



Food Safety Tips for College Students

When students pack up for college, they take along the basics - TV, laptop, MP3 player and cell phone. Many students will also arrive at school with a microwave oven, tabletop grill, mini-fridge and toaster-oven in tow. Most students, however, don't know there are food safety considerations when cooking with these appliances.

Students face many rigors while studying for a college education and they often eat whenever and wherever convenient. But when it comes to safely preparing meals, many college kids simply don't know what it takes to make the grade in food safety, and far too many could end up with a foodborne illness.

The **USDA Meat and Poultry Hotline** receives many calls from parents or students with questions about the handling and storage of food for college kids. Here is a sampling of those questions about how to safely cook and prepare foods while away at school.

Q Several slices of pizza have been left out overnight. Is the pizza still safe to eat?

A No. Perishable food should never be left out of refrigeration more than two hours. This is true even if there are no meat products on the pizza. Foodborne bacteria that may be present on these foods grow fastest at temperatures between 40 and 140 °F and can double in number every 20 minutes.

Other take-out or delivered foods such as chicken, hamburgers, cut fruit, salads, and party platters, must also be kept at a safe temperature. The rule is to "Keep HOT Food HOT and COLD Food COLD! To keep hot foods safe, keep them at 140 °F or above. Cold food must be kept at 40 °F or below (in the refrigerator or freezer). Bacteria grow rapidly between 40 and 140 °F. Discard all perishable food left at room temperature longer than 2 hours; 1 hour in air temperatures above 90 °F. Use safely refrigerated food in 3 to 4 days; frozen leftovers, 1 to 2 months.

Q I am living off campus this year. My two roommates and I will be preparing our own meals. What do we need to know to cook food safely?

A When using frozen meats, thaw them in the refrigerator — NOT on the counter. Don't allow raw meat or poultry juices to drip on other foods. Wash your hands before and after preparing foods. Always use clean paper towels. Wash used cutting boards and utensils in hot, soapy water.

Use a food thermometer to check internal temperatures. Cook hamburger and other ground meats (veal, lamb, and pork) to an internal temperature of 160 °F and ground poultry to 165 °F. Beef, veal and lamb steaks and roasts may be cooked to 145 °F for medium rare. Whole poultry should be cooked to 180 °F as measured in the thigh; breast meat to 170 °F. All cuts of pork should reach 160 °F. Foods from the microwave should be steaming hot. Finally, if you feel food has not been handled safely, throw it out.

Q I don't have a car on campus so I have to take the bus to get my groceries. Will the food be safe by the time I get it to my apartment?

A Whether you use public transportation or have your own car, it's important that perishable purchases are refrigerated within 2 hours (1 hour when the temperature is above 90 °F). First, when buying food, avoid cross-contamination by placing raw meat, poultry, and seafood in plastic bags and keep them separate from other foods in your grocery-shopping cart. Make cold foods the last items you place in your cart. After your purchases are bagged, go home immediately.

If you can't get home within the recommended times, you may want to take a cooler with frozen gel packs to keep perishable food safe in transit. If there are perishable raw meats you don't plan on using soon, freeze any ground meats, poultry or fish within 2 days; beef, pork, veal or lamb steaks, roasts or chops within 3 to 5 days.

Q Our dorm has a kitchen with a microwave on each floor. When I microwave the food according to the package's instructions, it's still partly frozen. Why doesn't it get hot enough?

A In a large building like a dorm, electrical equipment such as computers, toaster-ovens, hair dryers and irons compete for current and reduce the electrical wattage of a microwave. A community oven that has been used just before you, will cook slower than a cold oven. To compensate, set the microwave for the maximum time given in the instructions. Avoid using an extension cord with the microwave because power is reduced as it flows down the cord. Also, the cord might not be grounded.

Cover foods during cooking. Remember to stir or rearrange food and rotate the dish. Allow for standing time. The food continues to cook during this period. Finally, use a food thermometer to ensure the food reaches the safe internal temperature of 165 °F. If the food has not reached that temperature or is not steaming hot, add more cooking time.

Q What containers are safe for microwaving foods?

A Plastic cold-storage containers such as margarine tubs, take-out containers, whipped topping bowls, and other one-time use containers should not be used in microwave ovens. These containers can warp or melt, possibly causing harmful chemicals to migrate into the food.

Microwave plastic wraps, wax paper, cooking bags, parchment paper, and white microwave-safe paper towels should be safe to use. Do not let plastic wrap touch foods during microwaving. Never use thin plastic storage bags, brown paper or plastic grocery bags, newspapers, or aluminum foil in the microwave oven.

Q How do you thaw frozen foods in the microwave safely?

A Remove food from packaging before defrosting. Do not use foam trays and plastic wraps because they are not heat stable at high temperatures. Melting or warping may cause harmful chemicals to migrate into food. Cook meat, poultry, egg casseroles, and fish immediately after defrosting in the microwave oven because some areas of the frozen food may begin to cook during the defrosting time. Do not hold partially cooked food to cook later.

Q Several of us are planning a tailgate party at the stadium. How can we handle the foods safely?

A Keeping food safe from home, a store, or restaurant to the stadium helps prevent foodborne illness. If bringing hot take-out food, eat it within 2 hours of purchase. To keep food like soup, chili, and stew hot, use an insulated container. Fill the container with boiling water, let it stand for a few minutes, empty, and then put in the piping hot food. Keep the insulated container closed and the food should stay hot (140 °F or above) for several hours. Or plan ahead and chill the food in your refrigerator before packing for your tailgate.

Carry cold perishable food like raw hamburger patties, sausages, and chicken in an insulated cooler packed with several inches of ice, frozen gel packs, or containers of frozen water. Perishable cooked food such as luncheon meat, cooked meat, chicken, and potato or pasta salads must be kept refrigerator cold, too. Tuck an appliance thermometer into the cooler to make sure the food stays at 40 °F or below. When packing the cooler for an outing, be sure raw meat and poultry are wrapped securely to prevent their juices from cross-contaminating ready-to-eat food.

In addition to a grill and fuel for cooking food, pack a food thermometer to be sure the meat, poultry, and casseroles reach a high enough temperature to destroy harmful bacteria that may be present. Include lots of clean utensils, not only for eating but also for serving the safely cooked food.

Bring water for cleaning if none will be available at the site. Pack clean, wet, disposable cloths or moist towelettes and paper towels for cleaning hands and surfaces.

Q How long will food stay safe at a tailgate party?

It's important to keep hot food hot and cold food cold. Bacteria multiply rapidly between 40 °F and 140 °F. Never leave food in this "Danger Zone" more than 2 hours (1 hour when the outside temperature is above 90 °F). Cook meat and poultry completely. Partial cooking of food ahead of time allows bacteria to multiply to the point that subsequent cooking cannot destroy them.

Meat and poultry cooked on a grill often browns very fast on the outside, so use a food thermometer to be sure they are cooked thoroughly. Cook hamburgers, sausage, and other ground meats (veal, lamb, and pork) to an internal temperature of 160 °F and ground poultry to 165 °F. Beef, veal and lamb steaks and roasts may be cooked to 145 °F for medium rare. Poultry breast meat should be cooked to 170 °F and dark meat to 180 °F. All cuts of fresh pork should reach 160 °F; fully cooked ham, 140 °F.

Q Are leftovers from a tailgate party safe to eat later?

A Some people have so much fun at tailgate gatherings, they never actually make it into the stadium to see the football game. But that doesn't mean it's safe for the food to stay unrefrigerated before, during, and after the game. Store perishable food in the cooler except for brief times when serving. Cook only the amount of food that will be eaten to avoid the challenge of keeping leftovers at a safe temperature.

Discard any leftovers that are not ice cold after the game. Food should not be left out of the cooler or off the grill more than 2 hours (1 hour when the outside temperature is above 90 °F). Holding food at an unsafe temperature is a prime cause of foodborne illness.

Q I don't have time to go to the dining hall for lunch. How can I safely pack a lunch to eat between classes?

A Insulated, soft-sided lunch boxes or bags are best for keeping perishable food cold, but metal or plastic lunch boxes and paper bags can also be used. If using paper lunch bags, create layers by double bagging to help insulate the food. An ice source, such as a small frozen gel pack or frozen juice box, should be packed with perishable food in any type of lunch bag or box. Of course, if there's a refrigerator available, store perishable items there upon arrival.

It's important to keep perishable food cold. Harmful bacteria multiply rapidly in the "Danger Zone" — the temperatures between 40 and 140 °F. So, perishable food transported without an ice source won't stay safe long. Prepackaged combos that contain luncheon meats along with crackers, cheese, and condiments must also be kept refrigerated. This includes luncheon meats and smoked ham that are cured or contain preservatives. For more information, see "Keeping 'Bag' Lunches Safe" at http://www.fsis.usda.gov/Fact_Sheets/Keeping_Bag_Lunches_Safe/index.asp

Q I frequently send "care packages" to my son at college. What other foods besides cookies, crackers, and candy can I mail?

A College kids away from home always love receiving their favorite home-baked goods: Brownies and loaf-type cakes, like banana bread, carrot, applesauce or sour cream cakes, ship well if wrapped in aluminum foil and packed in a can or heavy cardboard box.

Shelf-stable, microwavable entrees are another option. These foods are not refrigerated or frozen and will stay fresh without refrigeration for about 18 months. Canned meats and fish as well as dried meat and poultry, such as beef and turkey jerky, are safe to mail. Bacteria can't grow in foods preserved by removing moisture.

If mailing perishable foods, pack them with a cold source, such as frozen gel packs or dry ice, and ship them by overnight delivery. Perishables must not be at temperatures between 40 and 140 °F for longer than 2 hours (1 hour when the temperature is above 90 °F). Pathogenic bacteria can grow rapidly at these temperatures but they do not generally affect the taste, smell, or appearance of a food. So if food has been mishandled or is unsafe to eat, the student will not be able to tell it's dangerous. For more information, see the FSIS publication "Mail Order Food Safety" at www.fsis.usda.gov/oa/pubs/mailorder.htm

Q My daughter's college is only a four-hour drive away, so she comes home often. How can I safely pack home-cooked foods for her to take back to school?

A For a four-hour drive, food must be handled properly to keep it safe from spoilage and pathogenic bacteria. Cooked foods should be divided into shallow containers and cooled in the refrigerator prior to the trip. To transport the food, place it in an insulated cooler packed with several inches of ice, frozen gel packs, or containers of frozen water. Add the cold containers of food from the refrigerator when she's ready to leave. Freezing foods prior to the return trip also helps keep food safe. Advise your daughter to refrigerate the food as soon as she arrives at college.

Q My math club is having a potluck dinner. What's important to remember for food safety?

A When you serve food, use clean containers and utensils to store and serve food. Do not use a plate that previously held raw meat, poultry, or seafood unless the plate has first been washed in hot, soapy water. When a dish is empty or nearly empty, replace with fresh container of food, removing the previous container.

Place cold food in containers on ice. Hold cold foods at or below 40 °F. Food that will be portioned and served on the serving line should be placed in a shallow container. Place this container inside a deep pan filled partially with ice to keep food cold. Food like chicken salad and desserts in individual serving dishes can also be placed directly on ice, or in a shallow container set in a deep pan filled with ice.

Food Safety Tips for College Students

Drain off water as ice melts and replace ice frequently.

Keep hot food hot by using a heat source. Once food is thoroughly heated on stovetop, oven or in microwave oven, place it in chafing dishes, preheated steam tables, warming trays, and/or slow cookers. Check the temperature frequently to be sure food stays at or above 140 °F.

USDA's Food Safety and Inspection Service helps consumers to safely plan and serve food for group gatherings. Single copies of a 40-page colorful "Cooking for Groups: A Volunteer's Guide to Food Safety" are available by calling the USDA Meat and Poultry Hotline at [1-888-MPHotline](tel:1-888-MPHotline) (888-674-6854).

Q My buddies and I are going on a camping trip over spring break. How can we take food along safely?

A If you are traveling with cold foods, bring a cooler with a cold source. If you are cooking, use a hot campfire or portable stove. It is difficult to keep food hot without a heat source when traveling, so it's best to cook foods before leaving home, refrigerate or freeze the food overnight, and transport it cold.

If you don't want to lug a cooler or portable stove, consider taking shelf-stable food. Advances in food technology have produced relatively lightweight staples that don't need refrigeration or careful packaging. These include dehydrated foods; beef jerky and other dried meats; dried noodles and

soups; peanut butter in plastic jars; canned ham, chicken, beef and tuna; concentrated juice boxes; dried fruits and nuts; and powdered milk and fruit drinks.

Don't drink water from a lake or stream, no matter how clean it appears. Bring bottled or tap water for drinking. For more information, see the FSIS publication "Food Safety While Hiking, Camping & Boating" at www.fsis.usda.gov/Fact_Sheets/Food_Safety_While_Hiking_Camping_&_Boating/index.asp

Q What are the important things to remember about food safety?

A USDA's Meat and Poultry Hotline, in conjunction with the Partnership for Food Safety Education's Fight BAC!® campaign, advises all consumers to keep these four basic tips in mind when cooking and preparing foods:

- **Clean.** Wash hands and surfaces often.
- **Separate.** Separate raw meat, poultry and egg products from cooked foods to avoid cross-contamination.
- **Cook.** Raw meat, poultry and egg products need to be cooked thoroughly. Use a food thermometer to ensure foods have reached a high enough temperature to kill any harmful bacteria that might be present.
- **Chill.** Refrigerate promptly.

Food Safety Questions?

Call the USDA Meat & Poultry Hotline

If you have a question about meat, poultry or egg products, call the USDA Meat and Poultry Hotline toll free at **1-888-MPHotline** or **1-888-674-6854**, TTY: 1-800-256-7072.



from 10 a.m. to 4 p.m. EST (English or Spanish).

Listen to timely recorded food safety messages at the same number 24 hours a day.

Check out the FSIS Web site at www.fsis.usda.gov.

Send e-mail questions to MPHotline.fsis@usda.gov.

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