

BACTERIAL VAGINOSIS (BV)

Bacterial Vaginosis (BV) is the **most common cause of vaginal discharge** in women. BV by itself is not harmful, but it has been linked with increased risk of becoming infected with genital herpes, gonorrhea, chlamydia, and HIV/AIDS and spreading it. Other risks include a higher chance of preterm delivery, and infections after gynecological surgery (example: hysterectomy).

The cause is an **imbalance** between the **healthy bacteria**, called lactobacilli or acidophilus, and an overgrowth of the unhealthy bacteria called **anaerobic**. Why this happens is not known but risk factors include multiple or new sexual partner(s), douching, and cigarette smoking.

BV is somehow related to sexual intercourse. The American College of Obstetrician and Gynecologists calls it a SAD (**Sexually Associated Infection**), as it is much less common in women who do not have sexual relations, or who use condoms consistently.

Approximately **50 to 75 percent of women with BV have no symptoms**. Those with symptoms often notice an unpleasant, "**fishy smell**" that tends to be more manifest after sexual intercourse. A grey and thin vaginal discharge may also be present. Itching, pain during urination or sex, redness, and swelling are not common.

The **diagnosis** of BV is based upon a physical examination and **laboratory testing**. The physical examination involves a pelvic examination, and obtaining vaginal **swabs**. Bedside tests which measure the **pH** and the smell by adding KOH (**Whiff test**) can sometimes be useful.

Treatment of BV is often recommended. There are two prescription medications used for the treatment of BV: **metronidazole and clindamycin**. Both medications can be taken in **pill** form by mouth, or with a **gel or cream** that is inserted inside the **vagina**.

Metronidazole vaginal gel is a very effective treatment; it is applied inside the vagina at bedtime for five days. In the pill version, metronidazole is taken 500 mg twice daily for seven days. The choice of pill versus vaginal gel depends upon the woman's preference. In general, there are fewer side effects with the vaginal treatment. Side effects of oral metronidazole include a metallic taste, nausea, and vomiting. You should not drink alcohol while taking metronidazole due to the risk of a serious interaction, which can cause flushing, nausea, thirst, palpitations, chest pain, vertigo, and low blood pressure. **Clindamycin** is a **cream** that is inserted into the vagina at bedtime for seven days. Clindamycin cream should not be used with latex condoms due to the risk of condom breakage.

FOR RECURRENT BACTERIAL VAGINOSIS

Unfortunately, around **30-50%** of women who had bacterial vaginosis (BV) once, have **recurring** episodes. BV is not an STD in a direct sense, as men don't get it. Treating the male partner does not help in the vast majority of cases. **BV live in a 'biofilm'**, or a thin layer next to the vaginal wall, so the medicines may have difficulties getting close to it.

INTERVENTIONS THAT MAY DECREASE THE CHANCE OF GETTING BV INCLUDE:

- Avoiding vaginal douches, which destroy the healthy bacteria

- Limiting the number of sexual partners
- Using condoms
- Quitting smoking
- Cutting down sugars and alcohol
- Completing the entire course of treatment, even if the symptoms resolve after a few days
- If the man is circumcised, the chance of getting a relapse appears to be less.

CLASSICAL PRESCRIPTION TREATMENT FOR RECURRENT BV

The best results for recurrent BV are obtained by the so called “**long term suppressive therapy**” protocol, which involves the following steps:

1. Take **oral metronidazole**, 500 mg twice a day for 1 week. (Note: do not drink any alcohol).
2. Use **boric acid** capsule, 600 mg daily at night time for 3 weeks (Note: **NOT FOR ORAL INGESTION, KEEP THESE OUT OF REACH FROM CHILDREN**). May need to be compounded.
3. Exam within 3 days after the last capsule to confirm that BV is cleared. If there is no BV:
4. **Nidagel 0.75% (vaginal metronidazole)** twice a week for another **4-6 months**.

NEWER APPROACHES WITH PRESCRIPTION DRUGS

1. Take a standard 7-day treatment with **oral or vaginal metronidazole** (or vaginal clindamycin), followed by **Nidagel 0.75% (vaginal metronidazole)** twice a week for another **6 months**.
2. Take **boric acid** capsule, 600 mg every night for 3 weeks, followed by **Nidagel 0.75% (vaginal metronidazole)** twice a week for another **6 months**.
3. Single day oral **metronidazole** and single day oral **fluconazole once a month** for 6 months.
4. If sex is infrequent, take small dose of **metronidazole** (single pill) immediately afterwards (**intermittent use**).

OVER THE COUNTER TREATMENTS THAT MAY BE USEFUL

None of the natural treatments has been well studied or tested as to say which one is the best. It may require a trial and error approach. They probably work by changing the pH (or the so called acidification) of the vagina.

1. **Probiotics**: oral or vaginal administration of a healthy gut and vaginal bacteria called **lactobacilli (acidophilus)** could be useful. Attached is a list of products available in Canada. It may be worth trying it for 2-3 months.

INDICATIONS FOR VAGINAL HEALTH

Brand Name	Probiotic Strain(s)	Dosage Form	CFU per dose	No. of doses/day	Vulvovaginal candidiasis	Bacterial vaginosis
Fem-Dophilus®	<i>L. rhamnosus</i> GR-1 2.5B <i>L. reuteri</i> RC-14 2.5B	Oral capsule	5B/capsule	1 capsule	[15,16]	[17,18]
ProB™ (RePhresh ProB)	<i>L. rhamnosus</i> GR-1 2.5B <i>L. reuteri</i> RC-14 2.5B	Oral capsule	5B/capsule	1 capsule	[15,16]	[17,18]
Probiacac BV®	<i>L. acidophilus</i> A-212 0.4B <i>L. rhamnosus</i> A-119 6.8B <i>S. thermophilus</i> A-336 0.8B	Vaginal capsule	8B/capsule	1-2 capsules		[19]
Provacare™	<i>L. rhamnosus</i> Lcr35	Vaginal capsule	3.41B/capsule	2 capsules	[20]	[21-24]
Purfem™	<i>L. rhamnosus</i> PB01 1B <i>L. gasseri</i> EN-153471 (EB01) 1B	Vaginal ovule	2B/ovule	1 ovule		[25,26]
UltraFlora™ Women's	<i>L. reuteri</i> RC-14 1B <i>L. rhamnosus</i> GR-1 1B	Oral capsule	2B/capsule	2 capsules	[27]	[28,29]

2. Vitamin C (PREVEGYNE): a six-day treatment with this vaginal tablet preparation may help treat BV. Some women use it once a week afterwards to prevent relapses. **The dose is 250 mg.** Some patients just use the regular Vitamin C tablets for oral consumption as it is cheaper. If the 250 mg tablet is not available, cut the 500 mg tablet in half.

3. Carbon inserts (V-FRESH PLUS): these are vaginal inserts similar to tampons that can trap bacteria, fungi and viruses. They can be left inside the vagina for 8-12 hours, and then removed like a tampon. (10-day treatment). It is not to be used during menstruation.

4. Lactic acid gel (RELACTAGEL): these vaginal inserts can be used to treat BV (and likely yeast infections as well) for 7 nights, or to minimize the relapse, apply 2-3 nights after your period.

5. Boric Acid: this medication can be bought over the counter as well, and the dose is 300 – 600 mg vaginally for 2-3 weeks. **NOT TO BE TAKEN ORALLY.** It can also be used for yeast infections.

Please all of the above can be ordered online. I checked on amazon.ca on October 8, 2017.

I TESTED POSITIVE FOR BACTERIAL VAGINOSIS (BV) BUT NOTHING IS BOTHERING ME. WHAT DO I DO?

This is a common situation. Approximately 50 to 75 percent of women with BV have no symptoms. Treatment of asymptomatic BV is not mandatory since patients often spontaneously improve over a period of several months and any antibacterial therapy is often followed by symptomatic vaginal yeast infection. If you have an IUD, and get a discharge or irritation with BV, the strings may be partially responsible, and can be trimmed.

But there are reasons to treat asymptomatic bacterial vaginosis:

- Pregnant women at high risk for preterm delivery,
- Women undergoing surgical procedures such as abortion or hysterectomy,

- Prior to gynecological procedures such as IUD insertion and endometrial biopsy.

THE TEST WAS INCONCLUSIVE FOR BACTERIAL VAGINOSIS (BV) WHAT DO I DO?

As the bacteria that cause BV is part of the normal vaginal flora, sometimes the swabs will be reported as **'inconclusive'**. That means that there are few bacteria, and cell changes are minimal, not enough to meet the criteria for the full diagnosis. It could happen at the beginning or the end of a BV infection.

In women with symptoms, we have the option of treating it right away (which most women prefer), or wait a few weeks and see if it resolves by itself. In either case, a repeat test to check for resolution can be performed in 1-3 months.

Vaginal swabs, either carried out by the doctor, or self-administered (selfie) can be used. There is also a special test called 'whiff' that can be carried out at the bedside, followed by testing the pH and looking at the cells with a microscope. If we do this, I can then give you the results right away.

If you have no symptoms, we can just wait and see what happens over the next few weeks or months.

As you can see, if you finish reading this article, there are many different possibilities in terms of symptoms, diagnosis and treatment. Each patient is different, one shoe size doesn't always fit all.

Dr Roberto Leon