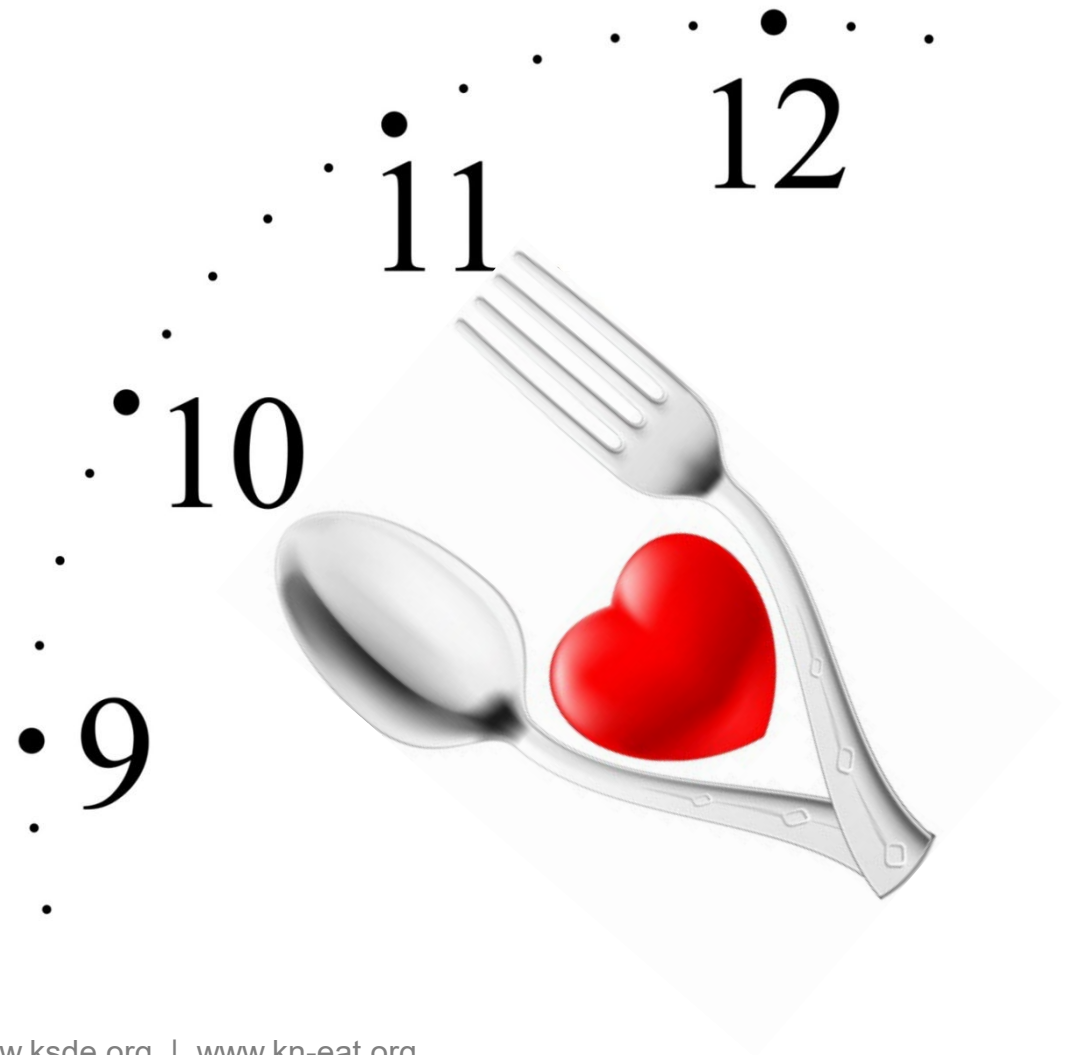



Take Time for Food Safety






Allergy Awareness

Prevent Foodborne Illness

Personal Hygiene



WASH

Cleaning & Sanitizing



Serving It Safe



Food Preparation & Cooling



Purchasing & Storing





Objectives

By the end of this class, participants will:

- Know what foodborne illness is and its causes.
- Recognize the importance of handwashing and personal hygiene.
- Understand how to clean and sanitize surfaces.
- Learn how to handle food safely during purchasing, storing, preparing, and serving.
- Realize food allergy risks.

What is Foodborne Illness (FBI)?

- Results from consumption of contaminated food or beverage.
- Often referred to as food poisoning.
- Occurs when two or more people get sick from consuming the same item.
- Occurs when one or more get sick from chemical contaminant or botulism.

How Do FBI Occur?

- Obtaining food from unsafe sources
- Improper food preparation practices
- Inadequate temperature controls
- Improper thawing
- Failure to cool hot foods quickly
- Poor personal hygiene
- Inadequate cleaning and sanitizing
- Mishandling of chemicals

Common Symptoms

- Nausea
- Vomiting
- Diarrhea
- Fever
- Chills
- Severe headache
- Stiff neck



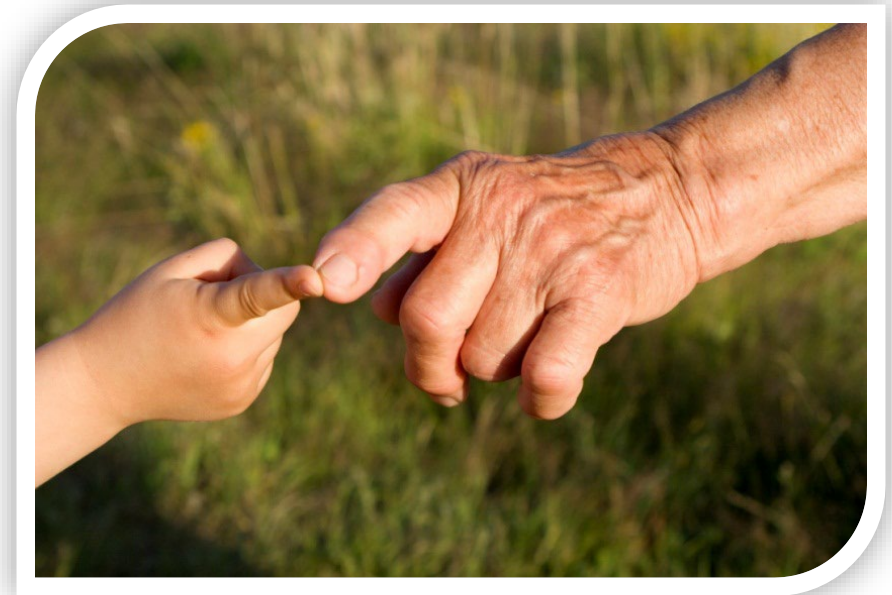


Long-Term Complications

- Guillain-Barre syndrome (muscle weakness)
- Reactive arthritis
- Kidney dysfunction
- Neurological disorders
- Brain damage
- Irritable bowel syndrome
- Chronic diarrhea
- Death

Highly Susceptible Populations

- **Young**
 - Infants
 - Children
- **Elderly**
- **Pregnant women**
- **Immune compromised or chronically ill**







Contaminants

- Physical Objects
- Chemical
- Harmful Microorganisms



Food can be unsafe to eat before it looks, smells, or tastes spoiled.

Physical Contamination

- Wear protective gear, such as hairnets, gloves, and aprons.
- Clean food-contact surfaces.
- Cover exposed foods.
- Store food properly.
- Maintain equipment.



Chemical Contamination

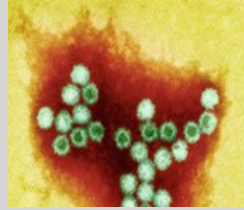
- Occurs when chemicals get into a food or food-contact surface.
 - Cleaning products and sanitizing solutions
 - Pesticides
 - Medicines
- Use chemical containers only for chemicals and label correctly.
- Store separately from food and food contact surfaces.



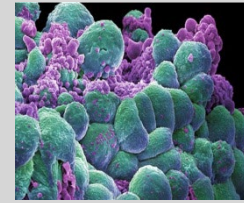
Harmful Microorganisms/ Pathogens Contamination

- Micro = very small
- Organisms = living things

Viruses



Fungi



Parasites



Bacteria



Bacteria can produce toxins, poisons that cause foodborne illness.

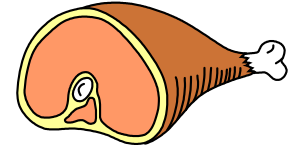
Potentially Hazardous Foods

- Any food/food ingredient capable of allowing **rapid** growth of pathogens.
- Require time and temperature controls for safety.
- Maximum time in the temperature danger zone of 41°F - 135°F is four hours.
- “Two-hour Rule” recommended.
- Limit time at room temperatures.



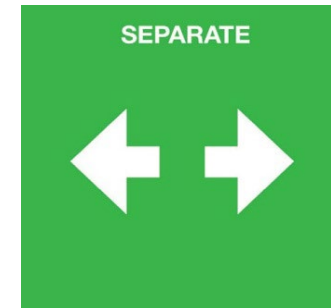
Examples of TCS Foods

- Raw or cooked foods of animal origin
 - Meats, poultry, milk, soft cheese, eggs, fish, or seafood
- Cooked foods of plant origin
 - Vegetables such as potatoes or beans
 - Starches such as rice or pasta
- Other foods
 - Cut melons, tofu, raw cut tomatoes, cut leafy greens, and raw sprouts



Four Aspects of Food Safety

1. CLEAN
2. SEPARATE
3. COOK
4. CHILL



FoodSafety.gov

CLEAN



Personal Hygiene

- Brush teeth and bathe daily.
- Wear clean clothes.
- Change apron when soiled.
- Restrain hair.
- Maintain good health.
- Do not work around food when ill.



CLEAN



Personal Hygiene, cont.

- Wash hands properly and often.
- Trim and smooth fingernails.
- Avoid polished or artificial fingernails.
- Wear disposable gloves over bandaged cuts, scrapes, and burns on the hands.
- Limit jewelry.



CLEAN



Handwashing Steps

1. Wet hands with warm water (100°F).
2. Apply soap and rub for 20 seconds.
3. Rinse.
4. Dry with clean paper towel or air dryer.



CLEAN



Handwashing Sink

- Designate a handwashing sink.
- Post handwashing sign to show steps.
- Accessible and stocked with supplies.
- Keep sink cleaned and sanitized.
- Make appropriate accommodations.
- Provide a covered waste container.



CLEAN



Hand Sanitizers

- Are not a substitute for proper handwashing.
- Optional follow up to handwashing.
- Use food-safe hand sanitizers.
- Can be drying to the hands if used repeatedly.



CLEAN



When to Wash Hands

After...

- Coughing or sneezing
- Blowing nose
- Touching face/hair
- Contact with bodily fluids/diapering
- Applying first aid
- Caring for person
- Feeding someone
- Handling animals, their foods and waste
- Handling raw foods
- Eating or drinking
- Smoking
- Cleaning activities
- Sandbox or dirt play
- Water play
- Handling money
- Using the restroom

CLEAN



When to Wash Hands, cont.

Before...

- Handling food
- Preparing bottles
- Putting on food gloves
- Setting the table
- Feeding another
- Eating
- Caring for the sick
- Applying first aid



CLEAN



Bodily Discharges

- Discharges are a source of contamination and can easily transfer pathogens.
- Diaper in a designated area.
- Sanitize area to kill pathogens.
- Wash hands after each incident involving bodily discharges.
- Use disposable gloves.



CLEAN



It Can Happen!

A 2007 outbreak of shigellosis in Florida affected 46 children and was associated with improper diapering and toileting protocol.

A 2017 outbreak in Kansas involved 22 cases of shigellosis at a single child care center. Improper cleaning of surfaces and person-to-person transmission contributed to this outbreak.

A 2010 E. coli outbreak at a Vancouver, Washington daycare led to the death of a four-year-old boy and four hospitalizations. Investigators believe risky diapering procedures may have been a factor.

CLEAN



Cleaning and Sanitizing Food-Contact Surfaces

- Cleaning is removing soil and food debris from a food-contact surface.
- Sanitizing is removing most of the microorganisms.

CLEAN



Food-Contact Surfaces

Storage & Preparation

- Microwave
- Sinks
- Cutting boards
- Blenders
- Counter tops
- Food thermometers
- Knives
- Refrigerator
- Wiping cloths
- Aprons



Service

- Flatware
- Dishes
- Child care table
- Highchairs
- Bibs

CLEAN



5 Steps to Cleaning, Rinsing, and Sanitizing

1. Scrape or rinse excess food debris.
2. Clean in hot soapy water to remove soil and food. Use clean dishcloths.
3. Rinse in clean hot water to remove the cleaning agent.
4. Sanitize to reduce microorganisms to levels that are safe.
5. Air dry.

CLEAN



Dishwasher

- Keep machine clean and free of food.
- Check water temperatures.
- Pre-rinse or scrape items before loading them into the dishwasher.



CLEAN



Manual Dish Washing

- Sinks should be cleaned first.
- Sanitize by immersing items in a properly mixed sanitizing solution.
- Sanitize by spraying with a properly mixed sanitizing solution.



CLEAN



Chemical Sanitizing Solution: Chlorine Bleach

- 1 gallon warm water (50°F - 100°F)
- Add 1-2 tsp. unscented bleach
- Stir
- Immerse for 10 seconds
- Air dry



CLEAN



Chemical Sanitizing Solution: Quaternary Ammonium

- 1 gallon hot water (75°F or hotter)
- Add ½ tsp - 1 tsp. Quaternary Ammonium
- Stir
- Immerse for 30 seconds
- Air dry



CLEAN



Sterilizing Bottles

- Dismantle the bottle.
- Wash all parts in warm soapy water.
- Rinse in clean water.
- Put parts in boiling water.
- Boil for 5 minutes.
- Remove with sanitized tongs.
- Air dry opened.



CLEAN



Sanitizers vs. Disinfectants

Bleach as a Sanitizer

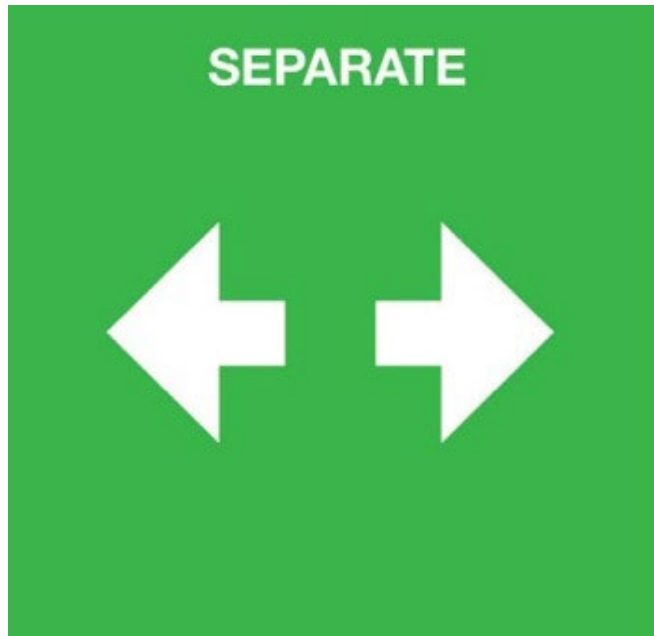
- Kill microorganisms
- Approved for food-contact surfaces
- Safe concentration of chemical to water
- 1-2 tsp. bleach/gal. water

Bleach as a Disinfectant

- Kill microorganisms
- Used on hard surfaces that do not touch food
- Strong concentration that has a chemical residue
- ¼ cup bleach/gal. water



SEPARATE



What is Cross-Contamination?

- Hands to food
- Food-contact surfaces to food
- Food to food
- Animals to food
- Pests to food



SEPARATE



Small Stuff Matters

- Personal beverage containers
- Aprons and pot holders
- Timers and thermometers
- Phones
- Door handles and knobs
- Bibs
- Other linens



SEPARATE



Dogs, Cats, and Critters, Oh My!

- Keep animals away from food and food-contact surfaces.
- Position caged animals away from food preparation and service areas.
- Wash hands after handling animals.



SEPARATE



Keep Chemicals Separate

- Store away from foods and food-contact surfaces.
- Secure away from children.
- Properly label.



SEPARATE



Purchasing

- Purchase wholesome safe foods from approved suppliers.
 - Grocery store
 - Wholesale market
 - Wholesale distributor
 - Caterer
 - Local farmer's market
 - Local producer
- Use meats, poultry, dairy, and processed foods that have been inspected.
- Purchase American products when possible.



SEPARATE



Safe Purchasing

- Check package dates.
- Inspect canned and packaged items.
- Ensure frozen items are solid to the touch.
- Keep meat, poultry, and fish separate.
- Purchase cut melons, cut tomatoes, and cut leafy greens from cold storage.
- Do not serve raw milk, unpasteurized juice, uninspected eggs, home-canned foods, or raw sprouts.

SEPARATE



Product Date Marking

- A "Sell-By" date indicates how long to display the product for sale.
- A "Best if Used By" date is recommended for best flavor or quality.
- A "Use-By" date is the last date recommended for the product.
- "Coded dates" are packing numbers for use by the manufacturer.



SEPARATE



Safe Transit and Food Storage

- Handle food safely during transport.
- Make storage arrangements in advance of shopping.
- Purchase cold foods last on trip.
- Use equipment to keep cold food cold.
- Store cold items immediately.



SEPARATE



Storing Cold Foods

- Keep refrigerator below 41°F (38°F ideal).
- Use foods on a First In, First Out (FIFO) basis.
- Store sealed meat, poultry, and fish on lower shelves.
- Store ready-to-eat foods separate from raw dripping foods.
- Label, date, and protect opened foods.
- Clean refrigerator frequently.



SEPARATE



Storing Frozen Foods

- Store at or below 0°F.
- Freezing practically stops growth of harmful bacteria.
- Preserves freshness.
- Wrap and freeze right after purchase.
- Keep frozen until ready to use.



SEPARATE



Storing Dry Foods

- Cool, dry area
- Sealed or covered packaging
- First-In, First-Out (FIFO) rotation
- Away from garbage and restrooms
- Raised shelves or enclosed cabinetry
- Pest free and pet free location
- Well lit
- Good air circulation
- Separate from chemicals



SEPARATE



Unsafe Foods

- Spoiled food that looks and smells bad
- “Use by” date has passed
- Leak, bulge, crack, have loose lids or severe dents, excessive rust or dirt
- Containers that spray when opened
- Moldy foods
- Improperly thawed products
- Pest-infested items



SEPARATE





Pesky Pests



- Cockroaches contaminate by crawling, shedding skins, and dumping wastes.
- House flies contaminate through digestive acids, defecation, and body hairs.
- Fruit flies land on foods and transfer bacteria from one place to another.
- Rodents contaminate with their waste products.



SEPARATE



Controlling Pests

- Deny food, water, and a place to hide.
- Cleaning removes a food source, destroys eggs, and controls nesting.
- Dispose of trash and keep it covered.
- Store recyclables properly.
- Secure exterior openings in the home.
- Call a licensed pest control operator.

SEPARATE

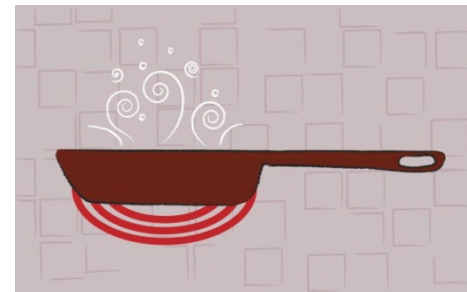


COOK



Thawing Frozen Foods

- In the refrigerator, at 41°F or below
- Under cold, running water
- Defrost in the microwave and continue cooking the food to endpoint temperature
- Thaw as part of the cooking process



COOK



Preparing Fresh Produce

- Rinse in running water to remove microorganisms on the surface.
- Use cool to warm water, not cold.
- Scrub tough skinned items with food brush under cool running water.
- Gently soak delicate items, then rinse.
- Packaged, ready-to-eat products do not need to be rinsed again.



COOK



Food Preparation

- Keep cold foods at 41°F or below.
- Keep hot foods at 135°F or above.
- Cook continuously to endpoint temperature.
- Use a food thermometer to temp food.
- Marinate products in the refrigerator.
- Cooking does not destroy toxins formed by some microorganisms.



COOK



Proper Internal Temps

- Poultry
 - Whole.....180°F
 - Legs, thighs & wings..... 180°F
 - Breasts..... 170°F
 - Ground.....165°F
- Ground Beef.....160°F
- Beef Roasts, Veal, Lamb..... 145°F
- Raw Pork, Ham & Sausage.....160°F
- Commercially Pre-cooked Ready-to-eat Meat
(ham, roast beef, turkey, etc.).....135°F
- Processed Meat Items (nuggets, fritters, cooked beef patties, etc.)
Follow Manufacturer's Instructions
- Egg Dishes..... 160°F
- Fish..... 145°F
- Leftovers, Casseroles.....165°F



Mr. Thermy

- Take internal temperatures of food.
- Place in thickest part of food, 2” deep; stack or pile food if necessary.
- Clean and sanitize after each use.
- Store in case.



COOK



Microwave Cooking

- Rotate and stir during cooking process.
- Use microwave-safe containers.
- Follow directions on commercially packaged foods or cook to internal temperature of 165°F.
- Avoid microwaving meat sticks and eggs since they splatter.



COOK



Slow Cookers

- Not suitable for cooking large quantities.
- Use thawed ingredients.
- Cut products into small pieces.
- Use recipes with a liquid.
- Cook on high for 1 hour and switch to low.
- Cooking must be continuous.
- Do not use delay cook feature.



COOK



Instant Pots

- Functions as a slow cooker, rice cooker, steamer, pressure cooker, and sauté pan.
- Quickens the cooking process, but can become a source of household hazards.
- Use safely, following product recommendations in Users Guide.
- Purchase quality equipment.



Taste Testing Foods

- Use appropriate tools.
 - Clean taste testing spoon
 - Small bowl
- Serve a small portion into the bowl.
- Step away from the prepared food.
- Taste from the bowl with testing spoon.
- Put soiled bowl and spoon in sink.



COOK



Emerging Risks

- Consumption of products containing raw flour that did not get cooked.
- Incidences included children playing with a homemade play dough, people licking cake batter off a spoon and people eating raw cookie dough as a snack food.
- Flour, became a high risk food once moisture was added to it and it was not cooked to destroy pathogens.



COOK



Field Trips and Picnics

- Keep potentially hazardous foods at safe temperatures.
- Pack foods that do not require temperature controls.
- Pre-chill or freeze cold foods overnight and use cold holding equipment.



COOK



Serving Food Safely

- Hold food at proper temperatures.
- Put out for service when ready to eat.
- Use time controls as needed.
- Prevent cross-contamination at the table.



COOK



Leftovers

- Label and date unserved leftovers.
- Store food in refrigerator immediately after service and hold for up to 7 days.
- Most served foods cannot be saved once they have been exposed to diners.
- Nonperishable packaged foods and fruits with a nonedible peel may be saved.
- Reheat leftovers to 165°F quickly.
- Reheat and serve hot leftovers once.

COOK



Handling Baby Formulas

- Check “use by” date.
- Label and refrigerate prepared formulas.
- Label and refrigerate opened cans of liquid formula.
- Discard formula in bottle after feeding.



COOK



Handling Breast Milk

- Label with the date pumped.
- Hold fresh milk at room temperature up to 4 hours including feeding time.
- Hold fresh milk in refrigerator up to 48 hours.
- Freeze up to 6 months.
- Do not refreeze a thawed product.
- Hold thawed milk room temperature up to 2 hours including feeding time.
- Hold thawed milk in refrigerator up to 24 hours.



COOK



Handling Baby Foods

- Label jars brought from infant's home.
- Observe "use by" date on jar.
- Serve from a dish not the container.
- Discard leftover baby food served directly from the jar.
- Refrigerate un-served amount.
- Serve portioned amount within 2 hours.
- Reheat homemade solid foods to 165 degrees.
- Thaw frozen foods safely.



COOK

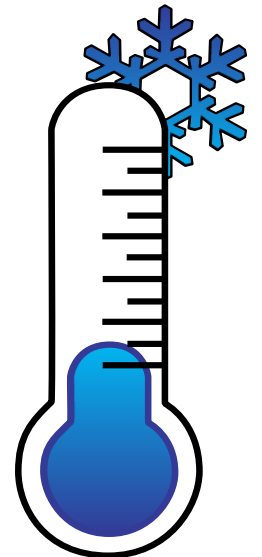


CHILL



Chill

- **The Chill Factor** – Cool to 41°F or below in the refrigerator or freezer.
- **Divide and Conquer** – Separate large amounts into smaller pans or pieces.
- **Ice Down** – Use an ice bath, ice paddle, or ice as an ingredient to cool hot foods.
- **Avoid the Pack Attack** – Store to allow cold air to circulate around hot foods.

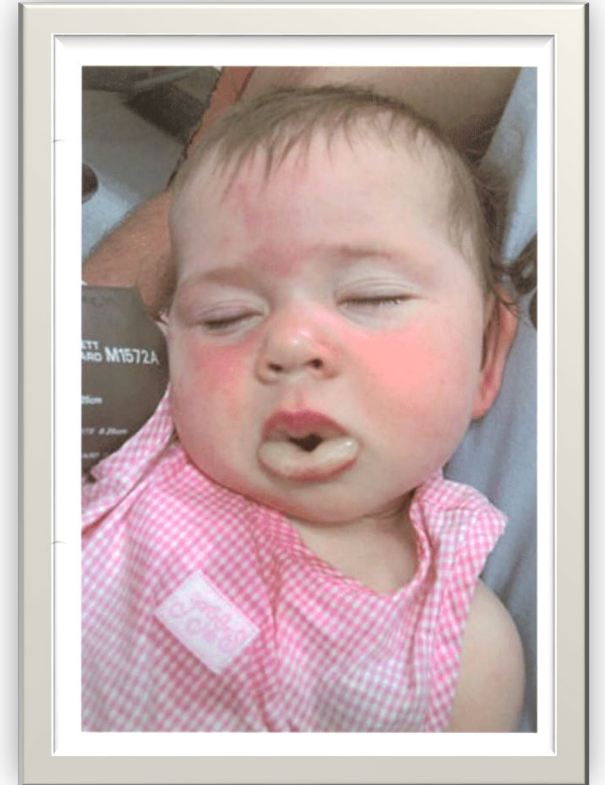


CHILL



Common Allergy Symptoms

- Nausea and/or vomiting
- Scratchy throat
- Nasal congestion
- Difficulty swallowing
- Shortness of breath
- Wheezing
- Hives / rashes
- Itching
- Swelling of body parts (face, hands, feet)
- Abdominal pain / stomach cramps
- Diarrhea



Anaphylaxis

- Rare but potentially fatal condition
- Reaction occurs throughout the body
- Symptoms include:
 - Low blood pressure
 - Breathing difficulties
 - Shock
 - Loss of consciousness
- Provide immediate medical attention
- May need epinephrine injection to open airways and blood vessels



“The Big 8 Allergens”

90% of food allergies

1. **Peanuts**
2. **Tree Nuts** (such as almonds, pecans, walnuts)
3. **Milk**
4. **Eggs** (and egg products)
5. **Soy**
6. **Wheat**
7. **Fish** (such as bass, cod, flounder)
8. **Crustacean Shellfish** (such as crab, lobster, shrimp)

CHILL



Prevent Cross Contact

- Follow safe food handling procedures to prevent transfer of allergens.
- Read food labels.
- Know what to avoid and how to substitute.
- Designate allergy-safe zones.

CHILL



Protect Health and Life



This institution is an equal opportunity provider.

Assessment

