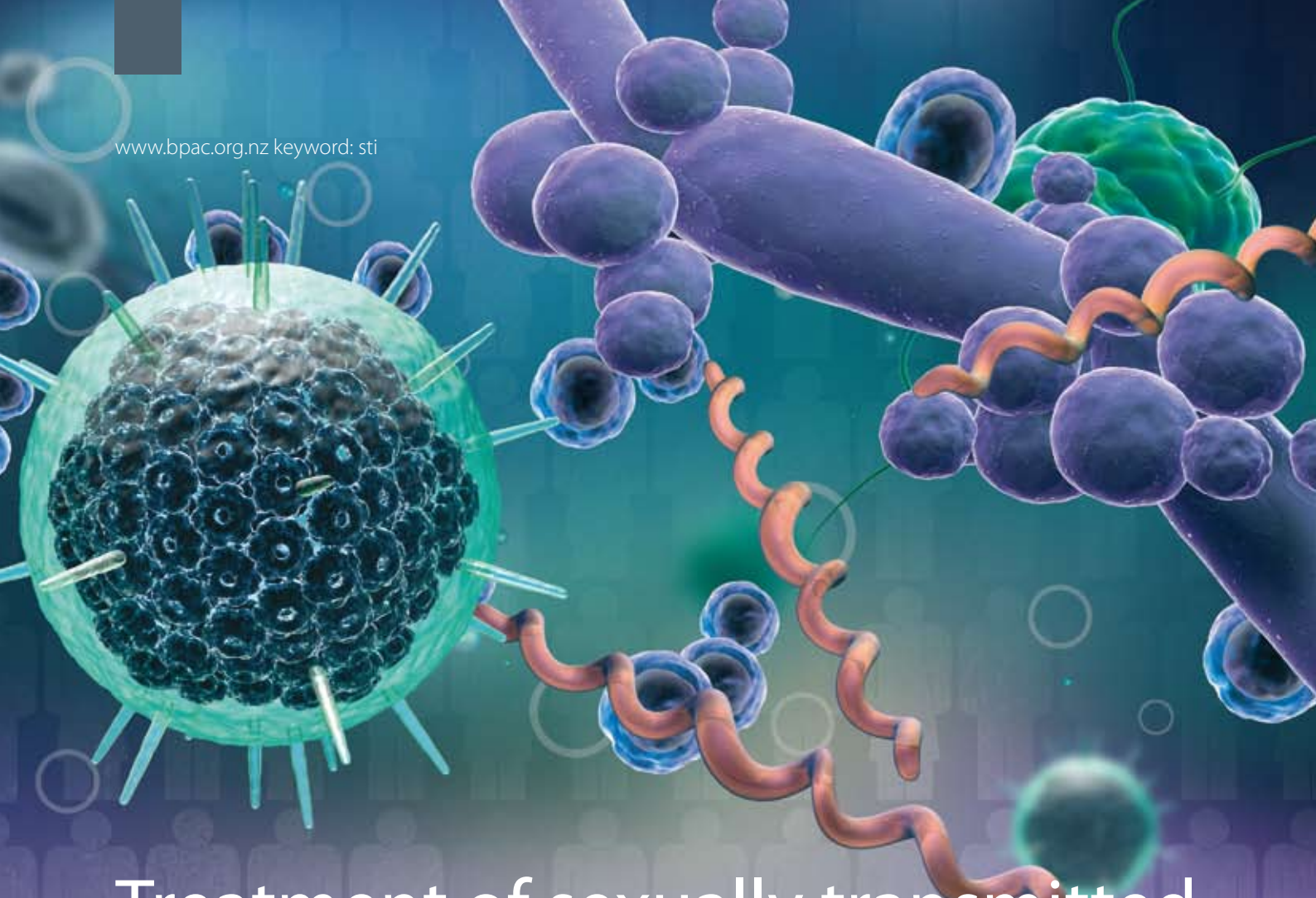

Treatment of sexually transmitted and other genital infections

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General points:

- If one STI is present always consider testing for others
- Testing and treatment of partners should ideally be done simultaneously
- Give verbal information on safer sexual practices, contraception and offer written information to take away
- Advise sexual abstinence until course of treatment is completed (or for seven days after single dose treatment)

Contact tracing

Testing and treatment of sexual partners is important. All sexual contacts within the past three months (or last contact if greater than three months ago) should be traced and advised to seek testing and/or treatment.

For more information on testing for genital infections, refer to Best Tests March 2009.

Chlamydia	
Best test:	Men – First void urine (FVU); Women – endocervical swab if performing pelvic examination; Self collected vaginal swab acceptable for screening; Rectal swab in either sex if indicated by history
Drug treatment:	Azithromycin 1 g stat or Doxycycline 100 mg bd for 7 days
Drug treatment in pregnancy or breast feeding:	Azithromycin 1 g stat (azithromycin not licensed for use in pregnancy in NZ but clinical experience and studies overseas suggest it is safe and effective[2]) or Amoxicillin 500 mg tid for 7 days or if allergic to penicillin use erythromycin e.g. erythromycin ethyl succinate 800 mg qid for 7 days (14 day regimens are appropriate if GI intolerance is a concern)
Other management:	Contacts of a person who has tested positive for chlamydia should be treated. For symptomatic rectal infection in men who have sex with men discuss treatment with a sexual health physician. A test of cure should be done at 4 weeks post treatment in rectal infection, in pregnancy and when amoxicillin or erythromycin is used. Repeat STI screen for those with positive results after 3 months.

Gonorrhoea	
Best test:	Men – urethral swab; Women – endocervical swab; If appropriate rectal and pharyngeal swabs.
Drug treatment	(including pregnancy and breastfeeding): Ceftriaxone 250 mg* IM stat AND Azithromycin 1 g stat Azithromycin is routinely given for treatment of chlamydia as co-infection is so common. If the isolate is known to be ciprofloxacin sensitive, a 500 mg stat dose of ciprofloxacin can be used. Resistance rates vary by location.
Other management:	Test of cure is not usually required as standard treatment is >95% effective (provided compliant and asymptomatic after treatment)

* Although most guidelines recommend ceftriaxone 250 mg for gonorrhoea, PID or epididymo-orchitis, currently the smallest unit amount available in New Zealand is a 500 mg ampoule. For the sake of simplicity some clinicians may choose to use a whole vial for one patient, i.e. 500 mg. Five ampoules are available on a PSO.

Syphilis	
Best test:	Early – examination of chancre exudate by dark ground microscopy (NB this is often impractical because it needs to be examined within 10 –15 minutes). After 6 – 12 weeks – serology
Drug treatment:	**Do not prescribe antibiotics or apply any solutions to ulcer prior to the patient being seen by a specialist**
Other management:	In the presence of a chancre or rash and/or positive serological finding, urgent referral to a sexual health or infectious disease physician is recommended. Advise patient to abstain from sexual activity until seen by a specialist and the diagnosis is confirmed.

Genital Herpes (first episode)	
Best test:	Viral swabs. Type specific herpes serology is typically not indicated in an acute presentation as interpretation can be difficult.
Drug treatment:	Aciclovir 200 mg 5 x/day for 5 days or Aciclovir 400 mg tid for 7 days Antiviral treatment may still be appropriate if patient presents >72 hours after development of symptoms if new lesions are developing or symptoms are severe. Lignocaine gel 2% as required Paracetamol 1 g qid
Drug treatment in pregnancy or breast feeding:	Aciclovir as above (note aciclovir not licensed for use in pregnancy although extensively used without significant adverse effects) All pregnant women should be referred to a sexual health physician or obstetrician. Urgent referral if in the third trimester
Other management:	Advise increasing fluid intake so urine is dilute and less painful to pass and suggest urinating in the bath/shower to reduce stinging. Written information is recommended for all patients. Useful resources can be found at **www.herpes.org.nz**

Trichomoniasis	
Best test:	Men – urethral swab; Women – high vaginal swab.
Drug treatment:	Metronidazole 400 mg bd for 7 days or Metronidazole 2 g stat. The single dose has the advantage of improved compliance but there is some evidence to suggest that the failure rate is higher.
Drug treatment in pregnancy and breastfeeding:	Metronidazole 400 mg bd for 7 days (NB single high dose regimens are avoided because they may result in higher serum concentrations which can reach foetal circulation).

Trichomoniasis continued	
Other management:	Avoid alcohol with metronidazole Partner also requires treatment to prevent re-infection. A male partner of a woman with trichomoniasis should be treated even if asymptomatic as the culture is seldom positive even if infection present.

Bacterial vaginosis	
Best test:	High vaginal swab
Drug treatment:	Metronidazole 2 g stat or Metronidazole 400 mg bd for 7 days
Drug treatment in pregnancy and breastfeeding:	Metronidazole 400 mg bd for 7 days
Other management:	Avoid alcohol with metronidazole Treatment of asymptomatic woman is unnecessary unless an invasive procedure is planned e.g. IUCD insertion, termination of pregnancy

Acute non-specific urethritis (NSU)	
Best test:	Diagnosis of exclusion. Urethral swab and FVU to exclude gonorrhoea and chlamydia
Drug treatment:	Azithromycin 1 g stat or Doxycycline 100 mg bd for 7 days If purulent discharge, treat as for gonorrhoea i.e. *ceftriaxone 250 mg IM stat and azithromycin 1g stat
Other management:	Treat contacts with azithromycin 1 g stat even if the contact's chlamydia test result is negative

Genital Warts	
Best test:	Clinical diagnosis
Drug treatment:	Patient applied: Podophyllotoxin 5 mg/ml bd for 3 consecutive days/week for 5 weeks or Imiquimod 3 times a week (alternate days followed by 2 treatment free days) for up to 16 weeks Clinician applied: Cryotherapy, laser, hyfrecation or surgical excision
Drug treatment in pregnancy and breastfeeding:	Cryotherapy only Specialist referral may be required
Other management:	Barrier contraception may reduce transmission to partners Treatment is cosmetic not curative For patient resources see **www.hpv.org.nz**

Acute candidiasis	
Best test:	Women – vaginal swab; Men – subprepucial or glans penis swab
Drug treatment:	Women: Intravaginal antifungal (imidazole) or fluconazole 150 mg stat Men: Topical antifungal (imidazole)
Drug treatment in pregnancy and breastfeeding:	Intravaginal antifungal (imidazole)
Other management:	Treatment of asymptomatic women is not generally necessary Although candidiasis is not an STI it can be transferred with sexual contact. The partner should be treated if symptomatic or in some cases of recurrent candidiasis

Pelvic inflammatory disease	
Best test:	Pelvic exam, endocervical swabs for chlamydia and gonorrhoea, HVS for trichomonas, temperature, pregnancy test, consider FBC, CRP
Drug treatment:	Ceftriaxone 250 mg* IM stat AND Doxycycline 100 mg bd for 2 weeks When symptoms are moderate/severe add metronidazole 400 mg bd for 2 weeks Alternatively if compliance is likely to be poor: Ceftriaxone 250 mg* IM stat AND azithromycin 1 g stat
Drug treatment in pregnancy:	Referral for specialist assessment is indicated. Admission may be required for IV antibiotics.
Other management:	Decision to remove IUCD should be made depending on the individual patient. Evidence suggests that treatment of PID can be successful in the presence of an IUCD.

Epididymo-orchitis	
Best test:	FVU for chlamydia, urethral swab for gonorrhoea, dipstick urine, MSU if suspect UTI
Drug treatment:	If STI pathogens suspected: Ceftriaxone 250 mg* IM stat AND doxycycline 100 mg bd for at least 2 weeks If UTI pathogens suspected: Amoxycillin/clavulanic acid 500 mg tid for 2 to 3 weeks or Ciprofloxacin 500 mg bd for 10–14 days
Other management:	Bed rest, analgesics and scrotal elevation are recommended

Molluscum Contagiosum	
Best test:	Clinical observation – look for firm flesh coloured bumps, often with waxy centres.
Treatment options:	Reassure and observe – in many cases no specific treatment is necessary. Cryotherapy / curettage / diathermy. Sterile sharp stick to remove contents (iodine or phenol may be applied). Podophyllotoxin or imiquimod.
Treatment in pregnancy:	Podophyllotoxin is contraindicated and imiquimod should also be avoided.
Other management:	If infection occurs, topical antibiotics may be required

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Table adapted from the following references:

1. Counties Manukau DHB. Primary Care Sexual Health Workstream. Available from www.healthpoint.co.nz. (Accessed March 2009).
2. Chlamydia Management Guidelines. Ministry of Health. July 2008. Available from http://www.moh.govt.nz/moh.nsf/pagesmh/8210/$File/chlamydia-management-guidelines.pdf (Accessed March 2009).
3. Kyle C. (ed). A Handbook for the Interpretation of Laboratory tests. 4th edition: Diagnostic Medlab; 2008.

Ciprofloxacin resistance

Penicillin was originally used to treat gonorrhoea. However increasing penicillin resistance meant that empiric treatment with ciprofloxacin was favoured. But data collected by ESR between 2007 and 2008 shows that ciprofloxacin resistance is at 22%. This far exceeds the acceptable 5% resistance threshold for first-line therapy. The national rate of penicillin resistance for 2007/2008 was 6%. Ciprofloxacin resistance is now more prevalent than penicillin resistance in most areas of New Zealand. Ceftriaxone injection is advised for treating suspected gonorrhoea, unless susceptibility data is available.

Full report available from:
http://www.surv.esr.cri.nz/PDF_surveillance/Antimicrobial/Gono/Gono2008Q1.pdf