Food for Thought......

A Newsletter for our Foodservice Establishments
Winter/Spring 2013
Published by the Branch-Hillsdale-St. Joseph Community Health Agency

5 Contributing Factors of Food Borne Illness

It is estimated that 1 in 6 Americans (48 million people) get sick, 128,000 are hospitalized, and 3,000 die of food borne diseases annually. This newsletter focuses on the five most common contributing factors that lead to food borne illness. The five contributing factors are:

- Safe Food Sources,
- Personal Hygiene/Employee Illnesses,
- Cross Contamination,
- Safe Cooling and Hot/Cold Holding of Hazardous Foods, and
- Safe Cooking Temperatures.

Our agency's environmental public health food inspectors have written a series of brief articles that highlight the importance of controlling for these contributing factors so as to prevent food borne illness. We hope you will take a few minutes to read this newsletter and incorporate the information it contains into the safe food handling procedures at your local food service establishment(s).

On behalf of the Environmental Public Health Food Staff, I would like to wish you a successful year. Working together, we can provide safe and enjoyable foods to your patrons. Please feel free to contact your inspector if you have any questions or concerns.

Sincerely,

Rob Stauffer, R.E.H.S.,
Environmental Health Coordinator-Food Program
517-279-9561 ext. 109
staufferr@bhsj.org
The definition of cross-contamination is “the transfer of a contaminant from one source to another.” Cross-contamination of food is a common cause of food borne illness. Foods can become contaminated by microorganisms from many different sources during the food preparation and storage procedures. There are three major ways that cross-contamination of food can occur: food to food, equipment to food, and people to food. Let’s look at each of these separately and see how they can occur, as well as how to prevent them from happening.

**Food to Food**

Food can become contaminated by bacteria from other foods. This type of cross-contamination is especially dangerous if raw foods come into contact with cooked foods. An example would be: when meat drippings from raw meat stored on a top shelf of a refrigerator drip into lettuce or ready-to-eat vegetables stored below it. To help prevent food from becoming contaminated by microorganisms present in another food, practice the following:

- Store raw fish, meat and poultry separately from prepared and ready-to-eat food.
- Raw fish, meat, and poultry should be stored in the following top-to-bottom order in the refrigerator:
  - whole fish,
  - whole cuts of beef and pork,
  - ground meats, and
  - whole and ground poultry.
- Ready to eat foods should always be stored on the top shelf in the refrigerator.

**Equipment to Food**

Cross-contamination can also occur from kitchen equipment and utensils to food. This type of contamination occurs because the equipment or utensils were not properly cleaned and sanitized between each use. Examples of this type of cross-contamination are:

- using unclean equipment or utensils to prepare food,
- using the same cutting board to cut raw meats, then to cut vegetables.

Use separate equipment items for each type of food you are preparing (i.e., use colored cutting boards). Clean and sanitize all work surfaces, equipment and utensils after each task. Just rinsing or washing the equipment will not work. To prevent microorganisms from contaminating food, you must wash, rinse and sanitize the equipment.

**People to Food**

People can also be a source of cross-contamination. Examples are: handling foods after using the toilet without properly washing your hands; or handling raw meats, then preparing vegetables without washing hands between tasks. To help prevent food from becoming contaminated from people, remember to practice the following:

- Wash hands thoroughly after handling different foods and after any contamination.
- Don’t touch or prepare food if you have cuts or sores without using a double barrier, such as a bandage and a disposable glove.
- Also, use gloves, utensils or deli paper when handling ready-to-eat foods.
People, and more specifically food handlers, are potentially the most prevalent risk for contamination within a food service facility. They can be a primary source for the introduction of various hazards into the food supply of the facility. The good news is that good personal hygiene practices can reduce or eliminate the hazards associated with the food service worker.

Every food service facility should have a personal hygiene program in place. This program should cover the following basic principles:

- **Proper hand washing techniques.** This is the single-most important practice.
- **Proper glove use.** This requires washing hands before donning gloves and after removing used gloves.
- **Maintaining a high degree of personal cleanliness.**
- **Wearing proper work attire.** This includes wearing appropriate (clean) clothing, wearing hair/beard nets, not wearing excessive jewelry, not wearing anything on your body that could potentially contaminate the food you are handling (e.g., artificial fingernails, nail polish, bandages not covered with a glove).

Keeping in mind that proper hand washing is the most important factor in a good personal hygiene program, there are other key elements associated with hand washing that must be in place as well. The health department requires hand wash sinks be placed in strategic locations throughout the food preparation areas to facilitate frequent hand washing. Unfortunately, the hand wash sinks sometimes become a catch-all for dirty dishes, utensils or various other items. The hand wash sink has only one purpose and that is to be **accessible at all times for hand washing.** It is equally important to ensure the hand sink is always supplied with soap and disposable paper towels.

The purpose of hand washing is to reduce the bacteria on your hands to a safe level. To do this effectively, you must:

- Wash your hands for a minimum of 20 seconds using hot water and soap.
- Vigorously rub your hands together, paying attention to the fingertips and under the nails, and also including the lower part of your arms.
- Rinse and dry the washed areas with a single-use, disposable towel.

Knowing when to wash your hands is extremely important as well. The following is a list of times when you should wash your hands. This is not intended to be an all inclusive list, but will provide some guidance:

- Upon entering a food preparation area
- Before handling food (raw or ready to eat)
- After handling raw meats, fish or eggs
- After handling hazardous chemicals
- After touching the hair or face
- After eating or smoking
- After coughing, sneezing or blowing the nose
- After handling money
- After dealing with an ill customer or co-worker
- After clearing tables or handling dirty dishes
- After handling trash
- After changing a dressing/bandage covering a boil, skin infection or cut

There are other employee practices that must be controlled to ensure that an effective personal hygiene program is in place. Eating and smoking in food preparation areas is strictly prohibited. If employees are to drink in food prep areas, a covered container with a straw is required. This will eliminate any hand to mouth contact.

Finally, employees that are exhibiting symptoms such as coughing, sneezing and runny nose should not be working around exposed food or equipment. The Food Code also requires restriction of any employee with diarrhea, vomiting, sore throat or fever. It is vital to follow all of the prescribed employee restriction and exclusion guidelines for employees who may be ill with any of the **Big 5** diseases (Norovirus, Hepatitis A, E-coli, Salmonella typhi and Shigella) as outlined in the Food Code.

Following a strict program for personal hygiene will go a long way in preventing the spread of disease through food in your establishment. Good food safety starts with a high standard of personal hygiene for all food handlers.
During my time conducting inspections for this agency, I have found many issues that have confused even the most seasoned operator. The one category that seems to trip up almost everyone is cooling and proper holding of potentially hazardous foods. Some people have small pieces of the process down, while others miss the mark all together. My job is two-fold: evaluate why operators are not effectively carrying out these processes; and assist them with the correction of issues when they are found. Here are a few tips that may aid in ensuring compliance with cooling/hot/cold holding processes in your establishment.

First and foremost you have to have a person in-charge that is willing and able to train the staff on proper cooling and holding procedures. If no active training policies or procedures exist for your establishment, this is a good time to develop and implement them. Also, this person in-charge should encourage the growth and training of staff. As a result, staff will gain confidence in completing assigned job duties safely and correctly.

The person in-charge should outline what items on their menu should be cooled and those that need to be held hot or cold during the day. Identifying hazardous food items is crucial to the effectiveness of your process.

Cooling hazardous foods. Many different methods of cooling can be utilized in a food establishment. The main key is to follow a two-step cooling method. You may recall that hazardous foods do not need to start the cooling process until they start to fall below 135°F. Operators have two hours for food items to fall from 135°F to 70°F, and then another four hours for items to fall from 70°F to 41°F for a total of six hours. This means that hazardous foods need to be cooled FAST before they are placed into a cooling unit.

Special care needs to be given to avoid allowing hazardous foods to sit at room temperature for an extended length of time. When hazardous foods fall into the temperature danger zone, harmful pathogens can grow quickly, increasing the risk of possible food borne illness. Operators are encouraged to use ice/ice paddles and shallow pans when cooling hazardous foods. Establishments that use batch cooking, should portion the food out into smaller containers, leaving uncovered to cool. The use of temperature tracking sheets and a good thermometer is very helpful during this process to ensure foods are never allowed to stay in the temperature danger zone.

Hot and Cold Holding. The person in-charge and the rest of the staff also need to realize that hot and cold holding are just as important as cooling in the daily cooking operations of a food establishment. The saying goes “keep hot foods hot and cold foods cold.” What does that really mean? Once a hazardous food has been cooked to the proper temperature it can then be held hot. Hot holding is defined by the 2009 FDA Food Code as “holding a potentially hazardous food at or above 135°F.” On the other side, cold holding of a potentially hazardous food is 41°F or below. Staff should check hot and cold held foods routinely during the day to ensure they are being kept within the appropriate temperature range. A good bi-metal or digital thermometer is necessary to correctly monitor hot and cold holding units in your establishments.

Operators and their staff should feel free to ask questions of the food sanitarians when they are in your establishments. Asking questions is a great way for you and your staff to gain confidence in the processes you are implementing. The food sanitarians for the Branch-Hillsdale-St. Joseph Community Health Agency really do enjoy working with operators to ensure safe food handling and welcome your questions.
An important part of ensuring that foods served or sold by licensed food facilities are safe and wholesome, is verifying that all food comes from "approved" sources. "Approved" means acceptable to the Regulatory Authority based on a determination of conformity with principles, practices and generally recognized standards that protect public health. Using food from approved sources is a priority because food borne illness is often traced to foods used from unapproved sources.

Each Food Service Establishment (FSE) must demonstrate that the supplier they are using is approved. It is important that FSE operators maintain copies of invoices and other documentation to track all purchases. There are several practices to ensure that FSE suppliers receive and use food from an approved food source:

1. Confirm that suppliers have a food safety and security plan in place.
2. Supervise deliveries; do not allow an unattended delivery. Check the temperatures of refrigerated and frozen food items; refrigerated food items should be 41°F or lower; frozen food items should be 0°F or lower. Check frozen food items for ice crystals and/or big chunks of ice which are an indication that the food item has been thawed and refrozen.

3. Keep a list of where food products are purchased and maintain copies of invoices/bills of lading for tracking.
4. Have written Standard Operating Procedures (SOP’s) for receiving food.
5. Be aware of delivery condition and product quality. Check for tampering, discoloration, unusual packages, odor, contamination, insects, moisture, holes or other damage.

You can not make unsafe food safe. Therefore, make sure that you bring only approved food items into your operation. Your consumers depend on it.

Contact the Branch-Hillsdale-St. Joseph Community Health Agency with any concerns about approved food sources.

---

**Adequate Cooking for Food Safety—Rob Stauffer R.E.H.S., E.H. Coordinator**

Why do you think recipes come with instructions such as “Cook for a minimum 30 minutes at 375 degrees”? Harmful pathogens and diseases like parasites, e-coli, salmonella and campylobacter are destroyed by high temperatures. This is a known scientific fact. Ever read over the Food Code and wondered “Why does it require raw chicken to be cooked to an internal temperature of 165 degrees Fahrenheit for 15 seconds?” This is the minimum required internal cooking temperature necessary to destroy salmonella and campylobacter, two of the most common bacterial pathogens associated with raw or undercooked poultry. It is common to become infected with salmonella or campylobacter if you consume undercooked poultry. Ever wondered “How do food borne illnesses occur?” Many foods harbor natural pathogens and/or diseases. Achieving proper cooking temperatures on raw meats, poultry, eggs, seafood, and fish is crucial to the health and well being of your customers and for your business.

Remember that I said to note “internal temperature.” I do not mean the oven temperature. Internal temperature means “the thickest portion of the food item being temped.” This is where your calibrated thermometer comes in real handy to use. All raw meats, poultry, stuffed meats, fish, seafood and eggs must be checked for the final minimum required cooking temperature to ensure the destruction of known pathogens related to those food items. Proper cooking temperatures make your foods delicious but more importantly safe for the enjoyment of your customers. Causing a food borne illness by not knowing or being responsible when cooking and preparing your patrons’ food is not a recipe for success.

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Internal Temp. in °F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roasts cooked rare (Prime Rib) and held hot for a minimum 112 minutes.</td>
<td>130 F</td>
</tr>
<tr>
<td>Time &amp; Temperature relationship.</td>
<td></td>
</tr>
<tr>
<td>Commercially processed ready to eat foods Reheated for hot holding</td>
<td>140 F</td>
</tr>
<tr>
<td>Fish/Seafood, precooked meats (ham, hot dogs, etc.)</td>
<td>145 F</td>
</tr>
<tr>
<td>Steaks and Chops (Non-mechanically tenderized) Eggs (for immediate service)</td>
<td></td>
</tr>
<tr>
<td>Ground meats &amp; sausage (Beef, Pork, Lamb)</td>
<td>155 F</td>
</tr>
<tr>
<td>Comminuted (ground) fish and game Eggs (Cooked for hot holding)</td>
<td></td>
</tr>
<tr>
<td>Poultry; stuffed fish, meat, pasta, and ratites; or Stuffing containing these items</td>
<td>165 F</td>
</tr>
<tr>
<td>Foods to be re-heated for hot holding or reheated in a microwave oven</td>
<td></td>
</tr>
</tbody>
</table>

If you have any questions on safe proper cooking temperatures of your menu items, please contact your inspector. We love to help answer questions and be a source and reference for food safety.
Branch County - St. Joseph - Hillsdale Counties

**Branch County**

- Anderson Elementary School
- Bronson High School
- Chicago Street School
- Ryan Elementary School
- Coldwater
  - Allen’s Root Beer Drive-in
  - Bronson Co. Commission on Aging/H&C Burnside
  - Intermediate School District
  - Capri Drive In
  - Chicago Pike Inn
  - Chicago Street Pub
  - Coldwater Cinemas
  - Coldwater Hampton Inn
  - Coldwater High School
  - Coldwater Recreation
  - Commercial Sports Bar
  - Dearth Community Center
  - Elks Lodge
  - Great Lakes Health & Fitness
  - Holiday Inn Express
  - Jefferson Elementary School
  - Lakeland Elementary School
  - Leaky’s Lounge
  - Legg Middle School
  - Lincoln Elementary School
  - Little Caesars/East
    - Concord Pizza Mgt.
  - Mancino’s Pizza of Coldwater
  - Max Larsen Elementary School
  - Northwood’s Coffee
  - Omar’s Bar
  - Pansophia Academy
  - Pizza Hut
  - Prop Blast Café
  - Roger the Chef
  - Skate Ranch
  - St. Charles School

**Coldwater**

- Willows Bar and Grill
- Jennings Elementary School
- Oriole Snack Shack
- Quincy Dairy Queen
- Quincy Golf Course
- Quincy Pizza
- Stables Inc.
- Union City
  - Union City Elementary
  - Union City High School
  - Union City Middle School

**Hillsdale County**

- Camden-Frontier School
- Hillsdale
  - Arby’s
  - Carl L. Bailey School
  - Cavoni’s
  - Coffee Cup Diner
  - Community Action Agency
  - Davis Middle School
  - Domino’s Pizza
  - Hillsdale Filling Station
  - Hungry Howie’s
  - Jilly Beans Coffee House
  - King Me Koffee
  - Mancuso’s/Yumez’s
  - S.J. Gier School
  - Subway #051504
  - The Finish Line
  - The Salvation Army
  - Wendy’s

**Litchfield**

- Litchfield Community
- Luigis Pizza

**Montgomery**

- Stout Nesbit American Legion
- Timberman’s Tavern

**Mosherville**

- Mosherville Ladies Aid

**North Adams**

- Johnson’s Pizza

**Pittsford**

- DJ Family Restaurant
- Pittsford Schools

**Reading**

- American Legion Post #360
- Reading High School
- Reading Pizza Barn

**Somerset**

- Freddies Freeze
- Waldron

**St. Joseph County**

- Burr Oak
  - Burr Oak School
  - Centreville
    - Centreville High School
  - Constantine
    - American Legion #223
    - Chicken Coop
    - Constantine High School
    - Constantine Middle School
    - Eastside Elementary
    - Rachel’s
    - Riverside Elementary
    - Town Fryer
  - Mendon
    - Mendon Grade School
  - Sturgis
    - Earth & Sky Garden Center
    - Eastwood Schools
    - Green Valley Golf & Racquet
    - Green Valley Campground
    - Snack Bar
    - Mancino’s Pizza & Grinders

**St. Joseph**

- McDonald’s
- Mike’s Pizza
- Strand Theatre
- Sturgis Dairy Queen
- Sturgis High School
- Taco Bell #4233
- Wendy’s

**Three Rivers**

- Andrews Elementary
- Norton Elementary School
- Sam’s Place
- Three Rivers Health
- Three Rivers Middle School
- Twin County Community Probation Center

**White Pigeon**

- Carl’s Catering
- Los Cazadores
- White Pigeon High School