handling raw foods
- After coughing, sneezing, blowing or touching your nose
- After touching your head, hair, mouth, wounds or sores
- After touching trash, floors, soiled linens, etc.
- After using cleaners or chemicals
- During food preparation whenever you change tasks



Eating or drinking



Smoking



Handling raw foods



Using tissue



Handling garbage



Using the restroom

CHECK your **handwashing station**.
It should have:







- hot and cold running water
- soap
- dispensed paper towels



If one is missing, let your supervisor know there is a problem.

Steps for Proper Handwashing

These steps only take 20 seconds!

	1. Wet hands and arms up to the elbow, using warm water		4. Rinse under warm water
	2. Apply hand soap		5. Towel dry with dispensed paper towels
	3. Rub hands and forearms briskly for 15 seconds		6. Turn off faucet with paper towels
7. Open the door by using a paper towel to touch the handle			

Working with Ready-to-Eat Foods

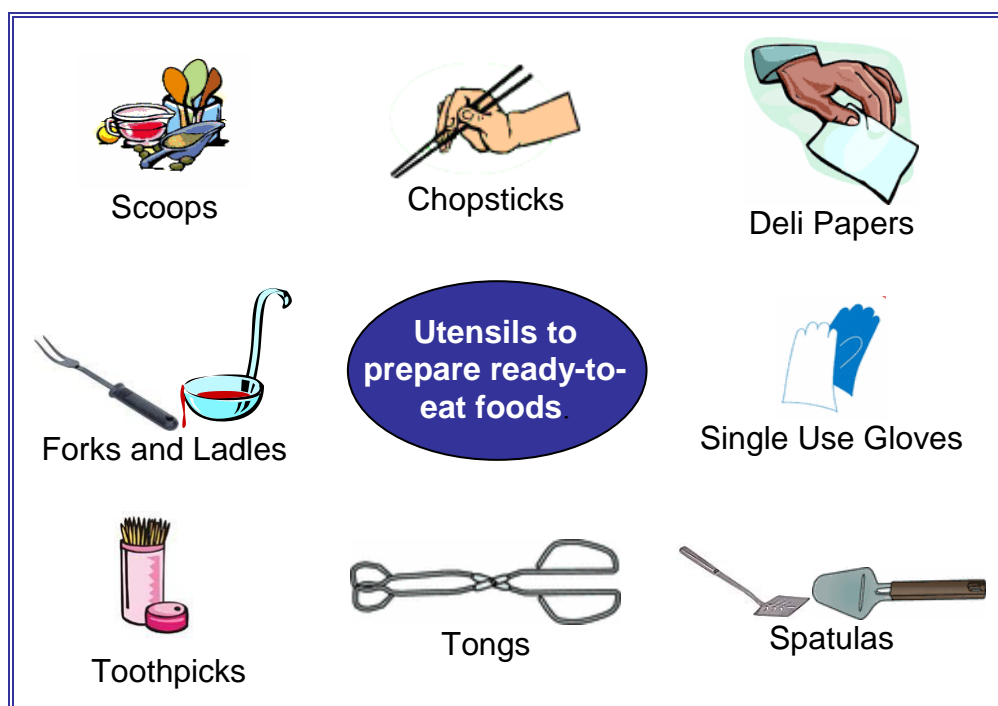
Germs can be spread from a food worker even when the food worker looks and feels healthy. To prevent spreading germs, the best thing you can do as a food worker, is wash your hands and avoid touching certain foods with your bare hands. Handwashing does not remove all of these germs from your hands, even if you do a good job. There can still be enough germs on your hands to cause illness.

In addition to proper handwashing another way to prevent spreading these illnesses is for food workers to avoid touching **ready-to-eat foods** with their bare hands. **Ready-to-eat foods** are foods that are eaten without additional cooking or washing to remove germs. You can use utensils such as scoops, tongs, or gloves to prepare and serve tacos, salads, sandwiches and other foods that are not cooked before serving. This will keep germs from your bare hands from getting on foods.

Ready-to-eat foods include:

- Any food that will NOT be cooked after final preparation, such as sushi and sandwiches
- Washed produce that is eaten raw, such as fruits and salads
- Bakery or bread items, such as toast and rolls
- Cooked foods, such as pizza and hamburgers
- Garnishes like parsley, lemon wedges, or pickles on plates
- Fruit or vegetables for mixed drinks
- Ice





Glove Use



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Sometimes it will not be practical to use other utensils, such as deli paper, spatulas or tongs, to avoid bare hand contact with **ready-to-eat foods**. In these cases, you may choose to use single use gloves to prepare and serve the foods.

Even if you are using single use gloves, you will still need to **wash your hands** before you put them on. How do you know when it is time to change your gloves and wash your hands? Pay attention to these reminders for proper glove use:

1. Wash hands before putting on gloves
2. Change gloves that get ripped
3. Change gloves that get contaminated
4. Never wash or reuse gloves
5. Change gloves between working with raw and ready-to-eat foods
6. Throw gloves away after use
7. Wash hands after taking gloves off

Every time you change tasks, sneeze, or use the toilet you need to wash your hands and put on new gloves.

GLOVES are no substitute for good handwashing!

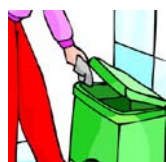
GLOVE USE REMINDERS!

Wash hands before putting on gloves.



If you wear artificial fingernails or fingernail polish – you have to wear gloves when working with exposed food.

Put gloves on only when you are ready to handle **ready-to-eat foods**.



When you change tasks, remove gloves and throw them in the trash. Use clean gloves when you resume food preparation.

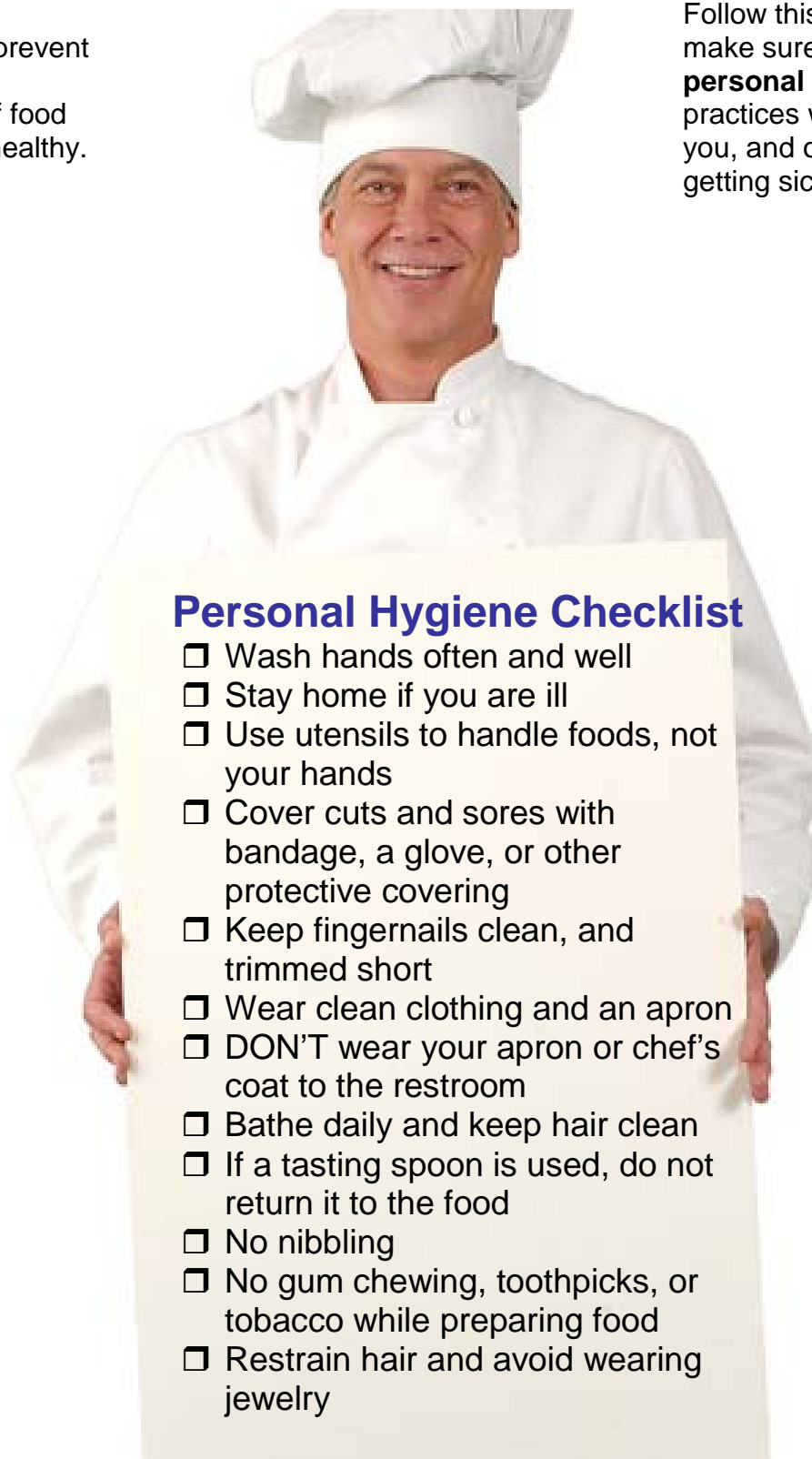
Do NOT use fabric or re-usable gloves with ready-to-eat food.



If you have a cut wash your hands, put on a clean bandage, and wear gloves.

Good **personal hygiene** habits prevent disease, the contamination of food and keeps you healthy.

Follow this checklist to make sure that your **personal hygiene** practices will protect you, and others, from getting sick.

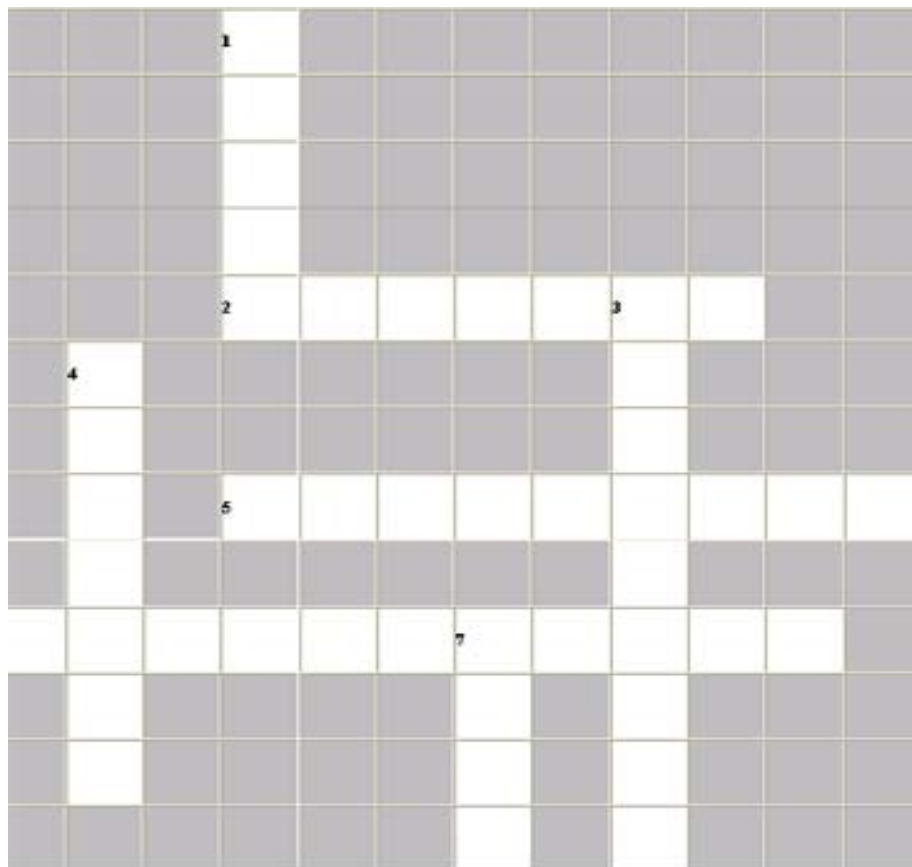


Personal Hygiene Checklist

- Wash hands often and well
- Stay home if you are ill
- Use utensils to handle foods, not your hands
- Cover cuts and sores with bandage, a glove, or other protective covering
- Keep fingernails clean, and trimmed short
- Wear clean clothing and an apron
- DON'T wear your apron or chef's coat to the restroom
- Bathe daily and keep hair clean
- If a tasting spoon is used, do not return it to the food
- No nibbling
- No gum chewing, toothpicks, or tobacco while preparing food
- Restrain hair and avoid wearing jewelry

Part 1: Food Worker Knowledge Activities

Answers to self-check activities are located on page 33.



Down:

1 Keep ____ from your bare hands from getting on ready-to-eat foods.

3 If you were sick with this virus you would stay home from work.

4 If you have diarrhea or vomiting, you should not work with food, or food _____ surfaces.

7 A handwashing station needs hot and cold running water, _____ and paper towels.

Across:

2 Ready-to-eat foods are foods that are not cooked before _____.

5 Any disease caused by eating or drinking contaminated food is called a _____ illness.

6 What is one of the most important things you can do to prevent foodborne illness?



What Would You Do?

- 1) You are at work and are just about to put on some gloves to prepare hamburger set-ups. You go to the hand sink to wash your hands, but there is no hot water. What would you do?
- 2) You observe your coworker eating his lunch with his gloves on. Then he goes to the restroom, comes back out with the gloves on his hands, and heads for the kitchen. What would you do?

Part 2: Prevent Cross-Contamination



Cross-contamination is the spread of germs from one place to another. Usually, this means that blood or juice from raw meat or poultry gets on food that won't be cooked. This would happen if you used the same cutting board for raw meat and bread. Another example of cross-contamination would be if you used a knife to cut up raw chicken and then used the same knife to cut up salad ingredients. You can also spread germs to clean equipment or cooked food from your dirty hands. **Cross contamination** also happens when unwanted chemicals end up in food.

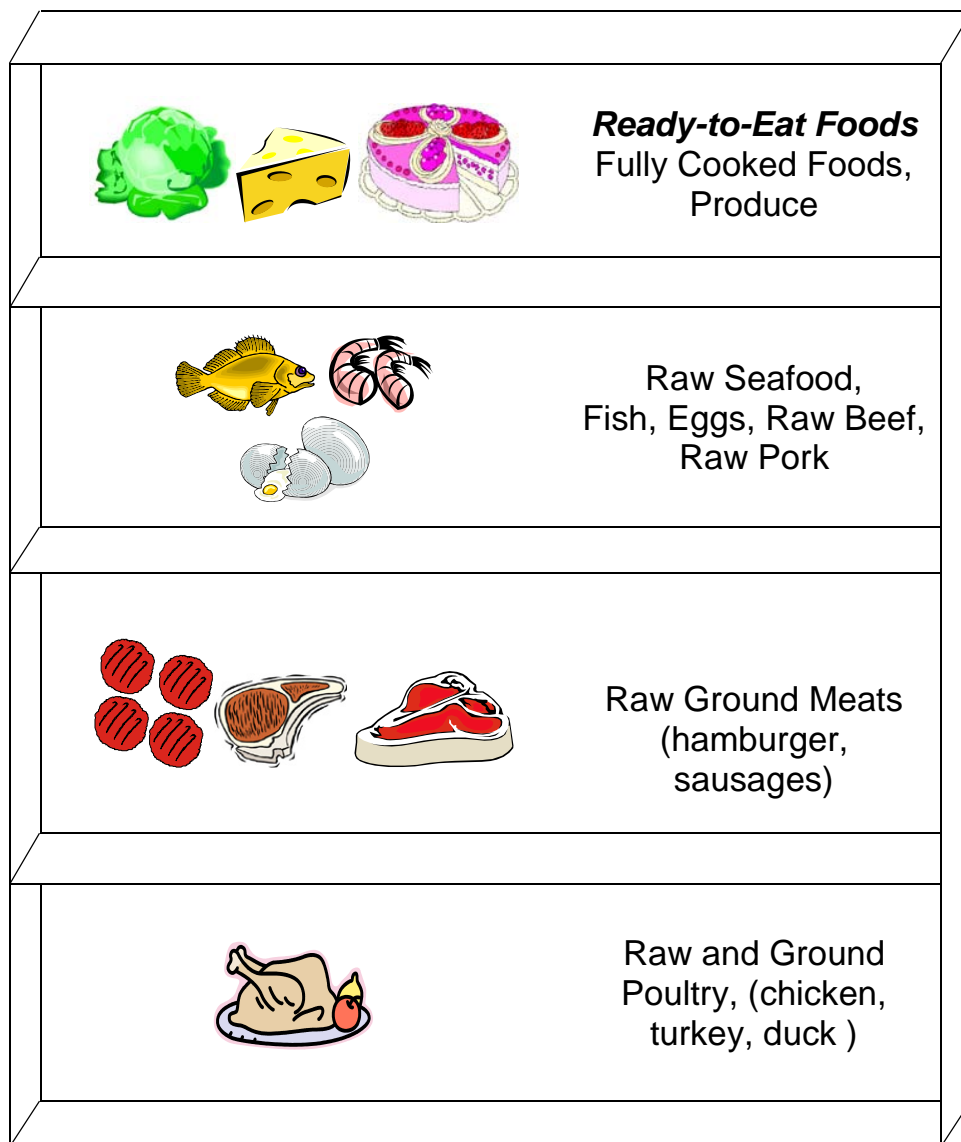
After completing this section of the training you will be able to:

- 👍 Define cross-contamination
- 👍 Store food safely
- 👍 Avoid cross-contamination by washing, rinsing and sanitizing cutting boards and other food contact surfaces
- 👍 Decide when to wash your hands to prevent the spread of germs
- 👍 Store and use chemicals safely

Store Food Safely

It is very important to keep raw meat away from other foods to prevent cross contamination. Place raw meat, fish, and poultry on shelves **below** other foods in the refrigerator. Keep food that does not require further washing or cooking separate from food that will be cooked.

Safe Refrigerator Storage



Wash, Rinse and Sanitize

The best way to prevent cross-contamination is to WASH, RINSE and SANITIZE food contact surfaces every time you switch from raw to **ready-to-eat foods**, and between different types of raw meat, fish, and poultry.

- Wash, rinse, sanitize, and air dry equipment and utensils used on a continuous basis every 4 hours.
 - This equipment includes cutting boards, frothing pitchers, knives, and serving utensils.
- Keep cutting boards and prep tables easy to clean by replacing them when worn
 - Deep grooves or scratches in those surfaces provide places for germs to hide, and make it more difficult for you to clean and sanitize them properly.



Cleaning and sanitizing are **NOT** the same!

Cleaning uses soap and water to remove dirt and food from surfaces.

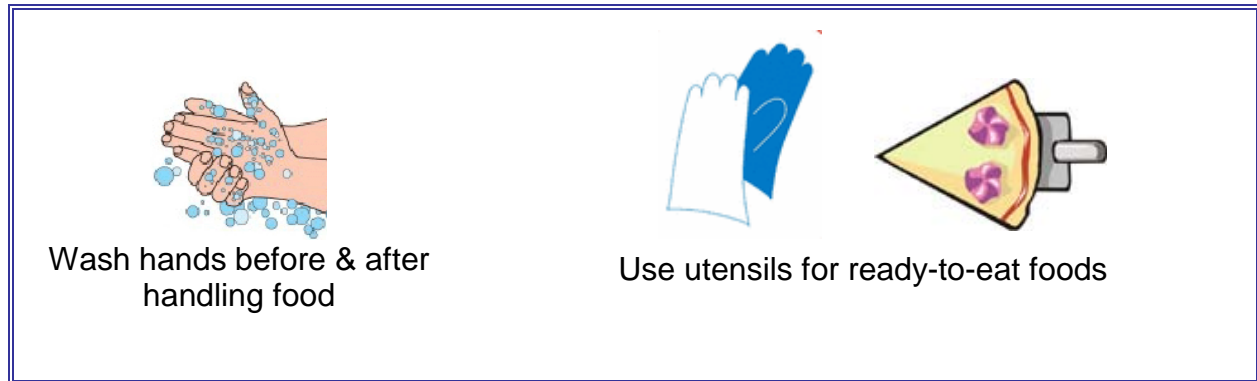
Sanitizing is using heat or chemicals to reduce germs to safer levels.

- Sanitizers must be mixed correctly to work properly
- Follow the directions on the label of the sanitizer to mix up your solution. Do **NOT** add soap or detergent to your sanitizer solution (like bleach water)
- Always use test strips to check the sanitizer strength
- Change sanitizer solution often, because grease, dirt and food pieces will make it less effective

Prevent Contamination from Hands

Not only can you cross contaminate during the storage of food and with utensils, you can also spread germs to food or clean equipment from your dirty hands!

- When handling ready-to-eat (RTE) food, use utensils such as gloves, tongs, spatulas, etc.
- Wash your hands often, and always wash them between tasks
- Wash hands before and after handling food



Safe Chemical Storage and Use

To prevent contamination of food store and use chemicals safely.

- Do not store chemicals above or next to food
- Make sure you mix chemicals according to the label directions
- Use test strips to check sanitizers
- Label spray bottles



Part 2: Cross-Contamination Activities

Circle the answers to these questions in the Word Search Puzzle below:

1. Cross contamination is the spread of _____ from one place to another.
2. Raw _____ should be stored below and away from other foods.
3. After cutting raw meat on the cutting board, you must WASH, RINSE and _____ the cutting board before cutting up lettuce.
4. Wash your hands _____ and after handling food.
5. A _____ sink needs hot and cold running water, soap and paper towels.
6. Do NOT add soap or _____ to your sanitizer solution.
7. Check the strength of your sanitizer with _____ strips.

I L T W C O V E T C R Y
 E G E Q F C A L D M G B
 I I K A S E P J R E S Y
 G N I H S A W D N A H A
 E D E T E R G E N T Z K
 R O R N C F R I R F M E
 M H G S S O T S E T B S
 S F T G F I R A U V O N
 T N C E Z O A A A S U T
 T C B E H A R G Y Y H L

What Would You Do?

- 1) A pan full of bloody raw chicken is sitting on a box of iceberg lettuce in the refrigerator. A cook goes to remove the chicken from the reach in and drops the pan. Chicken and its bloody juices land in the iceberg lettuce. What should the cook do?
- 2) A line cook reaches in the refrigerator and picks up raw hamburger patties with bare hands. The cook places the hamburger patties on the grill and then turns around to set-up the bun, lettuce, onion and tomatoes for the sandwich. What should the cook have done?

Back on the Job










Think about how you will apply these food safety principles on the job. See if you can answer these questions about **YOUR** workplace.

What food items are stored on the shelves of your refrigerator or walk-in at work? List or draw them below. Are all foods protected from cross-contamination?

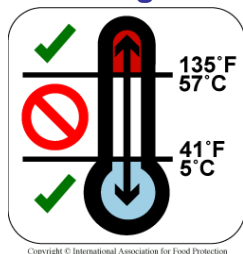
Safe Refrigerator Storage at your Workplace

Part 3: The Right Temperatures

Foods that are not kept hot or cold enough or cooked to safe temperatures can be unsafe to eat. By using a thermometer to check food temperatures, you may be able to prevent foodborne illness. After completing this part of the training you will be able to:

-  Define the Danger Zone temperatures that allow bacteria to grow rapidly
-  Define Potentially Hazardous Food
-  Use a thermometer to see if food is cooked to the right temperature to kill germs
-  Calibrate a thermometer
-  Keep hot or cold foods at safe temperatures to keep bacteria from growing in the food
-  Cool hot foods safely
-  Thaw frozen food safely
-  Reheat foods properly
-  Decide when to throw out foods that may be unsafe



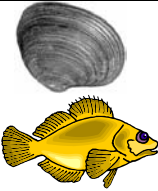


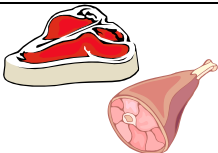


The Danger Zone (41°F and 135°F)



- Germs will grow more rapidly in food when the food is between the temperatures of **41°F** and **135°F**. This range of temperatures is called the ***Danger Zone***.
- How do you know when the food is in the Danger Zone?
 - Use a ***calibrated food thermometer*** to check the temperature of food (cooking, cooling, storing and holding for service).
- ***Potentially hazardous food*** left in the Danger Zone for 4 hours or more must be thrown away.
- Move food rapidly through the ***Danger Zone***!

Potentially Hazardous Foods

Potentially Hazardous Foods are foods that when held in the danger zone may support the rapid growth of disease-causing bacteria and lead to foodborne illness. Some examples are:

 Cut melons	 Rice	 Seafood	 Sprouts & Cooked vegetables
 Garlic in Oil	 Red Meat	 Poultry	 Dairy

Thermometers

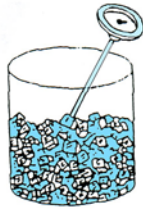
Thermometers get bumped and jarred frequently, even if they are used correctly. This causes them to get out of adjustment.

Calibrate thermometers to maintain accuracy

- Periodically (about once per week)
- If they are dropped
- After measuring extreme temperatures
- New thermometers before use

Calibrate Your Thermometer

Ice Point Method



- Fill glass with ice, add cold water. Accurate reading depends on having enough ice
- Insert sensing area of thermometer into ice slush at least two inches avoiding sides and bottom of container
- Allow the temperature to stabilize (at least a minimum of 30 seconds)
- With sensing area in the ice water adjust calibration nut so indicator (or dial) reads 32°F

Boiling Point Method



- Insert sensing area of thermometer into boiling water avoiding sides and bottom of pan
- Allow the temperature to stabilize (at least a minimum of 30 seconds)
- With sensing area in the boiling water adjust calibration nut so indicator reads 212°F. Water boils at lower temps at high altitude. Subtract 1°F for each 550 feet above sea level

Cooking



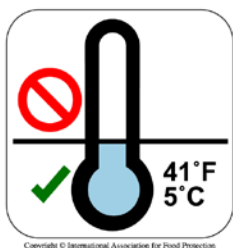
Germs that cause foodborne illness are killed when foods are cooked to the proper temperatures. Use a **calibrated food thermometer** to check the internal temperature of food and be sure that it is cooked to the correct temperature.

Check Cooking Temperatures with a Thermometer

- **Wash, Rinse and Sanitize** your thermometer
- Insert the probe into the center, or thickest part of the food, and check different spots to compare the temperatures
- Make sure the food is cooked for 15 seconds at the proper temperature

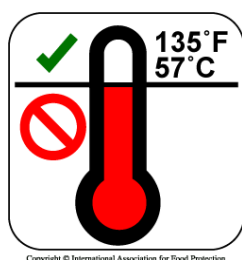
<p>165°F (for 15 seconds)</p>		<ul style="list-style-type: none"> ▪ Poultry (chicken and turkey) ▪ Stuffed foods or stuffing ▪ All raw animal products cooked in a microwave ▪ All reheated potentially hazardous foods for hot holding
<p>155°F (for 15 seconds)</p>		<ul style="list-style-type: none"> ▪ Hamburger ▪ Sausage (ground pork)
<p>145°F (for 15 seconds)</p>		<ul style="list-style-type: none"> ▪ Eggs ▪ Fish ▪ Pork ▪ Beef
<p>135°F (for 15 seconds)</p>		<ul style="list-style-type: none"> ▪ Packaged ready-to-eat foods that are heated for hot holding; such as hot dogs, canned chili ▪ Vegetables that will be hot held

Cold Holding



- Keep **cold** food for display or service at 41°F or colder at all times.
- When using ice to keep food cold, make sure that the food container is surrounded by ice to the level of the food. Use a thermometer to check the temperatures every 2 hours to see if the food is 41°F or colder.
- If food has been held in the Danger Zone for longer than 4 hours you will need to throw it away.

Hot Holding



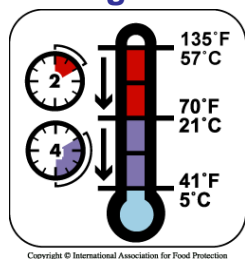
- Keep it hot, at least 135°F, until it is served. This keeps germs from growing rapidly in the food.
- Preheat your equipment to at least 135°F before adding food.
- Stir the food frequently to evenly distribute the heat.
- Check the temperature every 2 hours to make sure that it is 135°F.
- Throw out food that has been held in the Danger Zone for longer than 4 hours.

Cooling food from ambient (room) temperature

Some foods start out at room temperature like tuna salad. Once the ingredients are mixed together it is important to cool these foods rapidly.

- Cool from room temperature to 41°F in 4 hours or less
- Use pre-chilled ingredients to speed cooling
- Use small or shallow containers

Cooling Hot Foods


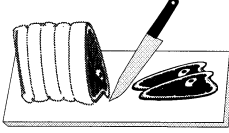




Cool foods from:

- 135°F to 70°F within 2 hours
- Then from 70°F to 41°F within 4 more hours

Cooling large batches of food and roasts safely can be challenging. Foods must be cooled quickly to keep bacteria from growing in the food. **Use your thermometer to make sure that the food is cooled rapidly.**

Here are some methods you can use to cool food quickly:

	<p>Ice Bath Method</p> <ul style="list-style-type: none"> Ice/water mixture should be the same level as the food Stir frequently Use of ice wands will speed cooling Refrigerate
	<p>Smaller Portions</p> <ul style="list-style-type: none"> Cut solid foods into smaller pieces Spread out in thin layers Refrigerate
	<p>Shallow Metal Pans</p> <ul style="list-style-type: none"> Divide food into smaller pans 2-inch depth for thick food While cooling keep uncovered Refrigerate Don't stack hot containers
	<p>Add ice instead of water to soups or stews</p> <ul style="list-style-type: none"> Add half of the water before cooking After cooking, add the other half as ice Refrigerate

Graphics Courtesy of DuPage County Health Department

Cooling Tips

- Label containers that are cooling with date and time cooling began
- Stir food often
- Thick foods such as refried beans should be no more than 2 inches deep
- Do **NOT** cover until food reaches 41°F
- Make sure there is good air circulation around food
- Do **NOT** stack food

Reheating

When you are reheating cooled, cooked foods for hot holding, you need to be sure that food is moved rapidly through the Danger Zone.

- They need to be heated to 165°F or hotter within 2 hours
- Reheat on stove or in oven
- Check temperature with thermometer
- Do NOT reheat in hot holding equipment such as steam tables, warmers or crock pots

Thawing

Thaw foods safely:

- in the refrigerator
- in the microwave as long as food is cooked immediately
- under cold running water (70 °F or colder)
- as part of the cooking process

Part 3: The Right Temperature Activities

Write in the correct temperature using the list of temperatures below. You may use some temperatures more than once.

165 °F

41°F to 135 °F

135°F

155°F

145°F

41°F

	The Right Temperature(s):
Ground beef cook temperature	
Danger Zone	
Fish cook temperature	
Chicken cook temperature	
Reheated food for Hot Holding	
Cold hold temperature	
Heating commercially canned foods for Hot Holding	
Hot Holding temperature	
Sausage and ground beef lasagna	

Now list several foods **prepared at your work** and the correct cook temperatures:

Is it done?

Decide if these foods are safely cooked. Check the correct box below.

	Cooking Example – Is it Safely Cooked?	Yes	No	Not enough info
1.	Deep fried chicken breast cooked to 165°F			
2.	Hamburger cooked until it looks brown in the middle			
3.	Commercially precooked ham for hot buffet cooked to 135°F			
4.	Beef roast cooked to 140°F			
5.	Carrots for hot holding heated to 130°F			
6.	Raw sausage for the hot breakfast buffet cooked in the microwave to 155°F			
7.	Pork tenderloin baked until it reaches 145°F			
8.	Whole turkey breast reaches 165°F			

What Would You Do?

- 1) You arrive in the morning and find ground beef sitting on the counter. The night cook had set it out to thaw the night before. When you take the temperature it is at 73 °F. What should you do?
- 2) The day cook sets a 10 gallon stock pot full of soup in the refrigerator with an ice wand in it. He labels it with the date and time the cooling (135 °F) started. It says cooling started at 3:00 p.m. It is 4:30 p.m. now and the temperature is at 87 °F. What should you do?

Back on the Job

List what you learned in this section and how you will apply it back on your job.

Part 4: Safe Food Sources



Food safety starts when you bring the food into your establishment. Make sure that you receive safe food from an **approved source**. All food must come from a source approved by the State of Alaska Food Safety Program or the Municipality of Anchorage Health Department. After completing this part of the training you will be able to:

- 👍 Decide if the food you order or receive is from an approved source
- 👍 Check food shipments for damage and proper temperatures
- 👍 Explain what a consumer advisory is and know why it is needed

Approved Sources for Food

- Meat and poultry must come from a USDA inspected plant
- Seafood must come from a permitted facility
- Shellstock containers must have an identification tag attached. Keep the tags for 90 days
- Canned food must come from an inspected facility
- Other types of food need to come from a permitted and inspected facility

Never serve home canned food, wild game meat or sport caught fish in a food establishment.

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; text-align: center; vertical-align: middle;">KEEP REFRIGERATED</td><td style="padding: 2px;">NAME AND ADDRESS:</td></tr> <tr><td></td><td style="padding: 2px;">HARVESTER PERMIT NO:</td></tr> <tr><td></td><td style="padding: 2px;">HARVEST DATE: DATE SHIPPED:</td></tr> <tr><td></td><td style="padding: 2px;">HARVEST AREA:</td></tr> <tr><td></td><td style="padding: 2px;">TYPE OF SHELLFISH:</td></tr> <tr><td></td><td style="padding: 2px;">QUANTITY OF SHELLFISH:</td></tr> <tr><td></td><td style="padding: 2px; text-align: center;">THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY AND THEREAFTER KEPT ON FILE FOR 90 DAYS.</td></tr> </table> <p style="text-align: center; margin-top: 10px;">Shellstock Tag</p>	KEEP REFRIGERATED	NAME AND ADDRESS:		HARVESTER PERMIT NO:		HARVEST DATE: DATE SHIPPED:		HARVEST AREA:		TYPE OF SHELLFISH:		QUANTITY OF SHELLFISH:		THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY AND THEREAFTER KEPT ON FILE FOR 90 DAYS.	 <p style="text-align: center;">(Poultry & Meat) USDA Inspection Legend</p>	 <ul style="list-style-type: none"> X No home canned X No wild game meat X No sport fish
KEEP REFRIGERATED	NAME AND ADDRESS:															
	HARVESTER PERMIT NO:															
	HARVEST DATE: DATE SHIPPED:															
	HARVEST AREA:															
	TYPE OF SHELLFISH:															
	QUANTITY OF SHELLFISH:															
	THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY AND THEREAFTER KEPT ON FILE FOR 90 DAYS.															

Check Food Deliveries

- Check the condition of delivery truck
- Check food temperatures
- Check for inspection legend on meat, poultry, eggs
- Make sure shellstock have their tags
- Condition of the food – no signs of damage/thawing
- Keep receiving area clean, well lit and free of pests
- Limit time in the Danger Zone (41°F to 135°F)

Storage Basics

- Protect **ready-to-eat foods** from raw foods and store them separately
- Separate fish, raw meat, and poultry
- Keep food in clean wrappers or containers
- Keep storage areas, food-transporting carts and trays clean and dry
- Remove trash periodically - don't let it build up
- Keep all chemicals in their original labeled containers
- Store chemicals away from food
- Store food at least 6 inches off of the floor

Consumer Advisories

A **consumer advisory** lets customers know that food served in the raw or undercooked state may be more likely to cause illness. This advisory needs to be written and available to the customers.

Food allergies can be serious and life threatening. Symptoms of an allergic reaction include a tingling sensation, hives, swelling of the mouth and throat, difficulty breathing, and loss of consciousness. If a customer asks about the ingredients in a menu item, you should know what ingredients it contains. If you are not sure, then you should ask your supervisor or the person in charge.

Part 4: Safe Food Source Activities

Unscramble these words related to safe and unsafe food sources.

Scrambled word	Unscramble!	HINTS:
1) trpos hfis		Catch and release – don't serve these.
2) lidw meag tmae		
3) eohm nancde		This meat is not inspected...
4) olesthkcs		Food that you preserve at home
5) SADU ptdecsein		These come with a special "tag"
6) naergd ozen		Meat should be... The _____ is between 41F and 135F

Put an **X** next to the foods that are NOT from an approved source:

<input type="checkbox"/> Your grandma's homemade pumpkin pie	<input type="checkbox"/> Home canned green beans
<input type="checkbox"/> USDA inspected chicken	<input type="checkbox"/> Dried fish sticks from fish camp
<input type="checkbox"/> Sport caught fish	<input type="checkbox"/> Reindeer meat from the local farmer that slaughtered it himself
<input type="checkbox"/> Milk and dairy products	<input type="checkbox"/> Bagels from the local permitted bagel shop
<input type="checkbox"/> Raw milk from your neighbor's cow	<input type="checkbox"/> Moose meat
<input type="checkbox"/> Pickle relish from your friend Jane	

What Would You Do?

- 1) Steaks are delivered to your restaurant. The boxes and packages do not have a USDA inspection legend on them. What should you do?
- 2) Grandma delivered her famous home-baked pies to sell at your restaurant. What would you do?

Back on the Job

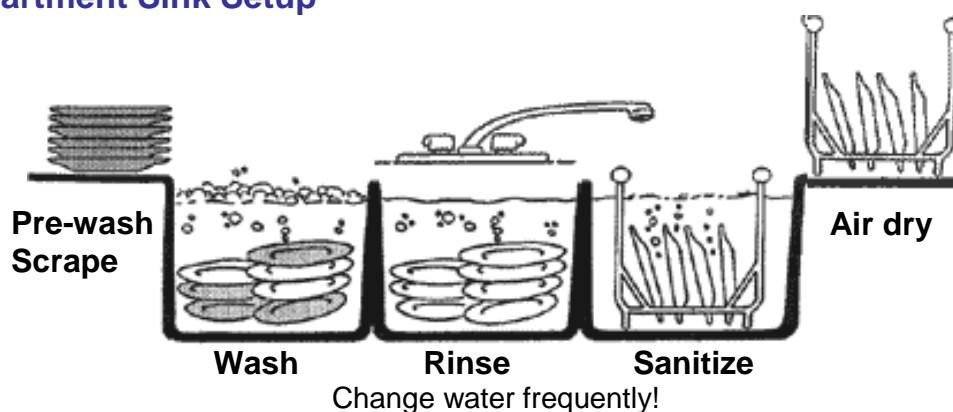
List what you learned in this section and how you will apply it back on your job.

Part 5: Proper Dishwashing

Washing, rinsing and **sanitizing** dishes and utensils are important in reducing the disease causing germs that will get transferred to food and your customers. Whether you use a 3-compartment sink or a dishwashing machine, you will need to follow certain steps to make sure that the dishes and utensils are cleaned properly and sanitized. After completing this part of the training you will be able to:

- 👍 Wash dishes properly using a 3-compartment sink or dishwashing machine
- 👍 Use a sanitizer correctly to kill germs on clean surfaces
- 👍 Know the methods for testing sanitizers for both manual and mechanical dishwashing

Manual Dishwashing 3-Compartment Sink Setup



*Graphic courtesy of the City of Toronto Public Health Department

A 3-compartment sink is required for manual dishwashing. Clean the dishes using the steps below:

1. Clean and sanitize the sinks
2. Pre-wash/Scrape
3. Wash in hot water with detergent
4. Rinse
5. Sanitize with an approved sanitizer following manufacturer's directions
6. Test sanitizer
7. Air dry

When washing a lot of very soiled dishes, you should drain and fill each compartment with fresh water, detergent and sanitizer several times.

Reminder! Sanitizer must be used properly to work effectively. The amount of time that dishes soak in a sanitizer may vary. Be sure to follow the manufacturer's directions for soaking times and concentrations.

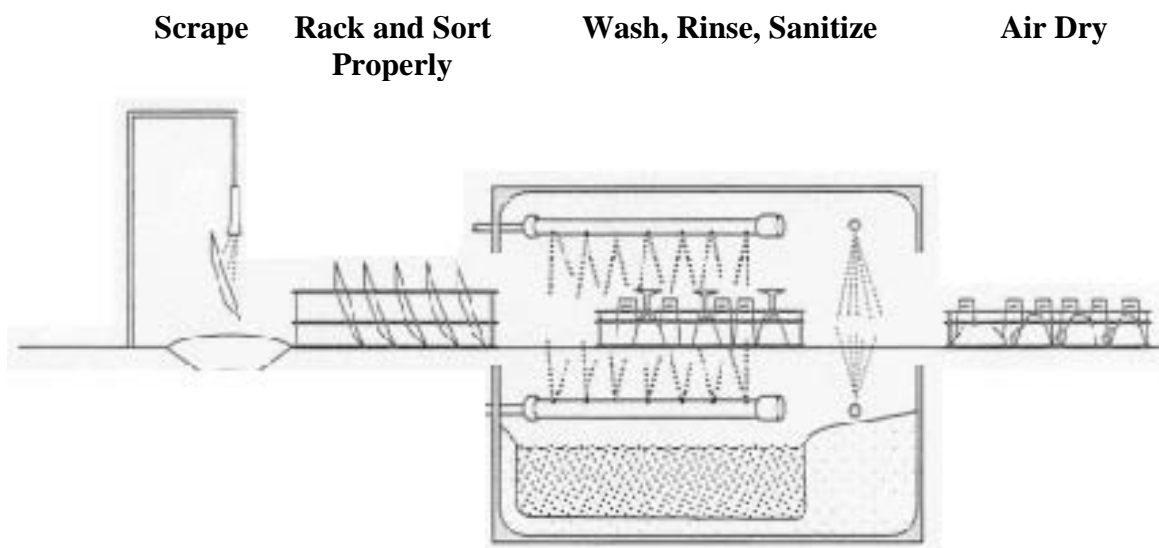
Clean in Place

For equipment that is too large to wash in the three compartment sink the same principles apply:

- Wash, rinse and sanitize each removable part in 3-compartment sink or dish machine.
- Use the three step method to wash, rinse and sanitize stationary surfaces
- Air dry all parts
- Reassemble
- Re-sanitize any food-contact parts you touch
- Remember to wash, rinse and sanitize equipment that is used on a continuous basis at least every 4 hours

Mechanical Dishwashing

Your workplace may have a mechanical dishwasher that will wash, rinse and sanitize the dishes. You will need to know how your machine operates so that you can monitor the temperature and sanitizer levels.



Graphic Courtesy of DuPage County Health Department

Follow these steps to use a mechanical dishwasher:

1. Make sure the machine is clean, follow manufacturer's directions
2. Before starting the mechanical dishwasher, check the detergent and sanitizer dispenser levels
3. Scrape, rinse or soak items
4. Check manufacturer's recommended wash and rinse temperatures
5. Sanitizing rinse-check periodically
 - a. Hot temperature sanitizing-temperature sensitive tape to ensure plate temperature reaches 160°F
 - b. Chemical sanitizing-check with test strip
6. Check final rinse water pressure gauge and make sure that it is within the manufacturer's recommendations
7. Air dry
8. Wash hands then unload clean dishes from racks

Commonly used sanitizers include:

Sanitizer	Concentration
Chlorine (i.e. bleach)	50 ppm
Quaternary Ammonia (Quat)	200 ppm or specified by manufacturer
Iodine	12.5-25 ppm

Chemical Sanitizing

- Water temperature according to the manufacturer
- Detergent and sanitizer must be automatically dispensed
- Chlorine at 50 ppm
- Check concentration with a test strip
- Change the sanitizer solution often

Hot Water Sanitizing

- Wash temperature according to the manufacturer
- Final rinse temperature at least 180°F
- Check with temperature sensitive strip to make sure plate surface reaches 160°F

Tips for using moist wiping cloths:

- Wiping cloths do not replace proper Washing, Rinsing and Sanitizing
- Store wiping cloths in clean sanitizer
- Use different wiping cloths for cleaning raw meat and ready to eat foods
- Use different cloths for food and non food-contact areas
- Clean and rinse soiled wiping cloths before storing in the sanitizer
- Use test strips to check the sanitizer strength
- The amount of sanitizer can vary- check the sanitizer solution with a test strip



Part 5: Dishwashing Activities

Fill in the blanks to finish these sentences:

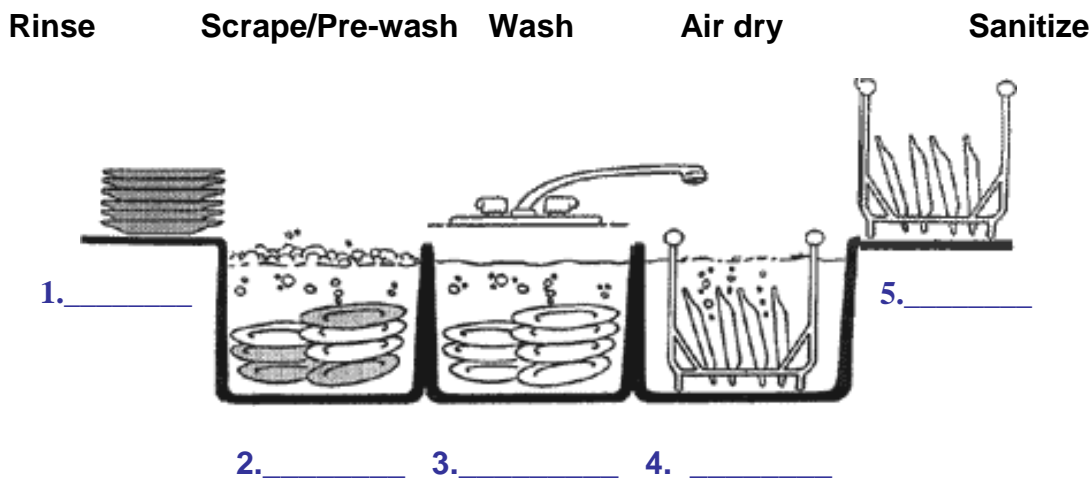
1. The correct steps to clean dishes are W_____, R_____, S_____, A_____ D_____.
2. You should wash your hands b_____ handling the clean dishes.
3. Chlorine sanitizer should be at _____ppm for dishwashing.
4. What are three kinds of commonly used sanitizers? Q_____, C_____, and I_____.
5. Bleach is a C_____ sanitizer.

What Would You Do?

- 1) The evening shift dishwasher comes on duty. He checks the sanitizer concentration in mechanical dishwashing machine as he was trained to do. He notices that the strip shows no chlorine sanitizer being dispensed. He checks the sanitizer bucket and notices that someone had hooked up a bucket of drain cleaner to the dishwashing machine by mistake. What should he do?
- 2) The dishwasher runs a temperature sensitive strip through the dishwashing machine after he notices the rinse temperature isn't getting up to the correct temperature. It indicates that the dishes are not being sanitized as required. It

is in the evening so the repair man is not available until tomorrow. How can he make sure the dishes are being sanitized until the repairman fixes the machine?

Match the steps for manual dishwashing in the **3-compartment sink** setup below:



Back on the Job

Think about how dishes are cleaned and sanitized where you work. Check methods below that are used at your job.

- Manual (3-Compartment Sink) Mechanical (Dishmachine)
- Chemical Hot Water
- Chlorine Bleach
 Iodine
 Quaternary Ammonium

List what you learned in this section and how you will apply it back on your job.

Glossary of Food Safety Terms

Approved source: Means a food establishment or facility that is permitted or certified by the federal, state or local government agency with jurisdiction. Meat and poultry must come from a USDA inspected plant; seafood, canned and other types of food must come from a permitted facility; shellstock containers must have an identification tag attached.

Bare hand contact: Touching foods with bare hands instead of using utensils such as gloves, tongs, deli papers, ladles, scoops, chopsticks, etc.

Calibrated food thermometer: Food thermometers that are checked to make sure that they are showing the correct temperature are “calibrated”. Use the ice point or boiling point method to calibrate thermometers.

Consumer advisory: A written advisory that lets customers know that food served in the raw or undercooked state may be more likely to cause illness.

Cross-contamination: Is the spread of germs from one place to another.

Danger Zone: Germs will grow more rapidly in food when the food is between the temperatures of **41°F** and **135°F**. This range of temperatures is the Danger Zone.

Food allergies: Some people have an allergic reaction when they eat certain food. Allergic reactions can be serious and life threatening. Symptoms of an allergic reaction include a tingling sensation, hives, swelling of the mouth and throat, difficulty breathing, and loss of consciousness.

Foodborne illness: Is any disease caused by eating or drinking contaminated food.

Germs: Microorganisms too small to be seen with the naked eye and include both bacteria and viruses.

High Risk populations: Are groups of people who get sick more easily than others from contaminated food, or get more serious sicknesses. People in this group include babies and young children, elderly people, pregnant women and immune compromised individuals.

Potentially hazardous food: Germs grow easily in these foods, such as fish, eggs animal products, sprouts, cooked rice, sliced melons, and tofu.

Ready-to-eat food: Foods that are eaten without additional cooking or washing to remove germs.

Sanitizing: Using heat or chemicals to reduce the number of germs on a surface to a safe level.

Symptoms: Changes in the body that are signs of sickness, like diarrhea, vomiting, fever, or jaundice.

Answers to the Self-Check Activities

Part 1: Food Worker Knowledge (page 10)

Crossword

Down:	1-Germs	Across:	2-serving
	3-Norovirus		5-foodborne
	4-contact		6-handwashing
	7-soap		

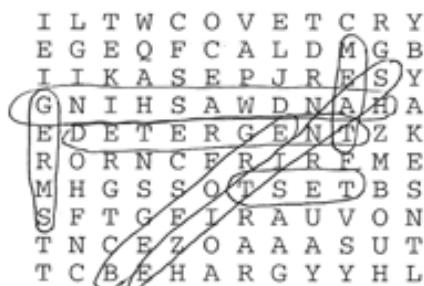
What Would You Do? (page 10)

- 1) Tell the manager or person in charge that there is no hot water, then use another handsink to wash hands.
- 2) Stop the food worker off and remind him that gloves are a single task utensil. They need to be removed between tasks, hands washed and then a new pair put on.

Part 2: Prevent Cross-Contamination

Word Search (page 16)

- 1) *Germs*
- 2) meat
- 3) sanitize
- 4) before
- 5) handwash
- 6) detergent
- 7) test



What Would You Do? (page 16)

- 1) Cook should discard the lettuce. It would be difficult to wash and remove all the possible germs (bacteria) that would have spilled on the lettuce.
- 2) Cook needs to wash his hands and use an utensil for handling ready to eat foods such as the lettuce, tomatoes, onion, etc. He may want to develop a system where he can use utensils for handling the raw meats too so his hands do not become contaminated from bacteria from the raw meats.

Part 3: The Right Temperature

Temperature Activities (page 23)

Ground beef cook temperature	155°F
Danger Zone	41°F to 135 °F
Fish cook temperature	145°F
Chicken cook temperature	165 °F
Reheated food for Hot Holding	165 °F
Cold hold temperature	41°F
Commercially canned foods for Hot Holding	135°F
Hot Holding temperature	135°F
Sausage and ground beef lasagna	155°F

Is it Done? (page 24)

Cooking Example – Is it Safely Cooked?	Yes	No	Not enough info
1. Deep fried chicken breast cooked to 165°F	X		
2. Hamburger cooked until it looks brown in the middle			X
3. Commercially precooked ham for hot buffet cooked to 135°F	X		
4. Beef roast cooked to 140°F			X
5. Carrots for hot holding heated to 130°F		X	
6. Raw sausage for the hot breakfast buffet cooked in the microwave to 155°F		X	
7. Pork tenderloin baked until it reaches 145°F	X		
8. Whole turkey breast reaches 165°F	X		

What Would You Do? (page 24)

- 1) Discard the ground beef. It is in the danger zone and you don't know how long it has been there. There is no way to make it safe.
- 2) It does not appear it will reach the 135 °F to 70 °F within the first two hours like it should for proper cooling. I would speed the cooling along by either putting it in shallow pans then refrigerate, use an ice wand and stir frequently or use an ice bath.

Part 4: Safe Food Sources

Word Scramble (page 26)

- 1) sport fish
- 2) wild game meat
- 3) home canned
- 4) shellstock
- 5) USDA inspected
- 6) Danger zone

Safe Source Activity (page 27)

<input checked="" type="checkbox"/> Your grandma's homemade pumpkin pie	<input checked="" type="checkbox"/> Home canned green beans
<input type="checkbox"/> USDA inspected chicken	<input checked="" type="checkbox"/> Dried fish sticks from Fish Camp
<input checked="" type="checkbox"/> Sport caught fish	<input checked="" type="checkbox"/> Reindeer meat from the local farmer that slaughtered it himself
<input type="checkbox"/> Milk and dairy products from grocery store	<input type="checkbox"/> Bagels from the local permitted bagel shop
<input checked="" type="checkbox"/> Raw milk from your neighbor's cow	<input checked="" type="checkbox"/> Moose meat
<input checked="" type="checkbox"/> Pickle relish from your friend Jane	

What Would You Do? (page 27)

- 1) Do not use the steaks. Find out the source of steaks and find out if they are USDA inspected.
- 2) Thank Grandma, but explain to her that you can not serve them in your restaurant.

PART 5: PROPER DISHWASHING

Fill in the Blanks (page 30)

- 1) Wash, Rinse, Sanitize, Air Dry
- 2) before
- 3) 50
- 4) Quats, Chlorine, and Iodine
- 5) Chlorine

What Would You Do? (page 30)

- 1) Drain the machine, hook up the correct sanitizer, test the sanitizer, then rewash dishes that were washed earlier in the day.
- 2) Do a manual sanitizing rinse until the dishmachine can be repaired.

Match the Steps (page 31)

- 1) Scrape/Prewash
- 2) Wash
- 3) Rinse
- 4) Sanitize
- 5) Air Dry