

# Oral vaccine for UTI is potential alternative to antibiotics, finds 9-year study

April 6 2024

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Recurrent Urinary Tract Infections (UTIs) can be prevented for up to nine years in more than half of people given an oral spray-based vaccine and is a potential alternative to antibiotic treatments, finds research.

Initial results from the first long-term follow-up study of the safety and effectiveness of the MV140 [vaccine](#) for recurrent UTIs are presented this weekend at the [European Association of Urology \(EAU\) Congress](#) in Paris.

They show that in both men and women with recurrent UTIs, 54% of study participants remained UTI-free for nine years after the vaccine, with no notable side effects reported. Full results of the study are expected to be published by the end of 2024.

UTIs are the most common bacterial infection. They are experienced by half of all women and one in five men and can be painful and uncomfortable. Recurrent infections, needing short-term antibiotic treatment, develop in between 20 to 30% of cases. With antibiotic resistant UTIs now on the rise and drugs becoming less effective, new ways of preventing and treating these infections are needed.

Carried out by clinicians at the UK's Royal Berkshire Hospital, this long-term follow-up looked at the safety and efficacy of the MV140 vaccine in 89 patients originally treated privately at The Urology Partnership Reading.

MV140 is a new vaccine for recurrent UTIs and is administered with two sprays of a pineapple-flavored suspension under the tongue every day for three months. While researchers have previously studied MV140's short-term safety and effectiveness, this is the first long-term follow-up study to report globally.

Dr. Bob Yang, Consultant Urologist at the Royal Berkshire NHS Foundation Trust, who co-led the research, said "Before having the vaccine, all our participants suffered with recurrent UTIs, and for many women, these can be difficult to treat. Nine years after first receiving this new UTI vaccine, around half of participants remained infection

free.

"Overall, this vaccine is safe in the long term and our participants reported having fewer UTIs that were less severe. Many of those who did get a UTI told us that simply drinking plenty of water was enough to treat it.

"This is a very easy vaccine to administer and could be given by GPs as a 3-month course. Many of our participants told us that having the vaccine restored their quality of life. While we're yet to look at the effect of this vaccine in different patient groups, this follow-up data suggests it could be a game changer for UTI prevention if it's offered widely, reducing the need for [antibiotic treatments](#)."

In their original trial, patients were initially followed-up for 12 months and data from the women in the cohort was published in *BJU International* in 2017. For their nine-year follow-up study, the researchers analyzed data from the electronic health records of their original cohort. They interviewed participants about their experience of UTIs since receiving the vaccine and asked them about side effects.

Forty-eight participants remained entirely infection free during the nine-year follow-up. The average infection-free period across the cohort was 54.7 months (four and a half years)—56.7 months for women and 44.3 months, one year less, for men. 40% of participants reported having repeat doses of the vaccine after one or two years.

Gernot Bonkat, Professor of Urology at the Alta Uro Medical Centre for Urology in Switzerland, and the EAU Chairman of Guidelines on Urological Infections, said, "These findings are promising. Recurrent UTIs are a substantial economic burden and the overuse of antibiotic treatments can lead to antibiotic-resistant infections.

"This follow-up study reveals encouraging data about the long-term safety and effectiveness of the MV140 vaccine. Further research into more complex UTIs is needed, as well as research looking at different groups of patients, so we can better optimize how to use this vaccine.

"While we need to be pragmatic, this vaccine is a potential breakthrough in preventing UTIs and could offer a safe and effective alternative to conventional treatments."

Developed by the Spain-based pharmaceutical company Immunotek, MV140 contains four bacterial species in a suspension with water. It is available off-license in 26 countries.

Participants in the trial were all aged over 18 years and were UTI-free when they were initially offered the vaccine. None of the participants had other urinary abnormalities such as catheters, tumors or stones. The follow-up study included 72 women and 17 men and outcomes were self-reported.

**More information:** Assessing the long-term efficacy and safety of Uromune bacterial vaccine in the initial cohort: A 9-year study in the UK for treating recurrent urinary tract infections in men and women by Kanabar S., Foley S., Yang B. is presented at EAU24

Provided by European Association of Urology

Citation: Oral vaccine for UTI is potential alternative to antibiotics, finds 9-year study (2024, April 6) retrieved 2 May 2024 from <https://medicalxpress.com/news/2024-04-oral-vaccine-uti-potential-alternative.html>

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