

UTI *factsheet*

Chronic UTI (cUTI) Frequently Asked Questions

Q: How common are UTI and who's more likely to get one?

A: Each year over 150 million people worldwide will experience a UTI with females four times more likely than males. At least half of all women will experience a UTI in their lifetime, and a third of these occur before the age of 24. Children are also prone to UTIs. One in 10 girls and one in 30 boys will develop a UTI before the age of 16.

Q: What causes a UTI?

A: No-one really knows. Many theories are postulated. Women frequently report a UTI after sexual intercourse and thus it is thought that the short female urethra and its proximity to the anus means bacteria may migrate from the bowel during sexual activity. Falling hormonal levels in postmenopausal women are thought to be another trigger and HRT has been known to occasionally help. Another possibility is a physical abnormality which may be found during a urological investigation, but this is rare.

Q: I've had a UTI before and I was fine after taking antibiotics. Isn't this the same for everyone?

A: Unfortunately this is not the case. It has been shown that up to 30 percent of people treated for an uncomplicated, acute UTI will fail to respond to the antibiotic treatment prescribed. There are currently no guidelines for doctors on how to treat patients who fail to respond. These people usually go on to develop a chronic form of UTI and experience repeated bouts of acute UTI, or either on-going or periodic UTI/pelvic pain symptoms (often described as 'flares').

Q: What's wrong with the current tests that doctors and labs use?

A: Diagnostic lab tests for UTIs have been widely discredited in peer-reviewed publications for at least 30 years. Both dipstick and MSU culture are known to miss at least 50 percent of genuine infections. Published guidelines omit any mention of these failures, and clinicians therefore continue as a rule to diagnose UTI **only** when a test result comes back positive, regardless of symptoms reported by the patient.

Q: If researchers have known for 30 years that current tests are unreliable and treatment guidelines are inadequate, why don't doctors and microbiologists change this?

A: Urine conditions are not considered 'sexy' and receive little attention in the medical world. One of the world-leading experts in treating and researching Lower Urinary Tract Symptoms (LUTS), Professor James Malone-Lee, describes cUTI as an '*orphan subject*'. And, unlike some high profile diseases, although they cause a great deal of pain and misery, they rarely kill. Given that the status quo seems effective for the majority, there seems little will for change in spite of compelling research. It is also likely economics are a factor: introducing new diagnostics throughout the UK in a cash-strapped NHS would probably meet resistance, even though medically justifiable.

Q: How is a chronic urinary tract infection (cUTI) different to a normal UTI?

A: In a 'normal' or 'acute' UTI, the causative (pathogenic) bacteria are known as free-floating (planktonic) bacteria that rapidly multiply causing acute symptoms. An acute UTI will successfully respond to standard antibiotic therapy 70 percent of the time. In contrast, researchers have found a cUTI behaves quite differently.

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It occurs when pathogenic bacteria manage to evade antibiotic or immune attack and then embed in the bladder lining. They then may form sophisticated self-defence mechanisms known as biofilms on the surface of, and inside, the bladder cells, which protect them from antibiotic penetration and immune attack.

Q: Why aren't treatment guidelines available for cUTI?

A: NICE admit that its overall guidelines for UTI are inadequate. (Quality Statements highlight the need for 'evidence-based guidance' in areas for which 'no source guidance is currently available'.) It has no evidence-based guidelines on what should be done about those who fail to respond to its established UTI treatments. NICE seems to have ignored peer-reviewed literature and continues to insist that these people be managed according to published guidelines. The British Infection Association, for example, continues to insist on a **positive test result** before diagnosing a UTI. NICE appears to be admitting failure on one hand, and continuing to reinforce the failure's causes on the other. As far as cUTI is concerned, there are simply no developed guidelines at all.

Q: How is cUTI being treated?

A: Once correctly diagnosed, the only available effective treatment for cUTI is the use of long-term, standard-dose antibiotics. The length of treatment will vary from patient to patient, although six-months is common for many. This treatment protocol requires a constant level of antibiotics remains in the bladder to kill-off infected epithelial cells as they shed naturally into the urine—preventing bacterial invasion of new epithelial cells that come to the surface.

An innovative treatment for cUTI is currently in development in the UK. When complete, it will have the potential to make redundant the present reliance on long-term antibiotics to treat cUTI, and, by extension, could address a host of other chronic intracellular bacterial infections. More information about the new treatment can be found at www.atocap.com

Q: When using long-term antibiotics does it increase the risk of antibiotic resistance?

A: According to Professor Malone-Lee, who has, over many years, treated thousands of patients with cUTI, antibiotic resistance is not a problem at his clinic. He states:

“Contrary to popular expectation, we experience few problems with antibiotic resistance. There are Darwinian reasons for this because bacterial resistance results from evolution. The bacteria divide very slowly so that replication and variation are minimal. The antibiotic doses provide a lethal selection pressure that favours extinction, as opposed to evolution. For resistance to evolve the correct balance of variation, replication and selection must exist. Our approach is designed to subvert those elements.”

Q: What is the cost for treating patients with cUTI with long-term antibiotics?

A: Health economists estimate the approach of long-term antibiotics to treat cUTI costs c £500 per patient per year. This contrasts with c £5,000 per patient for a year's treatment by conventional methods. These may well include procedures which are invasive, generally ineffective and can even aggravate the condition.