2019

Food Safety 101

Contents

SIOUXLAND DISTRICT HEALTH DEPARTMENT

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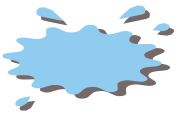
Handwashing

Lack of or improper handwashing is a major cause of foodborne illness!



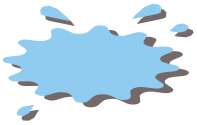
Food service employees must wash their hands BEFORE:

- **beginning food preparation or handling food**
- **handling clean equipment, utensils, and other food-contact items**
- **putting on gloves**

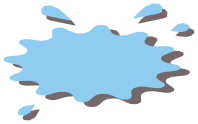
Hands also must be washed again AFTER:

- **using the restroom**
- **smoking or eating**
- **touching your face or hair**
- **handling raw meats**
- **handling unclean equipment, aprons, pot holders or oven mitts, and sponges or cloths**
- **using toxic chemicals**
- **taking out the garbage**
- **any other activity that may contaminate the hands this includes after using the phone**

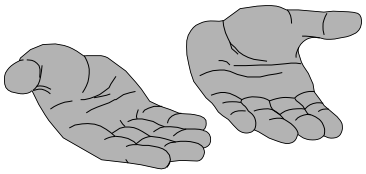
When you wash your hands…



- **ALWAYS use the designated handwashing sink**
- **use soap and warm running water**
- **rub hands and exposed portions of the arms together vigorously for at least 20 seconds, paying particular attention to areas between the fingers and under the fingernails**
- **rinse thoroughly with clean, running water**
- **dry with a single-use paper towel or air dryer**
- **DO NOT use a common cloth towel**
- **Hand sanitizer can be used following hand washing, but it is never a substitute for proper hand washing**



Frequent and thorough handwashing plays a very important role in food safety!



Bare Hand Contact

Bare hand contact with ready-to-eat food is <u>not</u> allowed!

- **Ready-to-eat foods include any food item that will be eaten in its current form with no additional washing or cooking. Some examples may include breads, cookies, lettuce, sandwiches, and fruits and vegetables.**

- **Food handlers must use gloves, tongs, spatulas, deli tissues, or other utensils or dispensing equipment to prevent hand contact with ready-to-eat food during preparation and serving.**

- **Food handlers must take steps to minimize bare hand contact with food that is not ready-to-eat.**

If you wear gloves…

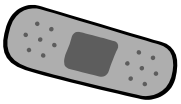
Gloves are never a substitute for handwashing. If you regularly use gloves during food handling, keep the following in mind:

- **Always wash your hands prior to putting on gloves and whenever you change to a new pair**
- **Gloves are single-use items and should never be washed or reused**
- **Change your gloves before beginning a new task or if they become torn**
- **Remember that gloves do not stay any cleaner than your hands, so gloves should be changed after any of the activities that would normally require handwashing this includes after using the phone**
- **Many people are allergic to latex, so vinyl or another material is preferable**
- **Gloves MUST be worn if the food handler has a bandage on their hand**

Proper Work Habits and Attire

In addition to proper handwashing, there are many other personal hygiene practices that are important to remember when you are working with food.

- **Fingernails should be kept short and clean. Nail polish and fake fingernails shall be avoided because they are difficult to keep clean and may come off into food.**



- **If you have a cut or sore on your hand or exposed portion of your arm, you must keep it cleaned and covered with a bandage. All bandages on hands must be covered with gloves.**

- **Hair must be effectively restrained by a hair net, cap, ponytail, etc… or by wearing it up in some other manner to prevent contamination of food. Hair spray is NOT considered to be an effective hair restraint.**

- **Keep clothing and aprons clean and do not use them for wiping your hands. Remove aprons before leaving the food service area, such as if you take out the garbage or go to the restroom.**

- **Because rings harbor bacteria and are difficult to clean, they should be removed prior to working with food (except for a plain wedding band).**

- **Do not wear other jewelry such as earrings that could fall into food, or watches and bracelets that will interfere with thorough handwashing.**

- **Do not eat, drink, or smoke while handling food. These activities shall be done in a designated area, and you must wash your hands before returning to work.**

- **Never use smokeless tobacco in a food preparation area.**

Foodborne Illness…Just the Facts

Foodborne illness, or food poisoning, is any illness that is transmitted to a person by food. Following are some facts about foodborne illness…

- **There are many different types of foodborne illness and they are caused by many different agents, including bacteria, viruses, parasites, and even chemicals.**
- **The various germs may be on the food, come from a food handler that is not washing hands properly, or even come from the person consuming the food if they have contaminated hands and do not wash them before handling food that they are eating.**
- **Symptoms include diarrhea, vomiting, nausea, abdominal cramps, and fever – commonly referred to as the stomach flu or 24-hour flu, these illnesses are typically food poisoning.**
- **There are an estimated 48 million cases of foodborne illness in the United States each year.**

- **Approximately 3,000 deaths and over a hundred thousand hospitalizations are attributed to foodborne illness every year.**
- **These cases can involve just one or two people, or may be an outbreak that involves many people.**
- **Depending on the actual type of illness, a person may become ill a few hours, a few days, or even a few weeks after eating the contaminated food. It is not always caused by the last meal that the person consumed before becoming ill.**
- **Foodborne illness can be caused by foods that aren't even considered to be potentially hazardous. We have seen large outbreaks caused by cookies and by sandwich buns, because the person handling them contaminated them with germs.**
- **Cooking and holding foods at the right temperature and good personal hygiene practices of food handlers, including proper handwashing, are the most important steps in preventing foodborne illness!**

Reporting Illnesses

It is very important that you tell your supervisor when you are ill. There are some instances when you will not be able to work around food, or perhaps not in the establishment at all.

1. **Notify your supervisor IMMEDIATELY if you are diagnosed with one of the following foodborne illnesses:**
   - **Salmonella typhi (typhoid fever)**
   - **Non-typhoidal salmonella**
   - **Shigellosis**
   - **Enterohemorrhagic or shiga-toxin producing E. coli**
   - **Hepatitis A**
   - **Norovirus**

   Your manager will also be required to report this to the Health Department.

2. **Inform your supervisor if you or someone that lives with you has been exposed to one of the five illnesses listed above.**

3. **You must also inform your supervisor if you are suffering from diarrhea, vomiting, jaundice, a sore throat with a fever, or if you have a boil or infected sore on your hands or exposed arms.**

Person in Charge

A designated person in charge must be present at the food establishment during all hours of operation. This person is responsible for the operation of the establishment during their shift and must be knowledgeable in:

- **Foodborne illness prevention**
- **Safe food handling**
- **Exclusion and restriction of ill employees**
- **Other requirements of the Food Code of Iowa**

The person in charge will be questioned by the regulatory authority during inspections and will need to demonstrate knowledge of these principles.

Potentially Hazardous Foods

Potentially hazardous food means any food or ingredient that supports the rapid growth of microorganisms. A food is potentially hazardous if it is…

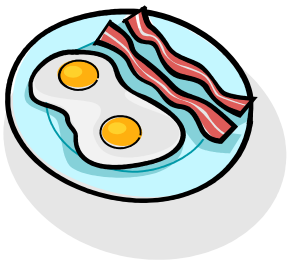
- **Of animal origin, such as meat, dairy, fish, shellfish, edible crustacea, or poultry**
- **Of plant origin and has been heat treated, such as cooked rice, beans, potatoes, and pasta**
- **Raw seed sprouts or garlic-in-oil mixtures**
- **Cut melons and cut tomatoes**

These foods can rapidly become contaminated with harmful bacteria if they are not kept at the proper temperatures.

Keep in mind that any food can cause a foodborne illness if it is handled by someone who has not washed their hands properly!

Consumer Advisory

If a food establishment intends to sell raw or undercooked animal foods in a ready-to-eat form, such as rare hamburgers or raw or undercooked eggs, the establishment must inform the consumer of the risks associated with eating these foods. This warning must include both a "disclosure" and a "reminder" statement.



The "disclosure" identifies the raw or undercooked animal foods, such as by asterisking these foods to a footnote on the menu which states that these foods may be served raw or undercooked.

The "reminder" shall include a statement that tells consumers that consuming raw or undercooked meats, poultry, seafood, shellfish, or eggs may increase their risk of a foodborne illness.

The Importance of Temperatures

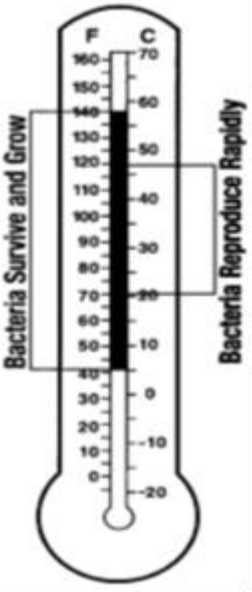
Safe Minimum Cooking Temperatures

Safe cooking temperatures are based on the temperature required to sufficiently reduce the number of microorganisms that are present on food. The internal temperature that a food must be cooked to is dependent on the type of food being cooked.

Poultry	**165° F**
Stuffed foods (meats & pasta)	**165° F**
Ground or flaked meats	**155° F**
Pork, including ham and bacon	**145° F**
Beef roasts and steaks	**145° F**
Fish	**145° F**
Eggs	**145° F**

All foods containing meat, poultry, fish, or eggs that are cooked in the microwave must be cooked to a minimum temperature of 165° F.

Foods that are potentially hazardous are extremely sensitive to temperature. Between 41° F and 135° F is known as the *Temperature Danger Zone*. Microorganisms can survive and reproduce readily in this temperature zone, so it important that foods being prepared, cooked, held, cooled, and reheated spend as little time in this range of temperatures as possible.



Keep hot foods HOT

Hot foods must be held at 135° F or above.

And keep cold foods COLD

Cold foods must be held at 41° F or below.

- **Proper hot or cold holding temperatures must be maintained while food is being transported.**

- **Do not mix new product with old product.**

- **Check temperatures with a food thermometer frequently!**

Thawing

Food must be thawed using one of the following procedures:

1) **Under refrigeration of 41° F or below.**
2) **Under potable <u>running</u> water at 70° F or below.**
3) **As part of the cooking process.**
4) **By microwaving, as the first step in a continuous cooking process.**

Reheating

- **Food must be reheated to an internal temperature of 165° F within TWO hours.**

- **After reaching 165° F, the food may be held at 135° F.**

- **Commercially processed food packaged in a sealed container may be reheated to 135° F.**

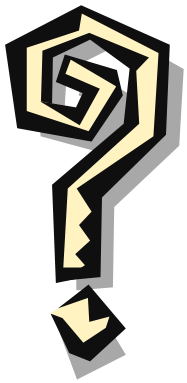
- **The range top is ideal for reheating. You may also use a steam cooker, conventional, convection, or microwave oven.**

- **Crock pots, steam tables, and warmers are not capable of heating to the required temperature and shall not be used for cooking or reheating.**

- **Do not mix new product with leftover items.**

- **Never reheat previously prepared food more than once.**

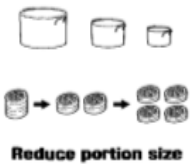
Do you know how to COOL foods properly



Improper cooling causes many cases of foodborne illness!

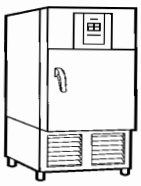
According to the Iowa Food Code, the following requirements must be met when cooling cooked potentially hazardous foods:

1) Cool from 135° F to 70° F within TWO hours or less -AND-
2) Cool from 135° F to 41° F or less within a total of SIX hours.



This can be accomplished using several methods:

- Divide food into smaller portions
  - -Cut large pieces of meat into smaller ones
  - -Divide contents into several shallow pans
- Don't stack hot things on top of each other so that cold air can circulate between them
- Leave foods uncovered while they are cooling
- Agitate or stir foods often during the cooling process
- Place the container of hot food into an ice bath
- For soups, gravies, and other water-based items, withhold water during the cooking process and add ice cubes at the end
- Use metal containers instead of plastic which acts as an insulator
- Cool foods in a freezer or blast chiller instead of in the refrigerator



The only way you will know if the cooling method that you are using is cooling foods within the required time period is if you check the temperatures with a food thermometer regularly!

Using a Food Thermometer

1) **Sanitize your thermometer before and after each use.**

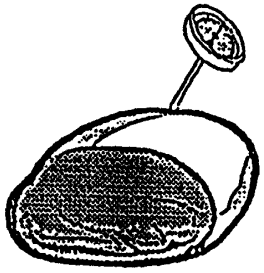
2) **Take the temperature by inserting the probe of the thermometer into the thickest part of the food.**

3) **Read the temperature when the display or needle has stopped moving.**

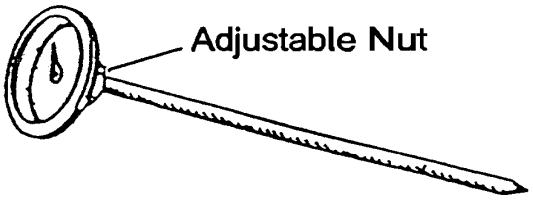
Food thermometers must be calibrated regularly to help ensure that they are accurate.

Calibrate your thermometer

- **At least once each month.**
- **After a thermometer has been dropped or handled roughly.**
- **After exposure to extreme temperatures.**



Using the following method



- **Fill a glass with half ice and half water and allow the temperature to stabilize.**
- **Place the thermometer into the ice water and wait for 3 minutes.**
- **If the thermometer does not read 32° F, use a pliers or wrench to turn the adjustable nut on the back of the thermometer until it does read 32° F.**
- **Repeat the procedure until the reading is correct.**

Dishwashing Basics

All dishes must be washed manually using a three-compartment sink or mechanically using a commercial warewashing machine.

Mechanical Warewashing Machines

These machines must be capable of sanitizing either with hot water that is 170° F or greater, or with an approved sanitizer at the proper concentration.

Manual Dishwashing

All dishes must be washed using the three-step process of WASH – RINSE – SANITIZE.

WASH - Using soapy, hot water that is at least 110° F.

RINSE - With clean, hot water that is at least 110° F.

SANITIZE - With water that is at least 170° F

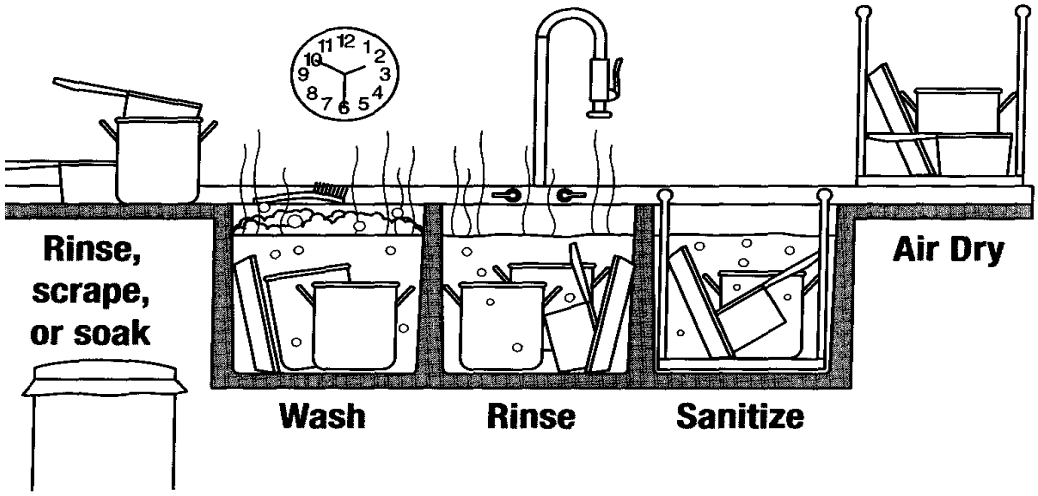
-or-

With an appropriate chemical sanitizer at the proper concentration:

Quaternary (ammonia) sanitizers at 150-400 PPM (MUST read the label for correct concentration requirements)

Chlorine (bleach) sanitizers at 50 – 100 PPM

A mixture of approximately ½ to ¾ teaspoon of Ultra Bleach in a gallon of water will yield the proper concentration. Check with test strips. For regular bleach, double the amount.



Keep your work area sanitary by wiping all counters, tables, and food preparation surfaces with one of the same sanitizers that is appropriate for dishwashing.

Wiping cloths must be kept in the bucket of sanitizer when they are not in use. Change sanitizer water as needed to keep it clean.

If you use spray bottles of sanitizer for wiping tables, you must use paper towels, or also keep a bucket of the same sanitizer available for soaking wiping cloths between uses.

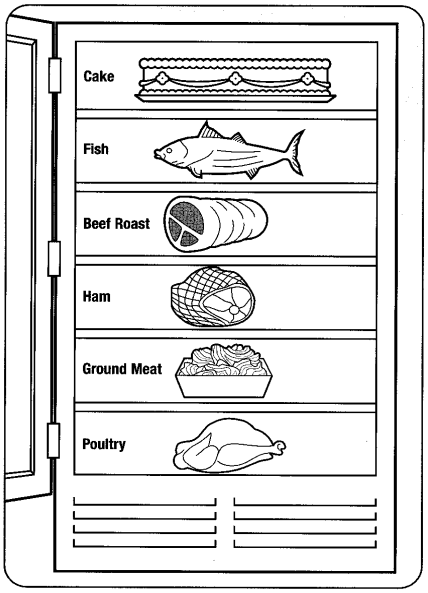
Keeping Food Safe in Storage

It is important to protect the integrity of food while it is in storage.

- **Refrigerators must be able to hold 41° F or below. Keep an easy-to-read thermometer in each refrigeration unit and check it frequently to ensure that it meets the temperature requirements.**
- **Store all dry goods in a protected area up off of the floor.**
- **Store all toxic chemicals and personal use items separate from or at a lower level than food.**
- **Store raw meats and ready-to-eat foods properly to avoid**

CROSS CONTAMINATION

- **All ready-to-eat foods should be stored on the top shelves above raw meats.**
- **Stack raw meats based on their cooking temperatures, with those requiring the highest temperatures on the bottom, and those with lower cooking temperatures at the top of the raw meats.**
- **Clean and sanitize equipment and food prep surfaces between working with raw meats and ready-to eat foods, and between different types of meat.**



Proper stacking order

Date Marking

Ready-to-eat, potentially hazardous food must be marked with a date when it is prepared or opened and must be used or discarded within 7 days. This includes the date of preparation or opening.

"Ready-to-eat" means food that is either raw or previously cooked that will not be cooked again prior to being consumed.

"Potentially hazardous" food is food that must be kept refrigerated at all times.

Some examples of foods that must be date marked are:

- **Salads such as potato salad, cole slaw, macaroni salad, egg salad, tuna salad, crab salad, and chicken salad**
- **Soft cheeses such as cottage cheese and cream cheese**
- **Cut melons, cut tomatoes and shredded green leafy vegetables**
- **Cold cuts of meat such as ham, turkey, and roast beef**
- **Desserts such as cheesecakes, "fluff" desserts, and cream pies**
- **Foods containing any of the above items**

With a few exceptions listed below, dates stamped on pre-made items by the manufacturer are only applicable until the product is opened. Once opened, a new date must be written on the container and the 7-day rule applies. Days do not accumulate if the food is frozen.

The date used to mark containers can be either the date the product is opened, or the date it must be discarded, as long as it stays consistent. A system using different colored date dots can also be used as long as it is very clear which day of the week is represented by which color and each day of the week has a different color. Make sure to train all employees on the date marking system. Items requiring a date mark that are not marked must be discarded.

There are several food items that are exempt from the date marking rule *if they have been prepared and packaged in a licensed food processing plant inspected by a regulatory authority*. These items include the following:

- **Deli salads such as ham salad, seafood salad, chicken salad, egg salad, potato salad, and macaroni salad in their original containers**
- **Hard and semi-soft cheeses including cheddar, parmesan, Monterey jack, mozzarella, and gorgonzola**
- **Cultured dairy products such as yogurt and sour cream**
- **Preserved fish products such as pickled herring**
- **Shelf stable, dry fermented sausages such as pepperoni and salami that are in their original casing and are not labeled "Keep Refrigerated"**