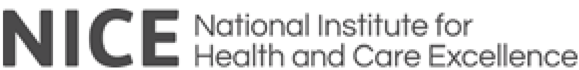
**Urinary Tract Infections** Mar 2020 v1



Local adaption for Gloucestershire March 2020 vs1
https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/antimicrobial-prescribing-guidelines

# Summary of antimicrobial prescribing guidance – managing common infections

- For all PHE guidance, follow PHE's principles of treatment.
- See BNF for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breastfeeding.

Key: Click to access doses for children     Click to access NICE's printable visual summary

| Infection | Key points | Medicine | Doses | | Length | Visual summary |
|---|---|---|---|---|---|---|
| | | | Adult | Child | | |
| **Urinary tract infections** | | | | | | |
| **Lower urinary tract infection**<br><br>**NICE**<br><br>Public Health England<br><br>Last updated: Oct 2018 | Advise paracetamol or ibuprofen for pain.<br>**Non-pregnant women**: back up antibiotic (to use if no improvement in 48 hours or symptoms worsen at any time) or immediate antibiotic.<br>**Pregnant women, men, children or young people**: immediate antibiotic.<br>When considering antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data.<br>If people have symptoms of pyelonephritis (such as fever) or a complicated UTI, see acute pyelonephritis (upper urinary tract infection) for antibiotic choices.<br>*For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management and the Public Health England urinary tract infection: diagnostic tools for primary care.* | **Non-pregnant women first choice**: nitrofurantoin (if eGFR ≥45 ml/minute) **OR** | 100mg m/r BD (or if unavailable 50mg QDS) | - | 3 days | |
| | | trimethoprim (if low risk of resistance) | 200mg BD | - | | |
| | | **Non-pregnant women second choice**: nitrofurantoin (if eGFR ≥45 ml/minute) **OR** | 100mg m/r BD (or if unavailable 50mg QDS) | - | 3 days | |
| | | pivmecillinam (a penicillin) **OR** | 400mg initial dose, then 200mg TDS | - | 3 days | |
| | | fosfomycin | 3g single dose sachet | - | single dose | |
| | | **Pregnant women first choice**: nitrofurantoin (avoid at term) – if eGFR ≥45 ml/minute | 100mg m/r BD (or if unavailable 50mg QDS) | - | 7 days | |
| | | **Pregnant women second choice**: amoxicillin (only if culture results available and susceptible) **OR** | 500mg TDS | - | 7 days | |

| Infection | Key points | Medicine | Doses | | Length | Visual summary |
|---|---|---|---|---|---|---|
| | | | Adult | Child | | |
| **Lower urinary tract infection** (continued) | | cefalexin | 500mg BD | - | | |
| | | **Treatment of asymptomatic bacteriuria in pregnant women**: choose from nitrofurantoin (avoid at term), amoxicillin or cefalexin based on recent culture and susceptibility results | | | | |
| | | **Men first choice**: trimethoprim **OR** | 200mg BD | - | 7 days | |
| | | nitrofurantoin (if eGFR ≥45 ml/minute) | 100mg m/r BD (or if unavailable 50mg QDS) | - | | |
| | | **Men second choice**: consider alternative diagnoses basing antibiotic choice on recent culture and susceptibility results | | | | |
| | | **Children and young people (3 months and over) first choice**: trimethoprim (if low risk of resistance) **OR** | - | | - | |
| | | nitrofurantoin (if eGFR ≥45 ml/minute) | - | | | |
| | | **Children and young people (3 months and over) second choice**: nitrofurantoin (if eGFR ≥45 ml/minute and not used as first choice) **OR** | - | | | |
| | | amoxicillin (only if culture results available and susceptible) **OR** | - | | | |
| | | cefalexin | - | | | |
| | | | | | | |

| Infection | Key points | Medicine | Doses | | Length | Visual summary |
|---|---|---|---|---|---|---|
| | | | Adult | Child | | |
| **Acute prostatitis**<br><br>NICE<br><br>Public Health England<br><br>Last updated:<br>Oct 2018 | Advise paracetamol (+/- low-dose weak opioid) for pain, or ibuprofen if preferred and suitable.<br>Offer antibiotic.<br>Review antibiotic treatment after 14 days and either stop antibiotics or continue for a further 14 days if needed (based on assessment of history, symptoms, clinical examination, urine and blood tests).<br>*For detailed information click on the visual summary.* | **First choice** (guided by susceptibilities when available):<br>ciprofloxacin (consider safety issues) **OR** | 500mg BD | - | 14 days then review | |
| | | ofloxacin (consider safety issues) **OR** | 200mg BD | - | | |
| | | trimethoprim (if fluoroquinolone not appropriate; seek specialist advice) | 200mg BD | - | | |
| | | **Second choice** (after discussion with specialist):<br>levofloxacin (consider safety issues) **OR** | 500mg OD | - | 14 days, then review | |
| | | co-trimoxazole | 960mg BD | - | | |
| | | **IV antibiotics** *(click on visual summary)* | | | | |

<table>
<tr><th rowspan="2">Infection</th><th rowspan="2">Key points</th><th rowspan="2">Medicine</th><th colspan="2">Doses</th><th rowspan="2">Length</th><th rowspan="2">Visual summary</th></tr>
<tr><th>Adult</th><th>Child</th></tr>
<tr><td rowspan="10">Acute pyelonephritis (upper urinary tract)<br><br>NICE<br><br>Public Health England<br><br>Last updated:<br>Oct 2018</td><td rowspan="10">Advise paracetamol (+/- low-dose weak opioid) for pain for people over 12.<br>Offer an antibiotic.<br>When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data.<br>Avoid antibiotics that don’t achieve adequate levels in renal tissue, such as nitrofurantoin.<br>For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management and the Public Health England urinary tract infection: diagnostic tools for primary care.</td><td>Non-pregnant women and men first choice: cefalexin OR</td><td>500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections)</td><td>-</td><td>7 to 10 days</td><td rowspan="10"></td></tr>
<tr><td>co-amoxiclav (only if culture results available and susceptible) OR</td><td>500/125mg TDS</td><td>-</td><td>7 to 10 days</td></tr>
<tr><td>trimethoprim (only if culture results available and susceptible) OR</td><td>200mg BD</td><td>-</td><td>14 days</td></tr>
<tr><td>ciprofloxacin (consider safety issues)</td><td>500mg BD</td><td>-</td><td>7 days</td></tr>
<tr><td colspan="4">Non-pregnant women and men IV antibiotics (click on visual summary)</td></tr>
<tr><td>Pregnant women first choice: cefalexin</td><td>500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections)</td><td>-</td><td>7 to 10 days</td></tr>
<tr><td colspan="4">Pregnant women second choice or IV antibiotics (click on visual summary)</td></tr>
<tr><td>Children and young people (3 months and over) first choice: cefalexin OR</td><td>-</td><td rowspan="2"></td><td rowspan="2">-</td></tr>
<tr><td>co-amoxiclav (only if culture results available and susceptible)</td><td>-</td></tr>
<tr><td colspan="4">Children and young people (3 months and over) IV antibiotics (click on visual summary)</td></tr>
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| Infection | Key points | Medicine | Doses | | Length | Visual summary |
|---|---|---|---|---|---|---|
| | | | Adult | Child | | |
| **Recurrent urinary tract infection**<br><br>NICE<br><br>Public Health England<br><br>Last updated Oct 2018 | First advise about behavioural and personal hygiene measures, and self-care (with D-mannose or cranberry products) to reduce the risk of UTI.<br>For postmenopausal women, if no improvement, consider vaginal oestrogen (review within 12 months).<br>For non-pregnant women, if no improvement, consider single-dose antibiotic prophylaxis for exposure to a trigger (review within 6 months).<br>For non-pregnant women (if no improvement or no identifiable trigger) or with specialist advice for pregnant women, men, children or young people, consider a trial of daily antibiotic prophylaxis (review within 6 months).<br>For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management and the Public Health England urinary tract infection: diagnostic tools for primary care. | **First choice antibiotic prophylaxis**: trimethoprim (avoid in pregnancy) **OR** | 200mg single dose when exposed to a trigger or<br>100mg at night | | - | |
| | | nitrofurantoin (avoid at term) - if eGFR ≥45 ml/minute | 100mg single dose when exposed to a trigger or<br>50 to 100mg at night | | - | |
| | | **Second choice antibiotic prophylaxis**: amoxicillin **OR** | 500mg single dose when exposed to a trigger or<br>250mg at night | | - | |
| | | cefalexin | 500mg single dose when exposed to a trigger or<br>125mg at night | | - | |

| Infection | Key points | Medicine | Doses | | Length | Visual summary |
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| **Catheter-associated urinary tract infection**<br><br>NICE<br><br>Public Health England<br><br>Last updated: Nov 2018 | Antibiotic treatment is not routinely needed for asymptomatic bacteriuria in people with a urinary catheter.<br>Consider removing or, if not possible, changing the catheter if it has been in place for more than 7 days. But do not delay antibiotic treatment.<br>Advise paracetamol for pain.<br>Advise drinking enough fluids to avoid dehydration.<br>Offer an antibiotic for a symptomatic infection.<br>When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data.<br>Do not routinely offer antibiotic prophylaxis to people with a short-term or long-term catheter.<br>*For detailed information click on the visual summary. See also the Public Health England urinary tract infection: diagnostic tools for primary care.* | **Non-pregnant women and men first choice if no upper UTI symptoms:** nitrofurantoin (if eGFR ≥45 ml/minute) **OR** | 100mg m/r BD (or if unavailable 50mg QDS) | - | 7 days | |
| | | trimethoprim (if low risk of resistance) **OR** | 200mg BD | - | | |
| | | amoxicillin (only if culture results available and susceptible) | 500mg TDS | - | | |
| | | **Non-pregnant women and men second choice if no upper UTI symptoms:** pivmecillinam (a penicillin) | 400mg initial dose, then 200mg TDS | - | 7 days | |
| | | **Non-pregnant women and men first choice if upper UTI symptoms:** cefalexin **OR** | 500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections) | - | 7 to 10 days | |
| | | co-amoxiclav (only if culture results available and susceptible) **OR** | 500/125mg TDS | - | | |
| | | trimethoprim (only if culture results available and susceptible) **OR** | 200mg BD | - | 14 days | |
| | | ciprofloxacin (consider safety issues) | 500mg BD | - | 7 days | |
| | | **Non-pregnant women and men IV antibiotics** *(click on visual summary)* | | | | |
| | | **Pregnant women first choice**: cefalexin | 500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections) | - | 7 to 10 days | |

| Infection | Key points | Medicine | Doses | | Length | Visual summary |
|---|---|---|---|---|---|---|
| | | | Adult | Child | | |
| **Catheter-associated urinary tract infection** (continued) | | **Pregnant women second choice or IV antibiotics** *(click on visual summary)* | | | | |
| | | **Children and young people (3 months and over) first choice:** trimethoprim (if low risk of resistance) **OR** | - | | - | |
| | | amoxicillin (only if culture results available and susceptible) **OR** | - | | | |
| | | cefalexin **OR** | - | | | |
| | | co-amoxiclav (only if culture results available and susceptible) | - | | | |
| | | **Children and young people (3 months and over) IV antibiotics** *(click on visual summary)* | | | | |