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INTRODUCTION

Food safety is an important part of public health. If the food we eat is not handled properly, it can make us very sick or, in some cases, kill us. This booklet will help you understand your role in keeping food safe and how to reduce the chances of making food that will get people sick.

In Riverside County, it is required that anyone who works in public food service must get a Food Handler’s Certificate. You must do this within one (1) week of being hired. In order to get the certificate, you must pass a basic food safety exam. The exam has fifty (50) questions covering a number of food safety topics. You can take the exam at any of the Environmental Health offices. Please contact the office nearest you (see back cover) for dates, testing hours and current fees. Be prepared to show photo identification at the time the exam is given.

The information presented here is designed to help you with the exam and with your job as a food handler by giving you basic food safety knowledge. This booklet will also give you an idea of what things the health inspector will be looking for when they do an inspection.

You can use this booklet as a tool and a handy reference guide on the job, as well as in your own home. Food protection should be important to everyone, but as a food handler, you are also responsible for keeping food safe for the public every time you go in to work. Food also includes some things that you might not have thought about, like drinks, or ice. Mishandling of these things can make people very sick.
FOODBORNE ILLNESS

Our bodies need food to stay healthy and strong. Sometimes the food we eat can make us very sick if it is not made safely. When someone gets sick from something they eat or drink we call it a foodborne illness. Having a foodborne illness can feel a lot like the flu. If you had this you would probably complain of an upset stomach, vomiting, diarrhea, fever, and chills. Each time a person goes out to eat they trust that the food being served will not make them sick. YOU, the food handler, play a very important role in making sure that people do not get sick from the food and drinks served by you.

CAUTION          CAUTION          CAUTION

CONTAMINATED FOOD CAN MAKE YOU SICK!

So why does only some food make people sick? What makes it bad? Sometimes food can become unsafe when it has something in it or on it that is not normally a part of it. This is called contamination. Contaminated food is a common cause of foodborne illness. Here are different types of contamination:

1) Physical Contamination— happens when something you can see and feel gets into a food item. Some examples of this would be hair, glass or metal fragments, fake fingernails, or even flies!

2) Chemical Contamination— can occur when a chemical, like a cleaner, bug spray, or medication, gets into a food item. An example of this could be storing bleach or floor cleaner on the shelf above the food preparation table. One accidental bump and the bottle could spill on the food. If a person eats food that has been chemically contaminated, they could be poisoned.

3) Pathogenic Contamination—this is the kind of contamination that is the most dangerous because it is impossible to see. These tiny germs (pathogens) can end up on food and become thousands of germs. Some germs are more dangerous than others.
Pathogens are germs that cause disease and include bacteria, viruses, fungi, and protozoa. It’s hard to tell if food is contaminated with these types of germs. The food will look, smell, and taste normal; maybe even great. People will usually think that the food is okay and eat it, germs and all.

Each of these types of contamination could cause a foodborne illness but the most common cause by far is bacteria.

BACTERIA

Some of the most well known and most dangerous germs out there are bacteria. Babies, small children, pregnant women, the elderly, and those who are already sick are more likely to get sick because their immune systems are not as strong. Some of the more dangerous bacteria are strong enough to get even a healthy person very sick.

So how do bacteria get into food? Bacteria are everywhere and on everything! Some bacteria are more dangerous than others. Pathogenic bacteria, the bad bacteria, can be found naturally in most types of food. They can also live on the surfaces around the kitchen and even on YOU! That’s right, we all have these germs on our bodies most of the time. You might not even realize it since the germs are not visible. If you don’t protect the food, those germs will end up in someone’s meal.

CROSS-CONTAMINATION

Bacteria can be transferred to foods where they are not normally found. This is called cross-contamination. Cross-contamination happens when the bacteria from one type of food comes in direct contact with another type of food, causing foodborne illness. A good example of cross-contamination is using one cutting board for different types of food without washing it
between uses. Raw chicken is known for carrying lots of harmful bacteria. If raw chicken is placed on a cutting board, this bacteria will get all over the surface. If the same cutting board is used to cut vegetables, the bacteria will then be transferred to the vegetables. The vegetables are now contaminated with bacteria! Another way that food can become cross-contaminated is by food handlers themselves. In fact, anything and anyone that comes in contact with food has the potential to contaminate that food.

Most bacteria found in food can be killed by cooking. But cooking doesn’t always make food safe. Some bacteria produce a poison or **toxin** that can also cause foodborne illness. These toxins are not affected by the heat of cooking. That’s why you have to work hard to prevent bacteria and other contaminates from getting into the food in the first place.
EMPLOYEE HEALTH AND HYGIENE

We are all sources of bacteria and there are many ways that food handlers can contaminate food. Good personal hygiene practices, like daily bathing and constant hand washing, are extremely important. Bacteria can be spread when food handlers forget these rules and handle food the wrong way. Below is a list of things you can do to make sure that the food you are handling stays safe. These things might not seem like a big deal to you but they can be very dangerous if not followed.

- **Wash your hands! A LOT!**
- **Don’t wear jewelry!**
- **Keep Fingernails short!**
- **Cover open cuts and wounds!**
- **Keep your clothes clean!**
- **Keep your hair restrained!**
- **If you are sick, don’t work!**

HANDWASHING

One of the most important things you can do to prevent foodborne illness is wash your hands! Science has shown that when food handlers frequently wash their hands, with soap and warm water, most of the germs are removed and don’t make it into the food. Remember, whatever your hands touch will end up on the food unless you wash them.
ALWAYS wash your hands AFTER.....

- Using the restroom
- Sneezing or coughing
- Touching your face or hair
  - Smoking
- Using chemicals or cleaners
- Taking out the garbage
  - Eating

And BEFORE and AFTER.....

- Working with raw meats, poultry, or fish
- Any time hands may be contaminated

Before you wash your hands find the sink that is for handwashing. DO NOT use food preparation sinks or dishwashing sinks to wash your hands. The handwash sink should always have liquid soap and single use paper towels (or a hot air blower). It should never be blocked and needs to be easy to get to at all times.

So now we know where, why, and when we need to wash our hands but what about how? Did you know there is a “right way” to wash hands? Following these six (6) steps can help make sure that you are doing your part in keeping bacteria out of food.
SIX STEPS TO CLEAN HANDS

1) First, turn on the warm water (minimum of 100°F) and wet your hands under the running water.

2) Next, put some liquid handwashing soap in your hand.

3) Wash your hands for at least 15 seconds. It might be easy to time this by singing a song, like “Happy Birthday to You” two times in your head or saying the alphabet slowly. Rub your hands together to make a lather making sure to get in between all of your fingers and under your finger nails. Also, scrub the backs of your hands and all the way up to your elbows.

4) When you have finished, rinse the soap off with warm, clear water.

5) Dry your hands with a paper towel or hot air blower.

6) Use the paper towel to turn off the water so you don’t pick up more germs!
HAND SANITIZERS-NOT A SUBSTITUTE!

Hand sanitizer is a great addition to handwashing but should never be used instead. Always wash your hands!

GLOVES-NOT A SUBSTITUTE!

Wearing gloves when you make food is also a nice addition to handwashing but is not a requirement except in cases we will talk about below. Keep in mind that wearing gloves does not mean that you don’t have to wash your hands. Hands should be washed before putting on a fresh pair of gloves and after gloves are taken off. Also, gloves should be changed as often as hands would normally be washed. For example, if you are forming raw hamburger patties and you have gloves on your hands, you need to change the gloves AND wash your hands before you handle other types of food or equipment. If you do choose to wear gloves remember that they need to be approved for restaurant use. Disposable gloves may not be reused!

JEWELRY AND LONG FINGERNAILS-MAY REQUIRE GLOVES

When you are making food you should not wear jewelry that could get in the way or spread bacteria. State law says that if you wear anything more than just a plain wedding band, you must wear gloves when you are working with food. The reason for this is that jewelry has lots of small spaces where bacteria can hide. Food can become cross-contaminated if the bacteria from the jewelry touches the food. The same is true for fingernails. Nails should be kept clean, neatly trimmed and filed. Food handlers with long or fake fingernails must also wear gloves. Nail polish can chip off and fall into the food, so food handlers should not wear polish unless they also wear gloves.
CUTS AND OPEN SORES

Every human being carries bacteria in their body. This means you can be a source of contamination if you are not careful. If you have any cuts, open sores, or rashes on your hands or forearms you must cover them with bandages AND wear gloves when working with food. If not, the bacteria, blood or pus from your body can get into the food.

CLOTHES AND HAIR

You must wear clean clothes when working with food. Food that is spilled, splashed, or wiped onto clothing will let bacteria multiply. This bacteria could then get onto hands, equipment or food. Wear an apron to cover your clothes and change it whenever it gets dirty. Also, don’t wipe your hands on your apron or clothing. Remember, handwashing is the most important thing you can do to prevent contamination!

Any employee with long hair should either have it completely restrained or worn inside a hat or hair net so it doesn’t fall into food.

EMPLOYEE HEALTH

If you are sick, you can get everyone around you sick. This includes those whose food you are making. It is very important to stop handling food or utensils if you think you are sick. Food handlers that are coughing, sneezing, or have a runny nose that doesn’t stop should stay home or be moved to a job duty that does not involve food or utensils. For really bad illnesses, especially those that can be passed along through food, the food handler cannot come to work until they are no longer sick.

TIME AND TEMPERATURE

Now we know that some bacteria can be found naturally in food and others can get into food through bad food handling practices. Our bodies can usually fight off small numbers of bacteria. Bacteria become dangerous when they are given the chance to multiply.
It takes time for bacteria to multiply. In the right conditions, the number of bacteria can double as quickly as every 20 minutes! So, if you start off with one (1) germ, in 20 minutes it will split and you will then have two (2). After another 20 minutes the two (2) will become (4), then four (4) will become eight (8), and so on. At that rate there would be more than a billion germs after ten (10) hours. Some bacteria can get someone sick with just a few bacteria, especially if the person has a weak immune system.

![Bacteria Multiplying](image)

In the picture above you can see that, if bacteria are allowed to keep splitting, it doesn’t take long for food to become very dangerous. So how do we keep these bacteria from multiplying? How do we keep something we can’t even see under control? The answer is simpler than you might think.

**POTENTIALLY HAZARDOUS FOODS**

In order to keep growing, bacteria need several things: food, moisture, time, and a temperature that allows growth. If we can control at least one of these factors we can stop the bacteria from multiplying and keep the food safe. Typically, many of the foods we eat are very moist and are a perfect place for bacteria to grow. These foods are usually called “perishable” and can go bad if they are left out at room temperature. Another name for them is **potentially hazardous foods**, or PHF for short. Most bacteria can multiply quickly while living in or on PHF. Some examples of PHF are meat, seafood, dairy products, eggs, and even foods that have already been cooked. We have to handle PHF very carefully in order to limit the growth of bacteria.
The best way to keep bacteria from growing in PHF is to keep them at the right temperature. There are two ways that you can do this. You can either keep PHF cold at 41°F or colder or hot at 135°F or hotter. Most bacteria do not grow very well at colder temperatures and will be killed at temperatures above 135°F. The temperature range between 41°F and 135°F is called the “Temperature Danger Zone” because these are the temperatures where bacteria multiply quickly.

Sounds easy enough, right? Either keep the food cold or hot. So what can you, the food handler, do to make sure that PHF stay safe and out of the temperature danger zone? Well, you can’t tell by looking at food if it is hot or cold enough. And feeling it with our hands is not a good option either. Thermometers are the only way to know for sure if the food is at a safe temperature. The place where you work should have thermometers on hand to check temperatures. There should be a thermometer in every refrigerator to make sure that the food inside is at 41°F or colder. Keep in mind that refrigerator doors are opened and closed many times throughout the day and cold air comes out each time. In order to make sure that the food inside stays at 41°F or colder, the refrigerator should be set to a lower temperature, like 38°F or 39°F. It is also important to have clean probe thermometers so you can check the temperature inside of both hot and cold food. After all, the temperature inside of the food is most important and will be one of the main things the health inspector checks during their inspection.
FOOD PREPARATION

COOKING FOOD

By cooking food to the right temperatures most bacteria and other germs will be destroyed. This means that all parts of the food, even the inside, must reach a minimum of 145°F-165°F depending on the type of food. Refer to the table on the last page for proper cooking temperatures and cooking times for different foods.

You can use a probe thermometer to make sure that you have cooked food long enough. Stick the thermometer into the thickest part of the food to make sure that it is cooked all the way through. Remember to clean and sanitize the thermometer between uses.

REHEATING FOOD

Food that has already been cooked and cooled can be reheated and then served again. You must make sure that the food reaches 165°F when it is reheated. Only AFTER food has been cooked or reheated can it be placed in a steam table or other equipment for hot-holding at 135°F or above. Remember, the food must already be at 165°F before it is put into the hot-holding unit.

COOLING FOOD

You may want to save food that you have cooked so you can serve it again later. This is okay but the food will need to be cooled to 41°F quickly. This can be hard if you have a lot of food to cool. For example, if you have a large pot of hot refried beans and you put it into the walk-in cooler, the beans close to the sides of the pot will get cold quickly, but the beans in the center will stay in the temperature danger zone, sometimes for days. As we learned earlier, these bacteria multiply very fast. Food that
stays out of temperature for a long time will grow dangerous levels of bacteria. In fact, taking too long to cool cooked food is a common cause of foodborne illness. This is why cooked food must be cooled quickly. You can take as long as six (6) hours to cool hot foods down to 41°F, as long as they are cooled to 70°F within the first two (2) hours. There are several ways that you can do this.

1) Large amounts of food need to be split up into smaller, shallow metal containers. When cooling, food should never be more than four (4) inches deep.

2) You can also cool small containers of food by placing them in an ice-water bath. When using an ice-water bath, make sure that the container is pushed down into the ice-water bath to the level of the food. If you don’t, only the bottom portion of the food will get cold allowing germs to grow on the other parts of the food. It will also help if you stir the food while it is in the ice-water bath so it cools down faster.

3) Always use metal pans instead of plastic. Metal pans will help transfer the heat better so the food will cool down faster.

4) Another way to help food cool down faster is by using chill paddles. Chill paddles are hollow, plastic paddles that you can fill with water and then freeze. Once frozen, you can stir the food with the paddle and it will help cool the food from the inside out.

No matter which method you choose, use a probe thermometer to make sure the temperature is dropping in the right amount of time. It is always a good idea to keep written records of how much time it takes the food to get to the proper temperature.

**THAWING FOOD**

Did you know that there are only **four (4)** ways to thaw food to keep it out of the Temperature Danger Zone? Putting frozen food on the counter or in a sink full of warm water are not good ways to
thaw. Leaving food out at room temperature or in warm water is dangerous because it puts the food in the Temperature Danger Zone where bacteria can multiply.

1) You can thaw food while you are cooking it. An example of this is soup or stew. When you put frozen vegetables into the soup pot they will thaw while the soup is being cooked.

2) The best way to thaw food is in the refrigerator. This will take some planning because it will take a lot of time for the food to completely thaw. The good thing about using a refrigerator is that the temperature will never get above 41°F, as long as the refrigerator is working.

3) Another way to thaw food is in a clean preparation sink. The sink should be filled with cool water so the food is surrounded. The faucet should be turned on so that cool water is running over the frozen food. The cool water will thaw the food and flush away particles but won’t allow it to reach dangerous temperatures.

4) The last way you can thaw food is in the microwave. This is a very fast way to thaw food. If you choose to use the microwave to thaw frozen food, keep in mind that the food needs to be used as soon as it is done defrosting.

**WASH, RINSE, AND SANITIZE**

Do you know the difference between cleaning and sanitizing? Many people think that cleaning and sanitizing are the same thing, but they are not. Cleaning is the same as washing and rinsing. Washing and rinsing gets rid of the left over food and grease. Sanitizing kills the germs. Items need to be washed, rinsed, and sanitized after every use and sometimes more often. Utensils that are used for serving or
cutting all day should be cleaned at least every four (4) hours.

**DISHWASHING BY HAND**

In order to wash the dishes by hand you need a three compartment sink, which is one large sink area with three (3) sinks in it. Three compartments are needed so that you can wash, then rinse, and also sanitize the dishes and utensils.

There are five (5) steps to take to make sure that the dishes, silverware, cooking utensils, and other food contact surfaces are safe to use. The five (5) steps should be done in this order because if done incorrectly, germs might survive and people could get sick.

**5 STEPS TO HAND WASHING DISHES**

**Step 1** is SCRAPE. Scrape excess food and debris into trash.

**Step 2** is DISHWASHING. Dishwashing is a very important part of food safety. The food is going to touch the dishes, utensils, and equipment and it could pick up bacteria if the dishes are not washed the right way. After you scrape all of the food and trash off of the dish, WASH it in hot (100°F) water. This will take place in the first compartment of the three (3) compartment sink. You can use regular dish soap and some sort of tool that will help you scrub the dish, like a brush or a cloth.

**Step 3** is to RINSE with warm water in the second compartment to
remove all soap and bubbles from the dish. After the dish is rinsed, it should be placed in the third compartment for step four (4).

**Step 4** is SANITIZATION. The third compartment should be filled with water and one of the approved sanitizers. Here are the choices:

- 100 ppm of Chlorine (Bleach) - soak for 30 seconds
- 200 ppm of Quaternary Ammonia - soak for 60 seconds
- 25 ppm of Iodine - soak for 60 seconds
- 171°F of Hot Water - soak for 30 seconds

The dish should be placed under the sanitizer water for 30-60 seconds, depending on what type of sanitizer you are using. Check the chart on page 17 to see how long you should leave the dishes in the third compartment.

**Step 5** is AIR DRYING. After the dishes have been washed, rinsed, and sanitized, they should be air dried and then put away. Do not use a dish towel to dry them or you might re-contaminate the dishes.

**DISH MACHINES**

Some places have machines that will automatically wash, rinse, and sanitize the dishes. Dish machines are pretty easy to use, but they still need attention. Some dish machines use chemical sanitizers similar to those we talked about for hand washing dishes. Most of them will use a chlorine based sanitizer.

The other type of dish machine is called a high-temperature dish machine. Like the name says, it uses really hot water to sanitize the dishes. The machine should have some type of built in thermometer to measure the temperature of the water. *When it reaches the plate, the water should measure 160°F.*

Dish machines need to be checked EVERY DAY to make sure they are working. It is best to check the machine in the morning, before any dishes are run through it. That way, if there is a problem, you
can fix it before the machine is used. So, how do you check a dish machine?

**TESTING STRIPS**

No matter how you wash the dishes, you will need to use testing strips to show that the dishes are getting sanitized. There are special testing strips to use with the different kinds of sanitizers. The strips that are used are basically small pieces of paper that change color when they are dipped into the sanitizer solution. The strip will change color depending on how much sanitizer is in the water. The testing strips for chlorine sanitizer start out white and change to a bluish purple. You can compare the color to the key on the side of the container. This will tell you how much sanitizer you have in the water. The chart below shows that chlorine sanitizer should measure 100 parts per million, or ppm. That means that for every million parts of water you would add 100 parts of chlorine. At 100 ppm, chlorine sanitizer will kill bacteria. If the reading on the strip is lower than 100 ppm, then you will need to add more sanitizer. If it is higher than 100 ppm, then you should add more water. Keep testing the water until you get the right mixture of water and sanitizer. The strips for quaternary ammonia and iodine sanitizers can be used the same way. Follow the chart to

<table>
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<th>Sanitizing options when handwashing dishes</th>
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<tr>
<td><strong>SANITIZER</strong></td>
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<tr>
<td>Chlorine</td>
</tr>
<tr>
<td>Quaternary Ammonia</td>
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<tr>
<td>Iodine</td>
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<tr>
<td>Hot Water</td>
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</table>
make sure you have the right amount every time you set up the sanitizer solution.

For high temperature dish machines, the temperature of the dishes should reach at least 160°F. This temperature can be measured with disposable heat strips that look like stickers but change color when they get hot. Stick one to the side of a plate or cup and send it through the machine’s wash cycle. When the machine is done washing, the strip will tell you what the maximum water temperature was. Of course, you can always use a thermometer as long as it is heat safe, waterproof and can tell you the maximum temperature reached.

**EQUIPMENT AND UTENSILS**

Dishes and silverware aren’t the only things that need to be cleaned. Floors, walls, ceilings, equipment and shelving all need to be kept clean and in good repair. Think about it this way; if it is used daily, it should be cleaned daily. Some things even need to be cleaned every four (4) hours. Make sure that you are cleaning in those hard to reach areas too. The areas underneath, behind, and above shelving and equipment is often missed because they are hidden from view. Don’t forget the restrooms and trash areas! Bacteria can live there too! It is a good idea to keep a schedule of cleaning so that nothing is left out.

**IN PLACE CLEANING**

There are some things that are too large to fit in the sink or in the dish machine. These items must be taken apart and cleaned where they are. For instance, the meat slicer is too large to fit in the dishwashing sink but it breaks down into smaller pieces that will fit. You can wash these smaller parts by hand or in the dishwasher but the large electrical base of the slicer needs to be cleaned in place. The process will follow all of the same steps that we talked
about earlier. First, it should be washed in place with soap and hot water. Take a bucket of soap and water and a cloth right over to the area where that piece of large equipment sits. Then, the equipment should be rinsed in place by using a clean, wet, cloth to remove the soap. Sanitizing in place is a snap. Just fill a spray bottle with a mixture of sanitizer and water (test it with a test strip to make sure it is the right amount) and then spray the sanitizer on the surface of the piece of equipment. Don’t forget to let it air dry so the sanitizer can do it’s job.

WIPING CLOTHS

As a food handler you will probably use wiping cloths from time to time. These cloths are used to wipe down counters, tables, or food prep surfaces. Using wiping cloths is fine as long as they are used for one purpose only. They also have to be stored correctly to prevent bacteria from growing. Picture it, a food handler proudly wipes up the chicken blood that he spilled on the countertop with a wet cloth. He carefully folds the cloth and places it on the end of the counter and continues preparing food. As the hours go by, the blood on the cloth gets warmer and the bacteria start to rapidly reproduce. Soon the cloth is covered in germs. The next time the food handler uses the cloth to wipe up a mess, they are not cleaning, but actually spreading bacteria everywhere the cloth touches! This is dangerous! An easy way to fix this is to keep buckets of sanitizer around the kitchen. After a cloth has been used it should be stored in the sanitizer solution. If not, each cloth should be tossed into the laundry hamper right after it is used.

CHANGING THE SANITIZER

No matter if the sanitizer is used to hold wiping cloths or to sanitize dishes it needs to be changed out from time to time. The sanitizer will get used up and there will be nothing left to kill bacteria. Test it often. If the testing strip shows that the sanitizer level is too low, it
should be drained and replaced with a fresh mixture. If there is not enough sanitizer in the bucket, you are left with a bunch of dirty water with lots of germs to spread around!

**FOOD PROTECTION**

Food protection is a very important job. As a food handler it is your duty to protect the food from the moment it comes in the door until it is served to the customer.

**DELIVERIES**

When food is delivered you should look at it carefully to make sure it is not damaged, contaminated or tampered with. Cold foods should be delivered in a refrigerated truck or packed in ice. If you do not feel that the food that has been delivered is safe, you should not accept the order. Never accept dented cans, damaged packaging, or PHF that is in the temperature danger zone. Once the order has been accepted, it should be put away as quickly as possible.

**STORAGE**

You should always store food inside the building and in an area where it will be safe. This means that food should be stored in areas that are only for food storage. Never store food in the same place as cleaners, chemicals, or personal items. Even utensils should have their own storage space. Keeping everything separate and organized will help keep food protected and
will also help your restaurant run smoothly.

In a refrigerator, the way the PHF is stored is very important to food safety. Raw meats and shell eggs should always be kept on the bottom shelf, below other types of food. Produce and food that are ready-to-eat should be stored on the very top shelf. If not, the juices and drippings from the raw meats might fall onto the vegetables and then, yes, you guessed it, cross-contamination. The raw meats and eggs should also be kept separate from each other. After all, you wouldn’t want the juices from the chicken to get on the beef or an egg to break and fall onto a raw hamburger patty. Cross-contamination is dangerous so be careful where you place things in the refrigerator.

Food containers should be covered and labeled. They should also be stored at least six (6) inches off the floor. This will make it easier to clean the floor and allow more air flow.

Sometimes people forget that ice is also a food. Even though it is cold, there are some germs that can grow in ice. Ice should be stored in an area where it is protected from contamination. Ice that is going to be used in drinks should not be used to keep other food items cold. Also, you should never use your hands or a glass to scoop ice. Only use a clean ice scoop.

**PREPARATION**

When food is prepared, there are many ways that it can become contaminated. You, the food handler, can take the following steps to keep them from happening:

Wash your hands often! We have said it before and we can’t say it enough. Handwashing is very important to food safety.

Never smoke, eat, or drink in food preparation areas. Use the employee break areas for these activities.
Prepare raw food separately from ready-to-eat food. Cutting lettuce on the same cutting board where raw chicken was just sliced is a surefire way to spread bacteria. If possible, use separate cutting boards and knives for different types of food. If not, just remember to clean and sanitize the cutting boards and knives between raw and ready-to-eat foods.

Use the preparation sink when preparing food. Mop sinks, dish sinks and handwashing sinks are dirty and can pass bacteria or chemicals to the food. Make sure to clean the prep sink before each use.

CHEMICAL AND PHYSICAL CONTAMINATION

Put chemicals and cleaners in an area away from food and utensils. An accidental spill could cause a chemical contamination. Also, make sure that all of the cleaners have labels that can be read easily. If the cleaner is put into a spray bottle make sure that the name of the cleaner is written on the outside of the spray bottle. Never use containers that once held food to hold toxic chemicals and don’t use toxic containers to hold food. It can get confusing and cost someone their life.

The light bulbs in the areas where food is made should be shatterproof or have some sort of protective shield around them. That way, if the bulbs break the tiny pieces of glass will not fall into the food.

When you are making food, follow the good hygiene practices we talked about earlier. You need to be careful that things like fingernails and hair don’t make it into the food.

SERVING

When you serve food, try to use a utensil, like a spatula or spoon. When you pick up plates, glasses, or silverware make sure that you don’t touch the part that will touch the customer’s mouth.
Sometimes the customers don’t eat everything that was served to them. This leftover food should never be served to other customers. If the food has been served once, it should not be served again. Even if the customer didn’t touch their food it has to be thrown away. Only unopened packaged foods, like crackers and condiments, can be re-stocked.

**APPROVED FOOD SOURCES**

All food made for the public must come from an approved source. An approved source is a place where the food is made that has been inspected by the government. For instance, all meat and poultry should be inspected by the USDA and should have a seal on the packaging. Milk and dairy products are regulated by the California Department of Agriculture. Food for the public **CANNOT** be made in a private home because private homes are not inspected or regulated in any way. Basically, there is no way to tell if the food is safe. Make sure that all food deliveries come from an approved source. Always keep the invoices and receipts in case the inspector needs to see where the food came from.

**CONSUMER ADVISORY**

Sometimes people like their food not fully cooked. I’m sure we all have heard the term “rare steak”. Also, some food items are not meant to be completely cooked. Some examples of this are raw sushi and hollandaise sauce (made with raw eggs). It is okay to make food the way the customer wants it as long as they know that it is not fully cooked. If the customer orders the food undercooked, it is safe to say that they know what they are getting. But, if the food they order is made with a raw or undercooked ingredients, then they need to be told either by mouth or in writing (printed on the menu).

**PEST CONTROL**

Rodents and insects can spread bacteria and contaminate food. These pests are very difficult
to get rid of. The best thing you can do is keep them out in the first place. Keeping doors and windows closed or screened will stop the pests from running inside. Flying pests, like house flies, can be kept out by putting air curtains above the doors. Air curtains are machines that blow air downward at a high speed. It’s hard for the flies to fly through the air stream so they are not able to get in the door. Air curtains should turn on automatically whenever the door is open. All doors should automatically close completely. A good rule of thumb is to look for light coming in the cracks around the door. If light is making it’s way inside, chances are that pests are too. It’s hard to imagine, but rodents and cockroaches can flatten themselves and squeeze through very small openings.

So how do you know if you have pests? Look for the common signs. Rodents will leave gray or black rub marks along the walls or shelves. They also leave droppings that can be seen easily. Cockroaches leave droppings that look a lot like pepper. Both rodents and roaches usually hide during the daytime so you might not see them. If you do see them during the day, there is a good chance that you have a really bad pest problem.

If any of these pests have found their way inside the facility there are some things you can do to get rid of them. By taking away their basic needs like food, water, and a place to hide, they will likely move out of the restaurant and to a place where they can find their basic needs. Don’t leave food out and make sure that all packages and containers are sealed tightly. Clean up the kitchen before you leave so that there is no food scraps for the pests to munch on. Fix any leaking plumbing and make sure that drains are not clogged. Like us, pests cannot survive without water.

Keep things clean and organized. Piles of junk and unused equipment make a perfect place for pests to sleep and breed. Fill all holes in the floors, walls or ceilings. Cockroaches live in very small places. Even a tile that is starting to come away from the wall could
be a perfect roach bed. Flies like to breed in garbage so make sure that the trash bags are tied tightly and that the lids of the dumpster are kept closed. The dumpster should be emptied at least twice a week. Keep the area around the dumpster clean and tidy. Don’t pile trash bags or boxes on the ground and make sure that the grease bin is clean and covered at all times.

If you have tried all of these suggestions and pests are still a problem, you may have to use some form of pest control. There are lots of different traps and pesticides out there but be careful because only a few can be used around food. Many of the bug sprays that you find in stores are not allowed around food. Check the label. It should say that the product is “approved for use in a food facility”. You can also hire a professional pest control company to help get rid of the pests. There are many different companies that you can use as long as they use products that are safe when used around food.

**SIGNS**

You will see a lot of different signs posted in places that make and/or serve food, but there are five (5) that are required by law.

1) A sign should be posted next to each handwashing sink used by employees. The sign should remind food handlers to wash their hands before returning to work.

2) There should also be a sign posted in the dining area that tells the customers if there is no restroom available for them to use.

3) A “No Smoking” sign should also be posted in the dining area.
4) At each health inspection, the facility will be graded on food safety and illness prevention. Points will be deducted for each violation that the health inspector sees. At the end of the inspection the inspector will post a letter grade (A, B, or C) in a place that can be easily seen by the customers. This grade card may not be moved, damaged, or covered up. Only an employee of the Environmental Health Department can take the card down once it has been posted.

5) Another card should be posted next to the grade card. It is a public notice telling customers and other members of the public that they can ask to see a copy of the last Environmental Health inspection report at any time. It is against the law to refuse to show them the report.

![Public Notice]

PUBLIC NOTICE

This facility is inspected by the County of Riverside Department of Environmental Health

Per the California Health and Safety Code, Section 113725.1; a copy of the most recent Environmental Health Food Inspection Report must be made available by this facility for review by the public upon request.

This notice shall remain posted next to the Grade Card, at or near the entrance to the facility.
THINGS TO REMEMBER

As a food handler, you have a huge responsibility to keep food safe. Customers are depending on you to protect the food they eat. Here is a recap of the most important things you can do to prevent foodborne illness.

1) WASH YOUR HANDS OFTEN WITH SOAP AND WARM WATER

2) DON’T HANDLE FOOD IF YOU ARE SICK

3) KEEP PHFs AT 41°F OR BELOW OR 135°F OR ABOVE

4) COOK MEATS, FISH, AND EGGS ALL THE WAY THROUGH

5) COOL PHFs AS FAST AS YOU CAN

6) SCRAPE, WASH, RINSE, SANITIZE, AND AIR DRY FOOD CONTACT SURFACES AND DISHES

7) ONLY USE FOOD FROM APPROVED SOURCES
FOOD DEFENSE

As an employee of a food facility, you are a first line defender of our nation’s food supply. In this day and age the threat of an attack that is meant to kill or to make people sick is very real and we need to work together to protect ourselves. Since an act of intentional food contamination has the potential to affect a massive number of Americans, it is very important that every food handler does their part in defending the food they are serving to the public.

A lax attitude towards food defense can leave a facility open for attack. Facilities where employees are not paying close attention to what is going on around them are most likely to be targeted. To encourage food handlers like you to take an active role in food defense, the FDA, CDC, and USDA have created the Employees FIRST program. This program was designed as a training tool to teach employees to be more aware of food defense and how to prevent intentional contamination of the food that they prepare and serve.

Remember FIRST and what it stands for. You can make a difference in your facility and help keep your country’s food safe!

For more information on Employees FIRST and to order free training supplies, please visit the FDA’s website at http://www.cfsan.fda.gov/~dms/first.html or contact your local Environmental Health office.
FOLLOW COMPANY FOOD DEFENSE PLAN AND PROCEDURES.

INSPECT YOUR WORK AREA AND SURROUNDINGS.

RECOGNIZE ANYTHING OUT OF THE ORDINARY.

SECURE ALL INGREDIENTS, SUPPLIES, AND FINISHED PRODUCT.

TELL MANAGEMENT IF YOU NOTICE ANYTHING UNUSUAL OR SUSPICIOUS.
Approved source - where food that is sold or given away to the public is made. Approved sources are regulated by the government and inspected for food safety.

Bacteria - germs that are found in and on food that can make you very sick.

Contamination - when something dangerous gets into food.

Cross-contamination - when germs are transferred from a food or surface to another food.

Foodborne illness - when someone gets sick from something that they ate or drank.

Pathogens - bacteria, viruses, fungi, and protozoa that cause disease and sickness.

Parts-per-million - (ppm) term that is used when measuring the level of the sanitizer. The number of parts of sanitizer that would be added to a million parts of water.

Potentially hazardous foods - (PHF) food that can grow bacteria and must be kept under temperature control.

Ready-to-eat - food that will not be cooked. It is served to the customer to eat just the way it is.

Sanitized - when the germs have been killed. Anything that comes in contact with food must be cleaned and sanitized before being used.

Temperature danger zone - the temperature range between 41°F and 135°F. This is where bacteria will grow the quickest. PHF should not be held at temperatures within the danger zone.

Toxin - poison produced by pathogens.
Internal Cooking Temperatures
Use a Probe Thermometer to Take Internal Cooking Temperatures

<table>
<thead>
<tr>
<th>Fruit and Vegetables</th>
<th>Eggs Cooked to Order</th>
<th>Fish</th>
<th>Single Piece Meat (Beef, Veal, Lamb, Pork)</th>
<th>Pooled Eggs</th>
<th>Ground Meat and sausage</th>
<th>Poultry and Stuffed Meat</th>
<th>Reheated Foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>135°F for 15 seconds</td>
<td>145°F for 15 seconds</td>
<td>145°F for 15 seconds</td>
<td>145°F for 15 seconds</td>
<td>155°F for 15 seconds</td>
<td>155°F for 15 seconds</td>
<td>165°F for 15 seconds</td>
<td>165°F for 15 seconds</td>
</tr>
</tbody>
</table>

Food temperature cannot be felt - use your probe thermometer!

Holding Food at Safe Temperatures

- **Safe**
- **Danger Zone**
- 135°F
- 41°F

Proper Food Storage in Refrigerators and Freezers

- Ready-to-Eat Food
- Cooked Food
- Raw Meat, Raw Eggs

Store cooked and ready to eat food above raw food to avoid cross contamination. Keep all foods covered to prevent contamination.

5 STEPS TO HAND WASHING DISHES

1. Scrape excess food into trash
2. Wash in soap and water at 100°F
3. Rinse in clear water
4. Soak every item in sanitizing solution
5. Air dry

Sanitizing Solution and Soak Time

- 500ppm Chlorine - 30 seconds
- 200ppm Quaternary Ammonium - 60 seconds
- 25ppm Iodine - 60 seconds

Proper Food Thawing Methods

1. In the refrigerator
2. In a microwave oven on “defrost”
3. Under cold running water in an approved preparation sink
4. As part of the cooking process

To view and download these images visit our website at: www.rivcoeh.org
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