

# Real-world proof of hand washing's effectiveness

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Credit: AI-generated image ([disclaimer](#))

Scientists are reporting dramatic new real-world evidence supporting the idea that hand washing can prevent the spread of water-borne disease. It appears in a new study showing a connection between fecal bacteria contamination on hands, fecal contamination of stored drinking water, and health in households in a developing country in Africa. The study is

in ACS' *Environmental Science & Technology*.

Alexandria Boehm, Jenna Davis, and their students note that almost half of the world's population — over 3 billion people — have no access to municipal drinking water supply systems. They obtain drinking water wells, springs, and other sources, and store it in jugs and other containers in their homes. Past research showed that this stored water can have higher levels of bacterial contamination than its source. But nobody knew why.

The scientists found a strong link between [fecal contamination](#) on the hands of household residents and bacterial contamination in stored water in Dar es Salaam, Tanzania. Stored water contained nearly 100 times more [fecal bacteria](#) than the source where it was collected. "The results suggest that reducing fecal contamination on hands should be investigated as a strategy for improving stored drinking water quality and health among households using non-networked water supplies," the report notes.

**More information:** "Hands, Water, and Health: Fecal Contamination in Tanzanian Communities with Improved, Non-Networked Water Supplies", *Environmental Science & Technology*

Provided by American Chemical Society

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