

Is the '5-second rule' real?

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Over the course of three decades, food scientist and professor at Clemson University Paul Dawson has studied how common food habits may increase the spread of bacteria in the human system.

According to a report by CNN, every year, Dawson and his group of undergraduate and graduate students come up with a research project related to [food habits](#) and then quantify how dirty it actually is.

While most people don't get ill from the small amounts of [bacteria](#) normally found in food, or transferred during the basic handling of food, how many of these "seven dirty habits" are you guilty of?

The 5-second rule. Just about everyone does this: A cookie or piece of candy - or a sandwich - drops to the floor. Pick it up within five seconds and it's still good to eat. Right? Well ... maybe. It depends on the type of food, the type of surface and the type and amount of bacteria. Solid foods dropped on a clean-looking solid or hard surface don't transfer too much bacteria to be harmful. But wet foods on a surface like a carpeted floor? ... Nope.

Double dipping. If you've ever seen someone take a bite of a chip and then dip that chip back into a bowl of dip, that's called double dipping. Dawson and his group tested the amount of bacteria transfer present when chips are double dipped into three common types of dip: salsa, melted chocolate and queso cheese.

Once again, depending on the type of dip, much higher bacterial populations were found after double dipping. While there was some minimal bacterial transfer in the melted chocolate and queso - there was five times as much transfer in the salsa. The theory is that chips that have been bitten and dipped in salsa may not hold all of the salsa, and bits of salsa falling back into the bowl carry the mouth's bacteria with it.

Beer pong. This tailgating pastime where you try to bounce or throw a ping pong ball into a cup of beer that is set across a table (if the ball goes in, you drink the beer) could make you ill. Dawson had his students pick up ping pong balls from indoor and outdoor tailgates after a home game at Clemson. Testing showed the highest levels of bacteria were found on the outdoor balls where the ball may have hit the ground after being hit on the table or handled by the beer pong players. Dawson's group found that nearly all of the bacteria on the ball transferred to the beer in the

cup.

Sharing popcorn at the movies. OK, this one is actually not so bad. After Dawson and his group spread non-infectious *E. coli* bacteria on the hands of their subjects and had them share a bowl of popcorn, they found that the transfer rate was minimal - less than 1 percent increase.

Blowing out birthday candles on a cake. "The amount of bacteria varies a lot from person to person based on how sloppy someone is when blowing their candles out, but it does occur," Dawson said. According to Dawson's research, blowing out candles over icing resulted in an increase of 1,400 percent, or 15 times more, bacteria recovered from icing compared to icing that did not have candles blown out. So maybe have the cake, just scrape off the icing.

Water with lemon (or any other fruit). You sit down at a restaurant and the waitperson brings you a glass of water. You ask for a slice of lemon to go with it. Dawson tested the rate of bacterial transfer between hands and ice scoops with slices of wet and dry lemons. Test participants coated their hands and ice scoops with non-infectious *E. coli* and then scooped ice and handled the lemon slices. One hundred percent of the bacteria were transferred to the wet lemon slices while only 30 percent was transferred to the dry slices. On average, 19 percent of the bacteria on the hands were transferred to the ice, while 66 percent of the bacteria on the scoop were transferred.

Menu, please. Usually, the first thing a diner is handed after being seated is the restaurant's menu. Before you freak out, remember that small amounts of bacteria are not harmful and occur naturally. But Dawson and his group found that bacteria are transferred just by handling menus. Higher traffic in restaurants during peak times produced higher numbers of bacteria. Overall, Dawson says that day-to-day, if you keep a clean kitchen and observe basic levels of cleanliness and hygiene, there

shouldn't be a problem with a little bacteria.

"These studies are not really big [food](#)-safety issues, but they're interesting and fun. I hope they do make people aware of good hygiene," he said. "But I don't want anyone to be a germophobe about it."

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