

CALIFORNIA STD TREATMENT GUIDELINES TABLE FOR ADULTS & ADOLESCENTS 2010

These guidelines reflect the 2010 CDC STD Treatment Guidelines and the Region IX Infertility Clinical Guidelines. The focus is primarily on STDs encountered in office practice. These guidelines are intended as a source of clinical guidance; they are not a comprehensive list of all effective regimens and are not intended to substitute for use of the full 2010 STD treatment guidelines document. Call the local health department to report STD infections; to request assistance with confidential notification of sexual partners of patients with syphilis, gonorrhea, chlamydia or HIV infection; or to obtain additional information on the medical management of STD patients. The California STD/HIV Prevention Training Center is a resource for training and consultation about STD clinical management and prevention (510-625-6000) or www.stdhivtraining.org.

DISEASE	RECOMMENDED REGIMENS	DOSE/ROUTE	ALTERNATIVE REGIMENS: To be used if medical contraindication to recommended regimen.
CHLAMYDIA			
Uncomplicated Genital/Rectal/Pharyngeal Infections ¹	<ul style="list-style-type: none"> Azithromycin or Doxycycline² 	1 g po 100 mg po bid x 7 d	<ul style="list-style-type: none"> Erythromycin base 500 mg po qid x 7 d or Erythromycin ethylsuccinate 800 mg po qid x 7 d or Levofloxacin² 500 mg po qd x 7 d or Ofloxacin² 300 mg po bid x 7 d
Pregnant Women ³	<ul style="list-style-type: none"> Azithromycin or Amoxicillin 	1 g po 500 mg po tid x 7 d	<ul style="list-style-type: none"> Erythromycin base 500 mg po qid x 7 d or Erythromycin base 250 mg po qid x 14 d or Erythromycin ethylsuccinate 800 mg po qid x 7 d or Erythromycin ethylsuccinate 400 mg po qid x 14 d
GONORRHEA: Ceftriaxone is the preferred treatment for adult and adolescent patients with uncomplicated gonorrhea infections. Dual therapy with ceftriaxone 250 mg IM (increased from 125 mg) Plus azithromycin 1 g po or doxycycline 100 mg po bid x 7 days is recommended for all patients with gonorrhea regardless of chlamydia test results.⁴			
Uncomplicated Genital/Rectal Infections ¹	Dual therapy with <ul style="list-style-type: none"> Ceftriaxone or, if not an option Cefixime⁵ PLUS <ul style="list-style-type: none"> Azithromycin or Doxycycline 	250 mg IM 400 mg po 1 g po 100 mg po bid x 7 d	<ul style="list-style-type: none"> Cefpodoxime 400 mg po or Cefuroxime axetil 1 g po or Azithromycin⁶ 2 g po in a single dose
Pharyngeal Infections	Dual therapy with <ul style="list-style-type: none"> Ceftriaxone PLUS <ul style="list-style-type: none"> Azithromycin or Doxycycline 	250 mg IM 1 g po 100 mg po bid x 7 d	<ul style="list-style-type: none"> Azithromycin⁶ 2 g po in a single dose
Pregnant Women ³	Dual therapy with <ul style="list-style-type: none"> Ceftriaxone or, if not an option Cefixime⁵ PLUS <ul style="list-style-type: none"> Azithromycin 	250 mg IM 400 mg po 1 g po	<ul style="list-style-type: none"> Cefpodoxime 400 mg po or Cefuroxime axetil 1 g po or Azithromycin⁶ 2 g po in a single dose
PELVIC INFLAMMATORY DISEASE ^{4,7,8}	Parenteral ⁹ <ul style="list-style-type: none"> Either Cefotetan or Cefoxitin plus Doxycycline² or Clindamycin plus Gentamicin IM/Oral <ul style="list-style-type: none"> Either Ceftriaxone or Cefoxitin with Probenecid plus Doxycycline² plus Metronidazole if BV is present or cannot be ruled out 	2 g IV q 12 hrs 2 g IV q 6 hrs 100 mg po or IV q 12 hrs 900 mg IV q 8 hrs 2 mg/kg IV or IM followed by 1.5 mg/kg IV or IM q 8 hrs 250 mg IM 2 g IM, 1 g po 100 mg po bid x 14 d 500 mg po bid x 14 d	Parenteral ⁹ <ul style="list-style-type: none"> Ampicillin/Sulbactam 3 g IV q 6 hrs plus Doxycycline² 100 mg po or IV q 12 hrs Oral ¹⁰ <ul style="list-style-type: none"> Levofloxacin² 500 mg po qd x 14 d or Ofloxacin² 400 mg po bid x 14 d or Ceftriaxone 250 mg IM in a single dose and Azithromycin 1 g po once a week for 2 weeks plus Metronidazole 500 mg po bid x 14 d if BV is present or cannot be ruled out
CERVICITIS ^{4,7,11}	<ul style="list-style-type: none"> Azithromycin or Doxycycline² plus Metronidazole if BV or trichomoniasis is present 	1 g po 100 mg po bid x 7 d 500 mg po bid x 7 d	
NONGONOCOCCAL URETHRITIS ⁷	<ul style="list-style-type: none"> Azithromycin or Doxycycline 	1 g po 100 mg po bid x 7 d	<ul style="list-style-type: none"> Erythromycin base 500 mg po qid x 7 d or Erythromycin ethylsuccinate 800 mg po qid x 7 d or Levofloxacin 500 mg po qd x 7 days or Ofloxacin 300 mg po bid x 7 d
EPIDIDYMITIS ^{4,7}	Likely due to Gonorrhea or Chlamydia <ul style="list-style-type: none"> Ceftriaxone plus Doxycycline Likely due to enteric organisms <ul style="list-style-type: none"> Levofloxacin¹² or Ofloxacin¹² 	250 mg IM 100 mg po bid x 10 d 500 mg po qd x 10 d 300 mg po bid x 10 d	
CHANCROID	<ul style="list-style-type: none"> Azithromycin or Ceftriaxone or Ciprofloxacin² or Erythromycin base 	1 g po 250 mg IM 500 mg po bid x 3 d 500 mg po tid x 7 d	
LYMPHOGRANULOMA VENEREUM	<ul style="list-style-type: none"> Doxycycline² 	100 mg po bid x 21 d	<ul style="list-style-type: none"> Erythromycin base 500 mg po qid x 21 d or Azithromycin 1 g po q week x 3 weeks
TRICHOMONIASIS ^{13,14}			
Non-pregnant women	<ul style="list-style-type: none"> Metronidazole or Tinidazole¹⁵ 	2 g po 2 g po	<ul style="list-style-type: none"> Metronidazole 500 mg po bid x 7 d
Pregnant Women	<ul style="list-style-type: none"> Metronidazole 	2 g po	<ul style="list-style-type: none"> Metronidazole 500 mg po bid x 7 d

- Annual screening for women aged 25 years or younger. Nucleic acid amplification tests (NAATs) are recommended. All patients should be re-tested 3 months after treatment for chlamydia or gonorrhea.
- Contraindicated for pregnant and nursing women.
- Every effort to use a recommended regimen should be made. Test-of-cure follow-up (preferably by NAAT) 3-4 weeks after completion of therapy is recommended in pregnancy.
- If treatment failure is suspected because GC has been documented, the patient has been treated with a recommended regimen for GC, and symptoms have not resolved, then perform a test-of-cure using culture and antibiotic susceptibility testing and report to the local health department. For clinical consult, call the CA STD Control Branch at 510-620-3400. For further guidance, go to www.std.ca.gov ("STD Guidelines").
- 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.
- For patients with cephalosporin allergy, or severe penicillin allergy, (e.g., anaphylaxis, Stevens Johnson syndrome, and toxic epidermal necrolysis), azithromycin is an option. However, because of GI intolerance and concerns regarding emerging resistance, it should be used with caution.
- Testing for gonorrhea and chlamydia is recommended because a specific diagnosis may improve compliance and partner management, and because these infections are reportable by California law.
- Evaluate for bacterial vaginosis. If present or cannot be ruled out, also use metronidazole.
- Discontinue 24 hours after patient improves clinically and continue with oral therapy for a total of 14 days.
- Fluoroquinolones can be considered for PID if the risk of GC is low, a NAAT test for GC is performed, and follow-up of the patient can be assured. If GC is documented, the patient should be re-treated with the recommended ceftriaxone and doxycycline regimen. If cephalosporin therapy is not an option, the addition of azithromycin 2 g orally as a single dose to a quinolone-based PID regimen is recommended.
- If local prevalence of gonorrhea is greater than 5%, treat empirically for gonorrhea infection.
- If gonorrhea is documented, change to a medication regimen that does not include a fluoroquinolone.
- For suspected drug-resistant trichomoniasis, rule out re-infection; see 2010 CDC Guidelines, Trichomonas Follow-up, p. 60, for other treatment options, and evaluate for metronidazole-resistant *T. vaginalis*. For laboratory and clinical consultations, contact CDC at 404-718-4141; <http://www.cdc.gov/std>.
- For HIV-positive women with trichomoniasis, metronidazole 500 mg po bid x 7 d is more effective than metronidazole 2 g orally.
- Safety in pregnancy has not been established; pregnancy category C.



DISEASE	RECOMMENDED REGIMENS	DOSE/ROUTE	ALTERNATIVE REGIMENS: To be used if medical contraindication to recommended regimen
BACTERIAL VAGINOSIS			
Adults/Adolescents	<ul style="list-style-type: none"> Metronidazole or Metronidazole gel or Clindamycin cream ¹⁶ 	500 mg po bid x 7 d 0.75%, one full applicator (5g) intravaginally qd x 5 d 2%, one full applicator (5g) intravaginally qhs x 7 d	<ul style="list-style-type: none"> Tinidazole ¹⁵ 2 g po qd x 2 d or Tinidazole ¹⁵ 1 g po qd x 5 d or Clindamycin 300 mg po bid x 7 d or Clindamycin ovules 100 mg intravaginally qhs x 3 d
Pregnant Women	<ul style="list-style-type: none"> Metronidazole or Metronidazole or Clindamycin 	500 mg po bid x 7 d 250 mg po tid x 7 d 300 mg po bid x 7 d	
ANOGENITAL WARTS			
External Genital/Perianal Warts	Patient-Applied <ul style="list-style-type: none"> Imiquimod ^{15,16} 5% cream or Podoflox ¹⁵ 0.5% solution or gel or Sinecatechins ¹⁵ 15% ointment Provider-Administered <ul style="list-style-type: none"> Cryotherapy or Podophyllin ¹⁵ resin 10%-25% in tincture of benzoin or Trichloroacetic acid (TCA) 80%- 90% or Bichloroacetic acid (BCA) 80%- 90% or Surgical removal 	Topically qhs 3 x wk up to 16 wks Topically bid x 3 d followed by 4 d no tx for up to 4 cycles Topically tid, for up to 16 wks Apply once q 1-2 wks Apply once q 1-2 wks Apply once q 1-2 wks Apply once q 1-2 wks	Alternative Regimen <ul style="list-style-type: none"> Intralesional interferon or Laser surgery or Photodynamic therapy or Topical cidofovir
Mucosal Genital Warts ¹⁷	<ul style="list-style-type: none"> Cryotherapy or TCA or BCA 80%-90% or Podophyllin ¹⁵ resin 10%-25% in tincture of benzoin or Surgical removal 	Vaginal, urethral meatus, and anal Vaginal and anal Urethral meatus only Anal warts only	
ANOGENITAL HERPES ¹⁸			
First Clinical Episode of Anogenital Herpes	<ul style="list-style-type: none"> Acyclovir or Acyclovir or Famciclovir or Valacyclovir 	400 mg po tid x 7-10 d 200 mg po 5x/day x 7-10 d 250 mg po tid x 7-10 d 1 g po bid x 7-10 d	
Established Infection	<ul style="list-style-type: none"> Acyclovir or Famciclovir ¹⁹ or Valacyclovir or Valacyclovir 	400 mg po bid 250 mg po bid 500 mg po qd 1 g po qd	
Suppressive Therapy ^{19,20}	<ul style="list-style-type: none"> Acyclovir or Acyclovir or Acyclovir or Famciclovir or Famciclovir or Famciclovir or Valacyclovir or Valacyclovir 	400 mg po tid x 5 d 800 mg po bid x 5 d 800 mg po tid x 2 d 125 mg po bid x 5 d 1000 mg po bid x 1 d 500 mg once, then 250 mg bid x 2 d 500 mg po bid x 3 d 1 g po qd x 5 d	
Episodic Therapy for Recurrent Episodes	<ul style="list-style-type: none"> Acyclovir or Acyclovir or Acyclovir or Famciclovir or Famciclovir or Famciclovir or Valacyclovir or Valacyclovir 	400 mg po tid x 5 d 800 mg po bid x 5 d 800 mg po tid x 2 d 125 mg po bid x 5 d 1000 mg po bid x 1 d 500 mg once, then 250 mg bid x 2 d 500 mg po bid x 3 d 1 g po qd x 5 d	
HIV Co-Infected ²⁰			
Suppressive Therapy ¹⁹	<ul style="list-style-type: none"> Acyclovir or Famciclovir ¹⁹ or Valacyclovir 	400-800 mg po bid or tid 500 mg po bid 500 mg po bid	
Episodic Therapy for Recurrent Episodes	<ul style="list-style-type: none"> Acyclovir or Famciclovir or Valacyclovir 	400 mg po tid x 5-10 d 500 mg po bid x 5-10 d 1 g po bid x 5-10 d	
SYPHILIS ^{21, 22}			
Primary, Secondary, and Early Latent	<ul style="list-style-type: none"> Benzathine penicillin G 	2.4 million units IM	<ul style="list-style-type: none"> Doxycycline ²³ 100 mg po bid x 14 d or Tetracycline ²³ 500 mg po qid x 14 d or Ceftriaxone ²³ 1 g IM or IV qd x 10-14 d
Late Latent and Latent of Unknown Duration	<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 intervals	<ul style="list-style-type: none"> Doxycycline ²³ 100 mg po bid x 28 d or Tetracycline ²³ 500 mg po qid x 28 d
Neurosyphilis ²⁴	<ul style="list-style-type: none"> Aqueous crystalline penicillin G 	18-24 million units daily, administered as 3-4 million units IV q 4 hrs x 10-14 d	<ul style="list-style-type: none"> Procaine penicillin G, 2.4 million units IM qd x 10-14 d plus Probenecid 500 mg po qid x 10-14 d or Ceftriaxone ²³ 2 g IM or IV qd x 10-14 d
Pregnant Women ²⁵			
Primary, Secondary, and Early Latent	<ul style="list-style-type: none"> Benzathine penicillin G 	2.4 million units IM	• None
Late Latent and Latent of Unknown Duration	<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 intervals	• None
Neurosyphilis ²⁴	<ul style="list-style-type: none"> Aqueous crystalline penicillin G 	18-24 million units daily, administered as 3-4 million units IV q 4 hrs x 10-14 d	<ul style="list-style-type: none"> Procaine penicillin G, 2.4 million units IM qd x 10-14 d plus Probenecid 500 mg po qid x 10-14 d

16. May weaken latex condoms and contraceptive diaphragms.

17. Cervical and intra-anal warts should be managed in consultation with specialist.

18. Counseling about natural history, asymptomatic shedding, and sexual transmission is an essential component of herpes management.

19. The goal of suppressive therapy is to reduce recurrent symptomatic episodes and/or to reduce sexual transmission. Famciclovir appears somewhat less effective for suppression of viral shedding.

20. If HSV lesions persist or recur during antiviral treatment, drug resistance should be suspected. Obtaining a viral isolate for sensitivity testing and consulting with an infectious disease expert is recommended.

21. Benzathine penicillin G (generic name) is the recommended treatment for syphilis not involving the central nervous system and is available in only one long-acting formulation, Bicillin® L-A (the trade name), which contains only benzathine penicillin G. Other combination products, such as Bicillin® C-R, contain both long- and short-acting penicillins and are not effective for treating syphilis.

22. Persons with HIV infection should be treated according to the same stage-specific recommendations for primary, secondary, and latent syphilis as used for HIV-negative persons. Available data demonstrate that additional doses of benzathine penicillin G, amoxicillin, or other antibiotics in early syphilis do not result in enhanced efficacy, regardless of HIV status.

23. Alternates should be used only for penicillin-allergic patients because efficacy of these therapies has not been established. Compliance with some of these regimens is difficult, and close follow-up is essential. If compliance or follow-up cannot be ensured, the patient should be desensitized and treated with benzathine penicillin.

24. Some specialists recommend 2.4 million units of benzathine penicillin G q week for up to 3 weeks after completion of neurosyphilis treatment.

25. Pregnant women allergic to penicillin should be treated with penicillin after desensitization.