CALIFORNIA STD TREATMENT GUIDELINES FOR ADULTS & ADOLESCENTS 2004

These guidelines for the treatment of patients with STDs reflect the 2002 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. To report STD infections; 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, call the local health department. The California STD/HIV Prevention Training Center is an additional resource for training and consultation in the area of STD clinical management and prevention (510-625-6000) or **www.stdhivtraining.org**.

DISEASE	RECOMMENDED REGIMENS	DOSE/ROUTE	ALTERNATIVE REGIMENS
CHLAMYDIA			
Uncomplicated Infections Adults/Adolescents[1]	• Azithromycin **or** • Doxycycline[2]	1 g po 100 mg po bid x 7 d	• Erythromycin base 500 mg po qid x 7 d **or** • Erythromycin ethylsuccinate 800 mg po qid x 7 d **or** • Ofloxacin[2] 300 mg po bid x 7 d **or** • Levofloxacin[2] 500 mg po qd x 7 d
Pregnant Women[3]	• Azithromycin **or** • Amoxicillin **or** • Erythromycin base	l g po 500 mg po tid x 7 d 500 mg po qid x 7 d	• 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[4] Fluoroquinolones are no longer recommended for treatment of gonoccocal infections in California because of increasing resistance to this class of drugs. If fluoroquinolones are the only drug available and must be used, test-of-cure after treatment is recommended.			
Uncomplicated Infections Adults/Adolescents	• Cefixime[5,6] **or** • Ceftriaxone[6] **plus** • A chlamydia recommended regimen listed above	400 mg po 125 mg IM	• Spectinomycin 2 g IM **or** • Azithromycin 2 g po **or** • Cefpodoxime[6] 400 mg po *Additional alternative treatments are listed below.*[7]
Pharyngeal Infections	• Ceftriaxone **plus** • A chlamydia recommended regimen listed above • Azithromycin	125 mg IM 2 g po	
Pregnant Women	• Ceftriaxone **or** • Cefixime[5] **plus** • A chlamydia recommended regimen listed above	125 mg IM 400 mg po	• Spectinomycin 2 g IM
PELVIC INFLAMMATORY DISEASE[8]	**Parenteral**[9] • **Either** Cefotetan **or** Cefoxitin **plus** Doxycycline[2] **or** • Clindamycin **plus** Gentamicin **Oral/IM** • **Either** Ceftriaxone **or** Cefoxitin **with** Probenecid **plus** Doxycycline[2]	 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	**Parenteral**[9] • **Either** Ofloxacin[2,10] 400 mg IV q 12 hrs **or** Levofloxacin[2,10] 500 mg IV qd **plus** Metronidazole 500 mg IV q 8 hrs **or** • Ampicillin/Sulbactam 3 g IV q 6 hrs **plus** Doxycycline[2] 100 mg po or IV q 12 hrs **Oral** • **Either** Ofloxacin[2,10] 400 mg po bid x 14 d **or** Levofloxacin[2,10] 500 mg po QD x 14 d **plus** Metronidazole 500 mg po bid x 14 d
MUCOPURULENT CERVICITIS[8]	• Azithromycin **or** • Doxycycline[2]	1 g po 100 mg po bid x 7 d	• Erythromycin base 500 mg po qid x 7 d **or** • Erythromycin ethylsuccinate 800 mg po qid x 7 d **or** • Ofloxacin[2,10] 300 mg po bid x 7 d **or** • Levofloxacin[2,10] 500 mg po qd x 7 days
NONGONOCOCCAL URETHRITIS[8]	• Azithromycin **or** • Doxycycline	1 g po 100 mg po bid x 7 d	• Erythromycin base 500 mg po qid x 7 d **or** • Erythromycin ethylsuccinate 800 mg po qid x 7 d **or** • Ofloxacin 300 mg po bid x 7 d **or** • Levofloxacin 500 mg po qd x 7 days
EPIDIDYMITIS[8]	Likely due to Gonorrhea or Chlamydia • Ceftriaxone **plus** Doxycycline Likely due to enteric organisms • Ofloxacin[10] **or** • Levofloxacin[10]	 250 mg IM 100 mg po bid x 10 d 300 mg po bid x 10 d 500 mg po qd x 10 d	
TRICHOMONIASIS[11]	• Metronidazole	2 g po	• Metronidazole 500 mg po bid x 7 d
BACTERIAL VAGINOSIS			
Adults/Adolescents	• Metronidazole **or** • Clindamycin cream[12] **or** • Metronidazole gel	500 mg po bid x 7 d 2%, one full applicator (5g) intravaginally qhs x 7 d 0.75%, one full applicator (5g) intravaginally qd x 5 d	• Metronidazole 2 g po **or** • Clindamycin 300 mg po bid x 7 d **or** • Clindamycin ovules 100 g intravaginally qhs x 3 d
Pregnant Women	• Metronidazole **or** • Clindamycin	250 mg po tid x 7 d 300 mg po bid x 7 d	
CHANCROID	• Azithromycin **or** • Ceftriaxone **or** • Ciprofloxacin[2]	1 g po 250 mg IM 500 mg po bid x 3 d	• Erythromycin base 500 mg po tid x 7 d
LYMPHOGRANULOMA VENEREUM	• Doxycycline[2]	100 mg po bid x 21 d	• Erythromycin base 500 mg po qid x 21 d **or** • Azithromycin 1 g po q week x 3 weeks

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1 Annual screening for women age 25 years or younger. Nucleic acid amplification tests (NAATS) are recommended. Women with chlamydia should be rescreened 3-4 months after treatment.

2 Contraindicated for pregnant and nursing women.

3 Test-of-cure follow-up is recommended in pregnancy.

4 Co-treatment for chlamydia infection is indicated unless chlamydia infection has been ruled out using sensitive technology or 2 g azithromycin dose is used.

5 Cefixime has not been available in the U.S. since November 2002. It will likely be available again in 2005.

6 For patients with significant anaphylaxis-type (IgE-mediated) allergies to penicillin, where the use of cephalosporins is a concern, or patients with allergies to cephalosporins: spectinomycin 2 g IM or azithromycin 2 g po.

7 Additional alternative antibiotic regimens for treatment of uncomplicated gonorrhea of the cervix, urethra, and rectum include: single-dose injectable cephalosporins (ceftizoxime 500 mg IM, cefoxitin 2 g IM with probenecid 1 g po, or cefotaxime 500 mg IM) or cefuroxime axetil 1 g po.

8 Testing for gonorrhea and chlamydia is recommended because a specific diagnosis may improve compliance and partner management and these infections are reportable by California state law.

9 Discontinue 24 hours after patient improves clinically and continue with oral therapy for a total of 14 days.

10 If gonorrhea is documented, change to a medication regimen that does not include a fluoroquinolone. Test-of-cure follow-up is recommended to ensure patient does not have untreated resistant gonorrhea infection.

11 If reinfection is ruled out and persistance of trichomonas is documented, evaluate for metronidazole-resistant *T. vaginalis*. Referral to CDC at 770-488-4115 or 404-639-1898.

12 Might weaken latex condoms and diaphragms because oil-based; not recommended in pregnancy.

Developed by the California STD/HIV Prevention Training Center
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DISEASE	RECOMMENDED REGIMENS	DOSE/ROUTE	ALTERNATIVE REGIMENS
HUMAN PAPILLOMAVIRUS			
External Genital/ Perianal Warts	**Patient Applied** • Podofilox[13] 0.5% solution or gel **or** • Imiquimod[14] 5% cream **Provider Administered** • Cryotherapy **or** • Podophyllin[13] resin 10%-25% in tincture of benzoin **or** • Trichloroacetic acid (TCA) **or** Bichloroacetic acid (BCA) 80%- 90% **or** • Surgical removal		**Alternative Regimen** • Intralesional interferon **or** • Laser surgery
Mucosal Genital Warts	• Cryotherapy **or** • TCA or BCA 80%-90% **or** • Podophyllin[13] resin 10%-25% in tincture of benzoin **or** • Surgical removal	Vaginal, urethral meatus, and anal Vaginal and anal Urethral meatus only Anal warts only	
HERPES SIMPLEX VIRUS[15]			
First Clinical Episode of Herpes	• Acyclovir **or** • Acyclovir **or** • Famciclovir **or** • Valacyclovir	400 mg po tid x 7-10 d 200 mg po 5/day x 7-10 d 250 mg po tid x 7-10 d 1 g po bid x 7-10 d	
Episodic Therapy for Recurrent Episodes	• Acyclovir **or** • Acyclovir **or** • Acyclovir **or** • Famciclovir **or** • Valacyclovir **or** • Valacyclovir	400 mg po tid x 5 d 200 mg po 5/day x 5 d 800 mg po bid x 5 d 125 mg po bid x 5 d 500 mg po bid x 3-5 d 1 g po qd x 5 d	
Supressive Therapy	• Acyclovir **or** • Famciclovir **or** • Valacyclovir **or** • Valacyclovir	400 mg po bid 250 mg po bid 500 mg po qd 1 g po qd	
HIV Co-Infected[16]			
Episodic Therapy for Recurrent Episodes	• Acyclovir **or** • Acyclovir **or** • Famciclovir **or** • Valacyclovir	400 mg po tid x 5-10 d 200 mg po 5/day x 5-10 d 500 mg po bid x 5-10 d 1 g po bid x 5-10 d	
Suppressive Therapy	• Acyclovir **or** • Famciclovir **or** • Valacyclovir	400-800 mg po bid-tid 500 mg po bid 500 mg po bid	
SYPHILIS[17]			
Primary, Secondary, and Early Latent	• Benzathine penicillin G	2.4 million units IM	• Doxycycline[13,18] 100 mg po bid x 2 weeks **or** • Tetracycline[13,18] 500 mg po qid x 2 weeks **or** • Ceftriaxone[18] 1 g IM or IV qd x 8-10 d **or** • Azithromycin[18] 2 g po
Late Latent and Unknown duration	• Benzathine penicillin G	7.2 million units, administered as 3 doses of 2.4 million units IM, at 1-week intervals	• Doxycycline[13] 100 mg po bid x 4 weeks **or** • Tetracycline[13] 500 mg po qid x 4 weeks
Neurosyphilis[19]	• Aqueous crystalline penicillin G	18-24 million units daily, administered as 3-4 million units IV q 4 hrs x 10-14 d	• 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[18] 2 g IM or IV qd x 10-14 d
Pregnant Women[20]			
Primary, Secondary, and Early Latent	• Benzathine penicillin G	2.4 million units IM	• None
Late Latent and Unknown duration	• Benzathine penicillin G	7.2 million units, administered as 3 doses of 2.4 million units IM, at 1-week intervals	• None
Neurosyphilis[19]	• Aqueous crystalline penicillin G	18-24 million units daily, administered as 3-4 million units IV q 4 hrs x 10-14 d	• Procaine penicillin G, 2.4 million units IM q d x 10-14 d **plus** Probenecid 500 mg po qid x 10-14 d
HIV Co-Infected			
Primary, Secondary and Early Latent	• Benzathine penicillin G	2.4 million units IM	• Doxycycline[13,18] 100 mg po bid x 2 weeks **or** • Tetracycline[13,18] 500 mg po qid x 2 weeks
Late Latent, and Unknown duration[20] **with normal CSF Exam**	• Benzathine penicillin G	7.2 million units, administered as 3 doses of 2.4 million units IM, at 1-week intervals	• None
Neurosyphilis[19,20]	• Aqueous crystalline penicillin G	18-24 million units daily, administered as 3-4 million units IV q 4 hrs x 10-14 d	• Procaine penicillin G, 2.4 million units IM q d x 10-14 d **plus** Probenecid 500 mg po qid x 10-14 d

[13] Contraindicated during pregnancy.

[14] Safety in pregnancy has not been well established.

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

[16] If lesions persist or recur while receiving antiviral treatment, antiviral resistence should be suspected and a viral isolate should be obtained for sensitivity testing.

[17] Benzathine penicillin G (the generic name) is the recommended treatment for syphilis not involving the central nervous system and is available in multiple formulations. Bicillin® L-A (or long acting; the trade name) contains only benzathine penicillin G. Other combination products, such as Bicillin® C-R, should not be used to treat syphilis.

[18] Because efficacy of these therapies has not been established and compliance with some of these regimens difficult, close follow-up is essential. If compliance or follow-up cannot be ensured, the patient should be desensitized and treated with benzathine penicillin.

[19] Some specialists recommend 2.4 million units of benazthine penicillin G q week for 1 to 3 weeks after completion of neurosyphilis treatment. While doxycycline may be used to treat late latent syphilis in the penicillin-allergic patient, this drug is not recommended for the treatment of neurosyphilis.

[20] Patients allergic to penicillin should be treated with penicillin after desensitization.