

Though acidic, salsa can still be a risk if handled improperly, researcher says

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In this file photo, University of Florida food safety and quality associate professor Amy Simonne poses with a variety of ethnic foods in her laboratory on UF's main campus in Gainesville. Simonne, an ethnic foods expert with UF's Institute of Food and Agricultural Sciences, recently published a study suggesting that salmonella and staphylococcus can survive long enough in red salsa to pose a risk to humans.

Just because salsa is acidic, don't assume it can't make you ill. A University of Florida researcher's study shows that salmonella and staphylococcus can both survive long enough to pose risk in the often free, always popular appetizer.

In a research paper published in the June issue of the *Journal of Food Protection*, Amy Simonne, an associate professor of <u>food safety</u> and quality, found that when samples of restaurant-prepared red salsa were



contaminated with salmonella and <u>Staphylococcus aureus</u>, the illnesscausing micro-organisms survived long enough to pose a food safety risk.

Red salsa is a staple in Mexican restaurants, often served as a free appetizer with tortilla chips. Because it is almost automatically served in many establishments, it is in and out of refrigerators — and sometimes kept at room temperature for long stretches, she said.

In her study, Simonne's team, which included former UF graduate student Wendy Franco and Wei-Yea Hsu, bought several batches of red salsa from one Mexican-style chain restaurant. They checked its temperature, then whisked the samples to a lab, where they added salmonella or S. aureus. The samples, some refrigerated, some not, were then monitored for several days to determine how long the microorganisms were present.

<u>Salmonella infection</u> is among the most common foodborne illnesses, often the result of eating raw or undercooked meat, poultry or eggs. Its symptoms can include abdominal pain, fever, nausea and vomiting. In a kitchen setting, S. aureus, known as staph, is often transferred to food by someone whose hands aren't clean. It can cause skin infections and <u>digestive problems</u>.

Simonne, who has been studying ethnic foods since 2004 with UF's Institute of Food and Agricultural Sciences, found that salmonella survived in all samples stored at room temperature, although S. aureus significantly decreased after 24 hours at room temperature.

But the study showed that both can survive in salsa long enough to represent a food safety risk at both refrigerated and room temperatures. Although S. aureus had a shorter life span in the salsa, the bacteria survived long enough to make the samples unfit for human consumption,



she said.

Many diners assume that because salsa has a pH of less than 4, meaning it is acidic, illness-causing bacteria won't survive in it, she said. But food scientists have shown that acidic foods can also cause problems, she noted, citing outbreaks of E. coli in unpasteurized apple cider and salmonella in fresh orange juice.

For snackers, the best news is that Simonne isn't saying consumers should steer clear of salsa, only that food handlers should be vigilant about not keeping refrigerated salsa more than seven days and minimize the time it's unrefrigerated.

And they should take care, as always, to follow hand-washing guidelines and ensure that ingredients are properly washed before preparation.

Provided by University of Florida

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