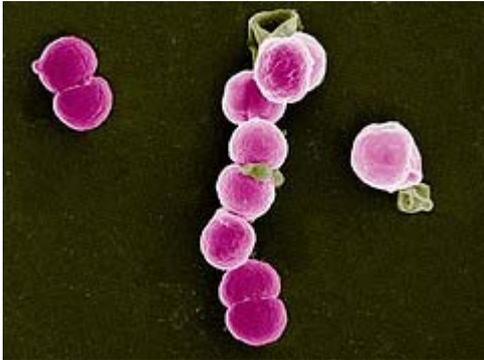


STI screening tests

Original article by: [Michael Tam](#)



Diplococci of *Neisseria gonorrhoeae*

Sexually transmitted infections (STIs) are common. Many can be treated easily. Some may be asymptomatic but may lead to significant longer term problems if left untreated (e.g., chronic pelvic inflammatory disease from chlamydia increases the risk of ectopic pregnancies and infertility) (1).

It is a reality that people have sex, and some people have many sexual partners. As such, taking a sexual history and offering screening is an important part of preventative health care.

Note: the following guidelines are specifically for the broader Australian population. It may be appropriate to perform additional tests in specific cultural or regional groups (e.g., screening for HIV and syphilis is certain indigenous communities). These guidelines have been adapted the article by Ooi in the February 2007 edition of [Australian Prescriber](#) (2).

Who should be screened?

Obviously, someone who has never had sexual intercourse do not require STI screening. Otherwise, as a baseline an annual screen should be *considered* for people who have changed sexual partners.

Multiple sexual partners, unprotected sex (i.e., without a condom), intravenous drug use (especially the sharing of needles) increase risk of STI transmission.

- Heterosexual men and women:
 - consider annual screening if there has been a change in sexual partners;
 - more frequently depending on risk.
- Men who have sex with men:
 - annual screening if asymptomatic;
 - more frequently depending on risk - up to every 3 months.
- People under the age of 25 years:
 - annual screening if there has been a change in partner;
 - more frequently depending on risk.
- Sex workers:
 - every 3-6 months.
- People who inject drugs:
 - annual screening if asymptomatic;
 - more frequently depending on risk - up to every 3 months.

Asymptomatic heterosexual men

Routine tests:

- Hepatitis B serology (i.e., blood test);
- chlamydia PCR (polymerase chain reaction) from first void urine.

Consider:

- Baseline HIV serology;
- gonorrhoea PCR from first void urine.

Although the guidelines do not recommend routine screening for gonorrhoea, you should consider it. Most men with gonorrhoea will be symptomatic it can uncommonly be asymptomatic (about 10%) (3). I commonly do offer performing gonorrhoea PCR on the urine as well.

You should consider and offer a baseline serology for HIV - though be aware, you must perform adequate pre-test counselling and though it is an anachronism, even a negative test may affect the patient's future assessment of risk for life insurance.

Symptomatic heterosexual men

Depending on the specific symptoms, you may elect to perform specific tests - e.g., a swab of urethral discharge for microscopy, culture and sensitivity (MC&S) (specifically to culture gonorrhoea), or swab for HSV (herpes simplex virus) PCR in genital herpes. In addition, you should consider screening for:

- Hepatitis B serology;
- HIV serology;
- chlamydia PCR from first void urine;
- gonorrhoea PCR from first void urine.

Asymptomatic heterosexual women

Routine tests:

- Hepatitis B serology;
- chlamydia PCR (first void urine).

Consider:

- Baseline HIV serology;
- gonorrhoea PCR from first void urine;
- high vaginal swab for MC&S (looking for gonorrhoea and trichomonas) (if already performing a Pap smear);
- cervical swab for chlamydia PCR and gonorrhoea PCR (if already performing a Pap smear).

Like men, consider performing a gonorrhoea PCR on urine and baseline HIV serology as well. Unlike men, women present for Pap smears and while this is performed, an opportunistic STI screen by way of cervical and high vaginal swabs for PCR and MC&S can be done.

Symptomatic heterosexual women

Again, you may choose to perform some specific tests depending on symptoms. In addition, you should consider:

- Hepatitis B serology;
- HIV serology;
- chlamydia PCR (first void urine);

- chlamydia PCR (anal and throat swab - depending on sexual practice);
- gonorrhoea PCR (first void urine);
- gonorrhoea MC&S +/- PCR (anal and throat swab - depending on sexual practice).

Be aware that although you can order PCR tests for chlamydia and gonorrhoea in extra genital sites, these tests may not have been validated.

Men who have sex with men (MSM)

It is important when taking your history to ask a man specifically whether his sexual partners include men as some MSM do not consider themselves "gay" or "homosexual". It is furthermore important to ask what type of sexual practices they engage in. For example, a MSM who has never had receptive anal sex does not require anal tests.

Routine tests:

- Hepatitis A serology;
- hepatitis B serology;
- HIV serology;
- syphilis serology;
- gonorrhoea MC&S +/- PCR (anal and throat swab);
- chlamydia PCR (first void urine and anal swab).

Consider:

- Gonorrhoea PCR (first void urine).

Indications for anal swabs:

- any anal sex with casual partners;
- any unprotected anal sex;
- any anal symptoms;
- HIV positive;
- past history of gonorrhoea;
- contact with any STI;
- request.

You can perform chlamydia PCR for throat swabs, especially in the presence of symptoms (4). However, pharyngeal *Chlamydia trachomatis* infection is firstly uncommon and usually symptomatic. In the absence of symptoms, a sole positive chlamydia PCR from a throat swab may well be a false positive.

Homosexual and bisexual women

For the most part women who have sex with women should have the same screening as heterosexual women. Be aware though that some lesbian women may still have sex with men (including MSM) and you should try to elucidate this in the sexual history. If this is the case, apart from routine screening, consider:

- HIV serology;
- syphilis serology.

Furthermore, consider the following diagnoses:

- Bacterial vaginosis / Gardnerella;
- trichomonas.

Sex workers

Routine tests:

- Hepatitis B serology;
- HIV serology;
- syphilis serology;
- chlamydia PCR (first void urine and cervical swab);
- gonorrhoea MC&S +/- PCR (cervical swab and throat swab).

Consider:

- gonorrhoea PCR (first void urine);
- gonorrhoea MC&S +/- PCR (anal swab - depending on sexual practice);
- chlamydia PCR (anal swab - depending on sexual practice);
- hepatitis A serology (depending on sexual practice).

People who inject drugs

They should have the same STI tests performed as per above. In addition:

- Hepatitis B serology;
- hepatitis C serology;
- syphilis serology;
- HIV serology.

Consider:

- Hepatitis A serology.

Hints and tips:

- The most important thing is an adequate sexual history.
- Once someone has been fully immunised against hepatitis A and B, further serology is generally unnecessary.
- There is no place for routine HSV serology in sexual health screening.
- Gonorrhoea PCR though convenient, does not allow for antibiotic sensitivity test; MC&S is preferable (though often involves another swab).
- Chlamydia and gonorrhoea PCR swabs of high vaginal, rectal and pharyngeal sites are not validated.
- For the most part, chlamydia and gonorrhoea PCR of first void urine replaces the highly unpleasant urethral swab.
- Some laboratories can perform PCR and MC&S on a single swab; it is worthwhile calling and finding out.
- All results of sexual health tests should be given to the patient in person (as opposed to over the phone). Patients should make a follow up appointment at the time of the test.
- Send complicated patients to a local sexual health unit!

References

- (1) Chlamydia: fact sheet. *Family Planning Australia Health*. April 2003. [[Link](#) :: PDF 47 Kb]
- (2) Ooi C. Testing for sexually transmitted infections. *Australian Prescriber* Vol. 30, No. 1. February 2007. [[Link](#) :: PDF 118 Kb]
- (3) Sherrard J., Barlow D. Gonorrhoea in men: clinical and diagnostic aspects. *Genitourinary Medicine*, Vol 72, Issue 6 422-426, Copyright © 1996 by Sexually Transmitted Infections [[Link](#)]
- (4) Ostergaard L., Agner T., Krarup E., et al. PCR for detection of Chlamydia trachomatis in endocervical, urethral, rectal, and pharyngeal swab samples obtained from patients attending an STD clinic. *Genitourinary Medicine*, Vol 73, Issue 6 493-497, Copyright © 1997 by Sexually Transmitted Infections. [[Link](#)]

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