

Management of Infection - Quick Reference Guide (October 2021)

Further detail including doses is available under separate document 'Managing common infections - Guidance for Primary Care'

Upper Respiratory Tract Infections:

- **Acute Sore Throat:** [NICE NG84 2-page visual summary](#)
Avoid antibiotics where possible; advise paracetamol, self-care, and safety net; provide [RTI](#) leaflet.
[FeverPAIN 0-1 or Centor 0-2](#): self-care, use no antibiotic strategy.
[FeverPAIN 2-3](#): no or 'back-up/delayed' antibiotic
[FeverPAIN 4-5 or Centor 3-4](#): immediate antibiotic, or 'back-up/delayed' prescription.
Systemically very unwell or high risk of complications: immediate antibiotic.
 - Phenoxymethylpenicillin
 - Clarithromycin (if penicillin allergy) or
 - Erythromycin (preferred if pregnant & penicillin allergy)
- **Influenza:** treat 'at risk' patients in line with [PHE Influenza](#) guidance
- **Scarlet Fever:** [PHE](#)
 - Phenoxymethylpenicillin
 - Clarithromycin (if penicillin allergy) or
 - [Erythromycin \(preferred if pregnant & penicillin allergy\)](#)
- **Acute Otitis Media:** [NICE NG91 2-page visual summary](#)
First line: avoid antibiotics where possible; advise self-care and safety net; provide [RTI](#) leaflet.
Consider **Otigo** eardrops for pain relief – C/I if infectious or traumatic perforation of the tympanic membrane (including myringotomy).
Second line:
 - First option: amoxicillin; if penicillin allergy or intolerance: clarithromycin, or erythromycin (preferred if pregnant)
 - Second option: co-amoxiclav (if worsening symptoms on first antibiotic choice taken at least for 2-3 days)
 Consider Otovent® kit for OME
- **Acute Otitis Externa:** [CKS](#)
First line: analgesia for pain relief, and apply localised heat (e.g. a warm flannel); provide RTI leaflet

Second line:

- First option: topical acetic acid 2% (EarCalm®) (+ available OTC)
- Second options: topical Betneson-N® drops or Otomize® spray
- If cellulitis: flucloxacillin

- **Sinusitis (acute):** [NICE NG79 2-page visual summary](#)

First line: avoid antibiotics where possible; advise self-care and safety net; provide [RTI](#) leaflet

Second line:

- First option: phenoxymethylpenicillin; if penicillin allergy: doxycycline, clarithromycin, or erythromycin (preferred if pregnant)
- Second option - If high-risk of complications, or persistent or worsening symptoms: co-amoxiclav

Lower Respiratory Tract Infections:

- **Acute Cough:** [NICE NG120 2-page visual summary](#)

First line: avoid antibiotics where possible; advise self-care and safety net; provide [RTI](#) leaflet

Second line: 5-day delayed antibiotic, safety net and advise that symptoms can last 3 weeks; provide [RTI](#) leaflet; third line: immediate antibiotic:

- Amoxicillin
- If penicillin allergy: doxycycline

- **Acute Exacerbation of COPD:** [NICE NG114 2-page visual summary](#). Choose antibiotics accordingly when current susceptibility available.
 - When current First option: doxycycline or amoxicillin
 - If penicillin allergy: clarithromycin
 - Second option (no improvement in symptoms after 2-3 days): use alternative first choice
 - Third option/if risk of resistance: co-trimoxazole
- **Acute Exacerbation of Bronchiectasis (non-cystic fibrosis):** [NICE NG117 3-page visual summary](#). Choose antibiotics accordingly when current susceptibility available.
 - First option: amoxicillin (preferred if pregnant) or doxycycline

- If penicillin allergy: clarithromycin
- **Managing suspected or confirmed pneumonia during COVID-19 pandemic:** [NICE NG165](#) Use antibiotics only when appropriate as per full guidance
 - First option: doxycycline (not if pregnant / breastfeeding)
 - Alternative: amoxicillin
- **Community Acquired Pneumonia:** [NICE NG123 3-page summary](#)
 - [CRB65](#) Score 0 - First option: doxycycline; second option: amoxicillin, or clarithromycin (if penicillin allergy), or erythromycin (preferred if pregnant)
 - [CRB65](#) Score 1,2 & at home – First option: amoxicillin AND (if atypical pathogens suspected) clarithromycin or erythromycin (preferred if pregnant); Second option: doxycycline or clarithromycin
 - [CRB65](#) Score 3-4: IM benzylpenicillin & urgent hospital admission

Meningitis:

- **Suspected Meningococcal Disease:** [PHE Meningococcal disease](#)
 - IV or IM benzylpenicillin
 - IV or IM cefotaxime

Sepsis:

- **Suspected 'Red Flag Sepsis':** [NICE NG51](#); [UK Sepsis Trust](#)
Transfer all suspected 'red flag sepsis' patients to acute hospital immediately
If time to treatment in hospital is likely to be more than 1 hour it is recommended that the first dose of antibiotic is administered by a primary care clinician (if possible after obtaining blood cultures).
 - IV or IM cefotaxime (alternatively, ceftriaxone)

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Urinary Tract Infections:

- **Lower UTI in non-pregnant women and men (aged ≥ 16 yrs):** [NICE NG109 3-page visual summary](#), [PHE UTI diagnosis](#)
Avoid antibiotics where possible; advise self-care and safety net; provide [UTI](#) leaflet.
 - Uncomplicated UTI & <70 years-old: First option (if GFR≥45): nitrofurantoin, if low risk of resistance: trimethoprim; Second option: pivmecillinam
 - Risk of resistance, frail and/or associated co-morbidity: First option (if GFR≥45): nitrofurantoin; second option: pivmecillinam. Avoid trimethoprim
 - If increased risk of resistance (refer to resistance factors in main guidance): fosfomycin (Monuril®)
Perform culture in all treatment failures.
- **Recurrent UTI in non-pregnant women:** (2 in 6mths and/or ≥3 in 12mths): [NICE NG112](#), [PHE UTI diagnosis](#)
Avoid antibiotics where possible. Provide [UTI](#) leaflet
First line: advise simple measures, self-care and safety netting (may wish to try +OTC D-mannose or cranberry supplements).
Second line: stand-by or post-coital antibiotics; Third line if recent culture sensitive:
 - Nitrofurantoin or trimethoprimOr consider:
 - Methenamine hippurate
- **UTI in pregnancy:** [NICE NG109](#), [PHE UTI diagnosis](#)
 - First line (if GFR≥45): nitrofurantoin (avoid at term)
 - Second line: amoxicillin (if susceptible) or cefalexin
- **Lower UTI in children and young people:** [NICE NG109 3-page visual summary](#), [PHE UTI diagnosis](#)
 - First line: trimethoprim (if low risk of resistance) or nitrofurantoin (if GFR≥45)
 - Second line: pivmecillinam (if ≥40kg), amoxicillin (if susceptible), or cefalexin

- **Upper UTI in children and young people:** [NICE NG111 3-page visual summary](#), [PHE UTI diagnosis](#)
Refer to paediatricians to: obtain a urine sample for culture, assess for signs of systemic infection.
 - First line: cefalexin or co-amoxiclav (if susceptible)
 - Second line: consult with microbiology
- **Acute pyelonephritis in non-pregnant women and men (aged ≥ 16 yrs):** [NICE NG111 3-page visual summary](#), [PHE UTI diagnosis](#)
 - Cefalexin, or co-amoxiclav (if susceptible); or trimethoprim (if susceptible), or ciprofloxacin (consider safety issues)
 - If ESBL risk: contact microbiologist
- **Acute prostatitis:** [NICE NG110 2-page visual summary](#), [PHE UTI diagnosis](#)
First line:
 - First option (if susceptible): ciprofloxacin or ofloxacin
 - Second option (if susceptible): trimethoprimSecond line: (after discussion with specialist)
 - Levofloxacin or co-trimoxazole

Gastro-intestinal Tract Infections:

- **Oral candidiasis:** [CKS](#)
 - Miconazole oral gel
 - Nystatin oral gel (if miconazole not tolerated)
 - Fluconazole capsules if extensive/severe
- **Infectious diarrhoea:**
Avoid antibiotics unless systemically unwell or pregnant
 - Clarithromycin if campylobacter suspected,
 - Otherwise, contact microbiologist for advice via Musgrove Park Hospital switchboard: ☎ 01823 333444
- **Giardiasis:** [BNE](#), [BNFc](#)
 - First line: tinidazole
 - Second line: metronidazole
- **Acute diverticulitis:** [NICE NG147 2-page visual summary](#)
There is no robust evidence to support the use of antibiotics for treating diverticulitis in primary care

It may be appropriate to treat mild to moderate episodes if 2 or more SIRS criteria: Temp > 38.3°C or < 36.0°C, Pulse > 90/min, RR > 20/min, New confusion/drowsy, Glucose > 7.7mmol/L (non-diabetic patient), WBC > 12 or < 4x10⁹/L

- Doxycycline plus metronidazole

- **Eradication of *H. pylori*:** [NICE CG184](#), [NICE PPI doses](#), [PHE H.pylori](#), [CKS](#)
Do not use clarithromycin, metronidazole or quinolone if used in the past year for any infection
 - First and second line: PPI with amoxicillin + either clarithromycin or metronidazole
 - Penicillin allergy & previous MZ + clari: PPI WITH bismuth subsalicylate (Pepto-Bismol tab®) 'off-label' + metronidazole + tetracycline
 - Relapse & previous MZ + clari: PPI with amoxicillin + tetracycline or levofloxacin
- ***Clostridioides difficile*:** [NICE NG 199 DoH](#), [PHE](#)
Stop unnecessary antibiotics, PPIs and antiperistaltic agents.
NICE guidance 2021 – Changes in treatment choices. No longer a place for oral metronidazole. Antibiotic choice depends on whether treating a first episode, relapse or recurrence. [See full Somerset Guidance for further info.](#)
Vancomycin should be available in Community pharmacies providing the [Specialist medicines service](#)
- **Travellers' diarrhoea:** [CKS](#)
Only for patients at high risk of severe illness or visiting high risk areas
 - Stand-by: azithromycin
 - Prophylaxis/treatment: bismuth subsalicylate (Pepto-Bismol®) (+available OTC)
- **Threadworms:** [CKS](#)
Treat all household contacts at same time and advise hygiene measures for 2 weeks
 - ≥6 months: mebendazole ('off label' < 2 years)
 - <6 months or pregnant (at least in first trimester): six weeks hygiene measures

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Genital Tract Infections:

STI Screening: [BASHH](#) People with risk factors should be screened for chlamydia, gonorrhoea, HIV and syphilis. Refer individual and partners to GUM clinic or Sexual Health Clinic.

SWISH are also currently offering online home STI testing for patients who want to get tested and **do not** have any symptoms. Patients can access via <https://www.freetest.me/landing/swish/swishservice>

- **Chlamydia trachomatis:** [BASHH](#)

First line:

- First option: doxycycline (contraindicated in pregnancy)
- Second option/pregnant or breastfeeding: azithromycin ('off label' use in pregnancy)

Second line:

- First option: erythromycin
- Second option: ofloxacin (C/I pregnancy) Or amoxicillin (if pregnant or breastfeeding):

- **Epididymo-orchitis:** [BASHH](#), [CKS](#)

- Low STI risk & >35yrs: **First line:** doxycycline; **Second line:** ofloxacin or co-amoxiclav
- STI risk or <35yrs (+refer to GUM): ceftriaxone IM PLUS oral doxycycline

- **Vaginal candidiasis:** [BASHH](#), [CKS](#)

- Topical options: clotrimazole (+available OTC) fenticonazole, miconazole
- Oral option (not if pregnancy/risk of pregnancy): fluconazole (+available OTC but some exceptions to sale)
- Recurrent: fluconazole capsule induction followed by maintenance

- **Bacterial vaginosis:** [BASHH](#), [CKS](#)

- **First line:** oral metronidazole, or topical metronidazole or topical clindamycin
- **Second line:** lactic acid gel (Balance Activ BV®) (for treatment; +OTC if prophylaxis), or dequalinium chloride (Fluomizin®) vaginal tablet

- **Genital herpes:** [BASHH](#)

Advise: saline bathing, analgesia, or topical lidocaine for pain, and discuss transmission.

- First episode: treat within five days if new lesions or systemic symptoms, and refer to GUM

- Recurrent: self-care if mild, or immediate short course antiviral treatment, or suppressive therapy if more than 6 episodes per year
- If antivirals indicated: **first line:** aciclovir; **second line:** valaciclovir; **third line:** famciclovir

- **Gonorrhoea:** [BASHH](#)

Antibiotic resistance is now very high. Please refer to GUM for cultures before treatment, test of cure and partner notification. SWISH contacts:

<https://swishservices.co.uk/> / booking line 0300 124 5010.

- Susceptibility **NOT known:** ceftriaxone IM stat
- Susceptibility **KNOWN:** ciprofloxacin po stat

- **Trichomoniasis:** [BASHH](#), [CKS](#)

- Oral metronidazole
- Topical clotrimazole

- **Pelvic inflammatory disease:** [BASHH](#), [CKS](#)

Delaying treatment increases risk of long-term sequelae.

Refer woman and sexual contacts to GUM service. SWISH contacts: <https://swishservices.co.uk/> / booking line 0300 124 5010.

First line: ceftriaxone IM + doxycycline + metronidazole

Second line:

- First option: metronidazole + ofloxacin
- Second option: moxifloxacin

Skin Infections:

- **Acne:** [NICE](#), [CKS](#), [Somerset Prescribing Formulary – topical](#)

[preparations for acne](#)

[See full Infection Management guidance document for options as this is a complex area with many new changes](#)

- **Impetigo:** [CKS](#), [PHE](#), [NICE guidance](#)

Localised

- Hydrogen peroxide 1% cream or sulfadiazine 1% cream (Flamazine®) – do not use either around the eyes.
- Fusidic acid 2% cream - use only for localised impetigo around the eyes®
- Mupirocin 2% nasal ointment - use only for localised impetigo around the eyes when fusidic acid resistance. Otherwise reserve for MRSA.

Widespread non-bullous impetigo

- Oral flucloxacillin
- Oral clarithromycin (if penicillin allergy) or erythromycin (pregnancy)

Do not offer combination treatment with topical and oral antibiotics. [See full Somerset Guidance for further info.](#)

- **Cold sores:** [CKS](#)

- Only if frequent, severe, predictable triggers – oral acyclovir

- **Eczema (secondary infection):** [NICE guidance NG 190](#)

For people who are not systemically unwell, do not routinely offer either a topical or oral antibiotic.

Topical antibiotics Silver sulfadiazine cream 1% (Flamazine) (Do not use product around eyes.)

Oral Antibiotics

- Flucloxacillin
- If penicillin allergy: clarithromycin or erythromycin (in pregnancy)

- **Secondary bacterial infections of psoriasis, chicken pox, shingles and scabies**

No antibiotic treatment recommended by NICE.

- **Leg ulcers:** [NICE NG152 2-page visual summary](#)

Only for active infection

- Flucloxacillin
- If penicillin allergy: clarithromycin or erythromycin (in pregnancy)
- If penicillin allergy and taking statins: doxycycline

- **Cellulitis & erysipelas:** [NICE NG141](#); [CKS](#)

- Flucloxacillin
- If penicillin allergy: clarithromycin or erythromycin (in pregnancy)
- If penicillin allergy and taking statins: doxycycline
- If facial: co-amoxiclav; if penicillin allergy: clarithromycin AND metronidazole (only add in children if anaerobes suspected)

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- **Diabetic foot infection:** [NICE NG19 3-page visual summary](#); [MPH & YDH guidance – PEDIS grading and treatment options](#)
PEDIS Grade 1: no antibiotics
PEDIS Grade 2 (mild infection): flucloxacillin; if allergic to penicillin: doxycycline. Review at 48-72 hours or as appropriate
PEDIS Grade 2 + evidence of ischaemia, and Grade 3 or 4: refer to secondary care
- **Bites (human and animal):** [CKS](#), [NICE](#)
Do not offer antibiotics if the skin is not broken
 - Prophylaxis or treatment: co-amoxiclav
 - If penicillin allergy - human bite: azithromycin + clarithromycin
 - If penicillin allergy – animal bite: metronidazole + doxycycline (not under 12s)
- **Scabies:** [BASHH](#), [CKS](#)
 - Permethrin cream
 - If allergic to permethrin: malathion aqueous liquid
- **Mastitis:** [CKS](#)
 - Flucloxacillin
 - If penicillin allergy: erythromycin or clarithromycin
- **Fungal skin infection:** [CKS body & groin](#), [CKS foot](#), [CKS scalp](#)
All ⁺available OTC
 - Topical terbinafine OR topical imidazole
 - Topical undecenoates i.e. tolnaftate**If infection confirmed with skin scrapings**
 - Oral terbinafine or itraconazole
- **Fungal nail Infection:** [CKS](#)
 - Amorolfine nail lacquer (superficial only) ⁺
(available OTC)
 - First line: oral terbinafine
 - Second line: oral Itraconazole
- **Varicella zoster(chickenpox):** [CKS](#), [PHE](#)
& **Herpes zoster (shingles):** [CKS](#), [PHE](#) First line for chickenpox and shingles: aciclovir
 - Second line for shingles if poor compliance: valaciclovir
 - Third line for shingles if poor compliance: Famciclovir

- **Insect and Spider Bites and Stings** [NICE](#)
Most insect bites and stings will not need antibiotics and secondary infection is rare. Self-care: ⁺ oral antihistamines. If signs or symptoms of a systemic allergic reaction follow [NICE guidance anaphylaxis](#).
- **Lyme disease:** [NICE NG95 visual summary](#), [CKS](#), [PHE](#)
First line (suitable for Lyme with or without focal symptoms, and Lyme carditis): doxycycline
Second line:
 - First option (suitable for Lyme with or without focal symptoms): amoxicillin (especially for children, pregnancy and breastfeeding)
 - Second option (suitable for Lyme without focal symptoms): azithromycin
- **Epidermoid and pilar cysts:** [EBI Benign skin lesion](#)
Advise self-care measures.
If infected cyst:
 - Flucloxacillin
 - If penicillin allergy: clarithromycin
- **Boils and carbuncles:** [CKS PHE PVL-SA](#)
Advise self-care measures.
 - Flucloxacillin
 - If penicillin allergy: clarithromycin

Eye Infections:

- **Conjunctivitis:** [CKS](#)
 - First line: self-care (⁺available OTC)
 - Second line: chloramphenicol eye drops + eye ointment (MHRA [July 21](#) update- Chloramphenicol drops are not contraindicated in <2yrs) ⁺ both available OTC for adults and children ≥ 2yrs old)
 - Third line: Ciprofloxacin 0.3% eye drops (preserved) or Ofloxacin 0.3% eye drops (preserved)
 - Fourth line: Azithromycin 1.5% eye drops (preservative free)

- **Blepharitis:** [Moorfields Eye Hospital NHS Foundation Trust, BNF, PHE PVL-SA](#)
 - First line/dry eye: hypromellose eye drops (⁺available OTC)
 - Second line: chloramphenicol eye ointment
 - If resistant/recurrent: consider microbiology advice
 - Third line (oral): oxytetracycline or doxycycline
- **Chalazion (meibomian cyst):** [Moorfields Eye Hospital NHS Foundation Trust; EBI Benign skin lesion](#)
Advise self-care measures.
 - Acute infection: chloramphenicol ointment
- **Stye:** [Moorfields Eye Hospital NHS Foundation Trust](#)
 - First line: self-care measures
 - Second line: chloramphenicol eye ointment (⁺available OTC for adults and children ≥ 2yrs old)

Dental Infections:

GPs should not routinely be involved in dental treatment

- **Mucosal ulceration and inflammation:**
 - First line: simple saline mouth wash
 - Second line: chlorhexidine gluconate mouthwash ⁺
 - Third line: hydrogen peroxide mouthwash 6% ⁺
- **Acute necrotising ulcerative gingivitis:**
 - First line: metronidazole
 - Second line: amoxicillin; if treatment failure with *amoxicillin:* co-amoxiclav
PLUS (if pain limits oral hygiene):
First line: chlorhexidine gluconate mouthwash ⁺
Second line: hydrogen peroxide mouthwash 6% ⁺
- **Pericoronitis:**
 - amoxicillin or metronidazole
PLUS (if pain limits oral hygiene):
First line: chlorhexidine gluconate mouthwash ⁺
Second line: hydrogen peroxide mouthwash 6% ⁺
- **Dental abscess:**
 - Phenoxymethylpenicillin or amoxicillin
 - If spreading infection: add metronidazole
 - If penicillin allergy: metronidazole