Yavapai County Environmental Health

Food Worker Training

Based on the 2017 Food and Drug Administration Food Code that was adopted by Yavapai County in 2018, effective 1/1/2019

READ THIS!

Must complete before taking the required written test
Testing is ONLY done at the Prescott office!!

1. **Read workbook and *fill out all the review questions* in the back of book.**
2. **Return the *completed workbook* to the PRESCOTT Environmental Health office - Walk-In Testing ONLY available at 1090 Commerce Dr, Monday-Friday (except holidays) between 8 am -11am and 1pm – 4pm**
3. **Bring cash, check or money order – NO CREDIT/DEBIT CARDS**
   - **$15.00 for 2-year card**
4. **Bring proof of legal US residency-examples:**
   - **U.S. Drivers License** All States except: Hawaii, Illinois, Maine, Maryland, New Mexico, Texas, Utah and Washington. (Washington "Enhanced Version" license is acceptable)
   - **Original U.S. Birth Certificate**
   - **US Passport, Work Visa, Permanent Residency Card, etc.**

Walk-In Testing ONLY provided at PRESCOTT Office:
1090 Commerce Dr. Prescott AZ 86305
928-771-3149

10 S. 6th St Cottonwood AZ 86326
928-639-8138

3212 N. Windsong Prescott Valley AZ 86314
928-771-3377

www.yavapaiaz.gov/chs/EH

December 2019

Welcome and 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.** The information in this manual will give you tips to safely store, prepare, and serve food at work and home. ***Note: Study Guide question pages in this booklet must be completed before you can take the written test.***

After studying this manual, you will be able to:
1. Understand there are ***many*** causes of foodborne illness
2. Identify the importance of *clean* hands and *healthy* food workers
3. Know how to avoid the Danger Zone to help prevent foodborne illness
4. Learn several tips to help you remember food safety basics
5. Recognize ***your*** responsibility as a food worker

Approximately **48 million people** in the United States will have a foodborne illness each year. Of those people, 128,000 will have to be hospitalized, and about *3,000* of them will die.

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, do not hesitate to call your local health department. Remember that food workers using proper food safety practices are the most important ingredient in safe food.

Food Safety Tip: Food safety is important at home but *REQUIRED* at work.

Highly Susceptible Populations

Highly Susceptible Populations: Although anyone can get sick from food handled unsafely, certain people usually get sick more often or have illnesses that are more serious. 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 cancer, AIDS, Diabetes, certain medications, or other conditions)

Facilities like hospitals, childcare 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 the health department.

Hazards in Food

Physical: Hard or soft objects in food that can cause injury, such as broken glass, fingernails, bandages, etc.

Chemical: Poisonous substances that occur naturally or are added during food handling, such as pesticides, cleaning products and certain metals. Other items include prescription or non-prescription drugs, makeup and personal hygiene products.

Biological: Germs that cannot be seen without a microscope, such as bacteria, viruses, and parasites. Biological hazards cause most foodborne illnesses. We live in a world full of germs. Most germs are good for us, but some can make us sick. Let us take a closer look.

Parasites: Usually tiny worms that live in fish, pork or meat. They can be killed if properly frozen or cooked to the right temperatures.

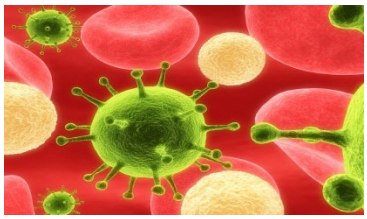
Viruses: Although viruses are small, it only takes a few to make you sick. We have all had an illness from a virus. Chicken pox, the common cold, and influenza are all caused by viruses spread from people coughing or sneezing. The viruses that we get through food usually come from the unclean hands of someone that touched our food. Unfortunately, the person's hands were probably not washed well enough to remove germs 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 have probably heard of a few of the viruses we spread this way, like hepatitis A and Norovirus. To prevent these common illnesses, we must be careful about personal hygiene, especially when working with food.

To keep your food safe from viruses:

- **do not work with food** when you have *diarrhea, vomiting, or fever*
- **wash your hands *twice*** after using the toilet – once in the *restroom*, and then again when you get back in the *kitchen*
- use *gloves* or *utensils* instead of bare hands when handling *ready-to-eat 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 **Time/Temperature Control for Safety Foods (TCS foods,) previously referred to as POTENTIALLY HAZARDOUS FOODS**. Keep TCS, potentially hazardous foods, hot or cold to slow bacterial growth.

Time/Temperature Controlled for Safety Foods (TCS) *(formally referred to as 'Potentially Hazardous')* Include:

Animal Products	Cooked Starches	Fruits and Vegetables
Meat, fish, poultry, seafood, eggs Dairy products	Cooked rice, beans, pasta, potatoes	Cooked vegetables • Tofu Cut melons Garlic or herbs bottled in oil Cut leafy greens, sprouts Raw tomatoes, cut, sliced, diced or used as an ingredient

Food Allergies

Food allergies are an increasing food safety and public health issue, affecting approximately *4%* of the U.S. population, or twelve million Americans. The majority of food allergies are linked to 8 food items: **milk, eggs, soy, wheat, peanuts, tree nuts, fish and shellfish**.

Allergic reactions can occur within minutes and include symptoms such as itchy skin, tingly mouth, rashes, hives, vomiting, stomach pain, and or diarrhea. More severe reactions can cause anaphylactic shock or even death.

There is NO cure for food allergies. The only *prevention* is to avoid the food that causes it and to *avoid cross contamination* with other foods.

Preventing Foodborne Illness

Now that you know germs cause almost all foodborne illnesses, let's talk about what you must do to keep germs from causing illness through food. Because people cannot usually see, smell, or taste germs in food, it is important to practice food safety even when the food looks fine. The next few pages will go over the top three food safety concepts – personal hygiene, temperature control, and cross contamination – that must be combined to keep food safe from germs.

Personal Hygiene

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

- not working with food when you are sick
- washing your hands the right way and at the right time
- using clean gloves and utensils when handling food
- keeping fingernails trimmed so hands can be easily cleaned

A *healthy* food worker is one of the most important ingredients in preventing foodborne illness. When you feel sick, you should not work with food. The germs 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 *Norovirus*, *Salmonella*, *Shigella*, shiga toxin producing *E. coli*, or *Hepatitis A, typhoid fever*
- infected, uncovered wounds
- continuous sneezing, coughing, or runny nose

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. These other duties include taking out the trash, mopping, sweeping, cleaning restrooms, or bussing tables.

Handwashing

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

When to Wash

Food workers are required to wash their hands before they begin food preparation and any time hands may be contaminated. The times of heaviest contamination include:

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

How to Wash Your Hands

You must wash your hands at a designated handwashing sink that has hot and cold running water, soap, and paper towels (or other single-use drying method). From start to finish, all food workers must wash their hands for at least 20 seconds. *<u>If it doesn't take at least 20 seconds, it doesn't count</u>*.

<u>Step 1:</u> Wet your hands with warm water so the soap will work.

<u>Step 2:</u> Apply soap and scrub for *10 to 15 seconds*. Be sure to scrub under the fingernails, between the fingers, and all the way up the lower arm. Time yourself.

<u>Step 3:</u> Rinse hands to send the soapsuds and germs down the drain.

<u>Step 4:</u> Dry hands completely with a paper towel and use the paper towel to turn off the water.

Hand Sanitizers

Hand sanitizers work best on hands that are clean. In food service, you may use hand sanitizers after washing your hands if you'd like, but you may not use them instead of washing your hands.

Preventing Bare Hand Contact with Ready-to-Eat Foods

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 germs that might remain on the hands from getting onto ready-to-eat foods.

Ready-to-eat foods include:

- washed produce that is eaten raw such as sliced fruit, salads, garnishes
- bakery or bread items such as breads, cakes, pies, tortilla chips
- foods that have already been cooked such as pizza, hamburgers, hot dogs, tacos
- foods that will not be cooked such as sandwiches, sushi, deli salads

Glove Use and Other Options:

Food workers must use utensils such as tongs, scoops, deli papers, or disposable gloves to keep from touching ready-to-eat foods. For example, tongs should be used to put sliced vegetables into salads and scoops should be used to get ice out of an ice bin.

Disposable 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. It is important to remember that *gloves are used to protect the food from germs*, not to protect your hands from the food. ***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 are working with food.

Important Rules for Using Gloves:

- Wash hands before putting on gloves
- Change gloves that get ripped
- Change gloves that might be contaminated-
  never wash or reuse gloves.
- Change gloves between working with raw and ready-to-eat foods
- Throw gloves away after use
- Wash hands after taking gloves off

Eating, Drinking, and Smoking

Personal Habits Affect Food Safety

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. Exception: Food workers may drink from a covered container with a straw. The drink must be stored in a designated area below/away from food or food-contact surfaces.

Temperature Control ***(calibrate your thermometer to ensure proper temperature)***

Proper temperatures are required for the safety of time/temperature controlled for safety (TCS) foods

Danger Zone* 41˚F - 135 ˚F

To keep food safe, *cold foods must be kept* ***41°F or colder****. Hot foods must be kept* ***135°F or hotter****.* The range of temperatures *between* ***41°F - 135°F*** is called *the Danger zone.*

When TCS food are left in the danger zone bacteria can grow fast or make poisons that can make people sick.

Time is ticking…

By the time you begin to prepare it, food has been through many 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 could help bacteria grow to dangerous numbers.

Work with food quickly to keep it out of the Danger Zone. When you are preparing food, only use a small amount of food at a time. Keep the rest of the food hot or cold until you are ready to prepare it. If the food has been forgotten and 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.

Date Marking

Date marking is a way to ensure food safety. It is an identification system for prepared *TCS food* that is held in refrigeration for *more than 24 hours*. The system helps to identify when the food was prepared and when it needs to be discarded *(within 7 days).*

Keep Hot Foods Hot

Cooking food to the right temperature is the best way to kill germs that might be in the food. Temperatures must 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 on page 10.*

Microwave

All raw food products cooked in a microwave oven 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 food evenly, it is important to measure the food's temperature in several places. These procedures are also used for foods that are reheated in a microwave.

Hot Holding (135°F or hotter)

Because cooking does not kill all bacteria, *cooked TCS foods must be kept hot until served.* Steam tables, soup warmers and other hot holding units must be turned on and heated before hot food is put into them. Use a thermometer to check the temperature of the food. HOT food must be kept *135°F or hotter*.

<u>Tips for keeping food hot:</u>

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

Reheating

Food that is cooked and then cooled may be reheated later to be served again.
Food must be reheated to at least 165°F quickly (within two hours).

Cold Holding (41°F or colder)

Remember, bacteria grow quickly when food is in the Danger Zone. Keep cold food cold in a refrigerator, in ice, or 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. Unsafe thawing can let bacteria grow in the outside layers of the food while the inside is still frozen.

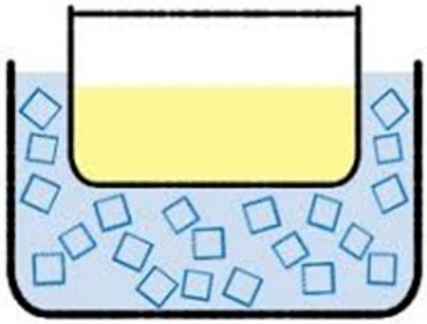
There are three safe methods for thawing food:

In the refrigerator: Put frozen food in the refrigerator until it is thawed. This method is the slowest and the safest. Be sure that raw meats are on the bottom shelf or in a container so they do not drip onto other foods.

Submerged under cold running water: Keep the food covered in cold (70°F or colder), running water until it is thawed.

As part of the cooking process or in the microwave: Small items, such as frozen burritos, may be thawed while they cook.

Cooling



Cooked foods that were not served to customers may be cooled to be served again. 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 slow bacterial growth. **Please take cooling seriously*;*** certain bacteria can make poisonous toxins that are not destroyed by reheating temperatures.

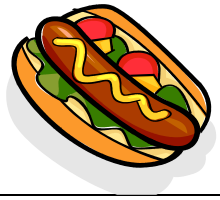
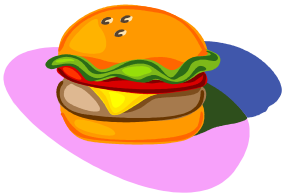
TCS food must cooled from 135°F to 41°F or colder within a *total of 6 hours*, however, **it must be cooled from 135°F to 70°F within the first 2 hours.** There are several methods to cool foods quickly:

Shallow Pan Method: To cool in shallow pans, place hot foods in pans 2-4 inches deep. Afterwards, cool foods in the refrigerator. Be sure to allow enough space for air circulation. **Do not cover until the food is cold.** Solid food items such as roasts can be cut into smaller pieces to cool more quickly.

Ice Bath Method: To cool in an ice bath, place the food container in a larger container and surround with ice and water. Stir the food often and refresh the ice as needed. Monitor the temperature to ensure the food is cooling properly.

Ice Wand Method: To cool with an ice wand, place the ice wand in container of hot food that is inside a refrigerator. Stir the food often and monitor the temperature to ensure the food is cooling properly.

Cooking Temperatures

135°F		**- Hot holding, including** **- Vegetables that are held hot** **- Prepackaged ready-to-eat foods**
145°F		**- Eggs** **- Fish/Seafood** **- Beef** **- Pork**
155°F		**- Ground or chopped meats-such as hamburger and sausage**
165°F		**- Poultry (chicken and turkey)** **- Stuffed foods or stuffing** **- Casseroles** **- All raw animal products cooked in a microwave** **- All reheated foods**

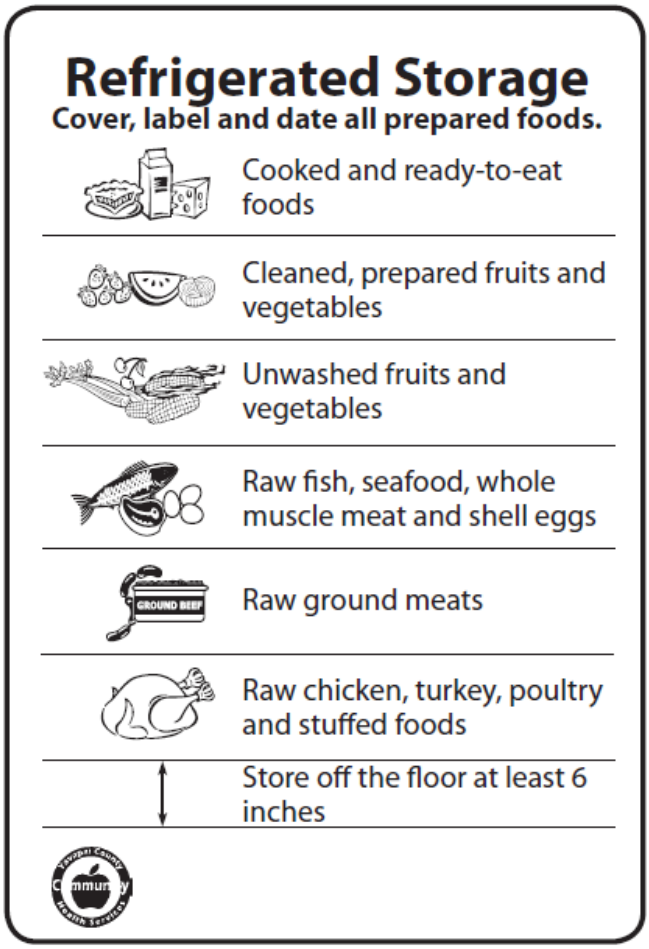
Prevention of Cross Contamination

Cross contamination happens when bacteria from foods spread onto other foods. Raw meat is a main source of cross contamination but produce can be involved, as well. When blood or juice from raw chicken or other meat gets 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 a lower cooking temperature (like fish).

Safe Food Storage



Cleaning and Sanitizing

Cleaning and sanitizing are not the same. Cleaning uses soap and water to remove dirt and food from surfaces. Sanitizing uses chemicals or heat to kill germs. It is important to remember that surfaces that look clean may still have germs on them that you cannot see. Sanitizing reduces these germs to safer levels.

Food Contact surfaces should be washed, rinsed, sanitized and allowed to air dry after each use to remove germs that can cause illness.

Sanitizers

Sanitizers are chemicals used to kill germs. Sanitizers must be mixed by following the directions on the label. Soap should not be added to sanitizers. The most common sanitizer used in food establishments is a bleach solution made by mixing 1 teaspoon unscented bleach with 1 gallon of cool water. Quaternary Ammonium (pro-quat) and Iodine are also acceptable.

Use test strips to make sure the sanitizer is not too strong or too weak.

Chlorine 50-200ppm
Quaternary Ammonium 200-400ppm
Iodine 12.5-25ppm

Wiping Cloths

Wet wiping cloths can be used to sanitize work surfaces that have been cleaned and rinsed. Wiping cloths should be stored in sanitizer when they are not in use.
The sanitizer should be changed often because grease, dirt and food pieces make the sanitizer less effective.

Tips for using wiping cloths:

- store wiping cloths in clean sanitizer
- use a different wiping cloth for cleaning up after raw meat
- use different 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

Washing Dishes by Hand

All dishes and food-contact surfaces must be washed, rinsed, and sanitized between uses. When washing dishes by hand, follow this procedure:

- **CLEAN** and sanitize the sink
- **SCRAPE** leftover food into the garbage
- **WASH** dishes in hot, soapy water in the first sink
- **RINSE** dishes with clean, hot water in the second sink
- **SANITIZE** by soaking the dishes in the third sink filled with room temperature water and an approved sanitizer
- **AIR DRY** all dishes and utensils. **Do not use towels to dry dishes.**

Washing Dishes in a Dishwasher

Some establishments have a mechanical dishwasher that will wash, rinse, and sanitize the dishes. When using a dishwasher, you must scrape leftover food from the dishes before putting the dishes on the rack. *Dishwashers use chemicals or heat to sanitize.*
Food workers that use the dishwasher must be trained on how to make sure the machine is washing and sanitizing properly. Temperature gauges and sanitizer levels must be monitored.

* *Use test strips to make sure the sanitizer is not too strong or too weak.*

Review

1. What are the 4 susceptible populations?

   1. _____ 2. _____ 3. _____ 4. _____

2. Approximately how many people die each year from foodborne illnesses? _____

3. Name the 3 types of hazards in food.

   1. _____ 2. _____ 3. _____

4. What are 3 symptoms of illness that you should report to your employer?

   1. _____ 2. _____ 3. _____

5. Name 3 types of time/temperature controlled for safety (TCS) foods?

   1. _____ 2. _____ 3. _____

6. When should you wash your hands?

   1. _____ 2. _____ 3. _____ 4. _____

      a. How long should you wash your hands? _____

7. What are ready to eat foods? _____

8. Name 3 ways to prevent touching ready to eat foods with your bare hands.

   1. _____ 2. _____ 3. _____

9. True or False, you must wash your hands before and after glove use? _____

10. What is the temperature danger zone? _____°F to _____°F

11. Cold foods should be kept at _____°F or below.

12. Hot foods should be kept at _____°F or above.

13. The correct cooking temperature for poultry is _____°F.

14. The correct cooking temperature for ground or chopped meats is _____°F.

15. Time/Temperature controlled for safety foods must be cooled from 135°F to 41°F or lower within a total of ____ hours, however, it must be cooled from 135°F to 70°F within the first ____ hours.

16. Name 2 ways to cool foods quickly. 1. _____ 2. _____

17. True or False: Wiping cloths should be stored in the sanitizer solution._____

18. When using test strips to check your sanitizer concentration, the proper amount of chlorine is _____ to _____ parts per million.

19. Name three types of chemical sanitizers.
    1. _____ 2. _____ 3. _____

20. The correct way to wash dishes by hand is to first scrape dishes clean, then _____, then _____, then _____, and then allow dishes to air dry.

21. You should use _____ to make sure that all sanitizers are at proper strength.

- **Label the 'shelves' for each type of food to prevent cross contamination.**