A FOOD HANDLERS MANUAL



Presented by:

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Table of Contents

Introduction

Chapter 1 Employee Responsibility and Hygiene

Chapter 2 Food Protection

Chapter 3 Food Preparation

Chapter 4 Clean, Safe, and Sanitary Conditions

Acknowledgements

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Introduction

Congratulations on your pursuit of knowledge in food safety! Educating food handlers is the first step in preventing food-borne illness. The principles and guidelines in this manual are from the rules that are found in the Oklahoma State Food Service Establishment Regulations – Chapter 257. If these guidelines are properly followed, food-borne illness will be prevented and you will serve safe food to your customers.

The Centers for Disease Control tell us that the following problems come from contaminated food every year in the United States:

- **76 million illnesses each year**
- **325,000 hospitalizations each year**
- **5,000 deaths each year (approximate)**
- **Annual cost up to $83 billion per year**

(Incurred from medical costs, law suits, businesses closing, etc.)

Again, the good news is that all of these bad things can be avoided if the guidelines in the state food code are followed.

This food safety manual is not exhaustive, but it will give a food handler the knowledge of the most critical areas of concern and that will protect your customer and your business. Attendance to the Food Handlers Class at the Health Department will help to complete your employees' training. This manual will inform you in the following areas:

Employee Responsibility and Food Handler Personal Hygiene
Food Protection: The Danger Zone, Cross-Contamination
Food Preparation: The Six Important Food Temperatures and How to Monitor Them
Cleanliness and Safety: Cleaning, Sanitizing, Toxic Chemicals, Proper Pest Control

Should you have any questions, please ask the health inspector when you attend the food handler class or call our office. Thank you for your interest in food safety and we wish the very best for your business.

1 - *Employee Responsibility and Hygiene*

Proper Hand Washing

State law requires that food handlers properly wash their hands in order to prevent contamination of food. Dirty hands will contaminate food and make the food unsafe to eat. For example, people who have not washed their hands after they used the restroom spread illnesses such as Hepatitis A and Norovirus. The fecal matter on his or her hands ends up in the customer's food. When the customer eats the food, he or she could become ill. This is referred to as fecal-oral transmission of a food-borne illness.

The approved method of hand washing is as follows:

1) Use the designated hand sink only.
2) Thoroughly lather hands with soap and warm water for 10 to 15 seconds.
3) Wash all surfaces of hands, including backs of hands, wrists, between fingers, and under fingernails.
4) Rinse hands well with warm water.
5) Dry hands off with a paper towel.
6) Turn off hand sink with the paper towel.



When must food handlers wash their hands?

- **Before doing any type of food handling / preparation**
- **Before handling ready-to-eat foods**
- **After handling raw meats**
- **After handling dirty food containers, dishes, or utensils**
- **After removing food debris, residue, or contamination on food prep surfaces during food preparation**
- **After eating, drinking, smoking, or other uses of tobacco**
- **After going to the restroom**
- **After <u>any</u> activity that would contaminate hands**



Do Not Handle Food When Sick!

When food handlers are sick, a contagious illness could pass from them to the customers. Law requires restaurant employees must inform their boss of their illness and symptoms before beginning work. Sick employees must stay out of the kitchen and not handle food, clean equipment or dishes.

The following symptoms must be reported to the person in charge:

- **Vomiting**
- **Diarrhea**
- **Fever (with or without a sore throat)**
- **Jaundice**
- **Diagnosed with one of the following:**
  - **Hepatitis A**
  - **E. Coli**
  - **Shigella**
  - **Salmonella Typhi**
  - **Norovirus**

- Also report cuts, burns, boils or infected wounds

The sick employee may perform duties outside the kitchen such as cleaning the restrooms, cleaning the windows, taking out the garbage, or cleaning the dumpster facility. This employee must be sure to frequently wash his or her hands.

Hand sanitizers and single-use disposable gloves may be used **after** proper hand washing, but are **never** to be used as a substitute for correct hand washing.

Eating, Drinking, or Using Tobacco Products

Food handlers are **not** allowed to eat, drink, or smoke in the kitchen. Employees who do these things contaminate their hands by hand-to-mouth contact. They must **take a break** outside of the kitchen in a designated break area **and properly wash their hands** before returning to work.





The **only exception** is employees are allowed to **drink from a cup that has a lid.** This is provided that, in order to avoid contamination, the personal drink with a lid is stored below and away from all food prep and storage areas.

Hygiene

The #1 source of contamination of food in a commercial restaurant is the food handler. This is why food handlers must bathe daily, wear clean clothing and practice overall good hygiene.

Employees should not wipe their hands on their aprons or their clothing. They should properly wash their hands at the designated kitchen hand sink as previously discussed.

Hair Restraints

In order to prevent hair from falling into a customer's food, hair must be effectively restrained. If the hair is long enough to touch the top of the shirt collar, it must be restrained by the use of hairnets, caps, hair bands or barrettes.



Notes:

2 - Food Protection

Potentially Hazardous Foods

There are two types of foods: Potentially hazardous foods and Non-potentially hazardous foods. Bacteria grow very well in potentially hazardous foods. To prevent bacterial growth these foods must be kept either hot or cold.

The following are examples of potentially hazardous foods:

- **Meats (raw or cooked), foods containing meats**
- **Milk and other dairy products, eggs**
- **Cooked vegetables, beans, rice, pasta**
- **Sliced melons (i.e. cantaloupe)**
- **Garlic and oil mixtures**





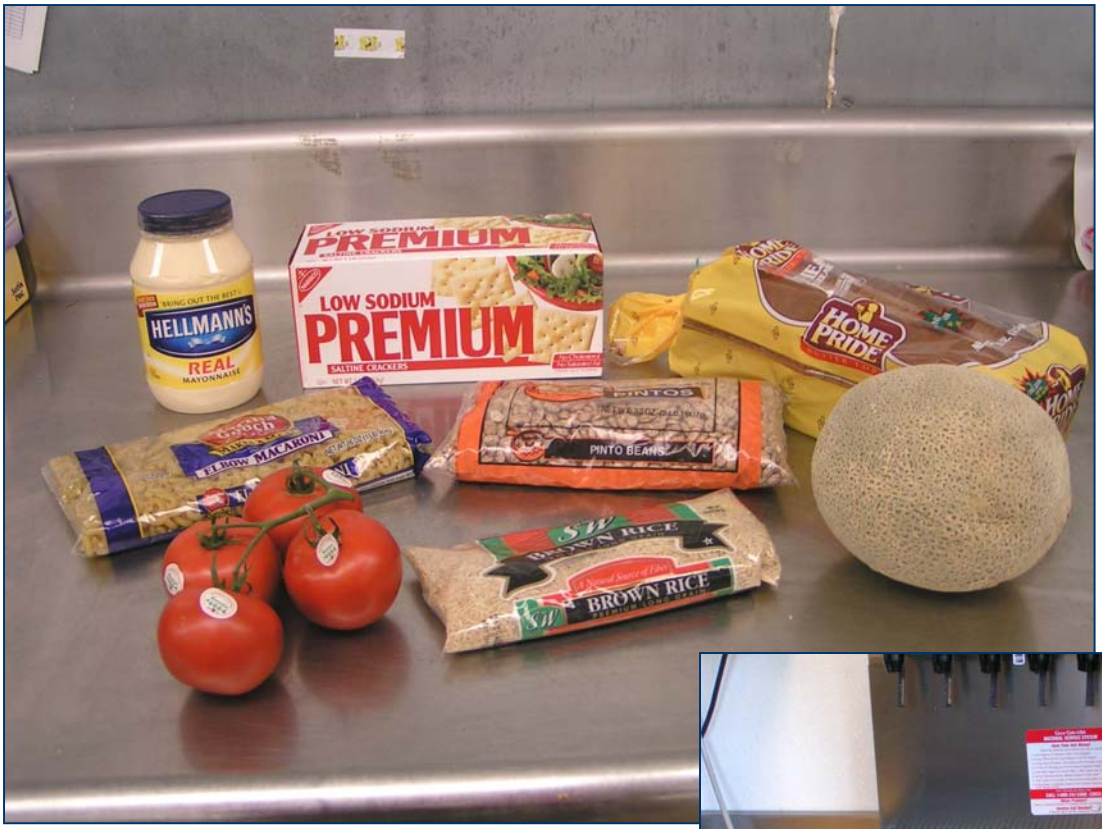


Non-Potentially Hazardous Foods

Non-potentially hazardous foods are the kinds of foods in which bacteria do not grow well. These are the foods that do not require temperature control, although some manufacturers may suggest refrigeration for quality reasons.

The following are examples of non-potentially hazardous foods:

- **Uncooked vegetables, beans, rice, pasta**
- **Fresh, uncut fruits and vegetables**
- **Breads, bagels, crackers**
- **Beef jerky, crisp bacon, other dried foods**
- **Mayonnaise, mustard, ketchup, pickles**
- **Ice**





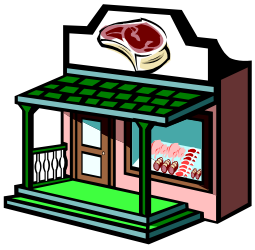
Sources of Food



Foods that are served to the public must be obtained from an approved source. An approved source is an establishment that is licensed and inspected. The purpose behind this rule is to assure a safe food supply and to prevent a food-borne illness outbreak. For instance, in the meat inspection process animals that are ill or show symptoms of illness are not processed for human consumption. During this inspection process the meat inspector checks the animal while it is still alive and if there is any sign of illness, the live animal is sent back to the farm to get healthy before it is processed. After processing has begun, the inspector checks the animal's entrails for evidence of disease. Bacterial samples are also taken from the meat. If the meat is determined to be unsafe it is destroyed – none of the meat is made available for human consumption. This inspection process will help guarantee a safe food supply.

The following are **approved sources of food**:

- **Licensed wholesalers, distributors**
- **Licensed retailers, grocery stores**
- **Licensed restaurants**

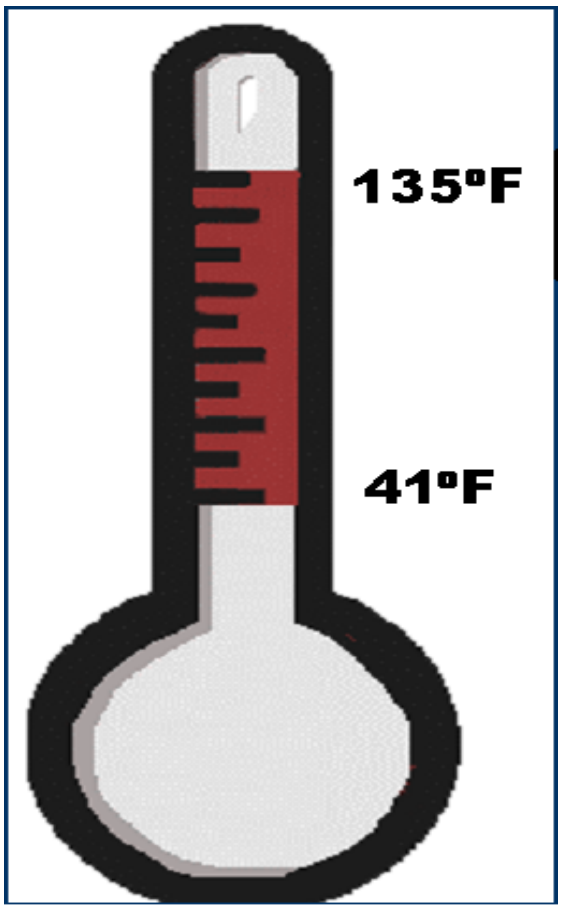


The following are **unapproved sources or types of food**:

- **Home kitchens**
- **Meats and wild game that are not inspected**
- **Milk and other dairy products that are not pasteurized**

The Temperature Danger Zone

The temperature danger zone is a temperature range in which bacteria best grow in potentially hazardous foods. The range is between 41°F and 135°F. Therefore, in order to prevent bacterial growth and keep the food safe, **cold** potentially hazardous foods must be maintained at **41°F and less.** This is referred to as the "cold holding temperature." In the same respect, **hot** potentially hazardous foods must be maintained at **135°F and above** and this is called the "hot holding temperature."



MONITORING FOOD TEMPERATURES IS CRITICAL!
Potentially hazardous foods left in the Danger Zone for **four hours or more** are considered **unsafe** and must be **discarded.**

Thermometers

The only manner in which to know that the foods' temperatures are **out** of the Danger Zone (Remember: COLD is 41°F or below and HOT is 135°F and above) is by **properly using a reduced diameter tip metal-stem probe thermometer** to monitor food temperatures.

- **Check thermometers frequently for accuracy**

Putting the thermometer into a cup of ice water (heavy on the ice) reveals the thermometer's accuracy. If the thermometer is accurate, it should read 32°F.

- **Calibrate when necessary**

If the thermometer does not read 32°F while in the cup of ice water, it needs to be calibrated. Follow the manufacturer's directions to calibrate the thermometer. Normally, while the thermometer is still in the cup of ice water, you may turn the adjustable nut provided on the thermometer until it reads 32°F.

- **Use frequently to monitor food temperatures**

One of the most important practices that can be performed in a commercial kitchen is properly using an accurate thermometer to check the various temperatures of foods within the establishment.





Cross-Contamination

Cross-contamination is the transferring of disease causing germs (pathogens) from a contaminated food or surface to another food. The most common example is raw meat, like hamburger, dripping into or contacting another food that is ready to eat, like tuna salad. If customers eat the tuna salad that has been contaminated with the raw beef blood, they could become ill.

The following are ways to prevent cross-contamination:

- **Wash hands after handling raw meats.**
- **Wash hands between different types of raw meats (i.e. between raw chicken and raw beef).**
- **Store raw meats below and away from ready-to-eat foods.**
- **Prepare or store raw meats in separate areas that are completely away from other foods.**
- **Clean and sanitize surfaces contaminated with juices from raw meats.**





Notes:

3 – *Food Preparation*
Cooking Temperatures

The cooking temperature of a particular food is actually the "kill step" taken in order to make the food safe. In this step of food preparation this is the temperature that must be reached to destroy the bacteria normally associated with the food being cooked. The food handler must use an accurate thermometer to know if the food being cooked is reaching the proper cooking temperature. The internal temperature must be maintained for a minimum of 15 seconds, and this is checked in the thickest and most dense part of the food.

The following are the proper cooking temperatures for the foods listed:

- **Poultry and Stuffed Foods → 165°F**
- **Ground Meats (hamburger) → 155°F or by request**
- **Steaks → by request**
- **Fish and Pork → 145°F**
- **Prime Rib (rare roast beef) → 130°F (held for 2 hours)**

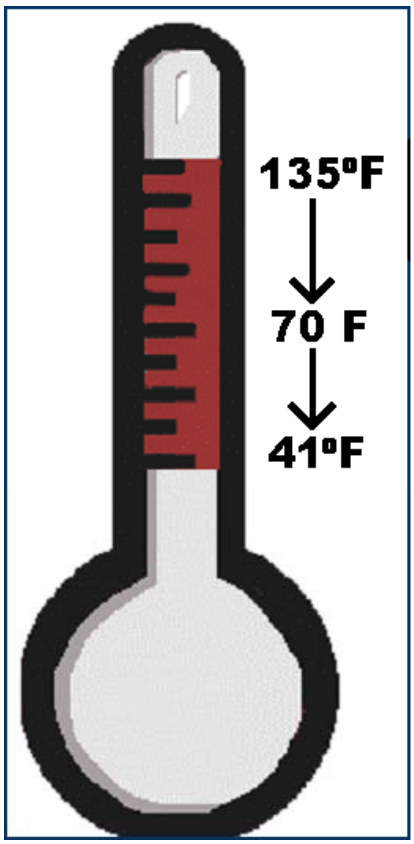


Meats that are served undercooked (or ordered **by request**) require a **consumer advisory** posted at the point of sale informing customers of their increased risk of food borne illness.

Cooling Down Hot Foods

When large quantities of foods are prepared a day or more in advance or when foods are going to be used as leftovers, the hot foods must be **rapidly cooled down**. Failure to do so correctly will keep the warm foods too long in the Danger Zone and bacteria will grow and produce toxins rendering the food unsafe.

Hot foods must be properly cooled down from **135°F to 70°F in 2 hours, and then from 70°F to 41°F in 4 hours for a total of 6 hours.** This usually requires specialized cooling methods.







Specialized methods to cool down hot foods must be utilized, especially when working with large quantities or thick and dense foods. The use of **ice baths** and **frozen stirring sticks** can help rapidly cool foods as will cooling small amounts in **shallow pans**.

Reheating

When leftovers are reheated they must be rapidly reheated to **165°F within 2 hours**. This will put the food through the Danger Zone quickly and avoid bacterial growth to an unsafe level. Placing foods on stove burners, in convection ovens, in microwave ovens and double boilers will reheat foods quickly. However, placing foods into a steam table is not a correct way to reheat foods. Steam tables would heat the foods too slowly. They are not made to reheat or cook foods – steam tables are made to keep previously heated foods hot.



More Information About Leftovers

- **Do not mix leftovers with fresh foods.**
- **Use up the oldest foods first.**
  - **FIFO – First In, First Out**
- **Use Date-marking.**
  - **Foods are safe for 7 days, if properly held at 41°F or less.**

Hot Holding

Cooked foods that are not served immediately must be kept hot. Hot potentially hazardous foods must be maintained at **135°F and above**. Hot foods must be placed in or on a source of heat that has been warmed up prior to use. Placing hot foods into steam tables, steam cabinets, and warming drawers will keep the hot foods hot.

The following steps will help keep cooked foods hot and safe:



- **Stir Hot Foods Frequently To Ensure Uniform Heating**



- **Cover Hot Foods To Keep Heat From Escaping**



- **Use Thermometers to Monitor Hot Food Temperatures**

Cold Holding

Cold potentially hazardous foods must be maintained at a temperature of **41°F or below.**



- **Use thermometers to monitor cold food temperatures in display units and buffets.**
- **Provide sufficient space in cold storage facilities to allow for good circulation.**

Thawing

There are four approved methods to thaw foods. They are:

1) In the refrigerator



2) Under cold running water



3) During the cooking process



4) In the microwave



Never set frozen foods **out to thaw at room temperature or thaw in warm running water,** as the food will, at least in part, be in the Danger Zone and bacteria will be allowed to grow.

Notes:

4 - *Clean, Safe, and Sanitary Conditions*

Cleaning and Sanitizing

Food prep tables, cutting boards, utensils, food containers, and dishes must be properly **cleaned and sanitized** before they are used.

What is *Sanitizing*?

- Sanitizing is a process that reduces the number of bacteria and viruses on a clean surface by 99.99%.

How is this accomplished?

- By applying cumulative *heat* or *chemicals* onto clean food contact surfaces.

There are **two methods** of cleaning and sanitizing any and all food-contact surfaces.



Using a Mechanical Dish Machine

- Low Temp. Machine - (Chemical sanitizing, usually Chlorine)
- High Temp. Machine - (Hot water sanitizing -180°F to 190°F)

Washing dishes by hand

- 3 Compartment Sink used: **Wash, Rinse, and Sanitize**
- Two Common Chemical Sanitizers
  - Chlorine
  - Quaternary Ammonia



- **Use kits to check the strength of sanitizers**
- **Change solution if weakened or dirty**
- **Dilute fresh solution if too strong (toxic)**



Toxic Chemicals

Cleaners, pesticides and other potentially harmful substances must be carefully used and stored so that foods and food-contact surfaces are not contaminated.

- **Use only chemicals that are approved for use in a commercial food service establishment**
- **Read and follow the directions on the product**
- **Label all bulk containers and spray bottles with the chemical name**
- **Store chemicals away in proper storage area**

- **Toxic and poisonous chemicals must be stored below and away from foods, clean equipment, and linen**



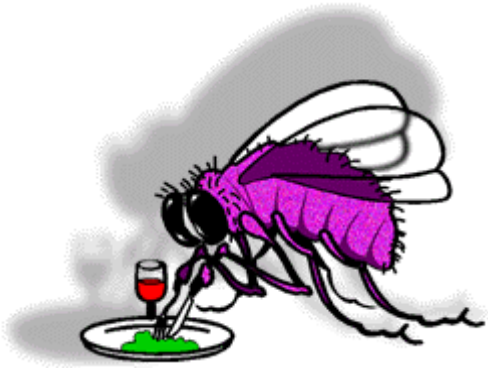




Vermin Control

Rodents and insects are filthy. If their entrance is not prevented, and if they are allowed to harbor and breed in a restaurant, they can contaminate food and customers could become ill.

- **Keep storage areas clean.**
- **"Build vermin out" – seal holes, crevices and cracks where vermin can enter, live, and breed.**
- **Call professional pest control if you see any evidence of insects or rodents.**
- **Use bait boxes with solid bait – open baits are not allowed around foods, utensils, equipment, etc. – take all precautions to avoid contamination of food or equipment by pesticides – prevent accidental poisoning.**











Imminent Health Hazards

An imminent health hazard is a significant threat or danger to the public that requires either immediate correction or cessation of operation of the food service establishment. Ownership and management, therefore, should be aware of the types of imminent health hazards and make plans for possible emergencies.

According to the Oklahoma State Food Service Establishment Regulations Chapter 257, **"... a license holder shall immediately discontinue operations and notify the health department when an imminent health hazard exists..." (310:257-15-32)**

The following are examples of imminent health hazards:





- **Fire or Flood**
- **Sewage back-up**
- **Lack of hot water in the facility**
- **Insufficient refrigeration and / or hot food storage facilities available**
- **Substantial evidence of rodent or insect harborage**
- **Interruption of safe potable water supply to the facility**
- **Misuse of poisonous or toxic materials**
- **Onset of apparent food-borne illness outbreak**
- **An employee diagnosed with Salmonella, Shigella, E. Coli 0157:H7, or Hepatitis A infection**
- **Interruption of electrical service for more than 4 hours**
- **Severe structural damage to the facility**
- **Gross unsanitary occurrence or condition**

Notes: