TREATMENT GUIDELINES

GUIDELINES FOR SCREENING, TREATMENT, FOLLOW-UP AND PARTNER MANAGEMENT:

Centers for Disease Control and Prevention (CDC)

- **2010 STD Treatment Guidelines - Up to date treatment guidelines for sexually transmitted infections.**
  http://www.cdc.gov/std/treatment/2010/default.htm
- **Recommendations and Guidance for HIV, Hepatitis, STD and TB Partners**
  http://www.cdc.gov/nchhstp/Partners/Rec-Guide.html

California Department of Public Health- Sexually Transmitted Disease Control

- **California Sexually Transmitted Disease (STD) Screening Recommendations -2010**
  http://www.cdph.ca.gov/programs/std/Documents/CA-STD-Screening-Recommendations-2010.pdf

- **California STD Treatment Guidelines Table for Adults & Adolescents 2010**
  http://www.cdph.ca.gov/pubsforms/Guidelines/Documents/STD%20258Tx%20GL%20FINAL%20TABLE%20--%20main%20doc.pdf

California Sexually Transmitted Disease (STD) Screening Recommendations – 2010

The following recommendations are based on guidelines for STD screening from: the Centers for Disease Control and Prevention, United States Preventive Services Task Force, Infectious Disease Society of America, Region IX Infertility Prevention Project, and the California STD Control Branch. In populations for whom no recommendations exist, screening should be based on risk factors and on local epidemiology and prevalence of specific STDs in the particular clinical setting. **All individuals** diagnosed with chlamydia or gonorrhea should be re-tested for repeat infection at three months after treatment; re-testing can also be performed any time the patient returns for care in the 3 to 12 months after treatment. Other factors to consider prior to screening are summarized in the footnotes below.

	Population	STD Screening Recommendations	Frequency	Comments
Women	Women 25 years of age and younger[1-3]	Chlamydia (CT) Gonorrhea (GC) Other STDs according to risk Human immunodeficiency virus (HIV)	Annually Annually At least once; then repeat annually, only if high-risk.	CT/GC: Consider screening more frequently for those at increased risk.
	Women over 25 years of age[1-4]	No routine screening for STDs Screen according to risk. HIV	 At least once prior to age 64; then repeat annually, only if high-risk.	Targeted CT/GC screening recommended for women with risk factors.
	Pregnant women[1, 5]	CT GC Syphilis HIV Hepatitis B Surface Antigen (HBsAg)	First trimester First trimester First trimester First trimester First trimester	Repeat screening for CT, GC, syphilis, HIV, HBsAg in third trimester if at increased risk.
	HIV-positive women[7]	CT GC Syphilis Trichomoniasis Herpes simplex virus (HSV)-2 HBsAg Hepatitis C	Annually Annually Annually First visit First visit First visit First visit Repeat screening every 3-6 months, as indicated by risk.	CT: • urine/cervical • rectal (if exposed) GC: • urine/cervical • rectal and pharyngeal (if exposed)
Men	Heterosexual men[3]	No routine screening for STDs Screen according to risk. HIV	 At least once prior to age 64; then annually, only if high-risk	Targeted screening for CT in high-risk settings (e.g., corrections) or if risk factors (e.g., CT in previous 24 months)
	Men who have sex with men (MSM)[1, 3, 6]	CT GC Syphilis HIV HBsAg	Annually Annually Annually Annually At least once Repeat screening every 3-6 months, as indicated by risk.	CT: • urine/urethral • rectal (if exposed) GC: • urine/urethral • rectal and pharyngeal (if exposed)
	HIV-positive men[6, 7]	CT GC Syphilis HSV-2 HBsAg Hepatitis C	Annually Annually Annually First visit First visit First visit Repeat screening every 3-6 months, as indicated by risk.	CT: • urine/urethral • rectal (if exposed) GC: • urine/urethral • rectal and pharyngeal (if exposed)

NOTES AND REFERENCES

[1]Centers for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines. MMWR 2006;55(No. RR-11).

[2]California Guidelines for Gonorrhea Screening and Diagnostic Testing among Women in Family Planning and Primary Care Settings. www.cdph.ca.gov/programs/std

[3]Screening for asymptomatic HSV-2 infection should be offered to select patients, based on an assessment of their motivation to reduce their risk. Universal screening in the general population should not be offered. Screening should be offered to patients in partnerships or considering partnerships with HSV-2-infected individuals. Herpes education and prevention counseling should be provided to every patient tested or screened for HSV-2. Guidelines for the Use of Herpes Simplex Virus (HSV) Type 2 Serologies – Recommendations from the California STD Controllers Association and the California Department of Public Health. www.cdph.ca.gov/programs/std

[4]Risk factors for CT or GC in women over age 25: prior CT or GC infection, particularly in previous 24 months; more than one sex partner in the previous year; suspicion that a recent partner may have had concurrent partners; new sex partner in previous 3 months; exchanging sex for drugs or money in the previous year; African American women up to age 30; and other population factors identified locally, including community prevalence of infection.

[5]In pregnant women with a history of injection drug use or a history of blood transfusion or organ transplantation before 1992, screening for hepatitis C should be conducted. Universal screening for HSV-2 infection in pregnancy is not recommended; consider screening with HSV-2 type-specific serology for pregnant women without a history of herpes and a partner with HSV-2 infection. California Guidelines for STD Screening and Treatment in Pregnancy. www.cdph.ca.gov/programs/std

[6]Routine Hepatitis B vaccination is recommended for MSM. HBsAg testing should be performed at the same visit that the first vaccine dose is given; if testing is not feasible in the current setting, routine vaccination should continue. Recommendations for Identification and Public Health Management of Persons with Chronic Hepatitis B Infection. MMWR 2008; 57 (RR-8).

[7]Primary Care Guidelines for the Management of Persons Infected with Human Immunodeficiency Virus: 2009 Update by the HIV Medicine Association of the Infectious Disease Society of America. *Clinical Infectious Diseases* 2009; 49, 651-681.

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CALIFORNIA STD TREATMENT GUIDELINES TABLE FOR ADULTS & ADOLESCENTS 2007

These guidelines for the treatment of patients with STDs reflect the 2006 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 2006 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 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: To be used if medical contraindication to recommended regimen
CHLAMYDIA			
Uncomplicated Genital/Rectal/Pharyngeal Infections [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	1 g po 500 mg po tid x 7 d	• 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. Fluoroquinolones are no longer recommended for treatment of gonococcal infections in California because of high levels of resistance to this class of drugs. Routine use of azithromycin to treat gonorrhea is not recommended because of mounting concern about emergent resistance. Complete guidelines for the treatment of gonorrhea in California are available at www.std.ca.gov			
Uncomplicated Genital/Rectal Infections[1]	• Ceftriaxone[4] **or** • Cefixime[4,5] **plus** • A chlamydia recommended regimen listed above if not ruled out by NAAT	125 mg IM 400 mg po	• Cefpodoxime[4] 400 mg po • Spectinomycin[5] 2 g IM • Azithromycin[7] 2 g po in a single dose
Pharyngeal Infections	• Ceftriaxone[4] **plus** • A chlamydia recommended regimen listed above if not ruled out by NAAT	125 mg IM	• Azithromycin[7] 2 g po in a single dose
Pregnant Women[3]	• Ceftriaxone[4] **or** • Cefixime[4,5] **plus** • A chlamydia recommended regimen listed above if not ruled out by NAAT	125 mg IM 400 mg po	• Cefpodoxime[4] 400 mg po • Spectinomycin[5] 2 g IM • Azithromycin[7] 2 g po in a single dose
PELVIC INFLAMMATORY DISEASE[8,9]	**Parenteral**[10] • **Either** Cefotetan **or** Cefoxitin **plus** Doxycycline[2] **or** • Clindamycin **plus** Gentamicin **IM/Oral** • **Either** Ceftriaxone **or** Cefoxitin with Probenecid **plus** Doxycycline[2] **plus** Metronidazole if BV is present	 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**[10] • Ampicillin/Sulbactam 3 g IV q 6 hrs **plus** Doxycycline[2] 100 mg po or IV q 12 hrs **Oral**[11] • **Either** Ofloxacin[2] 400 mg po bid x 14 d **or** Levofloxacin[2] 500 mg po qd x 14 d **plus** Metronidazole 500 mg po bid x 14 d
CERVICITIS [8,9,12]	• Azithromycin **or** • Doxycycline[2] **plus** Metronidazole if BV is present	1 g po 100 mg po bid x 7 d 500 mg po bid x 7 d	
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 [13] **or** • Levofloxacin [13]	 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[14]			
Non-pregnant women	• Metronidazole **or** • Tinidazole [15]	2 g po 2 g po	• Metronidazole 500 mg po bid x 7 d
Pregnant Women	• Metronidazole	2 g po	• Metronidazole 500 mg po bid x 7 d
BACTERIAL VAGINOSIS			
Adults/Adolescents	• 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	• Clindamycin 300 mg po bid x 7 d **or** • Clindamycin ovules[16] 100 mg intravaginally qhs x 3 d
Pregnant Women	• 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	

1. Annual screening for women age 25 years or younger. Nucleic acid amplification tests (NAATS) are recommended. All patients should be retested 3 months after treatment for chlamydia or gonorrhea infections.
2. Contraindicated for pregnant and nursing women.
3. Every effort to use a recommended regimen, specifically ceftriaxone, should be made. Test-of-cure follow-up (preferably by NAAT) 3-4 weeks after completion of therapy is recommended in pregnancy.
4. For patients with cephalosporin allergy, anaphylaxis-type (IgE-mediated) penicillin allergy or other contraindication: CDC recommends considering desensitization. However, in the vast majority of cases, this may not be feasible. Judicious use of azithromycin is a practical option if spectinomycin is not available or not indicated.
5. Cefixime tablets have not been available in the U.S. since November 2002, but may become available again in the future. An oral suspension formulation is available.
6. Spectinomycin has not been manufactured since January 2006, and future availability is uncertain.
7. Use only if medical contraindications to a cephalosporin, and when spectinomycin is not available or not indicated. Test-of-cure is prudent because efficacy data are limited and because of mounting concern about emergent resistance.
8. 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 state law.
9. Evaluate for bacterial vaginosis. If present or cannot be ruled out, also use metronidazole.
10. Discontinue 24 hours after patient improves clinically and continue with oral therapy for a total of 14 days.
11. Fluoroquinolones may be used for PID in California if the risk of gonorrhea is low, a NAAT test for gonorrhea is performed, and follow-up of the patient is considered likely. If gonorrhea is documented, a test using bacterial culture should be performed and the patient should be re-treated with the recommended ceftriaxone and doxycycline regimen.
12. If local prevalence of gonorrhea is greater than 5%, co-treat for gonorrhea infection.
13. If gonorrhea is documented, change to a medication regimen that does not include a fluoroquinolone, or obtain test-of-cure to ensure patient does not have resistant gonorrhea infection.
14. For suspected drug-resistant trichomoniasis, rule out reinfection; see 2006 CDC Guidelines, Trichomonas Follow-up p. 53, for other treatment options, and evaluate for metronidazole-resistant *T. vaginalis*. For laboratory and clinical consultations, contact CDC at 770-488-4115, http://www.cdc.gov/std.
15. Safety in pregnancy has not been established; pregnancy category C.
16. Might weaken latex condoms and diaphragms because oil-based.

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DISEASE	RECOMMENDED REGIMENS	DOSE/ROUTE	ALTERNATIVE REGIMENS: To be used if medical contraindication to recommended regimen
CHANCROID	• Azithromycin **or** • Ceftriaxone **or** • Ciprofloxacin[2] • Erythromycin base	1 g po 250 mg IM 500 mg po bid x 3 d 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
ANOGENITAL WARTS			
External Genital/ Perianal Warts	**Patient Applied** • Imiquimod [17] 5% cream **or** • Podofilox[17] 0.5% solution or gel **Provider Administered** • Cryotherapy **or** • Podophyllin[17] 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 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** • Intralesional interferon **or** • Laser surgery
Mucosal Genital Warts[18]	• Cryotherapy **or** • TCA or BCA 80%-90% **or** • Podophyllin[17] 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 [19]			
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	
Established Infection Suppressive Therapy[20]	• Acyclovir **or** • Famciclovir **or** • Valacyclovir **or** • Valacyclovir	400 mg po bid 250 mg po bid 500 mg po qd 1 g po qd	
Episodic Therapy for Recurrent Episodes	• Acyclovir **or** • Acyclovir **or** • Acyclovir **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 po bid x 3 d 1 g po qd x 5 d	
HIV Co-Infected[21]			
Suppressive Therapy[20]	• Acyclovir **or** • Famciclovir **or** • Valacyclovir	400-800 mg po bid or tid 500 mg po bid 500 mg po bid	
Episodic Therapy for Recurrent Episodes	• 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[22]			
Primary, Secondary, and Early Latent	• Benzathine penicillin G	2.4 million units IM	• 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 8-10 d
Late Latent and Latent of Unknown duration	• Benzathine penicillin G	7.2 million units, administered as 3 doses of 2.4 million units IM each, at 1-week intervals	• Doxycycline[23] 100 mg po bid x 28 d **or** • Tetracycline[23] 500 mg po qid x 28 d
Neurosyphilis[24]	• 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[23] 2 g IM or IV qd x 10-14 d
Pregnant Women[25]			
Primary, Secondary, and Early Latent	• Benzathine penicillin G	2.4 million units IM	• None
Late Latent and Latent of Unknown duration	• 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]	• 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
HIV Co-Infected			
Primary, Secondary and Early Latent	• Benzathine penicillin G	2.4 million units IM	• Doxycycline[23] 100 mg po bid x 14 d **or** • Tetracycline[23] 500 mg po qid x 14 d
Late Latent, and Latent of Unknown duration **with normal CSF Exam**	• Benzathine penicillin G	7.2 million units, administered as 3 doses of 2.4 million units IM each, at 1-week intervals	• Doxycycline[23] 100 mg po bid x 28 d
Neurosyphilis[24]	• 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[23] 2 g IM or IV qd x 10-14 d

17. Contraindicated in pregnancy.
18. Cervical warts should be managed by a specialist.
19. Counseling about natural history, asymptomatic shedding, and sexual transmission is an essential component of herpes management.
20. The goal of suppressive therapy is to reduce recurrent symptomatic episodes and/or to reduce sexual transmission.
21. If HSV lesions persist or recur while receiving antiviral treatment, antiviral resistence should be suspected. A viral isolate should be obtained for sensitivity testing, and consultation with an infectious disease expert is recommended.
22. 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.
23. Alternates should only be used 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 benazthine penicillin G q week for up to 3 weeks after completion of neurosyphilis treatment.
25. Patients allergic to penicillin should be treated with penicillin after desensitization.

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