

# Research finds 90 percent of home chefs contaminate food

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If you're gearing up for a big Super Bowl bash, you might want to consult the best food-handling practices before preparing that feast. New research from Kansas State University finds that most home chefs drop the ball on food safety.

In an effort to evaluate current food safety messages, researchers at Kansas State University videotaped home chefs preparing a meal containing raw meat and a ready-to-eat fruit salad. The raw meat was inoculated with a nonpathogenic organism to trace contamination in the kitchen. The researchers found that 90 percent of the participants had contaminated their salad.

"Almost all of the fruit salads we analyzed contained levels of the tracer organism, which we were representing as being salmonella," said Randy Phebus, professor of food safety at Kansas State University and one of the authors of the study "Consumer Food Handling Practices Lead to Cross-Contamination," recently published in the journal *Food Protection Trends*.

The purpose of the research—funded by the U.S. Department of Agriculture Food Safety and Inspection Service—was to determine which type of food safety messaging resulted in the best food-handling practices. The 123 participants were divided into three groups. One group was given an education program on the four national Food Safety Families campaign messages of clean, separate, cook and chill; one group viewed and discussed the Ad Council public service

announcements focusing on the same four Food Safety Families messages; and one group did not receive any food safety training before preparing a meal.

"A lot of studies in the past have been surveys asking consumers how they do things in the kitchen, but we have found that those are rather unreliable," Phebus said. "When you actually videotape it and observe it, most consumers are doing a really bad job in terms of preventing food contamination."

The study found that all participants made mistakes in the kitchen that could lead to potential foodborne illnesses. The researchers wiped down the kitchen after each participant prepared a meal, finding most participants tracked contaminations all around the kitchen, including on handles, countertops, faucets and trash cans. But contamination was especially prevalent on hand towels.

"We found that most people tried to wash their hands, but did it very ineffectively—either only using water or not washing for long enough," Phebus said. "By not washing their hands correctly, they spread contamination to the hand towels. They then go back to those towels multiple times and recontaminate themselves or the kitchen surfaces with those towels. It ultimately leads to contamination in the food product."

Participants who received food safety messages before cooking did slightly better at this task than those who received no messages, but the differences were subtle. This research highlights the difficult task for [food safety](#) practitioners of not only informing consumers, but also changing their habits, Phebus said.

"Human behavior can be modified, but it's a very complicated effort to do that," Phebus said. "To get people to change habits can be a pretty

daunting task."

**More information:** [www.foodprotection.org/files/f ... JAN-FEB-15-sneed.pdf](http://www.foodprotection.org/files/f...JAN-FEB-15-sneed.pdf)

Provided by Kansas State University

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