MSHC
MELBOURNE SEXUAL HEALTH CENTRE

Bacterial vaginosis treatment guidelines

Also known as BV

Bacterial vaginosis is a bacterial infection caused by a change in the normal balance of vaginal bacteria.

Causes

Bacterial vaginosis (BV) is a common cause of abnormal vaginal discharge in women of reproductive age and affects 30% of women globally (1).-It is a polymicrobial syndrome (dysbiosis) characterised by a profound change in the vaginal microbiota from a lactobacilli dominant state to one with high diversity and quantities of anaerobic bacteria including *Gardnerella vaginalis*, *Atopobium vaginae*, *Mobiluncus spp*, *Prevotella spp*, and other BV-associated bacteria (BVAB). This vaginal dysbiosis is accompanied by a rise in vaginal pH, proteolytic enzymes and volatile amines, which produce the malodour commonly associated with BV.

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Epidemiological and microbiological data supports sexual transmission of BV. There is a strong association between acquisition of BV and sexual behaviours known to be associated with sexually transmitted infections (STIs), including young age of first sex, increased numbers of sex partners, exposure to new sex partners, penile-vaginal sex and lack of condom use (2).-BVAB are also present in the urethra and on the penile skin more often in male partners of women with BV than without, suggesting these bacteria may be exchanged during intercourse -(3-6). In women who have sex with women or couples where both people have a vagina, studies show very high concordance for BV within partnerships and an association with a range of sexual activities (7,8). In addition, post treatment recurrence of BV has been associated with exposure to an ongoing sex partner and lack of condom use for penile-vaginal sex-(9,10).

A recent randomised controlled trial-undertaken at Melbourne Sexual Health Centre (MSHC) of couples in a current male-female relationship has shown that treating male partners with combination oral and topical antibiotics, at the same time their female partner is receiving first-line antibiotic therapy for BV, significantly improves BV cure over 12 weeks-(11). Please see sexual partner treatment below.

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Clinical presentation

- Vaginal malodour and/or a thin white or greyish vaginal discharge
- Up to 50% of women may be asymptomatic-
- BV is more commonly detected with-copper intra-uterine device (IUD) use (12-13). The association between hormonal IUD use and BV is unclear.-
- BV is associated with increased risk of spontaneous abortion, premature labour, chorioamnionitis, postpartum endometritis and pelvic inflammatory disease (PID). An increased risk of PID has been reported following surgical termination of pregnancy (TOP), IUD insertion or other gynaecological instrumentation. Refer to PID treatment guidelines

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- BV is associated with a 2-4 fold increased risk of acquiring STIs including chlamydia, gonorrhoea, herpes simplex type 2 and HIV infection, and increases the risk of HIV transmission to male partners.-

Diagnosis

Test	Site/specimen	Comments
Amsel's criteria	Vaginal swab	A diagnosis is made if 3 or 4 of the following criteria are present: 1. Clinician observed abnormal vaginal discharge, which is thin, white or grey, often adherent, homogeneous appearance 2. Vaginal pH of ≥4.5 3. The presence of “clue cells” on a Gram stain or wet preparation of high vaginal secretions 4. Positive amine (whiff) test – malodour on examination, or with the addition of 10% KOH can be recorded as a positive whiff test
Nugent's criteria	Vaginal swab	A score of 7-10 is diagnostic of BV, and 4-6 is classified as intermediate flora Approximately 50% of women with intermediate flora by the Nugent method will have BV by the Amsel's method **At MSHC we recommend using both Amsel's and Nugent's methods for the diagnosis of BV**
Molecular testing	Vaginal swab	Identification of BV-related bacteria using a molecular test - often referred to as a nucleic acid amplification test (NAAT) or NAA Testing-

Notes-on routine screening before invasive upper genital tract procedures-

There is currently insufficient evidence to support the recommendation of routine screening for BV at the time of insertion of an intrauterine device or surgical termination of pregnancy to prevent PID or endometritis in asymptomatic women (16-18, 19-23). However it is appropriate to ask about symptoms and/or history of BV prior to the procedure and to offer testing if indicated, and treatment before the intervention if BV is detected.-

Management

Treatment of the index

Treatment is indicated in:-

- Symptomatic women-
- Women undergoing an invasive upper genital tract procedure such as termination of pregnancy or insertion of IUD, where feasible, to

reduce the risk of PID/endometritis. The benefit of this practice has not been established.

- Asymptomatic women requesting treatment-
- Male partner treatment has now been shown to improve BV cure (see sexual partner treatment below)

Condition	Recommended	Comments
Uncomplicated BV in women who are not pregnant	**Metronidazole 400mg PO, twice daily for 7 days** OR **Clindamycin 2% intravaginal cream 5g, nightly for 7 nights (not on PBS)** OR **Metronidazole gel 0.75%, one applicator (5g) intravaginally, nightly for 5 nights (not on PBS)**	Metronidazole can cause nausea. Patients should be advised to have their medication with food and to avoid drinking alcohol whilst on treatment and for 48 hours after completion.- Women should avoid-sexual contact or are recommended to use condoms consistently during treatment. However, intravaginal cream or gel may weaken latex condoms. Partner treatment can now be offered to women with male partners (see below). Douching and intravaginal cleaning practices have been associated with a non-optimal vaginal microbiota and should be avoided.-
Alternative management for uncomplicated BV in women who are not pregnant	**Clindamycin 300mg PO, twice daily for 7 days** OR **Metronidazole 2g, PO, stat*** -	There is currently insufficient evidence to recommend the use of intravaginal lactic acid or vaginal probiotics, however research efforts to determine the role of non-antibiotic or adjunctive regimens in BV treatment are ongoing. Studies have demonstrated improvements in clinical outcomes following the use of a specific *Lactobacillus*-containing probiotic that is yet to come on the market-(21-24).
Pregnant woman	The same treatment options for non-pregnant women can be used in pregnancy	Treatment is recommended in symptomatic pregnant women to alleviate symptoms. Two meta-analyses of observational studies reported no significant association between metronidazole exposure and congenital malformations (25). Metronidazole is category B2 but a meta-analysis has not demonstrated an association with teratogenic or mutagenic effects in neonates. Clindamycin is category A. Oral therapy has not been shown to be superior to topical vaginal therapy in pregnancy (26). Therefore, both the oral and topical regimens recommended in non-pregnant women can be used. Partner treatment can now be offered to women with male partners (see below).

Condition	Recommended	Comments
Recurrent BV	**Intravaginal metronidazole 0.75% gel 5g twice per week for 4 months** (27) OR **Intravaginal boric acid (seek specialist advice)**	BV recurrence is common with >50% of women experiencing post-treatment recurrence within 3-12 months. There are limited data available to guide treatment for highly recurrent BV,-although data now suggest that reinfection from partners is likely to contribute to these high rates of recurrence. Partner treatment should be offered to individuals in ongoing relationships (see below). Intravaginal boric acid regimens have also been used but have not shown sustained benefit. Boric acid can be accessed via compounding pharmacies. Seek specialist advice if required.

* stat treatments are associated with higher recurrence rates of BV (28)

Notes on BV management for IUD users-

Due to the increased risk of BV acquisition and recurrence associated with copper IUD usage:-

- If a patient using an IUD develops BV treat as recommended above AND
- If the patient experiences recurrent BV with a copper IUD consider switching to an alternative method or removal and re-treatment prior to re-insertion (29)-

Treatment of sexual partners

A recent randomised controlled trial that treated males with oral metronidazole and topical clindamycin cream twice daily for 7 days, at the same time the female partner received recommended therapy, significantly improved BV cure to 12 weeks (11).

Following the successful outcome of this RCT, MSHC now routinely offers concurrent partner treatment to male-female couples in ongoing relationships. Detailed information on the evidence for male partner treatment including the findings of the trial are available on our website. Specific information is available on this site for clinicians, for pharmacists and for consumers. Resources for clinical use and health education have been developed in parallel with feedback from partner treatment study participants. Further information on consumer experiences will be available soon.-

Condition	Recommended	Comments
Male partner treatment	**Metronidazole 400mg PO, twice daily for 7 days** AND **Clindamycin 2% topical cream, applied to the penile skin twice daily for 7 days (not on PBS)**	Couples should be advised to synchronise treatment where possible, and abstain from all sexual contact until both partners have completed treatment. If engaging in any sexual activity, use of barrier methods (condoms) is strongly recommended, however clindamycin cream can weaken latex for 72 hours after last dose. Please provide the medication instructions-and the-pharmacy letter-with the script.

The abbreviated example of partner treatment instructions can be used in your prescription:–

Oral metronidazole: Take one 400mg tablet twice daily for 7 days. Take with food.–

Dalacin – V Cream 2% (2% clindamycin phosphate vaginal cream): Squeeze a line of cream from the tip of your index finger to the first crease. Retract foreskin, if uncircumcised, and rub the cream over the penile head and into the groove below the head. Squeeze a 2nd line of cream onto your finger. Rub it over the full length of the penile shaft, front and back and down to the base of the penis. Repeat this twice daily for 7 days while taking the oral metronidazole tablets.-

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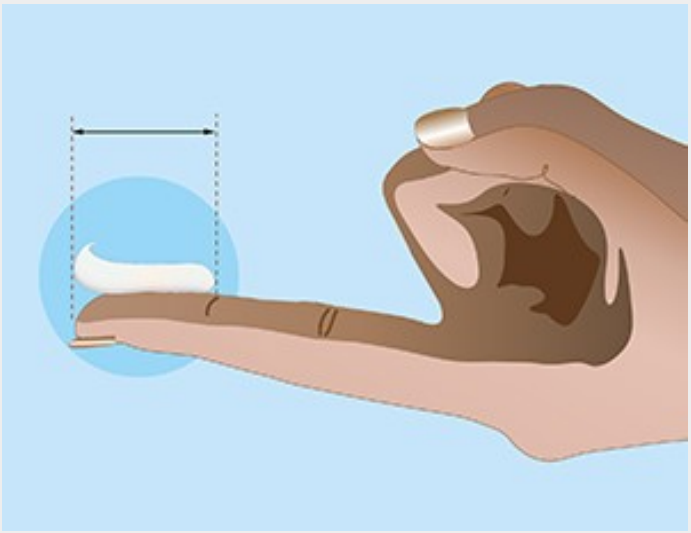

Image description: A line of cream measured from the fingertip to the first crease-

No trials of partner treatment for couples where both have a vagina have been conducted to inform female partner treatment. However, high concordance for BV is consistently reported within female-female partnerships. Testing of female partners should be offered in order to detect and treat BV in the partner. Where feasible, the alignment of treatment dates may reduce the risk of reinfection. -

MSHC is currently conducting a clinical trial of partner treatment in LGBTQIA+ couples to determine if partner treatment also improves BV cure in this community.-

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Notes on treating multiple partners-

Couples with additional partners may derive less benefit due to potential reintroduction of BV-associated bacteria from untreated individuals. Where appropriate, consider treating all sexual partners simultaneously to reduce the risk of reinfection.-

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