

The Partnership for Food Safety Education welcomes you to the MYTHBUSTERS Educators' Kit



This "kit" includes the following downloads:

- **MYTHBUSTERS Food Safety Story (2 pgs. w/cover)**
- **Food Safety Story Discussion Questions (1 pg)**
- **MYTHBUSTERS Quiz (1 pg)**
- **4 MYTHS (1 pg)**
- **4 MYTHS 4-minute video**

Note: The following paragraphs in the "Mythbusters Food Safety Story" correspond specifically to one of the myths:

- Paragraph 1 - Myth: Putting chicken in a colander and rinsing it with water will remove bacteria like *Salmonella*.
- Paragraph 2 - Myth: Lemon juice and salt will clean and sanitize a cutting board.
- Paragraph 4 - Myth: Once a hamburger turns brown in the middle, it is cooked.
- Paragraph 5 - Myth: You should not put hot food in the refrigerator.

The non-profit Partnership for Food Safety Education saves lives and improves public health through research-based, actionable consumer food safety initiatives that reduce foodborne illness.

MYTHBUSTERS Food Safety Story: Bethany and Travis Throw a Party

High school friends, Bethany and Travis, are throwing their very first barbecue party. They're serving grilled hamburgers and chicken, tossed salad, and cheesy potato casserole. Let's see if they remembered to put food safety on the menu as well.

Paragraph 1

While Travis gets the charcoal grill started and makes the hamburger patties, Bethany takes the raw chicken out of the refrigerator. She puts the chicken into a colander and rinses it under cold water. Bethany does this because she believes it will make the chicken safer to eat by getting rid of harmful bacteria like *Salmonella* and *E. coli*. She knows that bacteria in food can make people very sick.

Paragraph 2

Some of the chicken pieces that Bethany has rinsed off are very large, so she asks Travis to get out a cutting board and a knife and cut the chicken into smaller servings. When Travis is finished, Bethany realizes she needs to use the same cutting board to cut up lettuce for the tossed salad. But, she knows that the board should be cleaned and sanitized to avoid contaminating the lettuce with any juices from the raw chicken. Travis says that he's heard that lemon juice and salt can be used to sanitize cutting boards. He gets out a bottle of lemon juice from the refrigerator and a box of salt and goes to work. When he's finished, Bethany uses the cutting board to cut up the lettuce.

Paragraph 3

The potato casserole goes into the oven to bake, while Travis puts the chicken on the grill to cook following a recipe he found online. The recipe says to grill the chicken for 6 minutes on each side. After the chicken has cooked on both sides for a total of 12 minutes, Travis decides the pieces must be done and he takes them off the grill.

Paragraph 4

The guests have begun to arrive and they're hungry, so Bethany takes out the hamburger patties from the refrigerator and puts them on the grill. She knows the hamburgers should be thoroughly cooked, so that bacteria that might be in the meat are killed. Bethany doesn't have a recipe to follow for how long to cook the burgers. Instead, she plans to cut one of the burgers in the middle and if there's no pink showing and it looks brown inside, she will decide that the patties must be ready to eat.

Paragraph 5

After the party is over, Travis and Bethany begin cleaning up. There are no leftovers except for some of the potato casserole which is still hot. Travis covers the dish with foil and starts to put it in the refrigerator when Bethany stops him. She says she's afraid the heat from the casserole will make everything in the refrigerator too warm and dairy products like milk will go bad. Bethany suggests letting the leftover potato casserole sit on the kitchen counter until it cools down before storing it in the refrigerator. Travis says he's really tired and he just can't wait for the casserole. Bethany reluctantly agrees and Travis puts the hot casserole in the 'frig.

Print the Discussion Questions for this story.

*Two bacteria that can cause serious illness in people are featured in this story: *Salmonella* and *E. coli* O157:H7.*

For more information on microorganisms that can cause illness see the Least Wanted at:

<http://www.fightbac.org/content/view/14/21/>



MYTHBUSTERS Food Safety Story: Discussion Questions

1) *Using the Food Safety Mythbusters as your guide, identify areas where Bethany and Travis might have put themselves at risk for a foodborne infection and explain what they should have done to reduce their risk.*

2) *Identify the area or areas where Bethany and Travis handled the food properly from a food safety standpoint and explain why.*

3) *Based on the food safety advice of “Clean, Separate, Cook, and Chill,” do you think Bethany and Travis should have washed their hands before handling the food? Were there any times when Bethany and Travis should have washed their hands during the food preparation and serving?*



For more food safety activities and downloads:
www.fightbac.org

QUIZ



1. **You're having a barbecue. How can you tell if the hamburgers are done and safe to eat?**
 - a. They're done if they have been cooked on a hot grill for at least four minutes on each side.
 - b. They're done if they are brown in the middle and no pink is showing.
 - c. They're done if you've run out of hot dogs.
 - d. They're done if a thermometer placed in the middle of the patties registers at least 160 °F.

2. **The best way to clean and sanitize a cutting board is:**
 - a. To run it under hot water and then let it sit in the sun to dry.
 - b. After washing it with hot water and soap, cover the board liberally with a solution of 1 tablespoon un-scented, liquid chlorine bleach mixed with 1 gallon of water. Let stand a few minutes. Blot dry with clean paper towels or let air dry.
 - c. It's not really possible to clean and sanitize a cutting board, so it's best to have two cutting boards – one for raw meat/poultry and the other for raw vegetables.
 - d. To scrub the board with a combination of lemon juice and salt. Rinse under hot water and let air dry.

3. **It is noon. You just made a pot of homemade vegetable beef soup for 7pm dinner. From a safety standpoint, is it OK to leave the soup out on your stovetop until you and your family sit down to eat?**
 - a. Yes, as long as you reheat the soup to boiling just before serving it.
 - b. Yes, because the acid in the tomatoes will keep harmful bacteria from growing.
 - c. No, food left sitting out of refrigeration at room temperature for two or more hours is unsafe to eat. It's best to refrigerate any food – including hot items -- immediately.
 - d. No, leaving the soup out could tempt family members to eat it and you will end up with no dinner.

4. **You're making roast chicken for a party and you've heard that bacteria like *Salmonella* can be a problem and lead to foodborne illness. How do you reduce the risk of making your guests sick?**
 - a. The best safety practice is to put the raw chicken in a colander and rinse it thoroughly under running water to wash away harmful bacteria.
 - b. The best safety practice is to sear the chicken for three minutes under a broiler to kill harmful bacteria. Then finish cooking the chicken by following your own recipe.
 - c. The best safety practice is to cook the chicken to an internal temperature of 165 °F as measured with a food thermometer.
 - d. The best safety practice is to serve beef instead of chicken.



ANSWER KEY:

1 (d) ; 2 (b) ; 3 (c) ; 4 (c)

Common Home Food Safety Myths



Myth: Lemon juice and salt will clean and sanitize a cutting board.

Fact: Sanitizing is the process of reducing the number of microorganisms that are on a properly cleaned surface to a safe level to reduce risk of foodborne illness. Lemon juice and salt will not do this. The most effective way to sanitize a cutting board as well as other kitchen surfaces is with a diluted bleach and water solution. To clean your cutting board, first wash it with hot water and soap. Then sanitize it by using a diluted chlorine bleach solution – just one tablespoon unscented liquid bleach (not more) to one gallon of water. Let the bleach solution stand on the surface for a few minutes; then rinse and blot dry with clean paper towels. It is important to clean and disinfect – just because a surface looks clean, doesn't mean it is free of disease-causing bacteria!

Myth: Putting chicken in a colander and rinsing it with water will remove bacteria like Salmonella.

Fact: Rinsing chicken in a colander will not remove bacteria. In fact, it can spread raw juices around your sink, onto your countertops, and onto ready-to-eat foods. Bacteria in raw meat and poultry can only be killed when cooked to a safe minimum internal temperature, which for poultry is 165 °F, as measured by a food thermometer. Save yourself the messiness of rinsing raw poultry. It is not a safety step and can cause cross-contamination.

Myth: Once a hamburger turns brown in the middle, it is cooked.

Fact: You cannot use visual cues to determine whether food has been cooked to a safe minimum internal temperature. The ONLY way to know that food has been cooked to a safe minimum internal temperature is to use a food thermometer. Ground meat should be cooked to a minimum internal temperature of 160 °F, as measured by a food thermometer.

Myth: You should not put hot food in the refrigerator.

Fact: Hot foods can be placed directly in the refrigerator. A large pot of food like soup or stew should be divided into small portions and put in shallow containers for quicker cooling in the refrigerator. If you leave food out to cool and forget about it, then toss it! Food is not safe to eat after sitting out at room temperature for more than two hours. Bacteria grow rapidly in the “danger zone” between 40 °F and 140 °F. Always follow the “two hour rule” – eat perishable foods or refrigerate them within two hours at a refrigerator temperature of 40 °F or below. And, if perishable food is left out in a room or outdoors where the temperature is 90 °F or higher, food should be refrigerated or eaten within just one hour -- or discarded after one hour has passed.