INFECTIOUS DISEASE & SEXUAL HEALTH REFERENCE

Gonorrhea: Prevention & Risk Reduction

Barrier Protection, Multi-Site Screening, Partner Treatment Protocols, and Antimicrobial Stewardship

Gonorrhea is a common sexually transmitted bacterial infection caused by *Neisseria gonorrhoeae* that infects the mucous membranes of the reproductive tract (cervix, uterus, fallopian tubes, urethra), rectum, throat (pharynx), and eyes. Because many infections—especially pharyngeal, rectal, and cervical cases—cause no noticeable symptoms, silent transmission is frequent, and untreated infection can lead to pelvic inflammatory disease (PID), infertility, chronic pelvic pain, ectopic pregnancy, and disseminated gonococcal infection.

> **Public Health Reality:** Because *Neisseria gonorrhoeae* has progressively developed resistance to multiple antibiotic classes and no licensed standalone gonorrhea vaccine is yet widely deployed, prevention relies heavily on consistent barrier use, routine asymptomatic screening, and simultaneous partner treatment to break transmission chains.

1. Primary Prevention: Barrier & Behavioral Protection

Preventing mucosal contact with infected genital, rectal, or pharyngeal secretions is the most reliable way to avoid acquiring or transmitting gonorrhea.

Preventive Strategy	Transmission Context	Actionable Implementation
External & Internal Condoms	Vaginal and anal intercourse transmit bacteria efficiently via urethral, cervical, and rectal secretions.	Use latex or polyurethane condoms consistently from start to finish of every vaginal or anal sex act, paired with water- or silicone-based lubricants to prevent breakage.
Oral Sex Barriers	Pharyngeal gonorrhea is frequently asymptomatic and serves as a major reservoir for onward transmission and antibiotic resistance.	Use unlubricated condoms for fellatio and dental dams (or cut-open condoms) for cunnilingus or anilingus with new or non-monogamous partners.
Shared Toy & Fomite Hygiene	*N. gonorrhoeae* can survive briefly on moist surfaces and transfer between partners on shared intimate items.	Cover shared sex toys with a fresh condom for each partner and wash thoroughly with warm water and soap or manufacturer-recommended disinfectant between uses.
Mutual Monogamy & Pre-Intimacy Testing	Higher numbers of concurrent or sequential partners increase cumulative exposure probability.	Maintain mutual monogamy with a partner who has tested negative across all relevant anatomical sites, and discuss recent STI screening before initiating condomless intimacy.

2. Secondary Prevention: Routine Multi-Site Screening

Because asymptomatic carriers unknowingly spread infection, regular screening detects and cures silent cases before complications or onward transmission occur.

- **Annual Screening for Sexually Active Women:** Clinical guidelines recommend yearly nucleic acid amplification testing (NAAT) for all sexually active women under age 25, as well as women aged 25 and older with risk factors (such as a new partner, multiple partners, or a partner with an STI).
- **Anatomical Site-Specific Testing:** Urine-only testing misses up to 70–85% of extragenital infections in populations who engage in oral or anal sex. Ensure clinicians collect **pharyngeal (throat) and rectal swabs** in addition to urogenital samples based on sexual practices.
- **Higher-Frequency Screening Protocols:** Gay, bisexual, and other men who have sex with men (MSM), individuals taking HIV PrEP, and people living with HIV should undergo multi-site screening every 3 to 6 months.
- **Prenatal Screening & Neonatal Prevention:** Screening pregnant individuals during the first trimester (and retesting in the third trimester if at continued risk) prevents vertical transmission during childbirth, while routine neonatal ophthalmic prophylaxis prevents gonococcal conjunctivitis.

3. Interrupting Reinfection & Biomedical Developments

Completing treatment properly and ensuring partner care prevents immediate "ping-pong" reinfection and slows antimicrobial resistance.

- **Abstaining During Treatment:** Both the diagnosed individual and their sexual partner(s) must abstain from all sexual contact for at least **7 days after completing treatment** (typically single-dose intramuscular ceftriaxone) and until all symptoms have completely resolved.
- **Partner Notification & Expedited Partner Therapy (EPT):** Notify all sexual partners from the preceding 60 days so they can be tested and treated. Where legally permitted and clinically appropriate, Expedited Partner Therapy (providing oral cefixime prescriptions or medication for a partner without a separate visit) reduces reinfection rates.
- **Test of Cure & 3-Month Retesting:** A test of cure (7–14 days post-treatment) is mandatory for **pharyngeal gonorrhea** due to higher treatment failure rates at throat sites, and all treated patients should be retested at **3 months** to rule out reinfection.
- **Biomedical Prevention Context (Doxy-PEP & Vaccines):** While post-exposure doxycycline (Doxy-PEP) markedly reduces chlamydia and syphilis, its efficacy against gonorrhea is lower (~30–50%) due to widespread tetracycline resistance; meanwhile, outer-membrane vesicle meningococcal B vaccines (4CMenB) show modest (~30–40%) cross-protection in observational studies as dedicated gonococcal vaccines advance through clinical trials.