

Keep It Healthy! Food Safety Employee Guide

Your Guide to Preventing Foodborne Illness



Food Protection Program
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*The information provided in this manual is based on the Idaho Food Code and the Idaho Food Safety and Sanitation Manual. This handbook does not represent all requirements provided in the Idaho Food Code and is not the same as the Idaho Food Safety and Sanitation Managerial Training Program. For more information, contact your local health department.

Thank you.

We appreciate that you are taking an active role in learning to prepare and serve safe food. As a food worker, you will be making food for other people. They trust you to do all that you can to keep their food safe. **It is your responsibility to safely prepare and serve food to them so they will not get sick.**

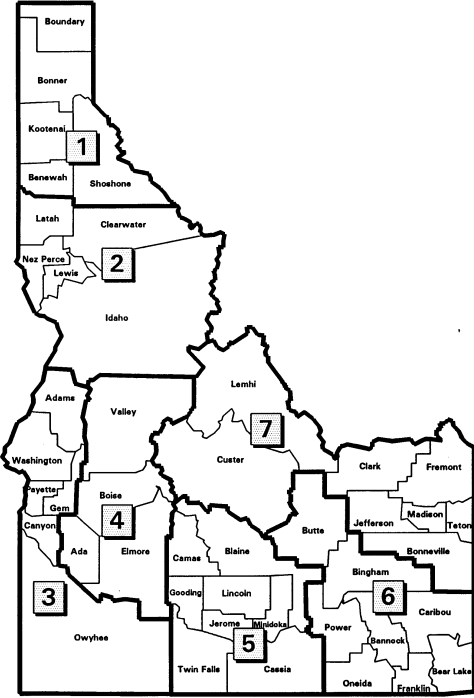
This guide will not prepare you to take the Idaho Food Safety and Sanitation Managerial Exam; however, the information in this guide will give you tips to safely store, prepare, and serve food at work.

By the time you have finished this manual you will:

1. understand there are many causes of foodborne illness
2. identify the importance of clean hands and healthy food workers
3. know how avoiding the Danger Zone helps prevent foodborne illness
4. learn several tips to help you remember food safety basics
5. recognize your responsibilities as a food worker

Food safety knowledge can help you protect yourself and others. Please take what you learn from this manual and use it at your workplace and in your home. If you have any questions, please call your local health department.

Remember that food workers using proper food safety practices are the most important ingredient in safe food. Welcome to the Idaho food safety team.

	1	Panhandle Health District	8500 N. Atlas Rd. Hayden, ID 83835	415-5100
	2	North Central District Health Department	215 Tenth St Lewiston, ID 83501	799-3100
	3	Southwest District Health	920 Main St Caldwell, ID 83605	455-5300
	4	Central District Health Department	707 N. Armstrong Pl Boise, ID 83704	375-5211
	5	South Central Public Health District	1020 Washington Street N Twin Falls, ID 83301	734-5900
	6	Southeastern District Health Department	1901 Alvin Ricken Pocatello, ID 83201	233-9080
	7	Eastern Idaho Public Health District	1250 Hollipark Dr Idaho Falls, ID 83401	522-0310

Part 1: Foodborne Illness

People can get sick if the food they eat has harmful chemicals or microorganisms. This is called foodborne illness.

Most foodborne illnesses are caused by microorganisms that grow in food or inside of our bodies. Symptoms can include diarrhea, vomiting, fever, headache, and stomach ache. These symptoms might be noticed several hours to several weeks after eating the food.

Some foodborne illnesses can be caused by chemicals or certain foods like poisonous mushrooms. In these cases, symptoms are usually noticed within minutes or hour of eating. Symptoms often include vomiting.



Highly Susceptible Populations

Although anyone can get sick from food handled unsafely, certain people usually get sick more often or have more serious illnesses. These people are called the Highly Susceptible Population. They are:

- Younger than 5 years old
- Older than 65 years old
- Pregnant
- Immune-compromised (due to illnesses such as cancer, medications, or other conditions)

Facilities like hospitals, child care centers, preschools, nursing homes, and adult care homes that provide food and services to a Highly Susceptible Population have additional food safety requirements. For more information, call your local health department.



Hazards in Food

The goal of food safety is to prevent the hazards that cause foodborne illness or injury. Most of the hazards in food are things you cannot see, smell, or taste.

A foodborne hazard is a physical, chemical, or biological object in food or drink that can cause injury or illness.

Hazard	Examples
Physical	Hard or soft objects in food that can cause injury. <i>Examples include broken glass, jewelry, adhesive bandages, staples, and fingernails.</i>
Chemical	Poisonous substances that occur naturally or are added during food handling. <i>Examples include cleaning agents, pesticides, and certain metals.</i>
Biological	Germs that cannot be seen without a microscope. <i>Examples include parasites, bacteria, and viruses.</i>

Physical Hazards

Physical hazards are objects in food that may cause injury if eaten. Physical hazards usually happen because of unsafe food handling practices or accidental contamination.

To prevent physical contamination:

- wash fruits and vegetables carefully
- look closely at the foods you prepare
- keep the food preparation area free of things that can fall into the food

Chemical Contamination

Chemicals may cause foodborne illness if they get into food. All chemicals such as soaps, cleaners, sanitizers, and pesticides must be stored away from food, utensils, and food preparation areas.

If a chemical needs to be stored in the kitchen area, the chemical must be stored below food or food-contact surfaces so that it does not drip onto food. If a chemical is not needed in the establishment, then the chemical should not be there at all.

All chemical containers must have easy-to-read labels and easy-to-follow directions.

Food Storage Containers

Some containers are not approved for food storage. Unapproved containers include garbage bags, galvanized cans, and containers once used for chemicals. Food may not be stored in these containers because chemicals can get into the food.

To keep your food safe from chemicals:

- only keep chemicals in the establishment that are approved for use near food
- store all chemicals away from food and work surfaces
- label all chemicals
- only use approved containers to store food
- make sure equipment is working properly
- make sure food is protected when you clean the kitchen

Biological Contamination

We live in a world with lots of microorganisms. Some microorganisms are good for us, but others can make us sick. This manual focuses on the harmful microorganisms that cause most foodborne illnesses: parasites, viruses, and bacteria.

Parasites

Parasites in food are usually tiny worms that live in fish, pork, or meat. They can be killed if frozen for a specific time or cooked to the right temperatures. Different kinds of parasites may be found in contaminated water.

Viruses

Although viruses are small, it only takes a few to make you sick. Unlike parasites, viruses are not destroyed by freezing. We've all had an illness from a virus. Chicken pox, the common cold, and influenza are all caused by viruses spread from people coughing or sneezing. The viruses that we get through food usually come from the unclean hands of someone that touched our food. Unfortunately, the person's hands were probably not washed well enough to remove microorganisms from vomit or feces. We call it the fecal-oral route of transmission. Everyone else calls it gross. As gross as it might be, you've probably heard of a few of the viruses we spread this way, like hepatitis A and Norovirus. To prevent these illnesses, we must be careful about personal hygiene, especially when working with food.

Bacteria

Unlike viruses, bacteria *can* grow in food. They are found everywhere and can grow when food workers are not careful about time, temperature, and cleanliness. Bacteria can spoil food or cause foodborne illness. Bacteria that cause foodborne illness come from sources like soil, animals, raw meat, and people. Although they can come from lots of places, these bacteria usually only grow in certain foods. These foods are called **potentially hazardous foods**.

Potentially Hazardous Foods

To keep your food safe from bacteria:

- keep potentially hazardous foods out of the Danger Zone (41°F-135°F)
- do not work with food when you are ill (diarrhea, vomiting, sore throat with fever, or jaundice)
- wash your hands after using the toilet
- use gloves or utensils to prevent bare hand contact when handling ready-to-eat food
- wash, rinse, and sanitize all equipment used for food preparation

Potentially Hazardous Foods include:

Animal Products

- meat, fish, poultry, seafood, eggs
- dairy products

Cooked Starches

- cooked rice, beans, pasta, potatoes

Fruits and Vegetables

- cooked vegetables
- tofu
- sprouts (such as alfalfa or bean sprouts)
- cut melons
- garlic or herbs bottled in oil



Part 2: Food Safety Defenses

Preventing Illness

Now that you know microorganisms cause almost all foodborne illnesses, let's talk about what you can do to prevent foodborne illness. Because people cannot usually see, smell, or taste microorganisms in food, it is important to practice food safety even when the food looks fine.

The next few pages will go over food safety concepts – **personal hygiene, temperature control, cross contamination, inadequate cooking, and foods from approved sources** – that must be combined to keep food safe.

Personal Hygiene

Food workers, even if they look and feel healthy, may accidentally spread harmful microorganisms to food if they do not have good hygiene. **Food workers with good personal hygiene help keep microorganisms from getting into food.**

Proper food worker hygiene includes:

- washing your hands
- not working with food when you are sick
- using clean gloves and/or utensils when handling ready-to-eat food
- keeping fingernails trimmed so hands can be easily cleaned

Worker Health

A healthy food worker is one of the most important factors in preventing foodborne illness. When you feel sick, you should not work with food. The microorganisms making you sick may be spread to the food and other people.

Food workers may not work with food if they have:

- diarrhea, vomiting, or jaundice
- diagnosed infections that can be spread through food such as *Salmonella*, *Shigella*, *E. coli*, hepatitis A, or Norovirus
- infected, uncovered wounds
- sore throat with fever

Food workers must tell the Person in Charge when they are sick. **Sick food workers should go home.** If sick food workers cannot go home, they may be given duties that do not involve handling food or clean food-contact surfaces or utensils. These other duties include taking out the trash, mopping, sweeping, cleaning restrooms, or bussing the dirty items off tables.

Hand washing

Clean hands are the most important food safety tool; but just because your hands look clean, it doesn't mean they don't have microorganisms on them. Hand washing gets rid of the microorganisms on hands that can make people sick. **It is important to wash your hands often throughout the day, even when they look clean. Washing your hands often is the most important thing you can do to keep microorganisms out of your body and out of the food you prepare.** Food workers must know when and how to wash their hands.

When to Wash

Food workers are required to wash their hands *before* they begin food preparation and any time hands may be contaminated, such as:

- after using the toilet
- after handling raw meat, fish, or poultry
- after handling garbage or dirty dishes
- after taking a break, eating, drinking, or smoking
- after sneezing, coughing, or blowing the nose
- after using chemicals
- after handling money or a cash register

Hand Sanitizers

You may use hand sanitizers only after washing your hands if you'd like, but you may not use them instead of washing your hands.

How to Wash Your Hands Properly:

1. Wet Hands

2. Use Soap

3. Scrub Vigorously
for 20 Seconds

4. Rinse with Warm Water

5. Dry

6. Use Towel to Turn Faucet Off



Ready-To-Eat Foods and Bare Hand Contact Prohibition

Even when food workers wash their hands well, they are not allowed to touch ready-to-eat foods with their bare hands. This is to keep microorganisms that might remain on the hands from getting onto ready-to-eat foods.

Ready-to-eat foods are foods that are served without additional washing or cooking to remove microorganisms.

Ready-to-eat foods include:

- washed produce that is eaten raw such as sliced fruit and salads
- bakery or bread items such as cookies, breads, cakes, and pies
- foods that have already been cooked such as pizza and hamburgers
- foods that will not be cooked such as cheese and snack mixes

Food workers must use utensils such as tongs, scoops, deli papers, or single-use gloves to keep from touching ready-to-eat foods.

For example, tongs may be used to put sliced vegetables into salads and scoops should be used to get ice out of an ice bin. Single-use gloves may be used to prepare foods that need to be handled a lot, such as when making sandwiches, slicing vegetables, or arranging food on a platter. Gloves must be changed often to keep the food safe. **Gloves must be worn if you have sores, bandages, or cuts on your hands and you're working with food.**

Important Rules for Using Gloves:

- wash hands before putting on or changing gloves
- change gloves that get ripped
- change gloves that might be contaminated
- change gloves between working with different foods
- throw gloves away after use
- never wash or reuse gloves



Eating, Drinking, and Smoking

Food workers may not eat, drink, or use any type of tobacco in food preparation areas. This is to prevent spills onto food and to reduce the chance of contamination.

Personal Habits Affect Food Safety

Jewelry: Jewelry can hide microorganisms that cause foodborne illness and make it hard to wash hands. Jewelry can also fall into food. While preparing food, food workers must remove watches, rings, bracelets, and all other jewelry on the arms or hands.

Personal Items: Personal items like medicine, coats, and purses must be stored away from food, dishes, and linens.

Fingernails: Fingernails must be trimmed so they are easy to clean.

Hair Restraints: Hair restraints are intended to keep hands out of hair and hair out of food. Hair must be effectively restrained whenever you are working around food or food preparation areas. Hair restraints include hairnets, hats, barrettes, ponytail holders, and tight braids.



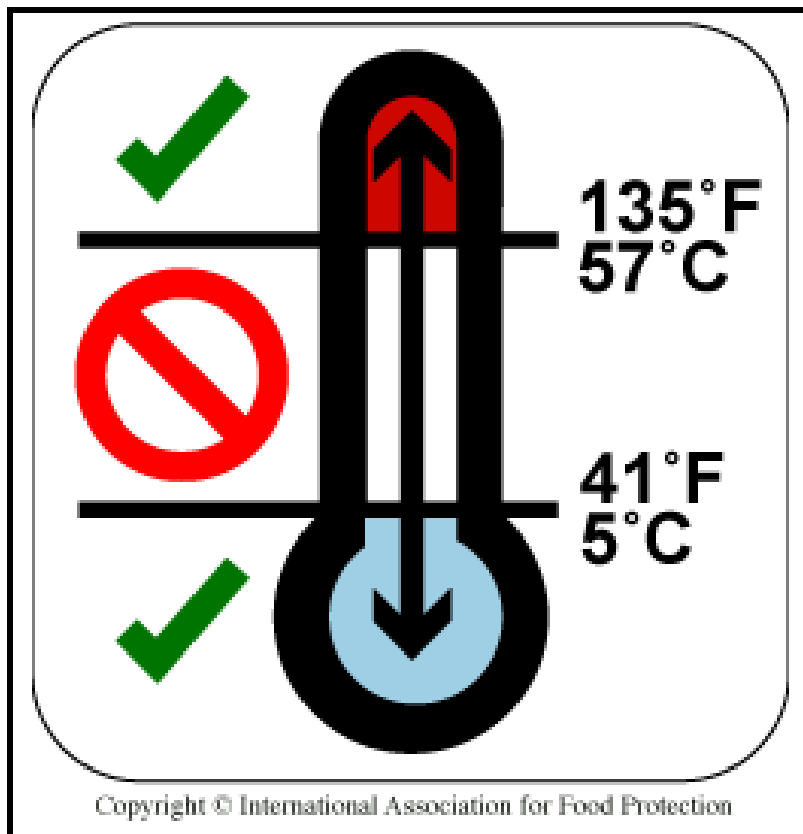
Temperature Control

Proper temperatures are required for the safety of potentially hazardous foods. **A thermometer should be used to make sure that food is cooked, cooled, delivered, and stored at the correct temperature.** Most bacteria do not grow in hot or cold temperatures. To keep food safe, cold foods must be kept at 41°F or colder and hot foods must be kept at 135°F or hotter. **The range of temperature between 41°F - 135°F is called the Danger Zone.** When potentially hazardous foods are left in the Danger Zone, bacteria can grow quickly and can make people sick.

Time is ticking... By the time you begin to prepare it, food has been through a lot of steps. It has been grown, shipped, purchased, received, and stored before you begin preparation. You may thaw, mix, cook, cool, serve, or reheat it. All of the time that the food spends in these steps adds up and helps bacteria grow to dangerous numbers. Work with food quickly to keep it out of the Danger Zone.

When you are preparing food, only prepare a manageable amount of the food at a time. Keep the rest of the food hot or cold until you're ready to prepare it. **If the food has been left out at room temperature, or you do not know how long it has been in the Danger Zone, you should throw the food away-** it may not be safe to eat.

Danger Zone 41°F - 135°F

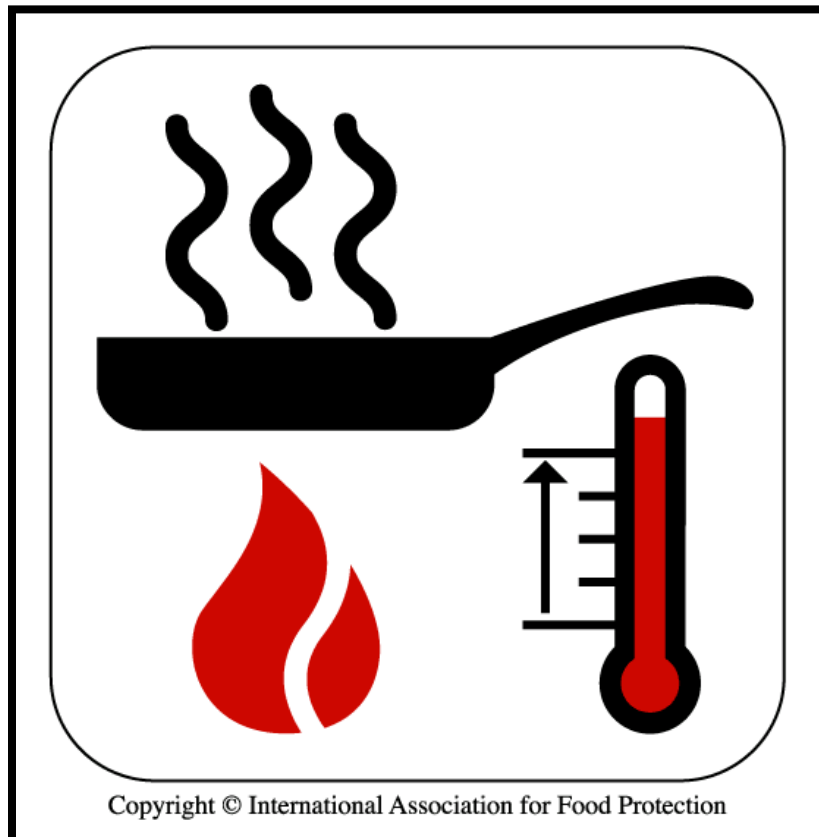


Cooking

Cooking food to the right temperature is the best way to kill microorganisms that might be in the food. Temperatures are to be taken with a food thermometer that is inserted into the thickest part of the food. Cooking temperatures depend on the type of food and the cooking time. For proper cooking times and temperatures, see the chart below.

Cooking Temperatures

▪ Poultry (chicken and turkey)	165°F (for 15 seconds)
▪ Stuffed foods or stuffing	165°F (for 15 seconds)
▪ Casseroles	165°F (for 15 seconds)
▪ All reheated potentially hazardous foods	165°F (for 15 seconds)
▪ Hamburger/Ground beef	155°F (for 15 seconds)
▪ Sausage /other ground meats	155°F (for 15 seconds)
▪ Eggs	145°F (for 15 seconds)
▪ Fish	145°F (for 15 seconds)
▪ Lamb	145°F (for 15 seconds)
▪ Vegetables that will be hot held	135°F (for 15 seconds)
▪ Rare beef roasts	130°F (for 15 seconds)



Reheating

Food that is cooked and then cooled may be reheated later to be served again. Properly cooled foods that will be served immediately may be reheated to any temperature. **Cold food that will be hot held must be reheated to at least 165°F quickly.**

Microwave

All foods reheated in a microwave must be heated to at least 165°F. The food must be covered to maintain moisture, stirred at least once during cooking, and allowed to stand covered for two minutes before serving. Because microwave ovens do not cook foods evenly, it is important to measure the food's temperature in several places.

Keep Hot Foods Hot

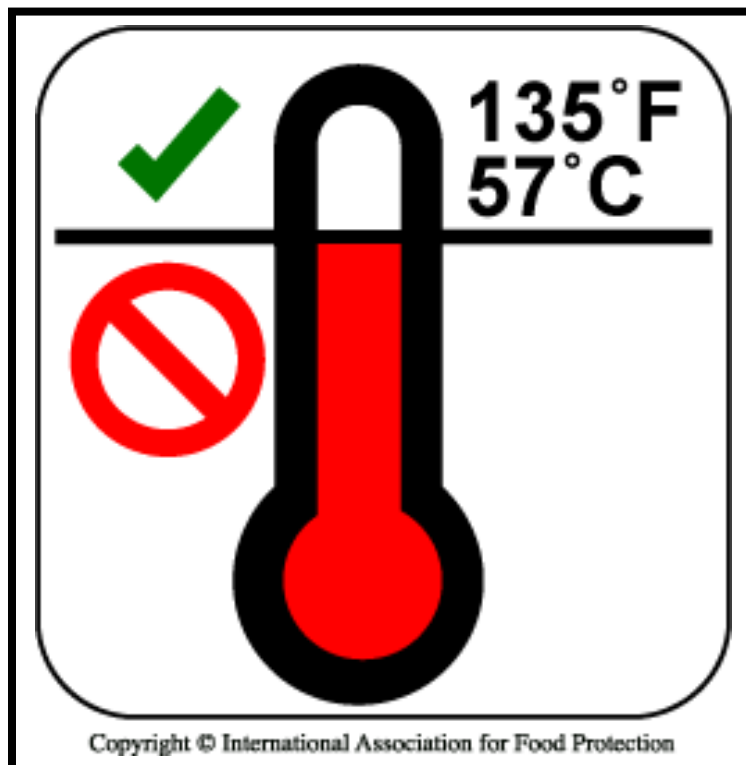
Hot Holding (135°F or hotter)

Because cooking does not kill all microorganisms, potentially hazardous food must be held outside of the danger zone. This way the surviving bacteria will not multiply.

Use a thermometer to check the temperature of the food often. Hot food must be kept at 135°F or hotter.

Tips for keeping food hot:

- cover pans
- stir food often to distribute heat
- never mix cold foods with hot foods



Keep Cold Foods Cold

Cold Holding

Remember, bacteria grow quickly when food is left in the Danger Zone. Keep cold food cold in a refrigerator, in/on ice, or some other approved method to keep bacteria from growing. When using ice to keep food cold, the ice must surround the container to the top level of the food. **Cold food must be kept 41°F or colder.**

Thawing

Frozen foods must be thawed safely to keep bacteria from growing.

There are three safe methods for thawing food:

- in the refrigerator (put frozen food in the refrigerator until it is thawed)
- submerged under cold running water (place the food in cool, running water until it is thawed)
- as part of the cooking process or in the microwave

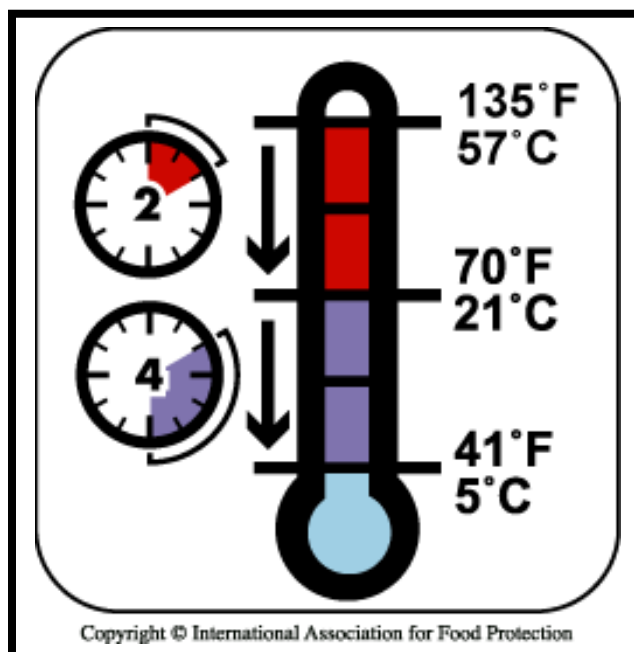
Cooling

Cooked leftovers that were not served to customers may be cooled to be served later. Because bacteria can grow quickly in cooling food, cooling is often the riskiest step in food preparation. **It is important to cool food through the Danger Zone as fast as possible to keep bacteria from growing.** Please take cooling seriously; some bacteria are not destroyed by reheating temperatures.

Suggested cooling methods include:

- using shallow pans (it is recommended that the food be uncovered and no more than 2 inches deep)
- cutting large portions of food into smaller portions (it is recommended that the food be uncovered and no more than 4 inches thick)
- using ice as an ingredient or stirring food with an ice wand

Food must cool from 135°F to 70°F in 2 hours and from 70°F to 41°F or lower in 4 hours- adding up to a total of 6 hours. This is called the Two-Step Cooling Process.



Prevention of Cross Contamination

Cross contamination is the spread of bacteria and other microorganisms from one surface to another. Cross contamination happens in the food establishment when harmful bacteria and other microorganisms from raw foods get onto other foods. When blood or juices from raw meats get onto a counter, cutting board, utensils, or hands, bacteria can spread to other food. **It is important to keep raw meat away from other food.**

Tips to avoid cross contamination:

- wash hands after handling raw meat
- wash and sanitize all food-contact surfaces that touch raw meat
- prepare raw meat in an area away from other foods
- use a separate cutting board for raw meat
- store raw meat below other foods in the refrigerator and freezer
- store meat with a higher cooking temperature (like chicken) *below* meats with lower cooking temperatures (like fish)

Cleaning and Sanitizing

Cleaning uses soap and water to remove dirt and particles from surfaces. Sanitizing uses chemicals or heat to reduce the amount of harmful microorganisms to a safe level. It is important to remember that an item may look clean, but harmful microorganisms may still be present. **Food-contact surfaces should be washed, rinsed, and sanitized after each use.**

Other areas in the food establishment such as floors and walls should also be kept clean.

Sanitizers

Sanitizers are chemicals used to kill microorganisms. Sanitizers must be mixed by following the directions on the label. Soap should not be added to sanitizers. Use test strips to make sure the sanitizer is not too strong or too weak.

Wiping Cloths

Wet wiping cloths can be used to sanitize work surfaces that have been cleaned and rinsed.

Tips for using wiping cloths:

- store wiping cloths in clean sanitizer
- use a different wiping cloth for cleaning up after preparing raw meat
- use different wiping cloths for food and non food-contact areas
- clean and rinse dirty wiping cloths before putting them back into the sanitizer
- use test strips to check the sanitizer strength

Food Sources

All food served to customers must come from a source approved by the local health department. You may not serve food prepared or canned at home.

Meat, Poultry, and Dairy Products

Meat, poultry, and dairy products must be inspected by the United States Department of Agriculture or the Idaho State Department of Agriculture.



Shellfish

Shellfish like clams, oysters, or mussels must have an identification tag attached to the container. The tags must be kept for 90 days after the shellfish is sold or served.

O	HARVESTER IDENTIFICATION NO.	
	HARVEST DATE	
	HARVEST LOCATION	
	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.		
<small>U.S. Department of Agriculture, Food Safety and Inspection Service, Shellfish Inspection and Control Division, 1400 Independence Avenue, SW, Washington, DC 20250-4700</small>		



Receiving Food

Food should not be spoiled. Packaged, frozen, or canned foods must be returned or thrown away if they are opened, rusty, or severely damaged. Potentially hazardous food should be received at 41°F or cooler. Do not accept food delivered at an unsafe temperature or in an unsafe condition.



Pests like rodents, cockroaches, and flies must be kept out of food areas because they may spread germs.

To keep pests out of food establishments:

- keep doors closed or screened and cover holes in walls
- cover garbage cans with tight fitting lids and throw away used boxes
- keep food covered and clean all spills quickly

Cleaning Supplies and other Chemicals

It takes more than soap and water to keep a food establishment clean and safe.

When using or storing chemicals and cleaning supplies always:

- know what the directions say- read the label
- keep all chemicals away from food
- label all chemicals stored in generic containers
- only used pesticides that are approved for food establishments



Key Points to Remember

- wash you hands often- and wash them well
- wear gloves or use some other method to prevent bare-hand contact with ready-to-eat food
- work only when you are healthy- Do NOT work when you are sick
- keep food out of the Danger Zone (41°F-135°F)
- cook foods until they reach the minimum internal temperature for at least 15 seconds
- prevent cross contamination by properly storing foods and cleaning equipment
- store all chemicals away from food, utensils, and equipment



Food Worker's Comprehension Quiz

- T / F** 1. You can help prevent foodborne illness by washing your hands often and well by using warm running water, soap, and paper towels.
- T / F** 2. After washing your hands, it is alright to wipe your hands on your apron.
- T / F** 3. It is okay to go to work if you have a fever and a sore throat, but not if you have diarrhea.
- T / F** 4. Having a bite to eat is okay if you are only washing dishes in the back.
- T / F** 5. Soap and hot water are not needed for washing your hands properly.
- T / F** 6. Potentially hazardous foods include chicken, beef, fish, cooked pasta, and cut melons.
- T / F** 7. The "Danger Zone" is between 38°F – 130°F.
- T / F** 8. The proper order for washing dishes is wash, rinse, sanitize, and air dry.
- T / F** 9. Salmonella is a female salmon.
- T / F** 10. Hepatitis A and Norovirus are viruses that can be spread by a sick employee.
- T / F** 11. You can use any chemical you want to take care of a fly problem.
- T / F** 12. The proper cooking temperature for chicken is 165°F for at least 15 seconds.
- T / F** 13. Shallow pans cool foods quicker than deep pots.
- T / F** 14. Cold holding is done at 55°F.

- T / F** 15. You can touch salads or sandwiches with your bare hands.
- T / F** 16. Raw meats should be stored below ready-to-eat foods.
- T / F** 17. You do not need to sanitize food equipment.
- T / F** 18. After you eat, blow your nose, or use the restroom, you should wash your hands.
- T / F** 19. You can use a towel to dry dishes after they are cleaned and sanitized.
- T / F** 20. Chemicals need to be labeled.
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Food Worker Training Confirmation Form

Name of Food Worker: _____

The Idaho Food Protection Program's Employees Guide to Food Safety has been reviewed and the questions on the Food Workers Comprehension Quiz have been either answered correctly or to the satisfaction of the Food Establishment's Person-In-Charge (PIC).

Supervisor/PIC Signature

Date

Food Worker Illness Policy Agreement Form

Food Worker Illness Policy Agreement

Name of Food Worker: _____

I agree to report to my Supervisor/PIC if I am displaying any of the following symptoms:

- Diarrhea
- Vomiting
- Jaundice
- Sore throat with fever
- Infected and/or draining cuts or wounds

And, I agree to report to my Supervisor/PIC if I or someone I have had contact with has been diagnosed with one of the following illnesses:

- Norovirus
- E-coli* O157:H7 or another EHEC/STEC
- Shigella* ssp.
- Salmonella* Typhi
- Hepatitis A virus

Food Worker Signature _____ Date _____

Supervisor/PIC Signature _____ Date _____