

**SUMMARY OF THE 2015 CDC SEXUALLY TRANSMITTED DISEASE (STD) TREATMENT GUIDELINES
MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH (MDPH) – DIVISION OF STD PREVENTION (DSTDP)**

These guidelines for treatment of STDs reflect recommendations of the **MDPH DSTDP** and of the **CDC STD Treatment Guidelines**. These guidelines focus on STDs encountered in outpatient settings and are not an exhaustive list of effective treatments. Please refer to the complete CDC document for more information or call the DSTDP. Clinical and epidemiological services are available through the DSTDP including staff to assist healthcare providers with confidential notification of sexual partners of patients with STDs and/or HIV infection. Please call the DSTDP for assistance at (617) 983-6940.

DISEASE	RECOMMENDED TREATMENT	ALTERNATIVES (use only if recommended regimens are contraindicated)
SYPHILIS		
ADULTS PRIMARY, SECONDARY OR EARLY LATENT (<1 YEAR)	• Benzathine penicillin G 2.4 million units IM once	(For penicillin-allergic non-pregnant patients only) • Doxycycline 100 mg orally 2 times a day for 14 days OR • Tetracycline 500 mg orally 4 times a day for 14 days
ADULTS LATE LATENT (>1 YEAR) OR LATENT OF UNKNOWN DURATION	• Benzathine penicillin G 2.4 million units IM for 3 doses at 1 week intervals (total 7.2 million units)	(For penicillin-allergic non-pregnant patients only) • Doxycycline 100 mg orally 2 times a day for 28 days OR • Tetracycline 500 mg orally 4 times a day for 28 days
All Suspect Syphilis Cases: Call the STD Program at (617) 983-6940 for past titers and treatment.	NEUROSYPHILIS including OCULAR SYPHILIS	• Procaine penicillin G 2.4 million units IM once daily PLUS probenecid 500 mg orally 4 times a day, both for 10-14 days
CHILDREN PRIMARY, SECONDARY OR EARLY LATENT (<1 YEAR)	• Benzathine penicillin G 50,000 units/kg IM once, up to adult dose of 2.4 million units	No specific alternative regimens exist.
CHILDREN LATE LATENT (>1 YEAR) OR LATENT OF UNKNOWN DURATION	• Benzathine penicillin G 50,000 units/kg IM (up to adult dose of 2.4 million units) for 3 doses at 1 week intervals (up to total adult dose of 7.2 million units)	
CONGENITAL SYPHILIS	See complete CDC guidelines.	
HIV INFECTION	Same stage-specific recommendations as for HIV-negative persons.	
PREGNANCY	Penicillin is the only recommended treatment for syphilis during pregnancy. Women who are allergic should be desensitized and treated with penicillin. Treatment is the same as in non-pregnant patients for each stage of syphilis. ²	
GONOCOCCAL INFECTIONS		
ADULTS, ADOLESCENTS AND CHILDREN >45 KG PHARYNGEAL, UROGENITAL, RECTAL	• Ceftriaxone 250 mg IM once PLUS ³ • Azithromycin 1 g orally once	Note: Use of an alternative regimen for pharyngeal gonorrhea should be followed by a test-of-cure 14 days after treatment.⁴ For urogenital or rectal infections ONLY, and ONLY if ceftriaxone is not available: • Cefixime 400mg orally once PLUS ³ • Azithromycin 1 g orally once OR in case of azithromycin allergy • Doxycycline 100 mg orally 2 times a day for 7 days For azithromycin allergy: ♦ Ceftriaxone 250 mg IM once PLUS ³ ♦ Doxycycline 100 mg orally 2 times a day for 7 days For cephalosporin allergy or IgE-mediated penicillin allergy: ♦ Gemifloxacin 320 mg orally once OR ♦ Gentamicin 240 mg IM once PLUS ³ ♦ Azithromycin 2 g orally once
ADULTS AND ADOLESCENTS CONJUNCTIVAL	• Ceftriaxone 1 g IM once PLUS ³ ♦ Azithromycin 1 g orally once, plus consider lavage of infected eye with saline solution once	No specific alternative regimens exist.
CHILDREN ≤45 KG	• Ceftriaxone 25-50 mg/kg IV or IM once (max 250 mg)	
NEONATES OPHTHALMIA NEONATORUM INFANTS BORN TO INFECTED MOTHERS	• Ceftriaxone 25-50 mg/kg IV or IM once (max 250 mg)	
CHLAMYDIAL INFECTIONS		
ADULTS AND CHILDREN AGED ≥8 YEARS	• Azithromycin 1 g orally once OR • Doxycycline ⁵ 100 mg orally 2 times a day for 7 days	• Erythromycin base 500 mg orally 4 times a day for 7 days ⁶ OR • Erythromycin ethylsuccinate 800 mg orally 4 times a day for 7 days ⁶ OR • Levofloxacin ⁷ 500 mg orally once a day for 7 days OR • Ofloxacin ⁷ 300 mg orally 2 times a day for 7 days
CHILDREN ≥45 KG BUT AGED <8 YEARS	• Azithromycin 1 g orally once	No specific alternative regimens exist.
CHILDREN <45 KG AND NEONATES	• Erythromycin base or ethylsuccinate 50 mg/kg/day orally divided into four doses daily for 14 days ⁵	For ophthalmia neonatorum: ♦ Azithromycin 20 mg/kg/day orally once a day for 3 days ⁹
Partner Management: Expedited partner therapy (EPT) is allowed in Massachusetts for treatment of partners of patients infected with chlamydia. For more information, go to www.mass.gov/dph/cdc/std .	PREGNANCY	• Azithromycin 1 g orally once • Erythromycin base 500 mg orally 4 times a day for 7 days (or 250 mg orally 4 times a day for 14 days) OR • Erythromycin ethylsuccinate 800 mg orally 4 times a day for 7 days (or 400 mg orally 4 times a day for 14 days)
NONGONOCOCCAL URETHRITIS		
ADULT MALES	• Azithromycin 1 g orally once ¹⁰ OR • Doxycycline ⁵ 100 mg orally 2 times a day for 7 days	• Erythromycin base 500 mg orally 4 times a day for 7 days ⁶ OR • Erythromycin ethylsuccinate 800 mg orally 4 times a day for 7 days ⁶ OR • Levofloxacin ⁷ 500 mg orally once a day for 7 days OR • Ofloxacin ⁷ 300 mg orally 2 times a day for 7 days
EPIDIDYMITIS¹¹		
LIKELY DUE TO CHLAMYDIA AND GONORRHEA	• Ceftriaxone 250 mg IM once PLUS • Doxycycline ⁵ 100 mg orally 2 times a day for 10 days	No specific alternative regimens exist.
LIKELY DUE TO CHLAMYDIA AND GONORRHEA AND ENTERIC ORGANISMS (MEN WHO PRACTICE INSERTIVE ANAL SEX)	♦ Ceftriaxone 250 mg IM once PLUS ♦ Levofloxacin ⁷ 500 mg orally once a day for 10 days OR ♦ Ofloxacin ⁷ 300 mg orally twice a day for 10 days	No specific alternative regimens exist.

¹ Some specialists recommend benzathine penicillin G 2.4 million units IM weekly for up to 3 weeks after completion of neurosyphilis (including ocular syphilis) treatment.
² Tetracycline/doxycycline contraindicated; erythromycin not recommended because it does not reliably cure an infected fetus; data insufficient to recommend azithromycin or ceftriaxone.
³ Dual therapy for gonococcal infection recommended for all patients with gonorrhea regardless of chlamydia test results.
⁴ Test of cure no longer necessary in cases of uncomplicated urogenital or rectal gonorrhea treated with recommended or alternative regimens. Test-of-cure for gonorrhea should be performed with culture or with nucleic acid amplification (NAAT) if culture not available. If NAAT positive, confirmatory culture recommended. If treatment failure suspected: culture, perform antimicrobial susceptibility testing, notify and consult with the state health department, and/or consult with an infectious disease specialist, an STD/HIV Prevention Training Center (www.nnptc.org), or CDC.
⁵ Doxycycline not recommended during pregnancy, lactation, or for children <8 years of age.
⁶ If patient cannot tolerate high dose erythromycin schedules, change to lower dose for longer (see under pregnancy alternatives).
⁷ Quinolones not recommended for use in patients <18 years of age, and contraindicated in pregnant women.
⁸ Efficacy of treating neonatal chlamydial conjunctivitis and pneumonia is about 80%. A second course of therapy may be required. An association between oral erythromycin and infantile hypertrophic pyloric stenosis (IHPS) has been reported in infants aged <6 weeks. See complete CDC guidelines for more information.
⁹ Data on efficacy of azithromycin for ophthalmia neonatorum limited, so follow-up recommended to assess response. An association between oral azithromycin and infantile hypertrophic pyloric stenosis (IHPS) has been reported in infants aged <6 weeks. See complete CDC guidelines for more information.
¹⁰ Infections with *M. genitalium* may respond better to azithromycin, although azithromycin efficacy may be declining.
¹¹ Given increase in quinolone resistant gonorrhea, use of ofloxacin or levofloxacin alone recommended only if infection more likely caused only by enteric gram-negative organisms and gonorrhea has been ruled out.

DISEASE	RECOMMENDED TREATMENT	ALTERNATIVES (use only if recommended regimens are contraindicated)
PELVIC INFLAMMATORY DISEASE (outpatient management)		
ADULT FEMALES	<ul style="list-style-type: none"> Ceftriaxone 250 mg IM once OR Cefoxitin 2 g IM once plus probenecid 1 g orally once OR Other parenteral third generation cephalosporin (e.g., ceftizoxime or cefotaxime) PLUS <ul style="list-style-type: none"> Doxycycline⁵ 100 mg orally 2 times a day for 14 days WITH OR WITHOUT <ul style="list-style-type: none"> Metronidazole¹² 500 mg orally twice a day for 14 days 	See complete CDC guidelines for alternatives.
PREGNANCY	Patients should be hospitalized and treated with recommended IV therapy (see complete CDC guidelines).	
CHANCROID		
ADULTS	<ul style="list-style-type: none"> Azithromycin¹³ 1 g orally once OR Ceftriaxone¹³ 250 mg IM once OR Ciprofloxacin⁷ 500 mg orally 2 times a day for 3 days OR Erythromycin base⁶ 500 mg orally 3 times a day for 7 days 	No specific alternative regimens exist.
BACTERIAL VAGINOSIS (BV)		
ADULT FEMALES	<ul style="list-style-type: none"> Metronidazole¹² 500 mg orally 2 times a day for 7 days OR Metronidazole gel 0.75%, 5 g intravag. once a day for 5 days OR Clindamycin cream 2%, 5 g intravag. at bedtime for 7 days¹⁴ 	<ul style="list-style-type: none"> Tinidazole¹⁵ 2 g orally once daily for 2 days OR Tinidazole¹⁵ 1 g orally once daily for 5 days OR Clindamycin 300 mg orally 2 times a day for 7 days OR Clindamycin ovules 100 mg intravag. at bedtime for 3 days¹⁴
PREGNANCY	Treatment is recommended for all symptomatic pregnant women. ¹⁶	
TRICHOMONIASIS		
ADULTS	<ul style="list-style-type: none"> Metronidazole¹² 2 g orally once OR Tinidazole¹⁵ 2 g orally once 	<ul style="list-style-type: none"> Metronidazole^{12,17} 500 mg orally 2 times a day for 7 days
PEDICULOSIS PUBIS¹⁸		
	<ul style="list-style-type: none"> Permethrin 1% cream rinse applied to affected area and washed off after 10 minutes OR Pyrethrins with piperonyl butoxide applied to affected area and washed off after 10 minutes 	<ul style="list-style-type: none"> Malathion 0.5% lotion applied for 8-12 hours and washed off OR Ivermectin¹⁹ 250 mcg/kg orally once, repeated in 2 weeks
SCABIES		
	<ul style="list-style-type: none"> Permethrin²⁰ 5% cream applied to all areas of the body from the neck down and washed off after 8-14 hours OR Ivermectin¹⁹ 200 mcg/kg orally, repeated in 2 weeks 	<ul style="list-style-type: none"> Lindane²¹ 1% 1 oz of lotion or 30 g of cream applied thinly to all areas of the body from neck down and washed off after 8 hours
GENITAL HERPES SIMPLEX: See complete CDC guidelines for the management of herpes in pregnancy and in the neonate.		
ADULTS FIRST CLINICAL EPISODE ²²	<ul style="list-style-type: none"> Acyclovir 400 mg orally 3 times a day for 7-10 days OR Acyclovir 200 mg orally 5 times a day for 7-10 days OR Valacyclovir 1 g orally 2 times a day for 7-10 days OR Famciclovir²³ 250 mg orally 3 times a day for 7-10 days 	
ADULTS EPISODIC THERAPY FOR RECURRENCE	<ul style="list-style-type: none"> Acyclovir 400 mg orally 3 times a day for 5 days OR Acyclovir 800 mg orally 2 times a day for 5 days OR Acyclovir 800 mg orally 3 times a day for 2 days OR Valacyclovir 500 mg orally 2 times a day for 3 days OR Valacyclovir 1 g orally once a day for 5 days OR Famciclovir²³ 125 mg orally 2 times a day for 5 days OR Famciclovir²³ 1 g orally 2 times a day for 1 day OR Famciclovir²³ 500 mg orally once, followed by 250 mg orally 2 times a day for 2 days 	
ADULTS SUPPRESSIVE THERAPY FOR RECURRENCE	<ul style="list-style-type: none"> Acyclovir 400 mg orally 2 times a day OR Valacyclovir 500 mg orally once a day OR Valacyclovir 1 g orally once a day OR Famciclovir²³ 250 mg orally 2 times a day 	
HIV INFECTION	Higher doses and/or longer therapy recommended. See complete CDC guidelines.	
GENITAL WARTS		
External or Perianal		
PROVIDER-ADMINISTERED		
<ul style="list-style-type: none"> Cryotherapy with liquid nitrogen or cryoprobe. Repeat applications every 1-2 weeks if necessary OR Surgical removal OR Trichloroacetic acid (TCA) or bichloroacetic acid (BCA) 80% -90%. Apply small amount only to warts. Allow to dry. If excess amount applied, powder with talc, baking soda or liquid soap. Repeat weekly if necessary. 		
PATIENT-APPLIED		
<ul style="list-style-type: none"> Imiquimod 5% cream²⁴ Apply once daily at bedtime 3 times a week for up to 16 weeks. Wash treatment area with soap and water 6-10 hours after application OR ◆ Imiquimod 3.75% cream²⁴ Apply once daily at bedtime every day for up to 16 weeks. Wash treatment area with soap and water 6-10 hours after application OR Podofilox 0.5% solution or gel²⁵ Apply 2 times a day for 3 days, followed by 4 days of no therapy, 4 cycles max. Total wart area should not exceed 10 cm² and total volume applied daily not to exceed 0.5 ml OR Sinecatechins 15% ointment²⁶ Applied 3 times a day for up to 16 weeks. Do not wash off. 		
Urethral Meatus		
<ul style="list-style-type: none"> Cryotherapy with liquid nitrogen OR Surgical removal 		
Vaginal²⁷, Cervical²⁸ or Intra-Anal²⁹		
<ul style="list-style-type: none"> Cryotherapy with liquid nitrogen OR Surgical removal OR TCA or BCA 80%-90%. Apply small amount only to warts. Allow to dry. If excess amount applied, powder with talc, baking soda or liquid soap. Repeat weekly if necessary. 		

¹² Consuming alcohol should be avoided during treatment with metronidazole and for 24 hours thereafter. Multiple studies and meta-analyses have not demonstrated an association between metronidazole use during pregnancy and teratogenic or mutagenic effects in newborns. In lactating women administered metronidazole, withholding breastfeeding during treatment and for 12-24 hours after last dose will reduce exposure of infant to metronidazole.

¹³ Because data are limited concerning efficacy of azithromycin and ceftriaxone regimens in HIV-infected persons, these regimens should be used for such patients only if follow-up can be ensured.

¹⁴ Clindamycin cream and ovules are oil-based and may weaken latex condoms and diaphragms for 3-5 days after use (refer to clindamycin product labeling for additional information). Although older studies indicated a possible link between use of vaginal clindamycin during pregnancy and adverse outcomes for the newborn, newer data demonstrate that this treatment approach is safe for pregnant women.

¹⁵ Consuming alcohol should be avoided during treatment with tinidazole and for 72 hours thereafter. Tinidazole safety during pregnancy is not established. Interruption of breastfeeding is recommended during treatment and for 3 days after last dose.

¹⁶ Because oral therapy has not been shown to be superior to topical therapy for treating symptomatic BV in effecting cure or preventing adverse outcomes in pregnancy, symptomatic pregnant women can be treated with either oral or vaginal regimens recommended for nonpregnant women, except as noted. Metronidazole 250 mg orally 3 times a day for 7 days is also a recommended regimen for pregnant women.

¹⁷ Regimen of 7 days of metronidazole may be more effective than single dose metronidazole in women coinfected with trichomoniasis and HIV.

¹⁸ Lindane no longer recommended because of toxicity. Pregnant or lactating women should be treated either with permethrin or pyrethrins with piperonyl butoxide.

¹⁹ Ivermectin not recommended for pregnant or lactating women, or children who weigh <15 kg.

²⁰ Permethrin is the preferred treatment in infants and young children.

²¹ Lindane no longer recommended as first line therapy because of toxicity. Lindane not to be used immediately after a bath, in persons with extensive dermatitis and women who are pregnant or lactating, or children aged <10 years.

²² Treatment can be extended if healing is incomplete after 10 days of therapy.

²³ Famciclovir efficacy and safety not established in patients <18 years of age.

²⁴ May weaken condoms and vaginal diaphragms. Data from studies of humans are limited regarding use of imiquimod in pregnancy, but animal data suggest imiquimod poses low risk.

²⁵ Podofilox is contraindicated in pregnancy.

²⁶ Sinecatechins not recommended for HIV-infected persons, immunocompromised persons, or persons with clinical genital herpes. Safety of sinecatechins in pregnancy is unknown.

²⁷ Cryoprobe is not recommended secondary to risk for vaginal perforation and fistula formation.

²⁸ Exophytic cervical warts warrant biopsy to exclude high-grade squamous intraepithelial lesions before treatment is initiated. Management should include consultation with a specialist.

²⁹ Many persons with anal warts may also have them in the rectal mucosa. Inspect rectal mucosa by digital examination or anoscopy. Management should include consultation with a specialist.