Summary of Management of Recurrent lower UTIs in Adults

≥3 symptomatic lower UTIs in 12 months OR ≥2 symptomatic lower UTIs in 6 months

Recurrent infections may be due to re-infection (a prolonged interval between infections) or bacterial persistence (frequent relapsing infections within short interval by the same organism). They should be diagnosed in line with the guidance and a urine sample taken. It does not include episodes of bacteriuria without UTI symptoms (asymptomatic bacteriuria) or catheterised patients.

Consider red flags for referral[1]

- **All men**, trans women and non-binary people with a male genitourinary system.
- All recurrent UTIs in pregnancy should be discussed with the Obstetric team.
- Recurrent lower UTI of unknown cause / suspected cancer
- Recurrent upper UTI

First line: Advise on conservative measures:

Drink enough fluids to urinate regularly through the day but avoid too much alcohol, caffeine or fizzy drinks	Avoid use of scented washes / wipes
For sexually active women: • Advise post-coital voiding • Avoid use of contraceptive diaphragm and spermicide	OTC products – limited evidence but some women find useful (do not prescribe): D-mannose Cranberry tablets
Perineal hygiene, ie. wiping front to back	

Issue / discuss patient information leaflets

RCGP TARGET UTI Leaflet - Women Under 65 Years RCGP TARGET: UTI Leaflet - all adults

If fails to improve symptoms

Consider **vaginal oestrogen** in peri-menopausal / post-menopausal women. eg. Estradiol 10mcg pessaries / tablets, (off-label use for recurrent UTI.)

Trial for 3-6 months. Treatment can be safely continued in the long term if beneficial.

Consider any **identifiable trigger**, eg. sexual intercourse. Trial of one-off doses of antibiotics when exposed to trigger. See antibiotic guidelines for choice.

Review at 6 months

If fails to improve symptoms

Continuous Urinary antiseptic (Methenamine) prophylaxis

- Methenamine works by conversion to formaldehyde in an acidic urine environment, which is directly toxic to bacteria. Its use avoids the risks of long term antibiotic prophylaxis, such as antibiotic resistance and adverse effects such as *C. difficile*.
- Use Methenamine as an initial alternative if recurrent UTIs are not improved by measures above. See antibiotic guidelines
- Explain: OTC sachets that make urine more alkaline (eg. containing potassium or sodium citrate) should not be used whilst taking Methenamine.
- Seek medical help for acute UTI symptoms. **Methenamine should NOT be used for UTI treatment**
- Patients should be counselled that prophylaxis is not usually a lifelong treatment. Treatment is given in this way to allow a period of bladder healing which makes UTIs less likely.

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If fails to improve symptoms

Continuous antibiotic prophylaxis

See antibiotic guidelines for choice but also consider; previous urine C&S, previous antibiotic use, which may have led to resistant bacteria, severity and frequency of symptoms, risks of long-term antibiotic use, risk of complications.
Advise on; possible adverse effects, returning for review, seeking help for an acute UTI.

***Reviewing patients on long term prophylaxis**

Patients should be reviewed after an initial 6 months of prophylaxis (antibiotic or methenamine) and stopping considered.

If prophylactic antibiotics are initiated by urology, a review by urology will be required prior to stopping unless specifically discharged to the GP to carry out the review.

On stopping prophylaxis

Around 50% of patients will not return to suffering recurrent UTIs after stopping prophylaxis.[2]

This means a significant number of patients are able to stop continuous prophylaxis without a return of symptoms and therefore avoid the risks of resistance emerging and side-effects.

Providing '**standby**' antibiotics, as below, when stopping continuous prophylaxis may give sufficient reassurance for patients to trial off prophylaxis.

The patient should be given advice regarding the continuation of simple measures to prevent UTI. Consider vaginal oestrogens where appropriate to reduce the risk of relapse.

Standby antibiotics are a course of antibiotic which can be initiated when symptoms start. A urine sample should be obtained when the patient becomes symptomatic (provide specimen pot), but the patient can initiate antibiotics. Ensure the Target Urinary Tract Infection information leaflet is given as this has details of possible urinary symptoms and safety net to seek medical attention if develop fever, loin pain or symptoms not improving by 48 hours. The choice of treatment should be based on previously known sensitivities and the BLMK Lower UTI guideline.

If there is a recurrence of UTI after stopping antibiotic prophylaxis:

- Ensure the patient is complying as far as possible with the simple measures.
- Restart and consider referral

Ongoing Antibiotic review should occur at least every 6 months and include:

- Assess the success of prophylaxis.
- Reminder of behavioural and personal hygiene measures and self-care treatments
- Discuss continuing, stopping or changing prophylaxis, (taking account of risk of resistance and person's preferences for antibiotic use.)

Monitoring of long term Nitrofurantoin[3]

Long term Nitrofurantoin has been associated with pulmonary and hepatotoxicity. The BNF recommends monitoring of lung and liver function throughout treatment.[4]

Managing 'breakthrough' UTIs on a continuous prophylactic agent

Methenamine prophylaxis

- Treat the breakthrough infection according to culture and sensitivity results if available.
- Methenamine prophylaxis should be continued alongside and after the antibiotic course for the breakthrough infection if there has been a good response.
- ***If multiple breakthrough UTIs occur (≥2 UTIs in 6 months,) prophylaxis has therefore proved ineffective and should be stopped or changed to an alternative prophylactic agent (antibiotic.)***
- Consider referral to urology, if not already referred.

Antibiotic prophylaxis

- The first breakthrough infection should be treated according to culture and sensitivity results if available, with the original prophylaxis held and then restarted once the infection has resolved if the culture confirms susceptibility to the prophylactic agent.
- ***If the culture shows resistance to the prophylactic agent, or multiple breakthrough UTIs occur (≥2 UTIs in 6 months), prophylaxis has therefore proved ineffective and should be stopped or changed to an alternative prophylactic agent (antibiotic or methenamine).***
- Consider referral to Urology at this point if not already referred

References

1. NICE (NG112) 2024. Urinary tract infection (recurrent): antimicrobial prescribing. Available via: https://www.nice.org.uk/guidance/ng112/resources/urinary-tract-infection-recurrent-antimicrobial-prescribing-pdf-66141595059397
2. Albert X, Huertas I, Pereiró II, Sanfélix J, Gosalbes V, Perrota C. Antibiotics for preventing recurrent urinary tract infection in non-pregnant women. Cochrane Database Syst Rev. 2004;2004(3):CD001209. doi: 10.1002/14651858.CD001209.pub2. PMID: 15266443; PMCID: PMC7032641.
3. MHRA April 2023. Nitrofurantoin: a reminder of the risks of pulmonary and hepatic adverse drug reactions. Available via: https://www.gov.uk/drug-safety-update/nitrofurantoin-reminder-of-the-risks-of-pulmonary-and-hepatic-adverse-drug-reactions
4. Bristol, North Somerset and South Gloucestershire ICB, Oct 23. Guidelines for the treatment of recurrent urinary tract infection in adults. https://remedy.bnssg.icb.nhs.uk/media/6630/guidelines-for-recurrent-utis-in-adults.pdf