should be reviewed within 12 months. Oral oestrogens (hormone replacement therapy) should not be given to postmenopausal women specifically to reduce the risk of recurrent UTIs.

In non-pregnant women, consider a trial of antibacterial prophylaxis if behavioural and personal hygiene measures, and vaginal oestrogen (in postmenopausal women) are not effective or appropriate. Single-dose antibacterial prophylaxis [unlicensed indication] should be considered for use when exposed to an identifiable trigger. Daily antibacterial prophylaxis should be considered in non-pregnant women who have had no improvement after single-dose antibacterial prophylaxis, or who have no identifiable triggers.

With specialist advice, daily antibacterial prophylaxis should be considered for men and pregnant women if behavioural and personal hygiene measures alone are not effective or appropriate.

Advise patients about the risk of resistance with long-term antibacterial use, seeking medical help if symptoms of an acute UTI develop, and to return for review within 6 months.

Review the success and ongoing need of prophylaxis at least every 6 months. If antibacterial prophylaxis is stopped ensure the patient has rapid access to treatment if they develop an acute UTI. A

Women and men

Choice of antibacterial therapy

- ***Oral*** *first line* :
  - EvGr Trimethoprim, or nitrofurantoin p. 625. A
- ***Oral*** *second line* :
  - EvGr Amoxicillin p. 579 [unlicensed indication], or cefalexin. A

Catheter-associated urinary-tract infection

EvGr For people with a catheter-associated urinary-tract infection, consider removing or changing the catheter as soon as possible if it has been in place for longer than 7 days, without delaying antibacterial treatment. An immediate antibacterial prescription should be given and a urine sample obtained before treatment is taken and sent for culture and susceptibility testing.

Consider referring or seeking specialist advice for patients with a catheter-associated UTI who are significantly dehydrated or unable to take oral fluids and medicines, are pregnant, have a higher risk of developing complications, have recurrent catheter-associated UTIs, or have bacteria resistant to oral antibacterials. A

Non-pregnant women and men

Choice of antibacterial therapy

- ***Oral*** *first line* (if **no** upper UTI symptoms):
  - EvGr Amoxicillin (only if culture susceptible), nitrofurantoin, or trimethoprim (if low risk of resistance). A
- ***Oral*** *second line* (if **no** upper UTI symptoms and first-line not suitable):
  - EvGr Pivmecillinam hydrochloride p. 585. A
- ***Oral*** *first line* (upper UTI symptoms):
  - EvGr Cefalexin, ciprofloxacin, co-amoxiclav (if culture susceptible), or trimethoprim (if culture susceptible). A
- ***Intravenous*** *first line* (if severely unwell or unable to take oral treatment). EvGr Antibacterials may be combined if concerned about susceptibility or sepsis.
  - Amikacin, ceftriaxone, cefuroxime, ciprofloxacin, gentamicin, or co-amoxiclav (only in combination, unless culture results confirm susceptibility). A
- ***Intravenous*** *second line* :
  - EvGr Consult local microbiologist. A

Pregnant women

Choice of antibacterial therapy

- ***Oral*** *first line* :
  - EvGr Cefalexin. A
- ***Intravenous*** *first line* (if severely unwell or unable to take oral treatment):
  - EvGr Cefuroxime. A
- *Second line or combining if concerned about susceptibility or sepsis*:
  - EvGr Consult local microbiologist. A

Useful Resources

Urinary tract infection (lower): antimicrobial prescribing. National Institute for Health and Care Excellence. Clinical Guideline 109. October 2018.
www.nice.org.uk/guidance/ng109

Prostatitis (acute): antimicrobial prescribing. National Institute for Health and Care Excellence. Clinical Guideline 110. October 2018.
www.nice.org.uk/guidance/ng110

Pyelonephritis (acute): antimicrobial prescribing. National Institute for Health and Care Excellence. Clinical Guideline 111. October 2018.
www.nice.org.uk/guidance/ng111

Urinary tract infection (recurrent): antimicrobial prescribing. National Institute for Health and Care Excellence. Clinical Guideline 112. October 2018.
www.nice.org.uk/guidance/ng112

Urinary tract infection (catheter-associated): antimicrobial prescribing. National Institute for Health and Care Excellence. Clinical Guideline 113. November 2018.
www.nice.org.uk/guidance/ng113

Patient decision aids: Urinary tract infection (lower); Urinary tract infection (recurrent) National Institute for Health and Care Excellence. November 2018.
www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/shared-decision-making

Methenamine hippurate

06-Aug-2018

(Hexamine hippurate)

INDICATIONS AND DOSE

Prophylaxis and long-term treatment of chronic or recurrent uncomplicated lower urinary-tract infections

- BY MOUTH
- Adult: 1 g every 12 hours

Prophylaxis and long-term treatment of chronic or recurrent uncomplicated lower urinary-tract infections in patients with catheters

- BY MOUTH
- Adult: 1 g every 8–12 hours

- **CONTRA-INDICATIONS** Gout · metabolic acidosis · severe dehydration
- **INTERACTIONS** → Appendix 1: methenamine
- **SIDE-EFFECTS**
  - **Uncommon** Epigastric discomfort · skin reactions
- **PREGNANCY** There is inadequate evidence of safety, but it has been in wide use for many years without apparent ill consequence, however, manufacturer advises it is preferable to avoid.
- **BREAST FEEDING** Amount too small to be harmful.
- **HEPATIC IMPAIRMENT** Manufacturer advises avoid.
- **RENAL IMPAIRMENT** Avoid if eGFR less than 10 mL/minute/1.73 m^2—risk of hippurate crystalluria.
- **EFFECT ON LABORATORY TESTS** False results for urinary steroids, catecholamines and 5-hydroxyindole acetic acid can occur.