

[MUSIC PLAYING]

Natural raw vegetables are now more commonly eaten in the United States, because we promote their health benefits. But without properly washing before eating it, the instance of foodborne illness is rising. One in six Americans-- that's 50 million people-- encounter some foodborne illness every year. And 10 million of those happen at home.

A smartphone can be used to detect bacteria in food. First, we rinse the food, and add rinse water to a container with a microchip that will capture the harmful bacteria. Then we use a smartphone with a microscope adapter to take a photo of chip. If there is harmful bacteria, it will be shown as visible dots, to indicate that you may have, for example, salmonella or Listeria.

Before this invention, it could take two full days to know if harmful bacteria was present. With this cell phone based technology, the results are instant. You can discard food right away, and prevent illness. So after a natural disaster, this would be a big help to prevent contaminated food or water from being eaten. It would be great for first responders and home owners.

This is research that matters.

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