

## Manual dishwashing study digs up dirt on dish cleanliness: caked on food can provide safe haven for bacteria

From Ohio State University

Researchers Jaesung Lee and Melvin Pascall at Ohio State University recently found that **contaminants like *E. coli* can survive for long periods of time if they make their way into food dried onto dishes.** If those dishes aren't thoroughly washed, they can sometimes cause food-borne disease outbreaks. Lee and Pascall's work also suggests that certain foods—especially cheese and milk—can be safe havens for bacteria when dried onto dishware. **Lipstick, however gross, proved to be dangerous to bacteria.**

When restaurants manually wash dishes, they follow a 3-step process: Dishes are washed and scrubbed in soapy water, rinsed with clean water, and finally soaked in water containing germ-killing sanitizers. But employees often use water that is cooler than 110°F (43°C)—the minimum washing temperature recommended by the FDA—because it is uncomfortably hot. They found that dishes washed in **soapy room-temperature water, rinsed, and then weakly sanitized with ammonium-based chemicals** also achieved FDA-acceptable results.



### Dishwashing highlights

- Washing dishes in hot dish water, followed by soaking in extra sanitizers, eliminated almost all of the bacteria on them, even when coated with dried-on cheese.
- The prongs of forks actually shield food from the action of scrubbing.
- Taking extra time to wash forks is a good idea, especially those covered with sticky foods like cheese.
- Leaving food on eating utensils and dishes could easily cause bacteria to grow on them, especially if it's moist.

