

# New evidence on how cranberry juice fights bacteria that cause urinary tract infections

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A glass of cranberry juice cocktail can fight pesky urinary tract infections, researchers say. Credit: Eli\_asenova

Scientists today reported new scientific evidence on the effectiveness of that old folk remedy -- cranberry juice -- for urinary tract infections, at the 240th National Meeting of the American Chemical Society (ACS), being held this week.

"A number of controlled clinical trials -- these are carefully designed and conducted scientific studies done in humans -- have concluded that cranberry juice really is effective for preventing [urinary tract infections](#)," said Terri Anne Camesano, Ph.D., who led the study. "That has important implications, considering the size of the problem and the health care costs involved."

Estimates suggest that urinary tract infections (UTIs) account for about 8 million medical visits each year, at a total cost of more than \$1.6 billion. UTIs involve bacterial infections of the urinary tract

and can occur anywhere between the urethra, the opening where urine is excreted from the body, and the kidney. Women are frequent victims, with at least 1 in 3 experiencing a UTI. Studies suggest that only half of women with UTIs seek medical care for the mildest symptoms, which include burning and urgency.

Camesano, who is with the Worcester Polytechnic Institute, said the study set out to shed light on how cranberry juice fights *E. coli*, the most common cause of UTIs. The study involved growing strains of *E. coli* in urine collected from healthy volunteers before and after consumption of cranberry juice cocktail. That mixture of cranberry juice, water, and sweeteners is the most popular cranberry beverage. The scientists then tested the *E. coli* for their ability to stick together and form biofilms. Biofilms are thin, slimy layers that provide an environment for bacteria to thrive.

The scientists concluded that cranberry juice cocktail prevents *E. coli* from sticking to other bacteria and the surface of a plastic [petri dish](#). *E. coli* adhere to those cells and work together to form a biofilm. The biofilm enables the [bacteria](#) to grow and multiply so that an infection can take root, continue, or become more severe. *E. coli* that doesn't stick has a better chance of being flushed out of the urinary track. The results suggest that the beneficial substances in cranberry juice could reach the urinary tract and prevent bacterial adhesion within 8 hours after consumption of [cranberry juice](#).

Camesano expressed reservations about self-treating UTIs and said that individuals who suspect an infection should seek medical advice. UTIs can progress rapidly and, if left untreated with antibiotics, result in severe illness, especially in children, individuals with chronic health problems, and the elderly.

The study was among nearly 8,000 scientific reports scheduled for presentation at the meeting,

one of the largest scientific gatherings of 2010.

Provided by American Chemical Society

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