


# Sexually Transmitted Diseases

## Summary of **2015** CDC Treatment Guidelines



Centers for Disease  
Control and Prevention  
National Center for HIV/AIDS,  
Viral Hepatitis, STD, and  
TB Prevention



These summary guidelines reflect the June 2015 update to the *2010 CDC Guidelines for Treatment of Sexually Transmitted Diseases*.

This summary is intended as a source of clinical guidance. When more than one therapeutic regimen is recommended the sequence is in alphabetical order unless the choices for therapy are prioritized based on efficacy, cost, or convenience. The recommended regimens should be used primarily; alternative regimens can be considered in instances of substantial drug allergy or other contraindications. An important component of STD treatment is partner management. Providers can arrange for the evaluation and treatment of sex partners either directly or with assistance from state and local health departments.

Complete guidelines can be viewed online at [www.cdc.gov/std/treatment](http://www.cdc.gov/std/treatment).

This booklet has been reviewed by the CDC 6/2015.

★ Indicates update from the *2010 CDC Guidelines for the Treatment of Sexually Transmitted Diseases*.

*Bacterial Vaginosis*

*Cervicitis*

*Chlamydial Infections*

*Epididymitis*

*Genital Herpes Simplex*

*Genital Warts (Human Papillomavirus)*

*Gonococcal Infections*

*Lymphogranuloma venereum*

*Non-Gonococcal Urethritis (NGU)*

*Pediculosis Pubis*

*Pelvic Inflammatory Disease*

*Scabies*

*Syphilis*

*Trichomoniasis*

# Bacterial Vaginosis

## Recommended Rx

metronidazole oral<sup>1</sup> OR

metronidazole gel 0.75%<sup>1</sup> OR

clindamycin cream 2%<sup>1,2</sup>

## Dose/Route

500 mg orally 2x/day for 7 days

One 5 g applicator intravaginally 1x/day for 5 days

One 5 g applicator intravaginally at bedtime for 7 days

## Alternatives

tinidazole 2 g orally 1x/day for 2 days OR

tinidazole 1 g orally 1x/day for 5 days OR

clindamycin 300 mg orally 2x/day for 7 days OR

clindamycin ovules 100 mg intravaginally at bedtime for 3 days

★ Treatment is recommended for all symptomatic pregnant women.

# Cervicitis

Recommended Rx	Dose/Route	Alternatives
azithromycin OR doxycycline <sup>3</sup>	1 g orally in a single dose  100 mg orally 2x/day for 7 days	
<p>Consider concurrent treatment for gonococcal infection if at risk of gonorrhea or lives in a community where the prevalence of gonorrhea is high. Presumptive treatment with antimicrobials for <i>C. trachomatis</i> and <i>N. gonorrhoeae</i> should be provided for women at increased risk (e.g., those aged &lt;25 years and those with a new sex partner, a sex partner with concurrent partners, or a sex partner who has a sexually transmitted infection), especially if follow-up cannot be ensured or if NAAT testing is not possible.</p>		

# Chlamydial Infections

	Recommended Rx		Dose/Route	Alternatives
Adults and adolescents	azithromycin doxycycline <sup>4</sup>	OR	1 g orally in a single dose 100 mg orally 2x/day for 7 days	erythromycin base <sup>5</sup> 500 mg orally 4x/day for 7 days OR erythromycin ethylsuccinate <sup>6</sup> 800 mg orally 4x/day for 7 days OR levofloxacin <sup>7</sup> 500 mg 1x/day orally for 7 days OR ofloxacin <sup>9</sup> 300 mg orally 2x/day for 7 days
Pregnancy <sup>3</sup>	azithromycin <sup>8</sup>		1 g orally in a single dose	★ amoxicillin 500 mg orally 3x/day for 7 days OR erythromycin base <sup>5,9</sup> 500 mg orally 4x/day for 7 days OR erythromycin base 250 mg orally 4x/day for 14 days OR erythromycin ethylsuccinate 800 mg orally 4x/day for 7 days OR erythromycin ethylsuccinate 400 mg orally 4x/day for 14 days
Infants and Children (<45 kg): urogenital, rectal	erythromycin base <sup>10</sup> ethylsuccinate	OR	50 mg/kg/day orally (4 divided doses) daily for 14 days	★ Data are limited on the effectiveness and optimal dose of azithromycin for chlamydial infection in infants and children < 45 kg
Neonates: ophthalmia neonatorum, pneumonia	erythromycin base <sup>10</sup> ethylsuccinate	OR	50 mg/kg/day orally (4 divided doses) daily for 14 days	★ azithromycin 20 mg/kg/day orally, 1 dose daily for 3 days

**Chlamydial  
Infections**

# *Epididymitis*<sup>11,12</sup>

	<b>Recommended Rx</b>	<b>Dose/Route</b>	<b>Alternatives</b>
For acute epididymitis most likely caused by sexually transmitted CT and GC	ceftriaxone doxycycline	PLUS	250 mg IM in a single dose 100 mg orally 2x/day for 10 days
★ For acute epididymitis most likely caused by sexually-transmitted chlamydia and gonorrhea and enteric organisms (men who practice insertive anal sex)	ceftriaxone levofloxacin ofloxacin	PLUS OR	250 mg IM in a single dose 500 mg orally 1x/day for 10 days 300 mg orally 2x/day for 10 days
For acute epididymitis most likely caused by enteric organisms	levofloxacin ofloxacin	OR	500 mg orally 1x/day for 10 days 300 mg orally 2x/day for 10 days

# Genital Herpes Simplex

	Recommended Rx		Dose/Route	Alternatives
First clinical episode of genital herpes	acyclovir acyclovir valacyclovir <sup>13</sup> famciclovir <sup>13</sup>	OR OR OR	400 mg orally 3x/day for 7-10 days <sup>14</sup> 200 mg orally 5x/day for 7-10 days <sup>14</sup> 1 g orally 2x/day for 7-10 days <sup>14</sup> 250 mg orally 3x/day for 7-10 days <sup>14</sup>	
Episodic therapy for recurrent genital herpes	acyclovir acyclovir acyclovir valacyclovir <sup>13</sup> valacyclovir <sup>13</sup> famciclovir <sup>13</sup> famciclovir <sup>13</sup> famciclovir <sup>13</sup>	OR OR OR OR OR OR OR	400 mg orally 3x/day for 5 days 800 mg orally 2x/day for 5 days 800 mg orally 3x/day for 2 days 500 mg orally 2x/day for 3 days 1 g orally 1x/day for 5 days 125 mg orally 2x/day for 5 days 1000 mg orally 2x/day for 1 day <sup>14</sup> 500 mg orally once, followed by 250 mg 2x/day for 2 days	
Suppressive therapy <sup>15</sup> for recurrent genital herpes	acyclovir valacyclovir <sup>13</sup> valacyclovir <sup>13</sup> famciclovir <sup>13</sup>	OR OR OR	400 mg orally 2x/day 500 mg orally once a day 1 g orally once a day 250 mg orally 2x/day	
Recommended regimens for episodic infection in persons with HIV infection	acyclovir valacyclovir <sup>13</sup> famciclovir <sup>13</sup>	OR OR	400 mg orally 3x/day for 5-10 days 1 g orally 2x/day for 5-10 days 500 mg orally 2x/day for 5-10 days	
Recommended regimens for daily suppressive therapy in persons with HIV infection	acyclovir valacyclovir <sup>13</sup> famciclovir <sup>13</sup>	OR OR	400-800 mg orally 2-3x/day 500 mg orally 2x/day 500 mg orally 2x/day	

**Genital Herpes Simplex**



**Genital Warts**  
(Human  
Papillomavirus)

# Genital Warts (Human Papillomavirus)<sup>16</sup>

	Recommended Rx	Dose/Route	Alternatives
External genital and perianal warts	<b>Patient Applied</b> ★ imiquimod 3.75% or 5% <sup>13</sup> cream OR podofilox 0.5% <sup>13</sup> solution or gel OR sinecatechins 15% ointment <sup>2,13</sup>	See complete CDC guidelines.  Apply small amount, dry, apply weekly if necessary	★ podophyllin resin 10%–25% in compound tincture of benzoin may be considered for provider-administered treatment if strict adherence to the recommendations for application. OR intralesional interferon OR photodynamic therapy OR topical cidofovir
	<b>Provider Administered</b> Cryotherapy OR trichloroacetic acid or bichloroacetic acid 80%-90% OR surgical removal		

# Gonococcal Infections<sup>17</sup>

	Recommended Rx		Dose/Route	Alternatives
Adults, adolescents: uncomplicated gonococcal infections of the cervix, urethra, and rectum	ceftriaxone	PLUS	250 mg IM in a single dose	
	azithromycin <sup>10</sup>		1 g orally in a single dose	★ If ceftriaxone is not available: cefixime 400 mg orally in a single dose PLUS azithromycin <sup>8</sup> 1 g orally in a single dose
Pharyngeal	ceftriaxone	PLUS	250 mg IM in a single dose	
	azithromycin <sup>10</sup>		1 g orally in a single dose	★ If cephalosporin allergy: gemifloxacin 320 mg orally in a single dose PLUS azithromycin 2 g orally in a single dose OR
Pregnancy <sup>3</sup>	See complete CDC guidelines.			gentamicin 240 mg IM single dose PLUS azithromycin 2 g orally in a single dose
Adults and adolescents: conjunctivitis	ceftriaxone	PLUS	1 g IM in a single dose	
	azithromycin <sup>10</sup>		1 g orally in a single dose	
Children ( $\leq 45$ kg): urogenital, rectal, pharyngeal	ceftriaxone <sup>18</sup>		25-50 mg/kg IV or IM, not to exceed 125 mg IM in a single dose	

*Lymphogranuloma  
venereum*

# *Lymphogranuloma venereum*

## **Recommended Rx**

doxycycline<sup>4</sup>

## **Dose/Route**

100 mg orally 2x/day for 21 days

## **Alternatives**

erythromycin base 500 mg  
orally 4x/day for 21 days

# *Nongonococcal Urethritis (NGU)*

	<b>Recommended Rx</b>	<b>Dose/Route</b>	<b>Alternatives</b>
★ Persistent and recurrent NGU <sup>3,19,20</sup>	azithromycin <sup>8</sup> OR doxycycline <sup>4</sup>	1 g orally in a single dose 100 mg orally 2x/day for 7 days	erythromycin base <sup>5</sup> 500 mg orally 4x/day for 7 days OR erythromycin ethylsuccinate <sup>6</sup> 800 mg orally 4x/day for 7 days OR levofloxacin 500 mg 1x/day for 7 days OR ofloxacin 300 mg 2x/day for 7 days
	Men initially treated with doxycycline: azithromycin	1 g orally in a single dose	
	Men who fail a regimen of azithromycin: moxifloxacin	400 mg orally 1x/day for 7 days	
	Heterosexual men who live in areas where <i>T. vaginalis</i> is highly prevalent: metronidazole <sup>21</sup> OR tinidazole	2 g orally in a single dose  2 g orally in a single dose	

***Non-Gonococcal Urethritis (NGU)***

*Pediculosis  
Pubis*

# *Pediculosis Pubis*

## **Recommended Rx**

permethrin 1% cream rinse OR

pyrethrins with piperonyl  
butoxide

## **Dose/Route**

Apply to affected area, wash off after 10 minutes

Apply to affected area, wash off after 10 minutes

## **Alternatives**

malathion 0.5% lotion, applied  
8-12 hrs then washed off  
ivermectin 250 µg/kg orally,  
repeated in 2 weeks

OR

# *Pelvic Inflammatory Disease<sup>11</sup>*

Recommended Rx		Dose/Route	Alternatives
<b>Parenteral Regimens</b>			<b>Parenteral Regimen</b>
Cefotetan	PLUS	2 g IV every 12 hours	Ampicillin/Sulbactam 3 g PLUS
Doxycycline	OR	100 mg orally or IV every 12 hours	IV every 6 hours
Cefoxitin	PLUS	2 g IV every 6 hours	Doxycycline 100 mg orally
Doxycycline		100 mg orally or IV every 12 hours	or IV every 12 hours
<b>Recommended Intramuscular/Oral Regimens</b>			
Ceftriaxone	PLUS	250 mg IM in a single dose	
Doxycycline	WITH or WITHOUT	100 mg orally twice a day for 14 days	
Metronidazole	OR	500 mg orally twice a day for 14 days	
Cefoxitin	PLUS	2 g IM in a single dose	
Probenecid	PLUS	1 g orally administered concurrently in a single dose	
Doxycycline	WITH or WITHOUT	100 mg orally twice a day for 14 days	
Metronidazole		500 mg orally twice a day for 14 days	
The complete list of recommended regimens can be found in CDC's 2015 STD Treatment Guidelines.			

# *Scabies*

## **Recommended Rx**

permethrin 5% cream      OR

ivermectin

## **Dose/Route**

Apply to all areas of body from neck down, wash off after 8-14 hours

200 µg/kg orally, repeated in 2 weeks

## **Alternatives**

lindane 1%<sup>22,23</sup> 1 oz. of lotion or 30 g of cream, applied thinly to all areas of the body from the neck down, wash off after 8 hours

# Syphilis

	Recommended Rx	Dose/Route	Alternatives
Primary, secondary, or early latent <1 year	benzathine penicillin G	2.4 million units IM in a single dose	doxycycline <sup>7,24</sup> 100 mg 2x/day for 14 days OR tetracycline <sup>7,24</sup> 500 mg orally 4x/day for 14 days
Latent >1 year, latent of unknown duration	benzathine penicillin G	2.4 million units IM in 3 doses each at 1 week intervals (7.2 million units total)	doxycycline <sup>7,24</sup> 100 mg 2x/day for 28 days OR tetracycline <sup>7,24</sup> 500 mg orally 4x/day for 28 days
Pregnancy <sup>3</sup> Neurosyphilis	See complete CDC guidelines. aqueous crystalline penicillin G	18–24 million units per day, administered as 3–4 million units IV every 4 hours or continuous infusion, for 10–14 days	procaine penicillin G 2.4 MU IM 1x daily PLUS probenecid 500 mg orally 4x/day, both for 10-14 days.
★ Congenital syphilis	See complete CDC guidelines.		
Children: Primary, secondary, or early latent <1 year	benzathine penicillin G	50,000 units/kg IM in a single dose (maximum 2.4 million units)	
Children: Latent >1 year, latent of unknown duration	benzathine penicillin G	50,000 units/kg IM for 3 doses at 1 week intervals (maximum total 7.2 million units)	
	See CDC STD Treatment guidelines for discussion of alternative therapy in patients with penicillin allergy.		



# *Trichomoniasis*

	<b>Recommended Rx</b>	<b>Dose/Route</b>	<b>Alternatives</b>
Persistent or recurrent trichomoniasis	metronidazole <sup>21</sup> OR tinidazole <sup>25</sup>	2 g orally in a single dose 2 g orally in a single dose	metronidazole <sup>21</sup> 500 mg 2x/day for 7 days
	metronidazole	500mg orally 2x/day for 7 days	
	If this regimen fails: metronidazole OR tinidazole	2g orally for 7 days 2g orally for 7 days	
	If this regimen fails, susceptibility testing is recommended.		

# Notes

1. The recommended regimens are equally efficacious.
2. These creams are oil-based and may weaken latex condoms and diaphragms. Refer to product labeling for further information.
3. Please refer to the complete 2015 CDC Guidelines for recommended regimens.
4. Should not be administered during pregnancy, lactation, or to children <8 years of age.
5. If patient cannot tolerate high-dose erythromycin base schedules, change to 250 mg 4x/day for 14 days.
6. If patient cannot tolerate high-dose erythromycin ethylsuccinate schedules, change to 400 mg orally 4 times a day for 14 days.
7. Contraindicated for pregnant or lactating women.
8. Clinical experience and published studies suggest that azithromycin is safe and effective.
9. Erythromycin estolate is contraindicated during pregnancy.
10. Effectiveness of erythromycin treatment is approximately 80%; a second course of therapy may be required.
11. Patients who do not respond to therapy (within 72 hours) should be re-evaluated.
12. For patients with suspected sexually transmitted epididymitis, close follow-up is essential.
13. No definitive information available on prenatal exposure.
14. Treatment may be extended if healing is incomplete after 10 days of therapy.

★ Indicates update from the 2010 CDC Guidelines for the Treatment of Sexually Transmitted Diseases.

# *Notes (continued)*

15. Consider discontinuation of treatment after one year to assess frequency of recurrence.
16. Vaginal, cervical, urethral meatal, and anal warts may require referral to an appropriate specialist.
17. CDC recommends that treatment for uncomplicated gonococcal infections of the cervix, urethra, and/or rectum should include dual therapy, i.e. both a cephalosporin (e.g. ceftriaxone) plus azithromycin.
18. CDC recommends that cefixime in combination with azithromycin or doxycycline be used as an alternative when ceftriaxone is not available.
19. Only ceftriaxone is recommended for the treatment of pharyngeal infection. Providers should inquire about oral sexual exposure
20. Moxifloxacin 400mg orally 1x/day for 7 days is effective against *Mycoplasma genitalium*.
21. Pregnant patients can be treated with 2 g single dose.
22. Contraindicated for pregnant or lactating women, or children <2 years of age.
23. Do not use after a bath; should not be used by persons who have extensive dermatitis.
24. Pregnant patients allergic to penicillin should be treated with penicillin after desensitization.
25. Randomized controlled trials comparing single 2 g doses of metronidazole and tinidazole suggest that tinidazole is equivalent to, or superior to, metronidazole in achieving parasitologic cure and resolution of symptoms.

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