

STD TREATMENT GUIDELINES TABLE FOR ADULTS & ADOLESCENTS 2013

These recommendations for the treatment of STDs reflect the **2010 CDC STD Treatment Guidelines**. The focus is primarily on STDs encountered in outpatient practice. This table is intended as a source of clinical guidance and is not a comprehensive list of all effective regimens. For more information, please refer to the complete CDC document at <http://www.cdc.gov/std/treatment/2010/>. The following are available resources in New York City: Call the NYCDOHMH at 212-788-4443 or go to <http://www.nyc.gov/health/std> to learn more about STDs and how to report infections; to request assistance with confidential notification of sexual partners of patients with syphilis or HIV infection; and to obtain additional information about NYC DOHMH clinical services. Health care providers can access the latest NYC public health information by joining NYC MED at <http://www.nyc.gov/health/nycmed>.

DOSING ABBREVIATIONS: d=day; qd=once each day; bid= twice daily; tid=three times a day; qid=four times a day; po=by mouth; IM=intramuscular injection; IV=intravenous; mg-milligram; g=gram; hs=hour of sleep; pm=as needed.

DISEASE	RECOMMENDED REGIMENS	ALTERNATIVE REGIMENS
CHLAMYDIA¹		
Uncomplicated Genital/Rectal/Pharyngeal Infections	<ul style="list-style-type: none"> Azithromycin 1g po x 1 or Doxycycline⁸ 100mg po bid x 7 d 	<ul style="list-style-type: none"> Erythromycin base 500mg po qid x 7 d or Erythromycin ethylsuccinate 800mg po qid x 7 d or Ofloxacin⁸ 300mg po bid x 7 d or Levofloxacin⁸ 500mg po qd x 7 d
Pregnant Women ²	<ul style="list-style-type: none"> Azithromycin 1g po x 1 or Amoxicillin 500mg po tid x 7 d 	<ul style="list-style-type: none"> Erythromycin base 500mg po qid x 7 d or Erythromycin base 250mg po qid x 14 d or Erythromycin ethylsuccinate 800mg po qid x 7 d or Erythromycin ethylsuccinate 400mg po qid x 14 d
GONORRHEA^{3,4} Ceftriaxone is the preferred treatment for adults and adolescents with uncomplicated gonorrhea. Dual therapy with ceftriaxone 250 mg IM (increased from 125 mg) Plus azithromycin 1 g po or doxycycline 100 mg po bid x 7 d is recommended for all patients with gonorrhea regardless of chlamydia test results. ⁴		
Uncomplicated Genital/Rectal Infections	Dual therapy with <ul style="list-style-type: none"> Ceftriaxone 250 mg IM PLUS Azithromycin 1g PO or Doxycycline 100 mg po bid x 7 d 	If an intramuscular injection cannot be given, Dual therapy with <ul style="list-style-type: none"> Cefixime ⁵ 400 mg po PLUS Azithromycin ⁶ 1g po or Doxycycline 100 mg po bid x 7 d If allergic to cephalosporins or severe penicillin allergy Azithromycin ⁶ 2 g po in a single dose
Pharyngeal Infections	Dual therapy with <ul style="list-style-type: none"> Ceftriaxone 250 mg IM PLUS Azithromycin 1g po or Doxycycline 100 mg po bid x 7 d 	<ul style="list-style-type: none"> Azithromycin ⁶ 2 g po in a single dose
Pregnant Women ²	Dual therapy with <ul style="list-style-type: none"> Ceftriaxone 250 mg IM PLUS Azithromycin 1 g po 	<ul style="list-style-type: none"> Cefixime ⁵ 400 mg po PLUS Azithromycin ⁶ 1g po If allergic to cephalosporins or severe penicillin allergy Azithromycin ⁶ 2 g po in a single dose
PELVIC INFLAMMATORY DISEASE Oral regimens (For parenteral regimens, see www.cdc.gov/std/treatment/2010/)	<ul style="list-style-type: none"> Ceftriaxone 250 mg IM x 1 or Cefoxitin 2g IM x 1 with Probenecid 1g po x 1 PLUS Doxycycline⁸ 100mg po BID x 14 d with or without Metronidazole⁷ 500mg po bid x 14 d 	<ul style="list-style-type: none"> Ofloxacin⁸ 400mg po bid x 14 d or Levofloxacin⁸ 500mg po qd x 14 d with or without Metronidazole⁷ 500mg po bid x 14 d Ceftriaxone 250mg IM x 1 plus Azithromycin 1g po q week x 2 with or without Metronidazole⁷ 500mg po bid x 14 d
CERVICITIS ⁹	<ul style="list-style-type: none"> Azithromycin 1g po x 1 or Doxycycline⁸ 100mg po bid x 7d 	
NONGONOCOCCAL URETHRITIS	<ul style="list-style-type: none"> Azithromycin 1g po x 1 Doxycycline 100mg po bid x 7 d 	<ul style="list-style-type: none"> Erythromycin base 500mg po qid x 7 d or Erythromycin ethylsuccinate 800mg po qid x 7 d or Levofloxacin 500mg po qd x 7 d or Ofloxacin 300mg po bid x 7 d
RECURRENT AND PERSISTENT URETHRITIS ¹⁰	<ul style="list-style-type: none"> Metronidazole 2g po x 1 or Tinidazole 2g po x 1 PLUS Azithromycin 1g po x 1 (if not used initially) 	
ACUTE EPIDIDYMITIS	<u>Likely due to gonorrhea or chlamydia¹¹:</u> <ul style="list-style-type: none"> Ceftriaxone 250mg IM x 1 PLUS Doxycycline 100mg po bid x 10 d <u>Likely due to enteric organisms or with a negative GC culture or NAAT¹¹:</u> <ul style="list-style-type: none"> Levofloxacin 500mg po qd x 10 d or Ofloxacin 300mg po bid x 10 d 	<u>For men at risk for both sexually transmitted and enteric organisms:</u> <ul style="list-style-type: none"> Ceftriaxone 250mg IM x 1 plus Levofloxacin 500mg po qd x 10 d or Ofloxacin 300mg po bid x 10 d
TRICHOMONIASIS		
Non-pregnant women ¹²	<ul style="list-style-type: none"> Metronidazole 2g po x 1 or Tinidazole¹³ 2g po x 1 	<ul style="list-style-type: none"> Metronidazole 500mg po bid x 7 d
Pregnant Women	<ul style="list-style-type: none"> Metronidazole 2g po x 1 	<ul style="list-style-type: none"> Metronidazole 500mg po bid x 7 d
BACTERIAL VAGINOSIS		
Adults/Adolescents	<ul style="list-style-type: none"> Metronidazole 500mg po bid x 7 d or Metronidazole gel 0.75%, one full applicator (5g) intra-vaginally qd x 5 d or Clindamycin cream¹⁴ 2%, one full applicator (5g) intra-vaginally qhs x 7 d 	<ul style="list-style-type: none"> Tinidazole¹³ 2g po qd x 2 d or Tinidazole¹³ 1g po qd x 5 d or Clindamycin 300mg po bid x 7 d or Clindamycin ovules 100mg intravaginally qhs x 3d
Pregnant Women	<ul style="list-style-type: none"> Metronidazole 500mg po bid x 7 d or Metronidazole 250mg tid x 7 d or Clindamycin 300mg po bid x 7d 	

¹ Contraindicated in pregnant and nursing women

² Annual screening for women aged 25 years or younger. Reinfection is common; retest 3 months after treatment.

³ Test-of-cure (preferably by NAAT) 3-4 weeks after completion of therapy is recommended.

⁴ Annual screening for women at increased risk, e.g. aged 25 years or younger. Reinfection is common; retest 3 months after treatment.

⁵ For suspected treatment failure: Re-test via NAAT and culture with antibiotic susceptibility testing from affected anatomical site(s). If patient was not treated with the recommended regimen, retreat with Ceftriaxone 250 mg IM plus Azithromycin 2 g po as a single dose, unless allergies preclude use of that regimen. If patient was previously treated with the recommended regimen or allergies preclude use of the regimen, consult with a local ID specialist or with the NYC PTC <http://www.nycptc.org> For further guidance, go to www.cdc.gov/std/Gonorrhea/treatment.htm. In NYC, to report suspected treatment failures call the Provider Access Line: 866- 692-3641.

⁶ Oral cephalosporins give lower and less-sustained bacteriocidal levels than ceftriaxone 250 mg and have limited efficacy for treating pharyngeal GC. Therefore, ceftriaxone is the preferred medication

⁷ Due to concerns over emerging antimicrobial resistance, use should be limited to those with severe cephalosporin allergy or history of severe reaction to penicillin.

⁸ Metronidazole offers additional anaerobic coverage and will treat BV and trichomoniasis, if present.

⁹ A quinolone-based regimen can be considered if a cephalosporin is not feasible and if individual risk and local prevalence of gonorrhea are low. If the test for gonorrhea is positive, the addition of azithromycin 2g po as a single dose is recommended.

¹⁰ Presumptive regimen. Co-treat for gonorrhea if local prevalence is high (>5%). Treat for BV and trichomoniasis, if present.

¹¹ Recommended treatment for patients with persistent symptoms if compliant with initial regimen and re-exposure can be excluded. Consider testing for *T. vaginalis* infection.

¹² Among sexually-active men aged <35 yrs, epididymitis is more likely caused by *C. trachomatis* or *N. gonorrhoeae*. For men who practice insertive anal intercourse or men aged >35 yrs, epididymitis may be caused by enteric organisms.

¹³ 7-day Metronidazole regimen may be more effective in HIV-infected women

¹⁴ Safety during pregnancy has not been established (Pregnancy Category C); interruption of breastfeeding is recommended during treatment and for 3 days after last dose.

¹⁵ Oil-based; might weaken latex condoms and diaphragms for up to 5 days after use

DISEASE	RECOMMENDED REGIMENS	ALTERNATIVE REGIMENS
ACUTE PROCTITIS ^{15, 16}	<ul style="list-style-type: none"> Ceftriaxone 250mg IM x 1 PLUS Doxycycline[§] 100mg po bid x 7 d 	
LYMPHOGRANULOMA VENEREUM	<ul style="list-style-type: none"> Doxycycline[§] 100mg po bid x 21 d 	<ul style="list-style-type: none"> Erythromycin base 500mg po qid x 21 d or Azithromycin 1g po q week x 3 weeks
CHANCROID	<ul style="list-style-type: none"> Azithromycin 1g po x 1 or Ceftriaxone 250mg IM x 1 or Ciprofloxacin[§] 500mg po bid x 3 d Erythromycin base 500mg po tid x 7 d 	
SYPHILIS Benzathine penicillin G, Bicillin®L-A, (trade name), is the preferred drug for treatment of all stages of syphilis and is the only treatment with documented efficacy for syphilis during pregnancy. ¹⁷		
Adults (including HIV-Co-infected) ¹⁸		
Primary, Secondary, and Early Latent	<ul style="list-style-type: none"> Benzathine penicillin G 2.4 million units IM x1 	<ul style="list-style-type: none"> Doxycycline^{19,§} 100mg po bid x 14 d or Tetracycline^{19,§} 500mg po qid x 14 d or Ceftriaxone¹⁹ 1g IM or IV qd x 10-14 d
Late Latent and Latent of Unknown duration ²⁰	<ul style="list-style-type: none"> Benzathine penicillin G 7.2 million units, administered as 3 doses of 2.4 million units IM each, at 1-week intervals²¹ 	<ul style="list-style-type: none"> Doxycycline^{19,§} 100mg po bid x 28 d or Tetracycline^{19,§} 500mg po qid x 28 d
Neurosyphilis	<ul style="list-style-type: none"> Aqueous crystalline penicillin G 18-24 million units qd, administered as 3-4 million units IV q 4 hrs or continuous infusion x 10-14 d²² 	<ul style="list-style-type: none"> Procaine penicillin G, 2.4 million units IM qd x 10-14 d plus Probenecid 500mg po qid x 10-14 d²² or Ceftriaxone¹⁹ 2g IM or IV qd x 10-14 d²²
Pregnant Women		
Primary, Secondary, and Early Latent	<ul style="list-style-type: none"> Benzathine penicillin G 2.4 million units IM x1 	<ul style="list-style-type: none"> None. If PCN allergic, desensitize and treat.
Late Latent and Latent of Unknown duration ²⁰	<ul style="list-style-type: none"> Benzathine penicillin G 7.2 million units, administered as doses of 2.4 million units IM each, at 1-week intervals 	<ul style="list-style-type: none"> None. If PCN allergic, desensitize and treat.
Neurosyphilis	<ul style="list-style-type: none"> Aqueous crystalline penicillin G 18-24 million units qd, administered as 3-4 million units IV q 4 hrs or continuous infusion x 10-14 d²² 	<ul style="list-style-type: none"> Procaine penicillin G, 2.4 million units IM qd x 10-14 d plus Probenecid 500mg po qid x 10-14 d²² If PCN allergic, desensitize and treat
DISEASE	RECOMMENDED REGIMENS	
ANOGENITAL WARTS (Human Papilloma Virus)		
External Genital/Perianal ²³	Patient Applied <ul style="list-style-type: none"> Podofilox 0.5% solution/ge^{24,25}: apply bid x 3 d followed by 4 d no treatment; use for up to 4 cycles. Total area treated not to exceed 10cm² and total volume used ≤ 0.5mL per day or Imiquimod 5% cream^{24,26}: apply qhs 3x/week for up to 16 weeks; wash off after 6-10 hours or Sinecatechin 15% ointment^{24,25,26,27}: apply tid (0.5cm strand of ointment per wart) for a maximum of 16 weeks 	Provider Administered <ul style="list-style-type: none"> Cryotherapy: repeat applications q1-2 weeks or Podophyllin resin[§] 10%-25%: apply q1-2 weeks pm; wash off after 1-4 hours. Total area treated not to exceed 10cm² and total volume used ≤ 0.5mL per day or Trichloroacetic acid (TCA) 80%- 90% or Bichloroacetic acid (BCA) 80%- 90%: apply q week pm Surgery—electrocautery, excision, laser, curettage
ANOGENITAL HERPES (HSV-2 and HSV-1)		
First Clinical Episode	<ul style="list-style-type: none"> Acyclovir 400mg po tid x 7-10 d or 200mg po 5x/day x 7-10 d or Famciclovir 250mg po tid x 7-10 d or Valacyclovir 1g po bid x 7-10 d 	
Established Infection	Suppressive Therapy <ul style="list-style-type: none"> Acyclovir 400mg po bid or Famciclovir 250mg po bid or Valacyclovir 500mg po qd or 1g po qd 	Episodic Therapy for Recurrent Episodes <ul style="list-style-type: none"> Acyclovir 400mg po tid x 5 d or 800mg po bid x 5 d or 800mg po tid x 2 d or Famciclovir 125mg po bid x 5 d or 1g po bid x 1 d or 500mg po x1, then 250 mg bid x 2d or Valacyclovir 500mg po bid x 3d or 1g po qd x 5 days
HIV Co-Infected ²⁸		
	Suppressive Therapy <ul style="list-style-type: none"> Acyclovir 400-800mg po bid or tid or Famciclovir 500mg po bid or Valacyclovir 500mg po bid 	Episodic Therapy for Recurrent Episodes <ul style="list-style-type: none"> Acyclovir 400mg po tid x 5-10 d or Famciclovir 500mg po bid x 5-10 d or Valacyclovir 1g po bid x 5-10 d

§ Contraindicated in pregnant and nursing women

¹⁵ Examine patients by anoscopy and evaluate for infection with HSV, gonorrhea, chlamydia and syphilis

¹⁶ If painful perianal ulcers are present or mucosal ulcers detected on anoscopy, presumptive therapy should include a regimen for genital herpes and LGV.

¹⁷ Benzathine penicillin G is available in one long-acting formulation, Bicillin® L-A, which contains only benzathine penicillin G. Combination penicillin drug products, such as Bicillin® C-R, contain both long- and short-acting penicillins and should not be used to treat syphilis.

¹⁸ Most HIV-infected persons respond appropriately to standard benzathine penicillin regimens. HIV-infected patients with syphilis should be treated according to the stage-specific recommendations for HIV-negative persons.

¹⁹ Use alternative regimens for penicillin-allergic, non-pregnant patients only. Data to support the use of alternatives to penicillin are limited. If compliance or follow-up cannot be ensured, the patient should be desensitized and treated with benzathine penicillin.

²⁰ Patients diagnosed with latent syphilis who demonstrate any of the following should have a prompt CSF exam to evaluate for neurosyphilis: 1) neurologic or ophthalmic signs or symptoms; 2) evidence of active tertiary syphilis; or 3) serologic or treatment failure.

²¹ An interval of 10-14 days between doses of benzathine penicillin for late or latent syphilis of unknown duration might be acceptable before restarting the sequence of injections.

²² Some specialists recommend an additional 2.4 million units of benzathine penicillin G IM qweek for up to 3 weeks after completion of neurosyphilis treatment.

²³ Mucosal genital warts (cervical, vaginal, anorectal, urethral meatus) should be managed in consultation with a specialist.

²⁴ Safety profile during pregnancy not established; Pregnancy Category C.

²⁵ Do not wash off after initial application.

²⁶ May weaken condoms and diaphragms.

²⁷ Use is not recommended for HIV-infected or other immunocompromised persons, or those with clinical genital herpes.

²⁸ If HSV lesions persist or recur while receiving antiviral treatment, suspect antiviral resistance. Obtain a viral isolate for sensitivity testing and consult with an HIV specialist.