

## Safe Food = Healthy Kids Play Book



### Safe Food = Healthy Kids

#### Play Book

##### Program information:

This class has been successful for in-person and online learning. If using online learning, you will want to review the slides and activities to determine the relevance for your presentation, since some of the activities are intended for just in-person class formats. You may also consider inserting polls and/or discussion questions to make the presentation interactive. The evaluation is the same for both in-person and online formats.

##### Equipment needed:

1. Computer w/ PowerPoint presentation
2. Projector with remote
3. Screen
4. Extension cord

##### Recommended supplies needed for in-person class:

1. PowerPoint presentation and hard copy with notes for teaching
2. Pencil & pens
3. Sign in sheet
4. Easel paper
5. Markers for easel paper
6. Sticky notes
7. Refrigerator and food thermometers for participants
8. Glo Germ™ with ultraviolet light kit OR hand sanitizer with glitter
9. Children's toy or fake fruit/veggie
10. Apple (for 1" ice breaker activity &/or with washing produce activity) along with food coloring, single use gloves, cutting board, knife, paper towels, plastic baggie and medicine dropper.
11. Test strips w/ bleach solution or use red food coloring
12. Thermometer calibration activity-cups, ice, water, thermometers
13. Children's story books – to put on display and reference, see Appendix
14. Coffee stirrers
15. Index cards – see Appendix
16. Certificates – filled out with names or fill in names at the training



### Safe Food = Healthy Kids

##### Appendix:

- *Safe Food = Healthy Kids Resources*, includes links to resources, links for downloadable handouts and suggested children's books. This may simply be provided to class participants (recommended) and/or be used as a resource for the facilitator.
- *Safe Sanitizing and Disinfecting fact sheet*
- *Resource index cards*: The intention for these cards is that the provider can use these as a ready reference, to be stored by a desk or refrigerator for example, where they are easily accessible. They are formatted to be printed as a 4' x 6' card, and can be printed two sided, you may consider laminating and connecting with a book ring.



- Safe Food = Healthy Kids Evaluation
- Certificate (with training hours)

##### Suggested educational reinforcement items for in-person classes:

- Refrigerator thermometer
- Food thermometer



### Activity Guide for SF=HK presentation:

#### Introduction

Slide #2 Ice Breaker: Last One Standing or Pass the Apple:

##### A. Last One Standing

1. Ask all participants to stand up. Explain the goal of the activity: to be the last person to remain standing or the person who follows the most food safety practices.
2. Say "Remain standing if..." and read the first food safety practice item below (step 3). Instruct participants to be seated if they do not follow the item you read. Wait until they sit or continue to next item if no one sits down.
3. Continue with the second item and so forth until reaching the last item, or when no one remains standing. Can also ask them to stand or sit every time they do a practice (this keeps them moving and engaged). Add/change questions as appropriate. Remind them that these practices are reflective of what they are doing in the childcare environment, not necessarily in their home.

Remain standing if...

- you wash hands with soap and warm water before handling food.
- you check the temperature of the refrigerator daily.
- you know what FIFO means (first in, first out).
- your freezer has a food appliance thermometer.
- you store all dry foods 6" off the floor, 3" from the wall, and 18" from the ceiling.
- you inspect refrigerator and freezer gaskets regularly for adequate seal and cleanliness
- you record refrigerator and freezer temperatures on a log at least daily.
- all food in the refrigerator and freezer is labeled and dated.
- you know what to do if the refrigerator temperature is 50°F.
- you keep cold foods cold (below 41°F) and hot foods hot (above 135°F)
- you do not defrost meat on the counter.

- B. Pass the apple: Give all participants a sticker and ask them to place on the apple as it gets passed around while they introduce themselves. At the end, use this to demonstrate how many germs can become attached to food by touching, and the importance of washing hands, surfaces and produce.



Slides #3 What would you like to learn today? Give participants sticky notes to write responses on and then place on easel paper for discussion and review during the class or ask them to share verbally with the group.

**Slide #5 Story Time:**

A landmark case in food safety happened in 1993 in Washington. Some of you may remember this story, it occurred with Jack in the Box restaurants. The Washington Department of Health (WDOH) was notified that children were suffering hemolytic uremic syndrome, which is the abnormal destruction of red blood cells. This is an illness that follows an E. coli infection and often presents with bloody diarrhea but can have severe health consequences such as kidney failure and even death. After investigating, the WDOH found that before the patients became sick, they consumed hamburgers purchased from Jack in the Box restaurants.

The WDOH found E. coli in 11 lots of patties from Jack in the Box and resulted in:

- 590 people confirmed with E. coli infections.
- 171 people were hospitalized.
- 41 developed hemolytic uremic syndrome.
- 4 died.

The company had previously been warned by local health departments that undercooking hamburgers was a problem, but the company decided that undercooking beef resulted in a better burger. This resulted in the spread of the bacteria E. coli. Over the 18 months that followed the outbreak, the company lost \$160 million and faced hundreds of lawsuits from customers and stockholders. The settlement required the company to pay more than \$50 million, the largest payment resulting from foodborne illness.

Because of this situation, President Clinton held a congressional hearing, and the FDA raised the recommended internal temperature for cooking hamburgers to 155°F, at least one positive outcome of this tragic event.

**Chapter 1: The Facts and Costs of Foodborne Illness**

No recommended activities

**Chapter 2: Bugs and the Problems they cause**

**Slide #13: Reference the Bad Bug Book:** <https://www.fda.gov/food/foodborne-pathogens/bad-bug-book-second-edition>, a good resource if you want to learn more in detail about pathogens.

**Slide #14 Story Time:**

A 2-year-old boy passed away in 2016 after contracting E. coli from a daycare center. A teacher at the daycare facility had symptoms but continued to work at the center and care for several children, including the boy who passed away. The daycare facility did not tell parents about the infection.



After this boy had been sick with diarrhea on and off for a couple of weeks, his parents took him to his doctor because his condition was worsening. The child was sent home without treatment, but later his parents took him to the emergency department, and he was admitted. At this point he was put on dialysis and a ventilator, and sadly died 4 days later, only 5 days after he was first taken to a doctor. There were 14 cases of the E. coli infection related to this facility.

The family settled for \$1 million dollars with the daycare facility. Although it is not about the money – this had a significant impact on the childcare provider and is an example of the importance of the dangers of foodborne illness.

**Slide #15 Activity: Biological, Chemical and Physical Activity (10-minute activity)**

Bring sticky notes and pens. Have a medium for them to post on (Posters/chalkboard/wall) – with a sectioned off heading for each type of contamination. Can be done as a group or individually.

**Group** – Place large sticky notes around room labeled Biological, Chemical and Physical – have the group think about hazards that present themselves as potential issues in their centers or homes. Fill in answers on the individual posters in the room as responses are shared.

**Individual** Ask the group to think about hazards that present themselves as potential issues in their centers or homes and write, on three different small sticky notes, a way that food can become contaminated (1 sticky note). After participants have written their answers, have them place each small sticky note on the large sticky note/chalkboard corresponding to the appropriate category.

With either method, discussion follows in this section about how food gets contaminated.

**Slide #16:**

**Handout:**

1. More information on how to access SDS is on the Safe Sanitizing and Disinfecting Fact sheet (Appendix).
2. Refer to the index cards with the poison control # and encourage them to keep in an accessible spot.

**Slide #22: Discussion** (This slide is hidden, it is here as a cue to engage in discussion with participants).

**Topics:**

1. Do you have pets in the home? If so, how do you prevent contamination of food/surfaces?
2. Toys? What is your cleaning policy?
3. Lunch bags – who knows where they've been before they arrive at a daycare facility?
4. Hazards such as items usually found in a garage: pesticides, cleaning chemicals, pest poisons, etc.



**Chapter 3: Preventing Foodborne Illness**

No recommended activities

**Chapter 4: Personal Hygiene and Health**

**Slide 32: Discussion** (slide is hidden, it is left as a cue to engage in discussion with participants)

How do you handle the challenge of getting kids to properly wash hands?

Utilize the feedback in future slides to reinforce the message.

**Slide #33 Story Time:**

**Activity:** Food Safety Story: Read below, as you read, ask participants to stand and then sit alternately when an unsafe practice is occurring.

Claire and her family woke up on a warm spring morning on their farm. Claire had gone out to check on the farm animals, while her mother packed her lunch. When it was time for Claire to get ready to leave, she ran through the front door with her dirty pink rain boots where her lunch box and backpack were sitting on the ground waiting for her (1).

When Claire's mom dropped her off at childcare, Sharon, an employee, grabbed the lunch box from Claire and placed it directly into the fridge above the veggies and dip that were prepared for snack that day (2). A short time later, Sharon ate the veggies and dip for a snack and developed diarrhea but stayed at work. There also was no replacement for her (3). While Sharon is in the bathroom, she hears Claire crying in the main room. She rushes out mid-hand wash, hands only being rinsed with cold water briefly (4) to tend to Claire. After she settles Claire, she then goes into the kitchen to prepare and serve the kids lunch (5). After naptime, Claire and the rest of the children start to complain of a stomachache and start throwing up. Sharon wipes down the surfaces of the counters and ground where the kids vomited with a wet paper towel (6).

At the end of the day, Sharon goes home and immediately starts to prepare food for her family (7). The following day, her family members end up calling in sick from work and school after experiencing flu like symptoms.

1. Place lunch box/backpack on sanitized surface where bacteria won't get on them.
2. Sanitize lunch box before putting in fridge or just put perishable food inside of fridge.
3. Sharon should have gone home when she was showing signs and symptoms of being sick/food poisoning, if no replacement found, then the kids will have to be sent home.
4. Wash hands for minimum of 20 seconds with warm, soapy water, drying them with a paper towel.
5. Should have not prepared food when she is sick and has not properly washed her hands.



6. Wear waterproof gloves, and in some cases, goggles, aprons, or masks. Use absorbent material to soak up and contain the spill. Pour disinfectant on mess and let it sit for 10-30 minutes. Wipe the area clean. Discard the paper towels/bodily fluid material in a nonabsorbent trash bag. Wash clothes then wash hands.
7. Do not prepare food when sick, but also, wash up properly before preparing food (in general).

**Refer to handouts:**

- Index card: After a Body Fluid Spill

**Slide #36: Glo Germ™ activity:** 1) Have Glo Germ™ lotion on hands 2) shake hands with someone (or pass a toy or fake fruit or vegetable around that has some Glo Germ™ on it) and 3) use the black light to illustrate how germs are transferred. The Glo Germ™ also shows the areas on the hands to pay particular attention to when hands are washed because the glow germ is more prevalent (creases of fingers etc.). 4) If you do not have Glo Germ™ you can put glitter in sanitizer and then have participants try to wash it off.

\*Glo Germ™ can be purchased online @ <https://www.glogerm.com/>

**Recommended Downloadable Handout:** Oregon State University High Speed Handwashing (and video, optional)

**Slide #38:**

**Recommended Downloadable Handout:** MDARD Employee Health Agreement Form

**Slide #40 Story Time:**

This is a story about a young man that can play baseball, and he can play well. He's a catcher and one of the top hitters on his team and has become noticed – but most important, respected. He had his right arm amputated at 19 months after contracting E. coli.

"They put the PICC line in his arm [to treat the E. coli]," his mother said "and the bacteria went to his arm, where the PICC line was. It just started eating his arm away." His mom mentioned that he had flatlined on the operating table three times.

He would not give up, and he adjusted rather quickly. He catches the ball with his glove side (left hand) and makes a flip-like motion to release the glove. He grabs the ball mid-air and swiftly throws it back to the pitcher – or to a base to get a runner out. It sounds like an endeavor, but he manages to make his craft look effortless. "This is a kid that won't allow any type of circumstance to derail his dream. People use the 'no excuses' quote all the time, but this kid lives it."

His teammates, coaches, and supporters have surrounded him with words of encouragement, and he shows no signs of slowing down anytime soon.

**Slide #41: Break:**

For online class: ask participants to get the bleach they use for sanitizing to reference later in the class. May also work for in-person classes if they have access to these chemicals.



**Chapter 5: How Food Moves Through Your Kitchen**

Slide #45:

**Recommended Downloadable Handout:** *Donating Garden Produce from Michigan Fresh*

Slide 49:

**Recommended Resource:** The USDA *FoodKeeper* App.

**Slide #58 Activity:** Recommend wearing an apron and gloves to prevent getting food coloring on clothing/hands and use a disposable plate. Bring paper towels to wipe off your knife and put knife and medicine dropper into a bag when complete.

Place food coloring in the stem cavity of an apple – 1 drop for any possible way that the apple can become contaminated (for example the apple fell to the ground (1 drop), then a farm employee picked up the apple after using the bathroom and not washing their hands (1 drop), then the apple was placed in a storage container that wasn't sterilized (1 drop), and continue to the store where food is handled by people that don't wash hands and end with us eating the apple without washing it (last drop), then cut into the apple. This will force the dye through the inside of the apple and will demonstrate how pathogens/pesticides can be transferred into the edible portion and reinforce the importance of washing.

Slide #60 Story Time:

Why is it important to protect our young children from foodborne illness? This true story explains the consequences of what foodborne illness can look like:

*A young girl contracted E.coli and ended up with HUS. She screamed in agony as she passed bloody diarrhea every 20 minutes. It took 2 weeks for the doctors to find out what was causing these extreme symptoms. She had multiple transfusions, two surgeries, dialysis, and NG tubes. Her parents stated "We have spent the past 2 years watching her learn to walk again, regain her strength, and hold our breath at every HIV test. Almost 2 years later, she is back to normal. Our story had a happy ending. But we saw the whole public health system fall apart as we tried to coordinate efforts to protect other children from her in the intensive care unit."*

Slide #65:

**Handout:** Temperature charts on Index cards.

Slide #67-Calibrating thermometers activity.

**Demonstration/activity:** Demonstrate calibrating a thermometer and then engage the participants by having them calibrate a thermometer.

**Chapter 6: A Clean, Safe Childcare Environment**

Slide #81: Handout: Safe Sanitizing and Disinfecting fact sheet found in the Appendix.



**Slide #84- Sanitizing Activity/Demonstration:** If participants have a bottle of bleach they grabbed during a break, ask them to identify the "% sodium hypochlorite". Refer to the Safe Sanitizing and Disinfecting fact sheet. Discuss the appropriate dilution of their specific bleach solution to achieve a safe sanitizer or disinfectant. They may have a form of bleach not recommended for using as a sanitizer or disinfectant. Use this as a discussion for following properly mixing sanitizing and disinfecting solutions and where it is appropriate to use a sanitizer vs. a disinfectant.

If the situation does not allow using the participant's bottles of bleach, have some of your own, or pictures of labels to refer to for this activity.

Slide #86 Story Time:

*Twenty-eight children and two adults accidentally drank bleach at a daycare center in Jersey City. They were in stable condition and expected to be released to their parents, officials said. "We don't think the amount they ingested is significant," said hospital spokesperson Mark Babson. Hospital officials were not clear how or why bleach was ingested by the children and staff. Dr. Steven M. Marcus, executive director of New Jersey Poison Information and Education System, said such accidents are fairly common. Oftentimes hotels, restaurants, and other food service outlets are required to regularly sanitize certain areas, and workers often use bleach and water as the solution. Despite warnings by the poison center against it, workers often put the solution in a container — such as a brand-name water bottle or gallon jug — that can be mistaken for water.*

Slide #90 Story Time:

*Does your daycare have pets like lizards or turtles?*

*Turtles in the 1960s and 1970s were inexpensive, popular, and low-maintenance pets, with an array of groovy pre-molded plastic housing designs to choose from. Invariably they would escape, only to be found days later behind the couch along with the skeleton of the class bunny my younger sister brought home from kindergarten one weekend. Reptiles have the ability to harbor Salmonella bacteria and handling them can transfer this pathogen to people via hand-to-mouth contact. It is very important to wash hands thoroughly after contact with reptiles (such as turtles, lizards, and snakes).*

**Chapter 7: Food for Thought**

Slide #93 Story Time:

As we move into this section, we would like to start off with a story about Food Allergies:

*A 3-year-old boy died in December 2017 after having an allergic reaction at his Manhattan preschool. The boy was allergic to dairy and had been given a grilled cheese sandwich. He was a student at a program overseen by the Harlem's Administration for Children's Services and the Health Department. The health department closed the school for inadequate supervision of a child and for failing to follow its own safety plan. It was noted that the boy "was given a grilled cheese sandwich by an adult at the pre-K, despite them knowing and having documented that he has a severe allergy to dairy." He went into anaphylactic shock and was taken to the pediatric ER, where they were unable to save him.*



We will discuss the Big 8 food allergens next in order to prevent tragedies such as this from happening.

Slide #96:

**Activity:** pass out coffee stirrers and tell participants to breathe through them (plugging nose) until they are instructed to stop. Do not wait too long as some people may have a very hard time. Explain how this is comparable to a severe allergic reaction in some cases. Also, point out the Allergen training offered through ServSafe®.

Slide #109 Story Time:

*Serving home-canned foods can be risky. Using home-canned foods may or may not be allowed – check with your licensing authority.*

*A deadly outbreak happened at a church in Lancaster, Ohio, in 2015 when a dish was made with home-canned potatoes that were improperly processed. When a botulism outbreak occurs, it is usually linked to home-canned food, particularly low-acid foods such as vegetables.*

- 1 person died.
- more than 21 others were sickened.
- 50-60 people ate at the potluck, including 10 children.

*Do not use boiling water canners when canning vegetables, meat, poultry, and seafood because they will not protect against botulism poisoning. Make sure that food preservation information is always current with up-to-date, scientifically tested guidelines. Do not use outdated publications or cookbooks, even if they were handed down from trusted family cooks.*

**Chapter 8: Deadly Look-Alikes |**

No recommended activities.

Receive certificate: after completing the evaluation (both found in Appendix).



**Appendix**

- A.1: Safe Food = Healthy Kids Resources
- A.2: Safe Sanitizing and Disinfecting
- A.3: Safe Food = Healthy Kids Index cards
- A.4: Evaluation
- A.5: Certificate

**Safe Food = Healthy Kids Resources**

Michigan State University Extension:

- Safe Food = Healthy Kids: [https://www.canr.msu.edu/safe\\_food\\_healthy\\_kids/index](https://www.canr.msu.edu/safe_food_healthy_kids/index)
- Michigan Fresh: [http://msue.anr.msu.edu/program/info/mi\\_fresh](http://msue.anr.msu.edu/program/info/mi_fresh)
- MSU Extension Food Safety work team Bulletins: [https://www.canr.msu.edu/safe\\_food\\_water/resources](https://www.canr.msu.edu/safe_food_water/resources)

Other Extension Resources:

- eXtension: Food Safety Guidelines for Child Care Programs: <https://childcare.extension.org/food-safety-guidelines-for-child-care-programs/>
- National Center for Home Food Preservation: [www.homefoodpreservation.com](http://www.homefoodpreservation.com)
- Oregon State University (OSU): High Speed Handwashing: <https://extension.oregonstate.edu/describes/high-speed-hand-washing>
- University of Minnesota Extension, Norovirus: step-by-step clean-up of vomit and diarrhea: <https://extension.umn.edu/sanitation-and-illness/norovirus-step-by-step-clean-vomit-and-diarrhea>

Fight BAC: The Partnership for Food Safety Education:

- Child Care Training: Food safety training materials for childcare professionals <http://www.fightbac.org/kidsfoodsafety/young-children-child-care-training>
- Crib Sheets: [http://www.fightbac.org/wp-content/uploads/2015/07/Crib\\_Sheet\\_FINAL\\_Nov\\_2012.pdf](http://www.fightbac.org/wp-content/uploads/2015/07/Crib_Sheet_FINAL_Nov_2012.pdf)
- Safe Produce: <http://www.fightbac.org/food-safety-education/safe-produce>

Governmental Agency Resources:

- USDA Food Safety and Inspection Service: [http://www.fsis.usda.gov/handbook/kitchen\\_companion.pdf?redircthttr=trac](http://www.fsis.usda.gov/handbook/kitchen_companion.pdf?redircthttr=trac)
- USDA FoodKeeper app – Search for USDA FoodKeeper in the App Store for your mobile device or: <https://www.foodsafety.gov/keep-food-safe/foodkeeper-app>
- Kitchen Companion: [https://www.fsis.usda.gov/handbook/kitchen\\_companion.pdf?redircthttr=trac](https://www.fsis.usda.gov/handbook/kitchen_companion.pdf?redircthttr=trac)
- FoodSafety.gov (managed by USDHHS): [www.foodsafety.gov](http://www.foodsafety.gov)
- FDA: I should have stayed home/Don't let what happened to me happen to you: <https://www.fda.gov/food/retail-food-industry/regulatory-assistance-training/retail-food-protection-industry-educational-materials>

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- Breastmilk storage chart: [https://wicworks.fhs.usda.gov/sites/default/files/media/document/Human\\_Milk\\_Storage\\_Guidelines.pdf](https://wicworks.fhs.usda.gov/sites/default/files/media/document/Human_Milk_Storage_Guidelines.pdf)

Michigan Resources:

- Licensing Rules for Michigan Child Care centers and homes: [http://www.michigan.gov/lara/0,4601,7-154-63294\\_6529\\_49572\\_50051\\_00.html](http://www.michigan.gov/lara/0,4601,7-154-63294_6529_49572_50051_00.html)
- Michigan Department of Agriculture and Rural Development: <http://www.michigan.gov/mdard>
  - Michigan Department of Agriculture and Rural Development (MDARD) Employee Health Reporting Agreement: [https://www.michigan.gov/documents/mdardMDA\\_CordEmelFoodEmplnyrHealthAgreement\\_247177\\_7.pdf](https://www.michigan.gov/documents/mdardMDA_CordEmelFoodEmplnyrHealthAgreement_247177_7.pdf)
  - MDARD Local Produce Handout: [http://www.michigan.gov/documents/mdardMDA\\_BuyingLocalFactSheetApr09\\_276147\\_7.pdf](http://www.michigan.gov/documents/mdardMDA_BuyingLocalFactSheetApr09_276147_7.pdf)
  - Allergen Flyer and Training Flyer, MDARD FAQ: [https://www.michigan.gov/documents/mdardAllergen\\_FAQs\\_496446\\_7.ppt](https://www.michigan.gov/documents/mdardAllergen_FAQs_496446_7.ppt)

The American Cleaning Institute: Daily Practices to Protect Children in your Care handout: <http://www.cleaninginstitute.org/clean-child-care/>

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**Safe Food = Healthy Kids Children's Books**

<p><b>Follow That Germ</b> By: Deirdre Byerly and Lisa Hawker.</p> 	<p><b>Germs Are Not for Sharing</b> By: Elizabeth Verdick and Marieka Heinlen</p> 
<p><b>Germs! Germs! Germs!</b> By: Bobbi Katz and Steve Bjorkman</p> 	<p><b>Lather Up! Hand Washing Activity Handbook</b> By: Terrific Science Press and Mickey Sarquis</p> 
<p><b>Tummy Bug</b> By: Tina Stubbs</p> 	<p><b>Wash Your Hands!</b> By: Margaret McNamara and Mike Gordon</p> 
<p><b>Wyatt's Little Germs</b> By: Kayla Nija</p> 	

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## Safe Sanitizing & Disinfecting

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**Understanding the Terms**

Although the terms *cleaning*, *sanitizing*, and *disinfecting* are often used interchangeably, they have significantly different meanings. Mixing up these terms can result in poor cleaning practices and the potential spread of illness. Having a better understanding of these terms can determine if you are using chemicals in the proper way and preventing pathogens from spreading on your surfaces.

**Cleaning:** Removing dirt and debris from a surface. The process involves warm, soapy water to physically remove these impurities. Cleaning needs to be done before sanitizing or disinfecting.

**Sanitizing:** Reduces bacteria on the surface to a safe level. Sanitizing is typically recommended for food contact surfaces as the chemicals are in concentrations that are considered safe.

**Disinfecting:** Kills almost all of the pathogens. Disinfectants have Environmental Protection Agency (EPA) claims against both bacteria and viruses.

**Locating the EPA Number and Reading the Label**

It is important to read the label of the chemical agent you are using to find out if it is safe to use on food contact surfaces. For example, chlorine disinfecting wipes are not meant to be used on food contact surfaces and the label clearly states this. The label also advises rinsing with potable (drinkable) water if these are used on a food contact surface.



Many different types of chemical agents can be used for sanitizing and disinfecting. The EPA requires all chemicals to have a number that identifies information such as product information and the company that produced it. The EPA will define the safety and use for these chemicals (for example, the pathogens the chemical will kill) and will tell how to use the product. All chemical cleaning products are provided an EPA number, but this may not be helpful unless you know how to find out the product details. To find detailed product information, an easy-to-navigate website to use is [SmartLabel.org](http://SmartLabel.org). For specific product information, go to <http://SmartLabel.org/products>. This site provides useful information such as the safety, usage, and ingredients. You can also download a Safety Data Sheet.

*MSU Extension loves food safety!*

## Safe Sanitizing & Disinfecting

### Options for Safe Sanitizing of a Food Contact Surface

#### Purchase a Sanitizing Product

- Some wipes may act as a chemical contaminant on food surfaces because they were originally designed to clean bathrooms, not to wipe hands or clean counters (Lysol or Clorox brand regular disinfecting wipes are too concentrated of a solution for food contact surfaces).
- Read the label to be sure it is appropriate for use on food contact surfaces.
- There are many options, but look to see if they are food safe. The following examples of products are acceptable for food contact surfaces:
  - Purell Multi-Surface Disinfectant
  - Food contact multi-surface wipes (available from a restaurant supply store)

(This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.)

#### Make a Sanitizing Solution

- Chlorine (in chlorine bleach solutions) is commonly used. Other agents, such as ammonia-based chemicals, are not as available as chlorine bleach, so guidance is provided here for chlorine bleach solutions. Sodium hypochlorite is the active ingredient in chlorine.
- Use chlorine bleach that has 8.25% sodium hypochlorite, commonly labeled as "disinfecting bleach." The percentage for disinfecting bleach should be clearly stated on the label. Be cautious. It is easy to grab bleach that is at a much lower concentration or not intended for sanitizing. You might find bleach that clearly states on the label that its purpose is for deodorizing or whitening laundry, not for cleaning or sanitizing. (See Table 1.)
- Do not use scented, concentrated, or gel bleach solutions.

- The ideal concentration for a bleach sanitizer for food contact surfaces is 50-100 ppm (parts per million). To know you have met this concentration, use chlorine test strips to test your mixed solution. Do not use pool test strips.
- Too concentrated of a solution can be harmful, but too little can be ineffective.
- Never mix chemicals. Combining certain chemicals (such as chlorine and ammonia, for example) can result in serious injury or death.
- See Table 1 for guidelines to prepare your own sanitizing solution. Note, there may be some sodium hypochlorite strengths that are not listed in Table 1. In this case, use the online Chlorine Dilution Calculator to find the correct recipe: <http://www.foodsafer.ca/dilution-calculator.html>. Table 2 provides recipes for disinfecting, which is a stronger solution and may require a clean water rinse if using on a food contact surface.

**Table 1. Sanitizing Solutions**

For use on eating utensils, food contact surfaces, mixed-use tables (such as a kitchen table also used for activities), highchair trays, crib frames, changing table pads, toys, pacifiers, floors, sleep mats, and other surfaces.

Water	Bleach strength* 2.75%	Bleach strength* 5.25-6.25%	Bleach strength* 8.25%
1 gallon	1 tablespoon	2 teaspoons	1 teaspoon
1 quart	1 teaspoon	1/2 teaspoon	1/4 teaspoon

\*Use only plain, unscented bleach that lists the percent (%) sodium hypochlorite strength on the manufacturer's label. Read the label on the bleach bottle to determine the bleach strength. For example, "Sodium Hypochlorite...6.25% or 8.25%."

(Table 1 adapted from *Disinfecting and Sanitizing With Bleach: Guidelines for Mixing Bleach Solutions for Child Care and Similar Environments* by the Washington State Department of Health, 2015, p. 1)

## Safe Sanitizing & Disinfecting

**Table 2. Disinfecting Solutions**

For use on handwashing sinks, bathrooms (including toilet bowls, toilet seats, training rings, soap dispensers, potty chairs), door and cabinet handles, diaper change tables, and other surfaces.

Water	Bleach strength* 2.75%	Bleach strength* 5.25-6.25%	Bleach strength* 8.25%
1 gallon	1/2 cup, plus 1 tablespoon	3 tablespoons	2 tablespoons
1 quart	1/4 tablespoons	2 1/2 teaspoons	1 1/2 teaspoons

Disinfecting chemicals are often the same as what you would use to sanitize, but in a more concentrated solution. The contact time for chlorine varies and can be anywhere between 5 to 10 minutes, and it may be different if you are using a solution that is pre-mixed. Always read the label for instructions specific to the chemical you are using, including chlorine bleach.

(Table 2 adapted from *Disinfecting and Sanitizing With Bleach: Guidelines for Mixing Bleach Solutions for Child Care and Similar Environments* by the Washington State Department of Health, 2015, p. 1)

#### Preparation Tips

Always prepare the solution in a well-ventilated area using appropriate water source, eye protection, and gloves.

- Daily, prepare a fresh bleach solution. Since children's lungs are still developing, keep chemicals away from them.
- Use cool water. Always add bleach to water (do not add water to bleach).

- Always label bottles of bleach solution clearly with the name of solution, ratio, and date mixed (for example, "Bleach sanitizer, 1 tablespoon/gallon, 5-18-20").

#### Steps to Clean and Sanitize

- Clean off visible debris from the surface by washing with soap and water.
- Rinse with clean water to remove detergent (detergents can reduce the effectiveness of chlorine) and air dry or dry with paper towel.
- Apply the sanitizing solution to the entire area to be disinfected or sanitized.
- Leave on for the recommended contact time. (Look on the container of the cleaning solution for the recommended time.)
- Wipe with a clean disposable cloth.
- Some products require a clean water rinse on food contact surfaces if using a concentrated disinfecting solution. Read instructions carefully.
- Air dry.

Use test strips to assure a proper concentration. Be sure to get the test strips specific to the chemical agent you are using (for example, use chlorine test strips for testing a chlorine solution).

("Preparation Tips" and "Steps to Clean and Sanitize" were adapted from *Disinfecting and Sanitizing With Bleach: Guidelines for Mixing Bleach Solutions for Child Care and Similar Environments* by the Washington State Department of Health, 2015, p. 1)

## Safe Sanitizing & Disinfecting

### References

Washington State Department of Health. (2015, January). *Disinfecting and sanitizing with bleach: Guidelines for mixing bleach solutions for child care and similar environments* (DOH 90-26). <https://www.doh.wa.gov/Portals/0/Documents/8340/970-216-Disinfect-an-L.pdf>

### Resources

British Columbia Foodsafe, Chlorine Dilution Calculator: <http://www.foodsafer.ca/dilution-calculator.html>

Centers for Disease Control and Prevention, How to Clean and Disinfect Schools to Help Slow the Spread of Flu: <https://www.cdc.gov/flu/school/cleaning.htm>

Consumer Brands Association and Food & Consumer Products of Canada, SmartLabel: <http://smartlabel.com>

Oklahoma State University, Guidelines for the Use of Chlorine Bleach as a Sanitizer in Food Processing Operations: <https://ufoodsafety.ucdavis.edu/sites/g/files/dgvnsk7366/files/inline-files/76437.pdf>

Partnership for Food Safety Education, Cleaning, Disinfecting and Sanitizing (scroll down): <https://www.fightbac.org/7astdisinfectants+and+sanitizers&id=12049>

Find out more about Michigan Food Safety at [www.msue.msu.edu/safefood](http://www.msue.msu.edu/safefood).



**Safe Food = Healthy Kids Evaluation**

Please help us to evaluate this program by giving us your feedback on what you learned, as well as what we need to add or change in the program. Thank you!

1. As a result of attending the Safe Food = Healthy Kids program, what amount of new information did you learn from this class on the following topics? (circle your answer)

Personal Hygiene	Already knew	Some new knowledge	Moderate amount	A great deal
Controlling Time & Temperature	Already knew	Some new knowledge	Moderate amount	A great deal
Cross Contamination	Already knew	Some new knowledge	Moderate amount	A great deal
Cleaning & Sanitizing	Already knew	Some new knowledge	Moderate amount	A great deal
Foodborne Pathogens	Already knew	Some new knowledge	Moderate amount	A great deal

2. As a result of attending the Safe Food = Healthy Kids program, what practices do you plan to do? (circle your answer)

Check food temperature with a calibrated food thermometer	Did before program	Plan to do	Plan to do more often	Probably won't do
Cook foods to proper temperature	Did before program	Plan to do	Plan to do more often	Probably won't do
Wash hands for 20 seconds	Did before program	Plan to do	Plan to do more often	Probably won't do
Limit the time food spends in the temperature danger zone	Did before program	Plan to do	Plan to do more often	Probably won't do
Cool foods quickly ( to 70°F in 2 hours and to 40°F in 4 hours)	Did before program	Plan to do	Plan to do more often	Probably won't do
Separate raw and ready-to-eat foods during preparation, storage and serving	Did before program	Plan to do	Plan to do more often	Probably won't do
Use appropriate strength sanitizer on utensils, equipment & food contact surfaces	Did before program	Plan to do	Plan to do more often	Probably won't do

OVER

3. How many children do you serve food to in an average week? \_\_\_\_\_
4. How many meals do you serve to each child on an average day, including snacks? \_\_\_\_\_
5. How was this program helpful to you? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
6. Please share any other comments you have. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

THANK YOU!

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Adapted from Penn State University Extension  
Revision date 11/26/19



*This certifies that*



*has received 3 Training Hours for*

**Safe Food = Healthy Kids**  
***A Comprehensive Food Safety Training for Childcare Providers***



Food Safety Extension Educator

Date

# Safe Food = Healthy Kids

## Marketing Material



### Safe Food = Healthy Kids

**DATE & TIME:**  
February 25, 2020  
5:30-8:30 p.m.

**LOCATION:**  
Pigeon Discovery Center  
6436 Pigeon Rd  
Pigeon, MI

1 in 6 people get sick from foodborne illness in the United States each year and infants, toddlers and young children are among those most at risk.

Learn what the best practices are for food safety to help keep kids safe

\*Snow date - March 3\*



Safe Food = Healthy Kids is a **FREE**, interactive food safety workshop for child care providers delivered by MSU Extension educators. Topics include cleaning and sanitizing, cooking and storing food as well as common allergens and personal hygiene.

The Safe Food = Healthy Kids workshop counts towards annual training hours for licensed child care providers. This workshop is also an approved training of Great Start to Quality. Additional food safety resources are also provided.

You must register to attend the class, please call 989-269-9949, ext. 602 to register.



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### Program flyer



## SAFE FOOD= HEALTHY KIDS

A free online food safety workshop for childcare providers. Topics include cleaning and sanitizing, preparing, cooking and storing food, personal hygiene and more.

- September 21, 6 - 9 p.m.
- October 19, 6 - 9 p.m.
- November 7, 9 a.m. - 12 p.m.
- November 19, 6 - 9 p.m.
- December 8, 6 - 9 p.m.

All sessions are EDT



The Safe Food = Healthy Kids workshop is an approved training for Great Start to Quality.

To register visit:  
<https://events.anr.msu.edu/SFHKFall2020/>

### Social Media Graphic

**MICHIGAN STATE UNIVERSITY** | Extension



**MSU Extension's Food Safety Texting Program**

Food Safety tips and information sent right to your phone!

Text **“SafeFood”**  
to  
**797979**

Let us help keep you and your family safe from foodborne illness

Image by Dean Moriarty from Pixabay



**Promotional slide for Texting program**

**Food safety workshop for child care providers**



Training approved by Great Start to Quality

**MICHIGAN STATE UNIVERSITY** | Extension

**Safe Food = Healthy Kids**

Learn food safety best practices in an interactive, food safety workshop for child care providers. Topics include cleaning and sanitizing, cooking and storing food as well as common allergens and personal hygiene.

To find out more details or to register for a class, visit [msue.msu.edu/childfoodsafety](https://msue.msu.edu/childfoodsafety)

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**Promotional Postcard**

## **Early Childhood Child Care Training Award**

### **Michigan State University Extension**

**Team Award: Laurie Messing, Lisa Treiber, Kara Lynch**

*Program Description:* Michigan State University (MSU) Extension's *Safe Food=Healthy Kids* (SFHK)

curriculum is a comprehensive food safety education program for childcare providers. The curriculum combines direct education to promote safe food handling, with technology to extend education thus reducing the potential for foodborne illness in the high-risk population of children. The Centers for Disease Control and Prevention (CDC) estimates 48 million Americans become ill with foodborne illness every year, of those, up to 3,000 people die. Data reports that foodborne illnesses are estimated to annually cost the economy more than \$15.6 billion. Children under the age of 5 account for half of all these illnesses with their developing immune systems making them a susceptible population as reported by the CDC. Children also have limited control over their diet and related food safety risks. Childcare providers furnish the bulk of children's nutrient intake, yet there is a lack of food safety education or requirements for training. There are approximately 10,000 childcare provider homes and centers throughout Michigan, providing more than [36.9 million](#) breakfasts, lunches and snacks annually (based on FY17 data from the [Michigan Department of Education](#)). Childcare providers have the potential to positively impact this high-risk group and as a trusted source can also provide further reach to all the families of the children they care for.

SFHK educates childcare providers regarding best practices for food safety enabling them to keep the children they care for healthy. The goals of SFHK are to reduce the incidence of foodborne illness in children and the accompanying health disparities. The program provides PowerPoint slides and supporting food safety resource materials. Participants can subscribe to a supplemental, optional weekly texting program which shares food safety messages and may include links and videos. Research shows that text messaging technology is an effective method to share information that can easily reach many people.

According to [Pew Research Center, approximately](#) 96% of American adults own a cell phone, with 81% of them being Smartphones, and 81% regularly text. This same source also states that Smartphones are widely used for navigating numerous important life activities, from researching a health condition to accessing educational resources. By using texting as an innovative approach to education, our participants can enhance their knowledge as well as receive reliable and trusted resources and information to share with their co-workers and the parents of the children they care for.

SFHK began with as a pilot in six counties in Michigan, consisting of rural and urban audiences. These counties have higher rates of poverty and/or a greater percentage of children under 18 years of age residing in them than the state average. After the program pilot, SFHK was expanded for statewide programming and in 2020 we further expanded our reach using a virtual format.

*Program Accomplishments:* SFHK classes were offered as in-person classes in 2019 and early 2020 reaching 117 providers. We started 2020 with a new partnership with Association of Child Development (ACD) to provide an online session for childcare providers in the states of Michigan, Illinois, and Indiana. Utilizing online technology as a platform to provide SFHK, the ACD class ended up paving the way for SFHK to be offered virtually for the rest of 2020 due to the coronavirus pandemic. In March when the stay-at-home order began in Michigan, we were in position to quickly pivot SFHK from an in-person training to a virtual three-hour training. The virtual friendly format was designed to engage providers using polls and discussion questions. During 2020, we offered eighteen SFHK online classes and reached 932 childcare providers including participants from over 70 of the 83 Counties in Michigan. Diversity in 2020 included an expanded reach to providers as seen here: Caucasian (52%), Black/African American (24%), Asian (4%) and American Indian (1%), as compared to 2019 with 96% Caucasian participants. Participant feedback was positive as

they shared that the online class was an engaging format, and they learned a variety of information to benefit them in both their childcare settings as well as personal lives.

Resources involved: SFHK is facilitated by a Food Safety Educator(s). The curriculum includes a PowerPoint presentation and interactive activities, including videos and “story time” slides. “Story time” slides are embedded throughout the presentation to illustrate relevant, factual foodborne illness cases highlighting the importance of food safe practices in childcare settings. Handouts were developed for providers including online food safety resources including children’s books with a food safety message, MSU Extension’s Safe Sanitizing and Disinfecting fact sheet, and an Employee Health Reporting Agreement. Also developed was a set of laminated reference cards including poison control number; cooking temperatures charts; recipe for making a sanitizing solution and more. Educational reinforcement items such as refrigerator/freezer and bi-metallic stemmed thermometers are provided for in-person classes to reinforce food safety practices at their childcare site. The ACD and Great Start to Quality both provide ongoing education to childcare providers and have been key partner organizations in our success. SFHK provides three hours towards Michigan’s annual training requirements for providers. These organizations are the main avenues for program promotion as providers can view the educational opportunities through the required MiRegistry professional development system. Social media graphics and flyers are shared with partners and posted on our Facebook pages throughout our statewide Extension network.

Program Impact: Program outcomes are collected on post-class evaluations measuring behavior change and knowledge gained. Evaluation data shows we have been able to improve food safety knowledge and practices.

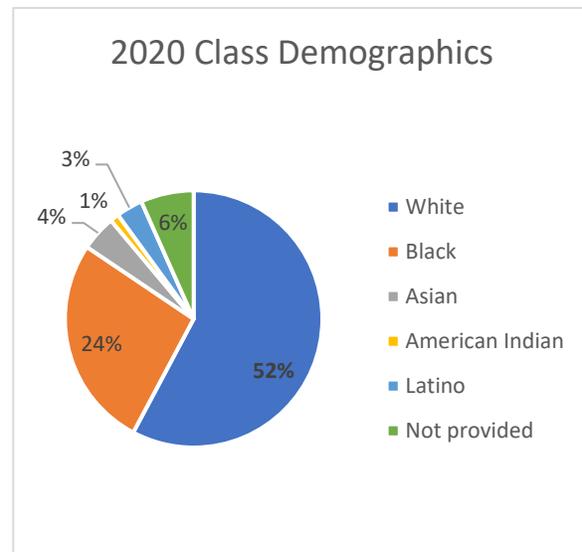
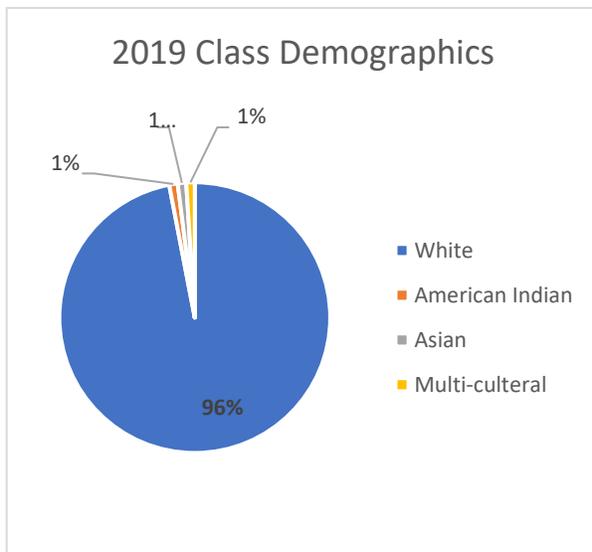
The demographic profile of program participants for 2019-20 indicates:

Gender: 93% women, 2% men (5% not provided)

Food Safety Knowledge	Percent gaining new information
Controlling Time & Temperature	87%
Cross Contamination	76%
Cleaning & Sanitizing	72%
Foodborne Pathogens	84%

Food Safety Practice Learned in Safe Food = Healthy Kids Program	Percent who plan to do or do more often after the program	Percent who were doing before
Check food temperature with a calibrated food thermometer	69%	23%
Cook foods to proper temperature	47%	52%
Wash hands for 20 seconds	17%	82%
Limit the time food spends in the temperature danger zone	58%	41%
Cool foods quickly (to 70°F in 2 hours and to 40°F in 4 hours)	69%	29%
Separate raw and ready-to-eat foods during preparation, storage and serving	31%	68%
Use appropriate strength sanitizer on utensils, equipment & food contact surfaces	41%	57%

Pie chart comparing the demographics from face-to-face classes (2019) and virtual (2020):



The total number of children served by class participants was 23,293, demonstrating the degree of food preparation provided by providers.

- 55% of providers served 3 meals or less/day
- 40% of providers served 4 or more meals/day

Subscriptions to the texting program rose from 110 in 2019 to over 400 in 2020.

*Future Implications:* Childcare providers may not have formal training requirements in food safety, but they are preparing and/or serving food to one of the most at-risk groups, thus the need for food safety training is critical. The transition to online programming created opportunities to expand the reach as well as increase the diversity of participants. For example, we have been able to reach participants in over 84% of Michigan counties, and we increased our participation in classes by 1872% with a 33% increase in ethnically diverse participants. Creating partnerships with two key organizations in Michigan has been key to the growth in programming, as well as the popularity of online classes. Looking at our success in Michigan, we recognize the value to making this program available nationally considering the need for education for all providers and the health implications foodborne illness can have on children. The SFHK curriculum received copyright protection in 2020 and we began the process to make this curriculum available to Extension Educators in other states. In 2021, we will be promoting SFHK at National events to continue the process of sharing the curriculum nationwide. We also will have online sessions scheduled all year long to continue providing education to childcare providers and share our food safety messages. The degree to which we can find value in the SFHK program is significant because improving safe food handling practices can touch many lives far beyond the provider themselves.

# Safe Food = Healthy Kids

## Comprehensive Food Safety Training for Childcare Providers

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### Participants will...

- Learn the sources of foodborne illness and why children are at a high risk.
- Understand the basic principles of safe food handling.
- Identify incorrect food handling practices.
- Determine proper sanitizing procedures throughout their facility.
- Recognize reputable food safety resources.

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### The Facts and Costs of Foodborne Illness

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### Costs of Foodborne Illness

- Foodborne illness affects millions of people and causes thousands of deaths each year
- National costs associated with foodborne illness are \$93.2 billion in medical bills, hospitalizations, and lost work, with quality of life factored in

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### Populations at Risk

- Children under age 5
- People who have compromised immune systems
- Pregnant women and their unborn babies
- Individuals over age 65

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### Foodborne Illness: Causes



Chemical

Physical

Biological

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Each childcare center or home provider follows policies and guidelines established by the State of Michigan. Please discuss policies with your licensing consultant before implementing them.

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### Facts About Foodborne Illness in the United States

- Each year 1 in 6 Americans have a foodborne illness
- 325,000 hospitalizations each year
- 3,000–5,000 deaths each year
- Symptoms

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### Illness vs. Outbreak – What's the Difference?



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### “Bugs” and the Problems They Cause

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### Chemical Hazards

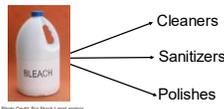


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## Story Time

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### Did You Know?

Children who attend childcare centers are twice as likely to experience gastrointestinal illnesses as those who do not.

- Children under 4 years of age are 4.5 times more likely to get bacterial infections from food than adults aged 20 - 49 years
- Long-term effects of a foodborne illness can lead to kidney failure, chronic arthritis, brain and nerve damage and death

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### Influenza vs. Gastroenteritis

- Influenza is respiratory
- Gastroenteritis is intestinal



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## Story Time

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### Physical Hazards

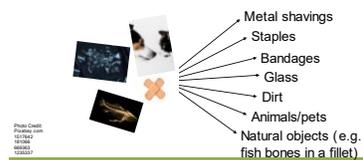


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## Biological Hazards

- Bacteria
- Viruses
- Parasites
- Fungi
- Biological toxins



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## Bacterial Growth

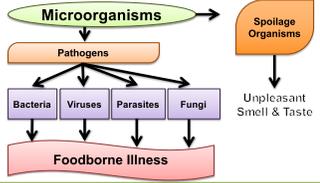


Start: 5 bacteria  
30 minutes: 20 bacteria  
1 hour: 80 bacteria  
1.5 hours: 320 bacteria  
2 hours: 1,280 bacteria

Photo Credit: Kean Lynch, MSU Extension

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## Common Pathogens

- Norovirus
- Hepatitis A
- E. coli
- Salmonella typhi
- Nontyphoidal Salmonella
- Shigella
- Listeria
- Campylobacter
- Staphylococcus aureus



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## Preventing Foodborne Illness



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## Food Requiring Time and Temperature Control for Safety (TCS)



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## Ready-to-Eat Foods



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## FAT TOM: Six conditions that allow bacteria to grow

- Food
- Acidity
- Temperature
- Time
- Oxygen
- Moisture

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## Knowledge Check

Keep cold foods at \_\_\_°F or below and hot foods at \_\_\_°F or above.

A. 35°F and 135°F    C. 60°F and 160°F  
B. 40°F and 140°F    D. 80°F and 180°F

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## Temperature Danger Zone

The Temperature Danger Zone (TDZ) is 40°F to 140°F

Leaving food in the TDZ increases the risk of foodborne illness

2-hour rule



Photo Credit: All Department of Agriculture

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## Preventing Foodborne Illness

It is preventable!

By following proper steps, you can keep food safe for the children in your care.

- CLEAN:** Wash hands and surfaces often
- SEPARATE:** Don't cross contaminate
- COOK:** Cook foods to proper temperature
- CHILL:** Refrigerate foods promptly

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## Personal Hygiene and Health



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## Story Time

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## Knowledge Check

Wash hands for a minimum of \_\_\_ seconds with warm water and soap before and after preparing food.

A. 10    C. 45  
B. 20    D. 60

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## Handwashing

- Set up handwashing station (kitchen/bathroom)
- Signage
- How long to wash hands
- 5 steps



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## Glove use



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## Personal Hygiene

- Apparel
- Jewelry
- Hair restraints



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## Don't Go To Work Sick

- Personal/family illness
- Healthy staff
- Healthy children




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## Story Time

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## How Food Moves Through Your Kitchen



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## Purchasing Food

All food used in your childcare center or home must be from an approved source:

- Grocery store
- Food supply store
- School kitchen

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## Food Product Dating

**Sell by:** quality date found on eggs, milk, and lunch meat. Distribute by this date, with time still left for storage and use at home

**Use by = Best by:** quality date found on canned food and cereal. Except for baby food, product may be safely used and distributed well past this date

**Expiration date:** quality date on infant formula and vitamins. Do not distribute infant formula or vitamins past the expiration date



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## Labeling



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## Storage – Freezer

- Temperature should be 0°F
- Label food stored in freezer with name and date
- Rotate stock
- Store food in tightly wrapped packaging or airtight containers
- Monitor receiving and storage
- Clean regularly

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## Storage Containers

- Material
- Recommended types
- Avoid reusing single use containers, for example, sour cream, yogurt, whipped topping containers, etc.

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## Cross-Contamination

- Store RTE food properly in refrigerator (above raw meat)
- Use separate food prep surfaces and utensils for potentially hazardous food and raw fruits and vegetables
- Wash hands

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## Knowledge Check

What is the only accurate way to find out if meat or poultry is cooked safely?

- Follow recipe instructions for temperature and cooking time
- Check the color of the meat
- Cook food to the recommended temperature using a food thermometer
- Not sure

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## Minimum Internal Cooking Temperatures

Product	Minimum Internal Temperature
All Poultry (breasts, whole bird, legs, thighs, w ground poultry, & stuffing)	165°F
Eggs	160°F
Fish and Shellfish	145°F
Leftovers	165°F
Casseroles	160°F
Beef, Pork, Veal, Lamb	145°F Allow to rest at least 3 minutes.
Steaks, chops, roasts	160°F
Ground meats	160°F
Hams, fresh or smoked (uncooked)	145°F Allow to rest at least 3 minutes.
Fully Cooked Ham (to reheat)	140°F USDA-Packaged
	165°F Non-USDA packaged facility

Photo Credit: MSU/EAHRI

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## Receiving Food

- Prepared food that arrives at your site must be above 135°F
- Produce donated from school gardens or families
- Lunches or food brought in by parents

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## FoodKeeper App



<https://www.foodsafety.gov/keep-food-safe/foodkeeper-app>

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## Storage – Dry (Pantry)

- Rotate stock – first in, first out (FIFO)
- Keep food 6 inches off the floor
- Check cans and jars for expiration dates, leaks, bulges, dents

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## Knowledge Check

Safe methods of thawing food include:

- Under running water
- In the refrigerator
- Microwaving
- As part of the cooking process
- All of the above

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## Prepping Produce

- Only prepare produce on a clean, sanitized surface
- Rinse produce prior to eating/preparing
- Use clean utensils



Photo Credit: ganderbooks

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## Cooking

Thoroughly cook meat, poultry, fish, and eggs to decrease risk of foodborne illness

- To ensure foods are cooked to proper temperature, use a *calibrated and sanitized* thermometer to monitor food temperature



Photo Credit: ganderbooks

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## Microwave Cooking

- Do not use microwave oven to heat formula or breastmilk
- Cook to a temperature of 165°F and monitor with calibrated thermometer
- Cover food, stir, and rotate to distribute heat and prevent hot spots
- Allow to stand at least 1 minute or follow package directions
- Use only microwave-safe containers to prevent leaching of harmful chemicals into the food

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## Knowledge Check

Which of these is **not** an important step in safely storing food in refrigerators?

- Labeling
- Rotating
- Sampling
- Covering food
- Cleanliness

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## Storage – Refrigeration

- Keep refrigerator at 38 - 40°F, monitored by thermometer
- Rotate foods
- Cover food
- Use food-safe containers
- Monitor food
- Clean refrigerator regularly



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## Food Recalls




Photo Credits: Lisa Tisher, MSU Extension

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## Safe Ways to Thaw Food



Photo Credits: Lisa Tisher, MSU Extension

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## Story Time

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## Why it's Important to Use a Thermometer



Sight, taste and smell are not reliable indicators of food quality and safety

Photo Credit: PhD Scott, MSU Extension, "Stick 'n' For Food Safety"

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## Calibrating Thermometers

### Ice-point calibration



1. Fill a large container with ice, then add water until full.
2. Insert the thermometer stem so that the sensing area is fully submerged. Wait for the dial to steady.
3. Adjust dial as needed so that it reads 32°F

Photo Credits: Pam Lusk, MSU Extension

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## Cooling Food

Cool foods quickly

- Divide large amounts into shallow containers
- Use ice bath or ice wand

## Ice Water Bath Results

Time	Temperature
9:40 a.m.	165°F
10:20 a.m.	70°F
11:15 a.m.	52°F



## Refrigerate food in shallow containers, not stacked



## Use Leftovers Safely

- If properly handled, leftovers are generally good 2 - 3 days
- Reheat leftovers to a temperature of 165 °F using a calibrated thermometer
- Foods should be reheated only once
- Never "reheat" food in slow cooker or warming device

## Cleaning vs. Sanitizing

Removing dirt, food, and grease with soap and water

vs.

Killing harmful bacteria

## How to Make a Three-Compartment Sink



## Contact Surfaces

- Nap mats
- Toys
- Doorknobs
- Diaper Changing Areas
- Electronics
- Tables and chairs
- Bathrooms

## Two-Stage Cooling Process



Photo Credit: Lisa Tisher, MSU Extension

## Not Recommended

Cooling Large Pot of Food in Refrigerator



Starting temperature of refrigerator: 30°F



A hot pot of food raises refrigerator temperature to temperature danger zone: 44°F

Photo Credit: Lisa Tisher, MSU Extension

## Never allow food to cool at room temperature



Photo Credit: Lisa Tisher, MSU Extension

## A Clean, Safe Childcare Environment

## Test Strips



Photo Credit: Lisa Tisher, MSU Extension

## Story Time

## Pests

- No pests in food service or kitchen area
- Foodborne illnesses may be passed on by pests such as rodents, flies, and cockroaches – and their droppings and urine
- Call a professional if you see signs of pest infestation

## Ice Water Bath

One way to cool food safely



Photo Credit: Lisa Tisher, MSU Extension

## Results of Cooling in Refrigerator

Time	Food Temperature	Refrigerator Temperature
11:45 a.m.	170°F	38°F
12:20 p.m.	140°F	42°F
12:50 p.m.	130°F	46°F
1:30 p.m.	110°F	44°F
3:30 p.m.	78°F	42°F
5:15 p.m.	56°F	41°F

Photo Credit: Lisa Tisher, MSU Extension

## Results of Cooling at Room Temperature

Harmful bacteria can grow when food is allowed to cool at room temperature.

Time	Temperature
9:45 a.m.	170°F
11:20 a.m.	115°F
1:00 p.m.	90°F
2:00 p.m.	80°F
3:30 p.m.	76°F

Photo Credit: Lisa Tisher, MSU Extension

## Knowledge Check

What is the difference between cleaning and sanitizing?

- Cleaning kills harmful bacteria and viruses; sanitizing removes dirt
- There is no difference
- Cleaning removes dirt; sanitizing kills harmful bacteria and viruses
- Cleaning is more thorough than sanitizing

## Sanitizing Solutions – Check with local authority

Water	Chlorine Bleach Strength 2.75%	Chlorine Bleach Strength 5.25-6.25%	Chlorine Bleach Strength 8.25%
1 gallon	1 Tablespoon	2 teaspoons	1 teaspoon
1 quart	1 teaspoon	½ teaspoon	¼ teaspoon

Provide a 50-100 ppm strength sanitizing solution- for use on food contact surfaces

## Kitchen and Dining Area

- Countertops, cupboard handles
- Dishes and utensils
- Pets in the home
- Tabletops, high -chairs, boosters

## Story Time

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## Cleaning Supplies

- Keep cleaning supplies in separate cupboards from food
- Lock or store cleaning supplies in places children cannot get into
- Poison Control  
1(800) 222-1222

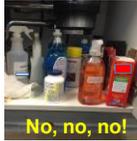


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## Food for Thought



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## Knowledge Check

Which of these is **not** one of the 8 top food allergens?

A. Milk  
B. Eggs  
C. Fish/Shellfish  
D. Tree Nuts/Peanuts  
E. Tomatoes

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## Food Allergens: The Big 8



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## Knowledge Check

How long can you safely keep breastmilk at room temperature?

A. 1 hour  
B. 2 hours  
C. 4 hours  
D. 6 hours

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## Knowledge Check

Use frozen breastmilk within:

A. 7 days  
B. 6 - 12 months  
C. 12 - 18 months  
D. 2 years

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## Feeding Infants

- Breastmilk
- Formula
- Baby food



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## Breastmilk Safety

- Always label and date
- Store in freezer-safe bags, or in a bottle for immediate use
- Refrigerate and use within 4 days if freshly pumped, or within 24 hours if it has been thawed
- Use frozen breastmilk within 6 - 12 months. Do **not** refreeze.

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## Formula Safety

- Once formula is mixed (or pre-made formula is opened), use within 24 hours
- Keep chilled (40 °F or less)
- Always use by expiration date on package, or within 1 month of opening powdered formula
- Store in cool, dry environment off the floor

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## Baby Food Safety

- Always use store-bought baby food by the expiration date
- Spoon food into a separate container to feed baby
- Store opened, unused food in the refrigerator for up to 48 hours, and label with a use -by or discard date
- Keep homemade baby food refrigerated until time to serve; discard leftovers

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## Why Does it Matter?

Risks when formula/baby food is mishandled:

- Salmonella
- E. coli
- Listeria
- Shigella
- Cronobacter
- Bacillus cereus

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## Tips for Meals and Snacks

- Handwashing
- Serving children
- Monitoring meals and snacks
- Choking hazards
- Modeling



Photo Credit: @gmsu1961176

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## Safe Food for Field Trips

- Keep food protected from contamination
- Keep cold foods cold if perishable foods are packed, encourage use of ice pack or cooler
- Handwashing

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## Home Preserved Foods

Michigan Fresh

Michigan's fresh produce is nutritious and delicious!

- Use Michigan Fresh research-based recipes for blanching, freezing, and canning to ensure a safe home preserved product.



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## Story Time

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## Deadly Look-Alikes



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## Deadly Look-Alikes

- How easy is it to confuse a cleaning product with a beverage?
- Keep cleaning products in their original containers.



Photo Credit: Eileen Haraminac

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\*There are 11 slides in total of Deadly Look-Alikes, this one is used as an example

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## Staff Training Topics

- Personal Hygiene/Handwashing
- Cleanup of vomit and other bodily fluids
- Employee health policies
- Allergens
- Thermometer use and food safety practices
- Pathogen awareness

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## Recommended Resources

- <https://www.fda.gov/food/food-safety>

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## Thank you!

AND JUSTICE FOR ALL

This program was created by:

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\*There are 5 slides of references not pictured here.