

Serving and Providing Food Safely at Extension Programming

FOOD POLICY



Extension's Role with Food

- Trusted resource for educational programming on food systems and handling and preparation practices
- Respected for increasing food knowledge within communities
- Host of many food-based fundraising events



Outbreak Example

April 2011, Maryland

- *Salmonella* outbreak linked to sausages used in and Extension fundraiser
- 8 people ill
- Sausages had been made during 4-H butchering event



Outbreak Example

July 2014, Alabama

- *Salmonella* and pathogenic *E. coli* outbreak traced to catered luncheon hosted by Alabama Cooperative Extension Service
- 19 ill
- 1 death from *E. coli* illness





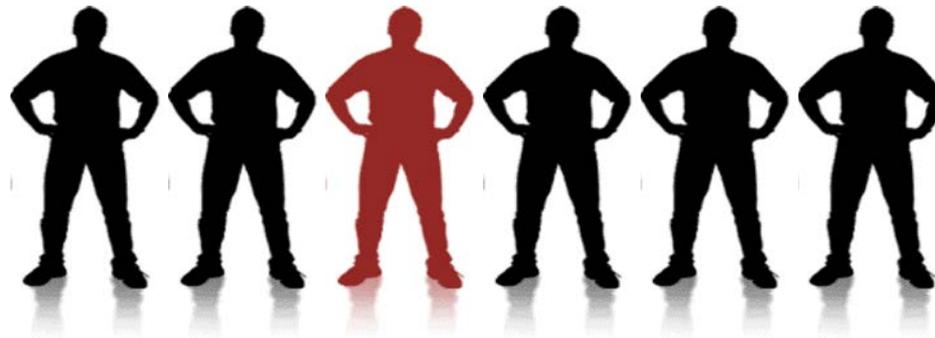
Foundations of Food Safety

Key Terms

- **Food** – anything edible that people consume including water and ice
- **Foodborne illness** – illness caused by consumption of contaminated food
- **Contamination** – presence of any harmful or objectionable substance or object in food
- **Pathogen** – a disease causing microorganism

Foodborne Illness

- Foodborne illness sickens approximately **1 in 6** people in the United States every year
 - 48 million illnesses
 - 128,000 hospitalizations
 - 3,000 deaths
 - Estimated annual cost \$51-77.7 billion

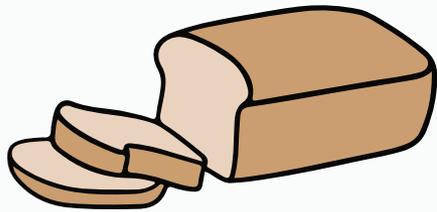


The Big Five Factors

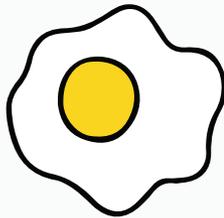
Centers for Disease Control and Prevention (CDC) identified the most common factors for foodborne illness as being:

1. Food purchased from unsafe sources
2. Failure to cook food to correct temperature
3. Improper holding temperatures
4. Contaminated equipment
5. Poor personal hygiene

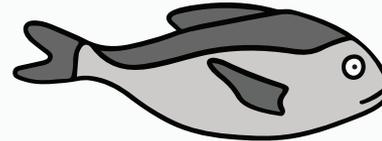
Common Food Allergens



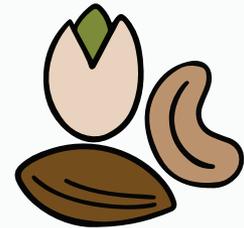
Wheat



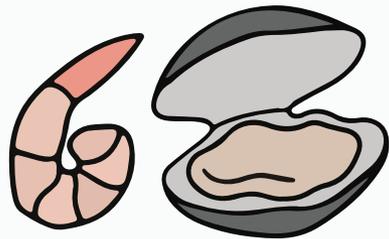
Eggs



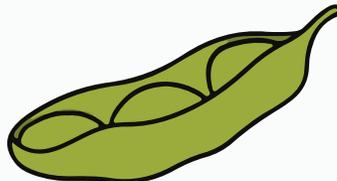
Fish



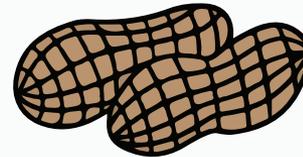
Tree Nuts



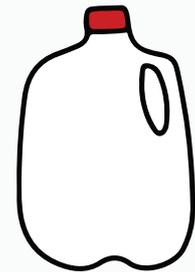
Shellfish



Soy



Peanuts



Milk

Discussion

Have you or anyone you know ever contracted a foodborne illness? Was it reported to the health department?

What kind of symptoms were experienced?



Populations at Increased Risk

- People who are more likely than the general population to experience foodborne diseases
 - **Y**oung (preschool age and younger)
 - **O**ld (elderly)
 - **P**regnant women and unborn babies
 - **I**mmune compromised (weakened immune systems)





Personal Health and Hygiene

Key Terms

- **Time/Temperature Control for Safety (TCS) foods** – foods that requires strict control of time and temperature to limit pathogenic microorganism growth and/or toxin formation
- **Ready-to-eat foods (RTE)** – foods that can be consumed without preparation or treatment, such as washing or cooking, immediately before they are eaten

Key Terms

- **Handwashing** – the act of properly washing your hands, a critical factor in reducing fecal-oral pathogens by preventing cross-contamination and the spread of disease
- **Cross-contamination** – the transfer of a harmful substance from one food item to another, usually from raw to cooked or ready-to-eat food

Outbreak Example

Summer 2018, North Carolina

- Norovirus outbreak linked to a McDonalds restaurant in Transylvania County
 - 70 cases of suspected foodborne illnesses
 - 200 individuals called health department with complaints of gastrointestinal problems
 - Illnesses not limited to restaurant customers
 - Spread person-to-person



Scenario

Michael, a Livestock Extension Agent, got a call to visit a local farm. Later that day, after being in one of the hog houses, Michael heads for the Extension office, changes shoes and washes his hands. Then he immediately starts to help cook the county potluck dinner.

What should Michael have done before preparing food?



Proper Handwashing

Handwashing Steps



Step 1: Wet hands and arms with warm water



Step 2: Rub soap into hands and arms for **10-15 seconds**



Step 3: Rinse with running water



Step 4: Dry hands with disposable paper towel

Hand sanitizers are not a replacement for handwashing

When to Wash Your Hands

Before

- Preparing food
- Touching ready-to-eat foods
- Putting on new gloves
- Beginning each new task



Do you need to wash hands before touching raw meat?

Scenario

Stacey, a Horticulture Extension Agent, is preparing for the annual county BBQ event. She is about to prepare lettuce, tomatoes and cheese for hamburgers. Does she need to wash her hands?

Now she is ready to make the burgers. Does Stacey have to wash her hands before she shapes the meat? Why or why not?



Preventing Bare Hand Contact

- Avoid bare hand contact with RTE foods by using utensils, hand papers or single-use gloves
- Gloves are not a substitute for handwashing
- Change gloves
 - When they tear
 - Before beginning a new task
 - Switching from raw to RTE food



Scenario

For the annual county BBQ, Stacey, the Horticulture Extension Agent, now has the burgers cooked and she is ready to put the patties on the buns and top them.

Does Stacey need to wash her hands? Why or why not?

Does she need gloves? Why or why not?



Preparing and Serving Food While Sick

- Do not prepare or serve food if sick with the following symptoms:
 - Diarrhea
 - Vomiting
 - Jaundice
 - Sore throat and fever
 - Wounds on exposed area with pus
- Do not allow any sick volunteers to prepare or serve food

Scenario

Today there is an event at the Extension office to make food for community partners. Two days before, Paul, an FCS Agent was vomiting and had diarrhea, but a few hours before the event he started feeling better.

Should he be handling food for the event?





Best Practices for Food Safety in Extension

**NC COOPERATIVE
EXTENSION**
Local Food Program
Balsamic Roasted Beets with Feta
Servings: 6 – 8, Total Time: 45 minutes
Ingredients

- 6 medium beets (2 bunches, or about 3
- 2 tablespoons of extra virgin olive oil
- 1 teaspoon of kosher salt
- 1/3 cup inexpensive balsamic vineg...
- 1 tablespo...

Key Terms

- **Approved supplier** – a supplier is one who is accountable to a regulatory authority
- **Cross-contact** – when an allergen is inadvertently transferred from a food containing an allergen to a food that does not contain the allergen
- **Food allergy** – the body's immune system has an abnormal reaction to proteins in a food
- **Potable water** – also known as drinking water; it is safe to drink and to use for food preparation

Outbreak Example

Spring 2015, Ohio

- *Clostridium botulinum* outbreak linked to a potato salad served at a church potluck
 - 29 people ill
 - 22 people hospitalized
 - 1 death
 - Outbreak traced to improperly home canned potatoes



Best Practices Food Prep Location

- Prepare food in the Extension office kitchen
- Clean and sanitize food contact surfaces before use
- Maintain clean equipment, floors and walls



Best Practices for Food Prepared at Home

- Food should be prepared by individuals who understand food safety
 - Extension is covered by insurance in case of an outbreak but volunteers are not
- Those preparing should provide a list of ingredients and a method of contacting participants in case of a recall
 - <https://www.foodsafety.gov/recalls/index.html>
- Prepare only **non-TCS** foods

Best Practices for Sourcing Food and Supplies

- Purchase and/or obtain food from the following:
 - Supermarkets and other commercial grocers farmers' markets
 - Farms
 - Restaurants
 - Licensed caterers
 - Certified home food business owners
- Food should come from a regulated source
 - Homes are not regulated



Food Preparation Equipment

- Use equipment in good condition
- Get rid of broken equipment which can harbor pathogens because it is not easily cleanable
- Rusty equipment is also difficult to clean adequately



Scenario

More kitchen space is needed for an upcoming Extension event serving food. Julia, a volunteer, has decided she will make some of the food at her home.

How does the county decide what should be made in the Extension kitchen and what could be safely made in Julia's home kitchen?



TCS Food

- A food that requires time-temperature control to prevent the growth of microorganisms and the production of toxins
- This food contains moisture and protein and has a neutral or slightly acidic pH



Factors that Determine TCS Food

F

food



A

acidity



T

temperature



T

time



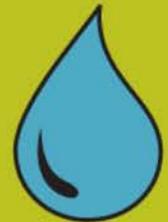
O

oxygen



M

moisture



Examples of TCS Foods

Animal Products

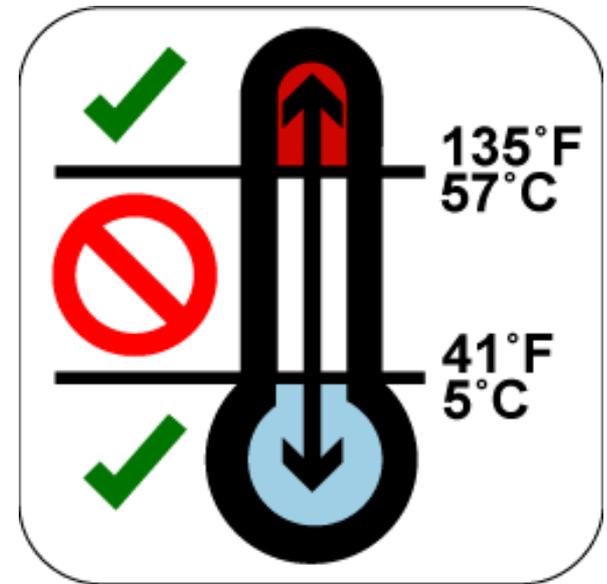


Produce and Grains



Storing TCS Foods

- Keep TCS food out of the temperature danger zone (TDZ)
 - TDZ is above 41°F and below 135°F
- Use TCS food held in the refrigerator (at or below 41°F) within 7 days



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Safe Handling of TCS and RTE Foods

- Ready-to-eat foods that are TCS held for longer than 24 hours should be labeled with food and use by or discard by date
- Date must be no longer than 7 days
- Day of preparation is Day 1

Potato Salad
Discard by Friday, 11/16

Safe Handling of Allergens

- Prevent cross-contact
 - Wash hands when switching from allergen to non-allergen foods
 - Use separate prep and cooking surfaces and utensils when switching from allergen to non-allergen foods
 - Clean anything that has touched an allergen
- Know your ingredients
- Store allergen ingredients away from non-allergen ingredients if possible
- Label allergen ingredients with allergen information



Monitoring Temperature

Measuring Temperature

- Monitor temperature when thawing, cooking, cooling, reheating and holding
- Use a tested digital tip-sensitive thermometer
- Measure temperature at the thickest spot
- Stir well before measuring temperature

Cooking Temperatures

Food	Temperature
Steaks, Roasts, Chops (Beef, Pork, Lamb)	145°F
Fish	145°F
Eggs	145°F
Ground meat	155°F
Egg dishes	160°F
Poultry (including ground poultry)	165°F
Leftovers & casseroles	165°F

Thawing Food

- Four ways to safely thaw food:
 - In the refrigerator or cooler at 41°F
 - In microwave oven if food is cooked immediately after
 - In package submerged under running potable water at 70°F or lower
 - As a part of the cooking process



Off-site Locations such as Farms

- Ensure the following is in place:
 - Potable water
 - Sink or improvised sink
 - Waste water disposal
 - Clean and sanitized food prep surface
 - Adequate lighting – use drop lights or vehicle headlights if dark out
 - Thermometer
 - Restroom or handwashing station
 - Coolers



Best Practices for Using Ice

- Use clean utensils to handle ice, such as an ice scoop or tongs
- Do not touch ice with dirty hands or containers
- Store ice only in clean containers that are safe for storing food such as coolers or food storage bags - do not use trash bags



Best Practice for Using Ice

- Raw foods should be wrapped securely to prevent water cross-contaminating
 - Ex. raw meat juices contaminating vegetables
- Have a separate bag of ice in a cooler to use for drinks
 - Do not use loose ice from a cooler used to keep foods cool



Taste Testing

- Contamination can occur when tasting food
- To prevent contamination:
 - Use disposable utensils or use a utensil once and then wash it; do not reuse tasting utensils
 - **Option 1:** Step away to taste dish; food should not be tasted over pots, pans or serving containers
 - **Option 2:** Place tasting portions in small dishes and step away to taste



Scenario

Kylie, a 4-H Agent, has 14 youth participating in a 2 day camp taking place offsite. Lunch will be prepared and served in the Extension kitchen. She just learned that the kitchen is being used to prepare food for a last minute event and she has to share the kitchen to prepare the lunches.

What steps should she take as she prepares to make the meal?



Food Safety on Field Trips and Tours

- Food temperature
 - Can I keep it cold or hot?
- Food preparation
 - Can I keep it clean and sanitary?
- Handwashing
 - Do I have what I need to wash hands?



Best Practices for Transporting Food

- Ensure vehicles and packaging are clean and sanitary
 - Dirty vehicles and reusing containers can be a source of cross-contamination
- Consider using inexpensive coolers and ice packs
- Promptly refrigerate products



Best Clean Up Practices

- It is best to clean up immediately after an event as to not attract pests
- This includes:
 - Cleaning and sanitizing all equipment and surfaces
 - Sweeping floors
 - Removing all trash



Steps for Cleaning and Sanitizing

1. Scrape off excess debris
2. Clean with soap and water
3. Rinse well
4. Sanitize
 - 1 TBSP chlorine bleach (plain, unscented and non-concentrated) + 1 gallon of water
 - Quaternary ammonium (ex: Mr. Clean, Lysol) follow manufacturers' instructions
5. Air dry before use



Hosting Cooking Classes

Best Practices for Hosting Cooking Classes

- Extension educational activities should never include serving food to the public for a fee
- Charging a registration fee to cover expenses is permissible
 - Never charge for a meal by itself
 - Refrain from suggesting on promotional materials that a fee is charged for food
 - Refrain from advertising that the registration fee includes sending product home with participants

Examples

In-appropriate Promotion

**Patriot County Cooperative Extension
Presents**

Canning Preserves

February 29, 2018
9:00 a.m. – 4:00 p.m.

This six hour training, taught by Extension professionals will teach the best practices associated with canning strawberry and grape preserves.

Lunch: steak, baked potato, and salad will be provided for \$15.00

Location: Patriot County Cooperative Extension Office

Appropriate Promotion

**Patriot County Cooperative Extension
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Lunch: steak, baked potato, salad and desert will be provided.

Registration Fee: \$15.00

Location: Patriot County Cooperative Extension Office

Best Practices for Hosting Cooking Classes

- Some Cooperative Extension kitchens are “permitted” by the Division of Public Health
 - Permitted means the kitchen has been inspected by Environment Health Services and a grade is posted on the premises
- If permitted, food handling activities must be supervised by an Extension professional trained in best practices for food preparation or a Certified Food Protection Manager



Home Food Preservation Training: Specific Guidance

Importance of Guidelines

- Food canned in a class setting may not always have appropriate controls or be monitored as well as when one is canning at home
- Provide proper instructions to consumers
- Low-acid canned foods are of particular concern because of *C. botulinum*

Best Practices: Provide Instructions

- When participants take jars home from workshop provide instruction to refrigerate jars regardless of risk
- **Application:**
 - Agents should instruct participants to promptly refrigerate jars, 41°F or lower
 - Emphasize and explain importance with low acid foods
 - Provide a disclaimer attached to jar/container or as a handout



Importance of Refrigeration

- Refrigerate all jars regardless of risk
- Recommended cooling time of 12 -24 hours contributes to the total process
- Particularly important when preserving low-acid canned foods like green beans, meat and sauces containing meat



Disclaimer Information Needed

- Disclaimers on jars should have information on:
 - Preservation method used
 - Ingredients
 - Potential side effects and warning of jar lids not sealing
 - FCS Agent contact information



Example of Disclaimer for High Acid Foods

Important

This strawberry jam was processed using the hot water bath method.

Storing: Refrigerate at 41°F or below within 4 hours regardless of whether or not the jar seals. If unable to refrigerate within 4 hours discard immediately.

Ingredients: Fresh strawberries, sugar, pectin, lemon juice

If you have questions about this product, please call your Family & Consumer Sciences Agent at: BR7-555-1212.

Example of Disclaimer for Low Acid Foods

Important

These green beans were processed using a pressure canner.

Storing: Refrigerate at 41°F or below within 4 hours regardless of whether or not the jar seals. If unable to refrigerate within 4 hours discard immediately.

Ingredients: green beans, salt and water

If you have questions about this product, please call your Family & Consumer Sciences Agent at: BR7-555-1212.

Review

- Importance of food safety
- Personal health and hygiene
- Recommended guidelines
- TCS and RTE foods
- Temperature and thermometer use
- Cooking classes
- Food preservation training