# Gonorrhoea

**BASHH 2025 UK National Guideline on *Neisseria gonorrhoeae*** (2025 update)

#### **1. Key updates since 2018 (high-yield)**

* **Universal pharyngeal sampling** for everyone with urogenital gonorrhoea **& all contacts**.
* **Cefixime dose doubled** to 400 mg **twice** (6–12 h apart).
* **Ciprofloxacin removed** from first-line list; still usable if susceptibility proven & clinically appropriate.
* **Routine TOC** no longer needed for ceftriaxone-susceptible anogenital infection treated with 1 g IM.
* Expanded guidance on **DGI & ocular infection**;.

#### **2. Epidemiology & Aetiology**

* 2nd commonest bacterial STI in UK
* highest rates in GBMSM
* 15–24 yr olds
* Black Caribbean ethnicity & deprived areas.
* Caused by **Gram-negative diplococcus** *N. gonorrhoeae* with marked antimicrobial-resistance (AMR) potential;
* Ceftriaxone resistance remains rare in England/Wales but prevalent in Asia-Pacific.

#### **3. Clinical spectrum (link to exam viva)**

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| **Site** | **Typical features** | **Key pitfalls** | **Treatment** |
| Penile urethra | Discharge/dysuria in >90 %; 2–5 d incubation | Mycoplasma / Chlamydia co-infection common | Ceftriaxone 1 g IM single dose  Alternative: Cefixime 400 mg PO x2 + Azithro 2 g  Alternative: Gentamicin 240 mg IM + Azithro 2 g  Alternative: Azithro 2g  Alternative: Ciprofloxacin 500mg |
| Cervix | 50 % vaginal discharge, ±abdo pain; PID risk 14 % | Microscopy insensitive (<50 %) |
| Rectum | Usually asymptomatic; consider in women without anal sex history |  |
| Pharynx | Largely asymptomatic; harder to eradicate |  |
| DGI | Septic arthritis (>80 %), fever, bacteraemia; negative mucosal tests in 50 % | Collect synovial fluid + blood cultures + all mucosal sites | Ceftriaxone 1 g IV/IM q24 h  Step down: cefixime 800 mg BD  7d arthritis; 14d meningitis; 28d endocarditis |
| Ocular | Purulent conjunctivitis, rapid keratitis → perforation | Urgent systemic + topical Rx | Ceftriaxone 1 g IM + cefuroxime 5 % drops hourly; ophthalmology referral. |

#### **4. Laboratory diagnosis (exam-favourite)**

**Microscopy**

* Urethral smear (symptomatic males): 90–95 % sens.
* Not recommended for asymptomatic urethra, pharynx; limited in cervix/rectum.

**NAAT** (preferred screening test)

* ≥95 % sens across sites; confirm with 2nd target if PPV < 90 % (esp. pharynx).
* Optimal specimens:
  + **First-pass urine** (penile urethra).
  + **Self-/clinician-taken vulvovaginal swab** outperforms endocervical & urine.
  + **Routine rectal & pharyngeal NAAT** for GBMSM, sex workers & all contacts.

**Culture** – essential for susceptibility testing

* Take from every NAAT-positive site **before treatment**.
* Rapid bedside plating or charcoal transport (refrigerate if delay > few h).

**AMR molecular markers**

* Commercial assays for *gyrA* (ciprofloxacin) available; mosaic *penA* tests pending.

#### **5. Treatment algorithms**

##### **Uncomplicated anogenital ± pharyngeal infection (adults)**

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| **Regimen** | **Notes** |
| **Ceftriaxone 1 g IM single dose** | Remains first-line; covers ≥99 % UK strains. |
| **Cefixime 400 mg PO x2 + Azithro 2 g** | Only if IM contraindicated **and** susceptibilities known; avoid for pharynx without dual Rx. |
| **Gentamicin 240 mg IM + Azithro 2 g** | Acceptable alt; pharyngeal cure rates lower. |
| **Azithro 2 g alone** | Reserve where absolutely no β-lactam/aminoglycoside possible; high GI SEs & resistance. |
| **Ciprofloxacin 500 mg** | Only if proven susceptible **and** no safer option (MHRA warning). |

##### **Complicated disease**

* **PID or epididymo-orchitis**: Ceftriaxone 1 g IM **plus** standard PID/EO regimen.
* **Ocular**: Ceftriaxone 1 g IM + intensive **cefuroxime 5 % drops hourly**; ophthalmology referral.
* **DGI**: Ceftriaxone 1 g IV/IM q24 h; 7 d for arthritis, 10–14 d meningitis, ≥4 wk endocarditis; switch to cefixime 800 mg BD once improved if susceptible.

##### **Pregnancy / Breast-feeding**

* Use ceftriaxone; **avoid quinolones & gentamicin**; azithro only if isolate susceptible & alternatives unsuitable.

##### **Severe β-lactam allergy**

* Gentamicin + azithro or consult UKHSA for ertapenem guidance if MDR suspected.

#### **6. Test of Cure (TOC)**

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| --- | --- |
| **Who needs TOC?** | **Timing & method** |
| Persistent symptoms, **pharyngeal infection**, unknown susceptibility, non-ceftriaxone regimen, pregnancy | **NAAT ≥14 days** post-treatment (RNA tests OK ≥7 d for ano-genital, ≥12 d for pharynx) or culture ≥72 h if symptomatic. |
| Anogenital infection treated with ceftriaxone 1 g **and** proven susceptible | **No routine TOC**. |

#### **7. Management of ceftriaxone treatment failure**

* Define as positive culture ≥72 h post Rx or NAAT at 2–3 weeks in absence of reinfection, with MIC > 0.125 mg/L.
* Notify UKHSA/PH Wales/Scotland; send isolates to reference lab.
* Consider **ertapenem 1 g IV daily × 3 d** (case-series evidence) if MIC favourable; consult GRASP team.

#### **8. Partner management**

* **Look-back:**
  + Symptomatic urethral males – partners from onset back to **2 weeks** (or last partner if longer).
  + All others – **3 months**.
* **Epidemiological treatment** only if exposure <14 d and high-risk (pregnancy, remote access, psychosocial barriers); otherwise test & await result.
* Doxy-PEP **does NOT cover gonorrhoea** (high tetracycline resistance) – manage as above.

#### **9. Auditable standards (good QA stations)**

1. Culture for AST **before treatment** – target ≥97 %.
2. Appropriate TOC offered where indicated – ≥97 %.
3. Concurrent HIV, syphilis, chlamydia tests – ≥97 %.
4. Partner notification documented – ≥97 %.
5. First-line therapy or documented rationale – ≥97 %.
6. Probable/confirmed ceftriaxone failures reported to UKHSA – ≥97 %.

#### **10. Hot points for viva/OSPE**

* Explain why **culture is mandatory even when NAAT positive** (AMR surveillance; phenotype confirmation).
* Discuss **NAAT confirmatory algorithms** when PPV low.
* Justify cefixime BID dosing pharmacodynamics (T>MIC).
* Outline MHRA fluoroquinolone safety alert rationale.
* Describe lab & clinical steps when faced with suspected MDR (*penA* mosaic) isolate.

**Mnemonic for first-line management** – **“1-GONe”**

*1 g Ceftriaxone, Gonorrhoea, Oro-pharyngeal sampling, Notify partners & labs, early abstinence (7 days).*