

Recipe modification improves food safety practices during cooking of poultry

Curtis Maughan,¹ Sandria Godwin,² Edgar Chambers IV¹
¹Kansas State University ²Tennessee State University

A recent study of consumers (186 total) at Kansas State University and Tennessee State University found that adding food safety instructions to recipes improved food safety behaviors.

- Consumers were asked to prepare two recipes, a baked parmesan sesame chicken breast, and a mushroom turkey burger, while they were observed for food safety behaviors such as hand washing and food thermometer use.
- Approximately half of the consumers received normal recipes to follow, while the other half received recipes with included food safety instructions.
- The study found that those who had recipes with food safety instructions significantly improved their hand washing after handling raw ingredients as well as their thermometer use (see Fig 1 & 2).
- As example of a recipe with food safety instructions can be seen below:

Mushroom Turkey Burger

- Wash your hands with soap and warm water before you begin this recipe.
- Run cold water over the mushroom while rubbing gently with your fingertips. Use a paper towel to dry.
- Remove the stem from the mushroom and chop using a cutting board.
- Spray a medium sauté pan with cooking spray. Preheat pan over medium high heat.
- Remove the wrapper from the ground turkey. Place the ground turkey into a medium bowl.
- Wash your hands with warm soap and water after handling the ground turkey.
- Add the chopped mushroom, soy sauce, onion powder, salt and pepper to the ground turkey. Mix with hands or a wooden spoon. Once mixed thoroughly form into a burger patty and place into the preheated pan.
- Wash your hands with soap and warm water after placing the patty into the pan.
- Cook the patty for approximately 5 minutes on each side.
- Using a spatula, tilt the patty up and insert the cooking thermometer into the side of the burger, with the tip extending into the center. If the temperature is less than 165°F, return the patty to the pan and continue cooking until the internal temperature reaches 165°F.
- If you touched the turkey when checking the temperature, wash your hands with warm soap and water.

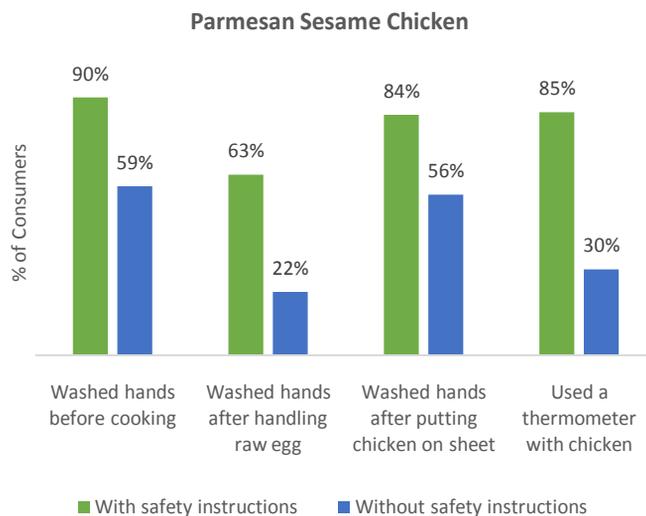


Figure 1 Observed consumer behaviors while preparing Parmesan Sesame Chicken recipe. All behaviors were significantly different at $p < 0.05$.

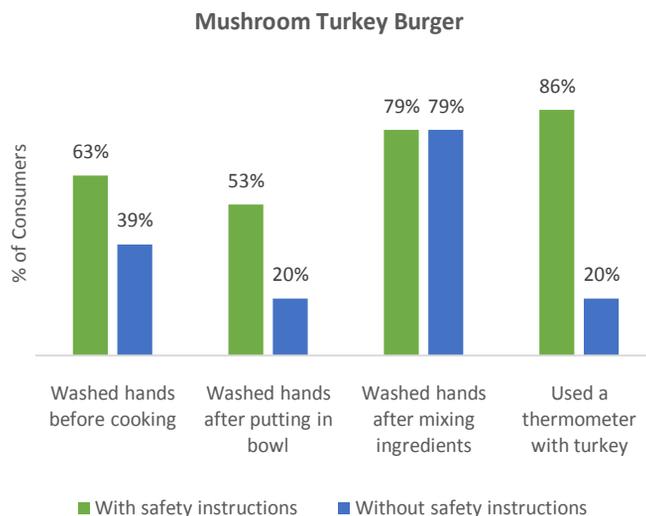


Figure 2 Observed consumer behaviors while preparing Mushroom Turkey Burger recipe. All behaviors were significantly different at $p < 0.05$ except for washing hands after mixing ingredients.

In addition to observed consumer behaviors, the study also asked about consumer opinions on the recipe:

- There was no difference in the ease of use of the recipes whether or not they had food safety instructions.
- The majority of consumers stated that they would use recipes that had similar safety instructions in the future.