

Food Service Facts

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22. Food Safety & Sanitation

School nutrition program personnel are entrusted with the health and safety of those they serve. It is critical for all employees to be equipped with a thorough understanding of how to keep foods safe.

Food borne illnesses can be caused by physical contaminants, chemicals, viruses, bacteria, fungi, or parasites. Unsanitary practices, poor personal hygiene and improper holding can allow food to become contaminated and cause food borne illness. Unsafe food may look and even taste normal. When eaten by young children and others with a weak immune system, contaminated food can cause serious illness, or even death.

Food Safety Resources

Website Resources

The Child Nutrition & Wellness website provides easy access to all of the food safety resources listed below and many, many more. Go to www.kn-eat.org, Food Safety.

Food Safety for Volunteers and Students

This training tool consists of five modules that can be used as a self-training workbook for a supervisor and food handler to progress through together. Information in each module is provided in a specific area of food safety followed by activities or quizzes to reinforce learning. This is an ideal tool to use as a food safety refresher, as an introduction to food safety for a new employee or as a guide for volunteer staff and student workers.

Focus on Food Safety

This booklet designed by the Kansas Department of Agriculture's (KDA) Food Safety and Lodging contains basic food safety information in an attractive, easy to follow format. It is available at <http://agriculture.ks.gov/divisions-programs/food-safety-lodging/food-safety-educational-materials>.

Kansas Food Code

All licensed food service establishments in Kansas must follow rules set forth in the most recent edition of the Kansas Food Code from KDA. The current Kansas Food Code is posted on the KDA website at <http://agriculture.ks.gov/divisions-programs/food-safety-lodging/food-safety-educational-materials>. Although KSDE adheres to the Kansas Food Code, there are a few KSDE policies that are even more stringent than those established in the Kansas Food Code.

For example, the Food Code requires the "person in charge" to demonstrate a strong knowledge of basic sanitation principles while KSDE requires all nutrition program staff to have a basic knowledge of food safety.

Requirements for Employees

The Kansas Department of Agriculture's (KDA) Food Code governs all food preparation, service and storage in an establishment. Food safety and sanitation requirements for school nutrition programs are briefly summarized on the following pages. Child Nutrition & Wellness, Kansas State Department of Education (KSDE), recommends that these practices should also be used by all other student, staff and community groups or organizations that use a sponsor's food service facilities. KSDE encourages school administrators to put in place appropriate safeguards to ensure that all users of a school facility follow Kansas Food Code requirements.

Health

At the time of employment, public school districts are required to obtain a Certification of Health for School Personnel (Form 22-A) for each employee. The form must be completed by a licensed physician (MD or DO) OR a physician's assistant (PA) or an advanced registered nurse practitioner (ARNP) authorized by their responsible licensed physician. It includes a tuberculosis test and a statement certifying the health of the employee.

Kansas law states "Every board of education shall require all persons, whether employees of the school district or under the supervision thereof, who come in regular contact with the pupils of the school district, to submit a certification of health signed by a person licensed to practice medicine and surgery under the laws of any state on a form prescribed by the secretary of health and environment. The certification shall include a statement that there is no evidence of physical condition that would conflict with the health, safety, or welfare of the pupils; and that freedom from tuberculosis has been established by chest x-ray or negative tuberculin skin test. If at any time there is reasonable cause to believe that any such person is suffering from an illness detrimental to the health of the pupils, the school board may require a new certification of health".

The Kansas Food Code requires employees to report health problems before handling foods and food-contact surfaces. The person in charge of food service needs to know when to restrict or exclude food handlers from work because of injury or illness and when to report illnesses to the regulatory authority. An employee may be restricted or excluded if he or she:

- ◆ Has been diagnosed with an illness due to salmonella typhi, shigella spp., norovirus, escherichia coli (E. coli) 0157:H7, or hepatitis A virus
- ◆ Has a symptom caused by illness or infection associated with an acute gastrointestinal illness, such as diarrhea, fever, vomiting, jaundice or sore throat with fever. In addition, an employee who has a lesion containing pus (such as a boil or infected wound) may not handle food and food contact surfaces unless certain precautions are in place.

Employees who become ill or injured during a shift must report this immediately.

Hand Washing & Glove Use

1. Wash hands and forearms with warm water (at 100°F or warmer) and soap. Rub soapy hands together vigorously for at least 20 seconds. Rinse well. Use a towel to turn off the faucet. Dry hands with an air-dryer or single-use towel. Hand sanitizers and single-use food gloves can be used as a follow up to proper handwashing, but should NEVER replace good hand-washing practices.
2. Always wash hands thoroughly:
 - ◆ Before starting work
 - ◆ Before touching food
 - ◆ After blowing nose or coughing
 - ◆ After touching face (eyes, nose, mouth) or hair
 - ◆ After going to the restroom
 - ◆ After smoking
 - ◆ After touching raw meats, poultry, fish, seafood, eggs, or other time and temperature control for safety foods
 - ◆ After handling soiled dishes or other soiled food-contact surfaces
 - ◆ After handling money
 - ◆ After handling trash or engaging in pest removal activities
 - ◆ After handling animals, animals waste, or animal foods
3. Single-use food gloves, utensils, or methods other than bare hand contact must be used when handling ready-to-eat foods. If single-use food gloves are used, the following guidelines are recommended:
 - ◆ Wash hands before putting on gloves.
 - ◆ Put gloves on only when you are ready to handle ready-to-eat food.
 - ◆ Use gloves for only one task, such as preparing a ready-to-eat food, then discard.
 - ◆ If an interruption occurs during food preparation or service, remove gloves, wash hands and use clean gloves when resuming food handling activities.
 - ◆ Dispose of gloves immediately upon removal.
 - ◆ Single-use food gloves should not be used around heat or hot fats.
4. Fabric or reusable gloves may not be used when handling ready-to-eat foods.

Hygiene & Grooming

Program personnel must always be clean and well groomed. These characteristics improve appearance, personal pride and guard against food contamination. A well-groomed professional looking employee should:

1. Wear clean, neat clothing, a uniform or an apron. Wear comfortable, well-fitting shoes with closed toes. Keep shoes clean and in good repair.
2. Avoid wearing jewelry while working with food. A plain band ring is acceptable during food production activities.
3. Keep nails clean, filed short, free of hangnails and infection. Do not wear artificial nails or nail polish.
4. Wash hair frequently and comb in a neat, suitable style. All personnel in food production and service areas, including student workers and volunteers, are required to wear hairnets or hair coverings designed and worn to effectively restrain all hair, including bangs, sideburns and beards.
5. Bathe daily and use an effective deodorant.
6. Practice good oral hygiene.
7. Do not use tobacco products in any area of the school nutrition program facilities.
8. Do not eat or chew gum in food production and service areas.

Control Bacterial Growth to Keep Food Safe

Bacteria, in particular, need certain conditions to grow to harmful levels. These conditions can be controlled and the risk of foodborne illness significantly reduced. Bacteria require (1) adequate time, (2) a comfortable temperature, (3) a certain type of food with (4) adequate moisture and (5) a neutral or slightly acidic pH value in order to multiply to harmful levels. Bacterial growth can be minimized by controlling these five factors.

Bacteria multiply by dividing in half every 20 to 30 minutes in room temperatures and can produce toxins not easily destroyed by heat. If a time and temperature control for safety (TCS) food is mishandled (e.g. held at room temperature for more than four hours), the food may contain excessive levels of bacteria and bacterial toxins. Every effort must be made to minimize the amount of time a TCS food is held in the temperature danger zone.

The temperature danger zone, 41° to 135° F, is the range of temperatures at which bacteria multiply quickly. Refrigeration at or below 41° F will slow but not stop the growth of bacteria. Freezing at 0° F or below will practically stop bacterial growth. Cooking to minimum required temperatures kills most bacterial cells, but not the toxins deposited by bacteria as they grow and die. See Internal Temperatures for Cooked Time and Temperature Control for Safety (TCS) Foods (Form 22-C) for a list of minimum internal temperatures for cooked time and temperature control for safety (TCS) foods.

TCS foods, defined as any food or food ingredient capable of supporting the rapid growth of harmful microorganisms, include raw and cooked foods of animal or aquatic origin, cooked foods of plant origin and a few other foods such as cut melons, cut tomatoes, cut green leafy greens and plant foods containing raw seed sprouts. TCS foods should be handled with proper time and/or temperature controls during receiving, storing, preparing and serving.

Procedures to Control Bacterial Growth

- ◆ Store all TCS food at or below 41° F.
- ◆ Thaw frozen raw meat, poultry or aquatic foods safely:
 - In the refrigerator, OR
 - In a watertight package, under cold, running water, OR
 - In the oven, steamer or microwave as a continuous process of cooking
- ◆ When preparing a TCS food, remove from refrigeration and prepare in small batches to minimize the length of time the TCS food spends in the temperature danger zone.
- ◆ Ready-to-eat, TCS foods prepared and held refrigerated for more than 24 hours must be date-marked with a “use by” safety date. Allow seven days if held in refrigeration at 41°F or below. This also applies to a commercially processed and packaged, refrigerated, ready-to-eat, TCS food, once the original container is opened.
- ◆ Heat TCS foods to the minimum internal temperatures as specified on the Internal Temperatures for Cooked Time and Temperature Control for Safety (TCS) Foods (Form 22-C).
- ◆ Never partially cook TCS foods one day and complete the cooking the next day.
- ◆ Hold cooked TCS foods in a thermostatically controlled hot box, oven, or serving line.
- ◆ Hold cold TCS foods in the refrigerator or on a thermostatically controlled cold bar.
- ◆ Place leftover cooked foods in prechilled two-inch deep half pans for cooling and storage. Cool from 135° F to 70° F within 2 hours and from 135° F to 41° F within a total of 6 hours (two-stage method of cooling).
- ◆ When reheating a cooked product, heat to 165° F within 2 hours or less.
- ◆ Remove garbage and trash from the premises daily.

Procedures to Prevent Contamination of Food

- ◆ Cover pans with a lid or foil to protect food and keep it free from contaminants.
- ◆ Use suitable equipment, utensils or single-use food gloves to mix or portion food.
- ◆ Never use fingers to taste food. Use a tasting spoon and step away from the product to prevent contamination. Do not reuse the soiled tasting spoon.
- ◆ Wipe tops of canned foods with a clean sanitizing cloth before opening them.
- ◆ Cover food being transported from one location to another.
- ◆ Rinse fresh fruits and vegetables in clean potable water to remove residue from spray and soil.
- ◆ Discard food that shows signs of spoilage. When in doubt, throw it out.
- ◆ Do not cough or sneeze near food.
- ◆ Report health problems, illness or injury before starting work. To determine if an employee should be restricted or excluded from working with foods and clean food-contact surfaces, refer to *Requirements for Employee Health* earlier in this chapter.
- ◆ Do not use the same utensils, equipment or gloves in the preparation of more than one food because of the possibility of cross contamination.
- ◆ Use an air dryer or single-use towel to dry hands after hand washing.
- ◆ Keep the kitchen and storeroom free of insects and rodents.
- ◆ Limit traffic in the kitchen to only those employees directly involved in the production or service of food.
- ◆ Maintain a clean and orderly kitchen and storeroom at all times.
- ◆ Cover cuts and burns with a bandage or finger cot and glove.

Procedures to Prevent Contamination of Equipment, Pans & Dishes

- ◆ Keep work surfaces and equipment clean. Food contact surfaces should be cleaned and sanitized before food production. Cafeteria tables should be cleaned before meal service begins.
- ◆ Clean corners and seams when washing equipment.
- ◆ Report any equipment in need of repair.
- ◆ Follow recommended instructions to clean and operate equipment.
- ◆ Invert all utensils stored on tables or shelves.
- ◆ Never re-use soiled utensils for food. Clean and sanitize them before re-use.
- ◆ Allow washed dishes and utensils to air dry. Do not dry with towel.
- ◆ Never allow pans to touch the floor.
- ◆ Keep garbage and trashcans covered.
- ◆ Handle bowls and plates by the outer edge or rim.
- ◆ Pick up glasses at the bottoms.
- ◆ Keep knives, forks and spoons in a sanitary receptacle with only the handles exposed.
- ◆ Pick up spoons, knives and forks by the handles.
- ◆ Do not use the top plate or dish of a stack if they have not been covered in storage.
- ◆ Do not keep a scoop, spoon or tongs in the ice machine. Store in a clean covered container near the ice machine when not in use.
- ◆ Dispose of cracked, scratched or chipped dishes, trays or rubber spatulas.

Procedures for Dishwashing

Dishwashing, whether done manually or mechanically, should include the following steps:

1. Scrape / Pre-rinse
2. Wash
3. Rinse
4. Sanitize
5. Air dry

Manual Dishwashing

- ◆ Manual dishwashing requires a three-compartment sink.
- ◆ A soiled-dish counter of adequate length should be provided preceding the dishwashing compartment.
- ◆ A clean dish counter should be provided for air drying the dishes. These counters preferably should be constructed of stainless steel.

The procedure for manual dishwashing is as follows:

Compartment 1: Wash in hot soapy water. Maintain water temperature at 110° F or above unless otherwise specified by manufacturer of the cleaning agent.

Compartment 2: Rinse in clean water.

Compartment 3: Sanitize using one of the following methods.

1. Use a sanitizing solution of water and either chlorine, quarternary ammonia (sometimes referred to as “quats”) or iodine. Refer to manufacturer’s recommendations for water temperature, concentration, and immersion time for the chemical used. Use test strips to check the strength of the solution every 30 minutes. Replace solution as needed.

OR

2. Use water maintained at 171° F or hotter with an immersion time of at least 30 seconds. A thermometer should be readily available for checking the temperature.

Mechanical Dishwashing

- ◆ Dishwashing machines should be equipped with temperature reading devices that accurately indicate the temperatures during the wash, rinse, and sanitizing cycles.
- ◆ Dishwashing machines should sanitize using one of the following:
 1. Hot water dispensed at 165° F for a stationary rack or 180° F for a conveyor machine. To properly sanitize, the hot water must hit the cleaned equipment at 160° F or above inside the machine.
 2. Chemical sanitizer dispensed at the proper concentration and water temperatures as specified by the manufacturer.
- ◆ Ensure that the dishwashing machine is constructed and operated correctly. For more information, contact the manufacturer and review the requirements in the Kansas Food Code.
- ◆ Never touch or load soiled items and then touch or remove clean items from the dishwashing machine without first properly washing hands.

Policies for Serving Safe Food

It is important to keep food safe during serving, as well as during production and storage.

Sneeze Guards

- ◆ The purpose of a sneeze guard is to interrupt the direct line between the consumer and the food. Sneeze guards should be in place on all serving lines and in all self-service areas where unpackage, exposed foods are displayed.
- ◆ Placement of the sneeze guard should be appropriate for the serving situation. For example, if elementary students will be served, sneeze guard placement should be relative to their height.

Re-Serving Unopened Milk Cartons

Re-service (sharing) of unopened cartons of milk is permitted by KDA if the following criteria are met:

1. Within 30 minutes after an unopened container of milk is placed on the share table, the container shall be:
 - ◆ Served to another student as a second milk with their meal.
 - ◆ Placed on ice for other students to consume later in that serving period.
 - ◆ Placed in refrigeration separate from unserved milks, and marked in some way (such as "R" or a slash mark) to designate that they are the returned product.
 - ◆ Milk can be returned to appropriate storage and used for cooking purposes; and/or may be served and claimed for reimbursement during another meal service; and/or offered to children as a snack during another school activity; and/or donated to a recognized charitable organization.
2. Returned unopened containers of milk shall not be intermixed with fresh milk in storage.
3. Expiration date of returned milks shall be monitored and product discarded when expiration date is reached.

Family Style Meal Service

Family style meal service is a method of serving food to groups of students with adult supervision. Sanitary procedures must be followed to assure the safety of the food during the meal service.

- ◆ Tables must be cleaned and sanitized before each group of students arrives for the meal service.
- ◆ The students and adult supervisors must wash their hands before the meal is served.
- ◆ Food should be held at proper temperatures (hot foods hot, cold foods cold) until everyone is seated and ready to be served.
- ◆ Each table must have its own set of serving containers.
- ◆ There must be no bare hand contact with ready-to-eat food. Appropriate serving utensils should be provided to serve the food.
- ◆ Students must pass the serving containers without putting their fingers into the containers or touching the food within the containers.
- ◆ Food that has been on tables cannot be offered to students at other tables or at other meals.
- ◆ Clean serving containers must be used for each group of students who arrive for lunch. The serving containers/utensils that were used by students at a previous meal service must be washed and sanitized before being used for the next meal service.

Serving Seconds

If second portions of food are offered:

- ◆ They must be served to consumers on clean dishes, trays or disposable-ware.
- ◆ Clean dishes, trays or disposable-ware must be provided at self-service bars.

Storing Foods Brought from Home

Food brought from home (sack lunches, food for fundraisers, etc.) should not be stored with food prepared in and for the school nutrition program.

Responding to a Food Recall

Although the United States food supply is among the safest in the world, sometimes food may be recalled when there is reason to believe it may cause people to become ill. The food may be recalled because it is deemed unsafe or it is mislabeled. Usually, a food manufacturer or distributor initiates the recall to take the food off the market. In some situations, food recalls are requested by government agencies, such as the United States Department of Agriculture (USDA) or the Food and Drug Administration (FDA). When a food is recalled, notifications are generated. To find the latest information about food recalls and to sign-up for free email notification of food recalls, visit www.foodsafety.gov/recalls.

Procedures for Handling Food Borne Illness Complaints

The first step in dealing with a complaint of possible food borne illness is to gather as much information as possible. Interview the parent(s) and/or student(s) involved. Ask for a three-day history of food eaten by the student. Also, ask:

- ◆ Which meal(s) did the student consume at school?
- ◆ Which foods were selected?
- ◆ Which foods were eaten?
- ◆ At which school did the student eat?
- ◆ In which serving period did the student eat?

Gather data from the school. Determine which employee prepared particular foods. Determine whether anyone in the kitchen displayed signs of illness or has recently been ill. Should there be sufficient reason to suspect that food borne illness has occurred, a sample of the food served must be available for testing.

Inform the principal, school nurse and food service manager at the site that you have received a complaint. Ask them to report any and all other complaints to you.

Notify the local health department when a complaint has been received. A sanitation inspection may be conducted by the Kansas Department of Agriculture or another agency. Cooperate with any investigation to determine the cause of the illness. Further information on handling an outbreak of food borne illness can be accessed through the Child Nutrition & Wellness website: www.kn-eat.org.

Procedures for Hazardous Chemicals

- ◆ The Hazardous Communication Program requires that *Safety Data Sheets* (SDS) be maintained in all work areas where hazardous chemicals are stored or used.
- ◆ SDS are available from the supplier/distributor of chemical products. They outline handling precautions and provide emergency care information to be used in case of an accident.
- ◆ All chemical substances should be clearly labeled, whether in their original containers or in a working container, such as a wiping cloth bucket or spray bottle.
- ◆ Chemicals should be stored away from, and never above food, equipment, utensils, single-service articles or food contact surfaces.

Food Safety Professional Development Requirements

School nutrition program personnel are entrusted with the health and well-being of those they serve. It is absolutely essential that all employees have a thorough understanding of how to keep food safe. To help prepare employees for this critical responsibility, a statewide system of required food safety professional development was implemented in January 2002. All personnel employed in local school food service operations that participate in the federal Child Nutrition Programs are required to receive KSDE-approved food safety instruction.

- ◆ New school nutrition program directors and authorized representatives are required to complete 8 hours of KSDE approved food safety training not more than 5 years prior to or within 30 days of their start date and every 5 years thereafter.

KSDE Approved Food Safety Training for Directors and Authorized Representatives		
Class Name	Length	Training Information
Kansas Food Safety in Schools	8 hours	Live virtual event; in person training; or online through KSDE Training Portal
ServSafe	Variable: 8 to 12 hours	Kansas Restaurant & Hospitality Association Regional locations throughout the year with a charge www.krha.org
ICN Food Safety in Schools	8 hours	ICN instructor taught in person training or online through ICN iLearn (docebosaa.com)

- ◆ New school nutrition program employees, who are not directors (or authorized representatives) are required to complete 3 hours of KSDE approved food safety training within 6 months of their employment date and every 5 years thereafter.

KSDE-Approved Food Safety Training for Other Employees (not Directors)		
Class Name	Length	Training Information
Food Safety Basics	3 hours	Live virtual event; in person training; or online through KSDE Training Portal
Food Safety Basics Spanish	3 hours	Live virtual event; in person training; or online through KSDE Training Portal
KSDE-approved locally developed food safety class	3 hours minimum	KSDE-approved locally developed food safety class taught specifically for district employees

Locally Developed Food Safety Classes Must be Approved by KSDE

All locally developed classes must be approved by Child Nutrition & Wellness, KSDE before they can be counted to meet the food safety professional development requirement. To request approval for a locally developed class, contact Child Nutrition & Wellness, KSDE at (785) 296-2276.

Spanish Food Safety Basics

Spanish speaking employees who are not fluent in English should meet the food safety professional development requirement by attending a Food Safety Basics class taught in Spanish or by viewing the recorded version of KSDE Spanish Food Safety Basics and reviewing class information with their supervisor. Please contact Child Nutrition & Wellness, KSDE at (785) 296-2276 for more information.

Record Keeping

Food safety professional development must be updated in KSDE's KN-CLAIM computer system. An individual with access to the sponsor's KN-CLAIM user-id and password must enter the information. For instructions, go to www.kn-eat.org, School Nutrition Programs, Guidance, KN-CLAIM Quick Reference Guides. The sponsor should also maintain a copy of each employee's class certificate. These documents are to be kept on file at the local level for review or audit by KSDE.

Hazard Analysis Critical Control Points (HACCP)

The Child Nutrition and WIC Reauthorization Act of 2004 requires that sponsors implement a school food safety program for the preparation and service of meals that complies with any "hazard analysis and critical control point system established by USDA."

To view the complete HACCP guidance and resources go to www.kn-eat.org, Food Safety, HACCP Guidance and Resources.