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## Patient education: Bacterial vaginosis (Beyond the Basics)

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### INTRODUCTION

Bacterial vaginosis (BV) is the most common cause of vaginal discharge in women. It can cause bothersome symptoms, and also increases the risk of acquiring serious sexually transmitted infections, such as HIV. It may be difficult to know if discharge is caused by BV or other common vaginal infections, thus a visit with a health care provider is recommended in most cases. (See ["Patient education: Vaginal discharge in adult women \(Beyond the Basics\)"](#).)

### BACTERIAL VAGINOSIS CAUSES

BV occurs when there is a change in the number and types of bacteria in the vagina. Lactobacilli are a type of bacteria that are normally found in the vagina. In women with BV, the number of lactobacilli is reduced. The reason for these changes is not known.

**Risk factors** — Risk factors for BV include multiple or new sexual partners, douching, and cigarette smoking. BV is now thought to be a sexually transmitted infection, although most

recurrences are not sexually related. BV can be transmitted by sex toys, oral-genital contact, and fingers. To reduce the risk of transmission, sex toys should be used with condoms, when possible, and cleaned after every use.

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## BACTERIAL VAGINOSIS SIGNS AND SYMPTOMS

Approximately 50 to 75 percent of women with BV have no symptoms. Those with symptoms often note an unpleasant, "fishy smelling" vaginal discharge that is more noticeable after sexual intercourse. Vaginal discharge that is off-white and thin may also be present.

Some patients have itching. Pain during urination or sex, redness, and swelling are not typical.

If you have concerns about excessive or foul-smelling vaginal discharge, abnormal bleeding, or vulvar irritation, see a health care provider. Self-treatment with over-the-counter products (eg, yeast creams, deodorants) is not recommended without a definite diagnosis.

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## BACTERIAL VAGINOSIS DIAGNOSIS

The diagnosis of BV is based upon a physical examination and laboratory testing. The physical examination usually includes a pelvic examination, which allows the health care provider to observe and test vaginal secretions. It can be difficult to know, without an examination and testing, if vaginal discharge is caused by BV or another vaginal infection. You should insist that your provider confirm the diagnosis with appropriate tests.

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## BACTERIAL VAGINOSIS COMPLICATIONS

BV itself is not harmful, although it has been associated with some health problems.

- Pregnant women with BV are at higher risk of preterm delivery. (See ['Bacterial vaginosis and pregnancy'](#) below.)
- Untreated BV in a woman who undergoes hysterectomy or abortion can lead to infection of the surgical site.
- BV increases the risk of becoming infected with and spreading HIV.
- BV increases the risk that a woman will become infected with genital herpes, gonorrhea, or chlamydia. (See ["Patient education: Genital herpes \(Beyond the Basics\)"](#) and ["Patient](#)

[education: Gonorrhea \(Beyond the Basics\)"](#) and "[Patient education: Chlamydia \(Beyond the Basics\)"](#).)

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## BACTERIAL VAGINOSIS TREATMENT

Treatment of BV is usually recommended. The two most common prescription medications used for the treatment of BV are [metronidazole](#) and [clindamycin](#). Both medications need to be used for multiple days and can be taken in pill form by mouth, or with a gel or cream that is inserted inside the vagina. Oral medication may be more convenient, but causes more side effects. A single-dose medication that is taken by mouth, [secnidazole](#), is also available; however, it is often more expensive and is not more effective than metronidazole or clindamycin.

If symptoms improve after treatment, a follow-up visit is not necessary.

**Metronidazole** — [Metronidazole](#) vaginal gel is one of the most effective treatments; it is applied inside the vagina at bedtime for five days. Metronidazole can also be taken in pill form, 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 a temporary lowered blood count. You should not drink alcohol while taking metronidazole pills due to the risk of a serious interaction, which can cause flushing, nausea, thirst, palpitations, chest pain, vertigo, and low blood pressure. Metronidazole pills also interact with [warfarin](#) (brand name: Jantoven), potentially increasing the risk of bleeding. The vaginal gel does not cause these side effects.

**Clindamycin** — [Clindamycin](#) is a cream that is inserted into the vagina at bedtime for seven days. A one-day vaginal clindamycin cream and three day vaginal ovule are also available. Clindamycin cream should not be used with latex condoms due to the risk of condom breakage.

[Clindamycin](#) can also be taken by mouth, 300 mg twice daily for seven days.

**Sexual partners** — Treating the sexual partner does not improve the woman's symptoms or decrease the risk of the infection coming back, hence treatment of male sexual partners is not recommended.

**Relapse and recurrent infection** — Approximately 30 percent of women who initially improve after treatment have a recurrence of BV symptoms within three months, and more than 50 percent have a recurrence of symptoms within 12 months. It is not clear why this occurs, although it may be related to bacteria that were not completely treated or lack of a normal level

of protective lactobacilli. The role of lactobacilli is discussed above. (See '[Bacterial vaginosis causes](#)' above.)

Relapse can be treated with a prolonged course of oral or vaginal [metronidazole](#) or [clindamycin](#) for seven days; the United States Center for Disease Control and Prevention suggests a treatment regimen different from the initial or previous treatment regimen (eg, oral treatment if vaginal treatment used previously).

If you've had more than three episodes of BV in the past 12 months, you may benefit from longer treatment. This may include vaginal [metronidazole](#) gel twice weekly for three to six months. [Clindamycin](#) (oral or vaginal) is not usually recommended as a preventive treatment. Probiotic therapy is of no value in preventing recurrence of BV.

**Bacterial vaginosis and pregnancy** — Pregnant women with BV are at increased risk of preterm birth. However, there is no benefit to testing and/or treating all pregnant women for BV unless the woman has symptoms of infection. Some experts recommend testing only pregnant women who have a history of a previous preterm delivery.

Pregnant women with symptoms of BV infection are usually treated. Oral treatment with seven days of [metronidazole](#) is preferred over vaginal treatments.

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## BACTERIAL VAGINOSIS PREVENTION

The best way to prevent BV is not known. However, a few basic recommendations can be made.

- Do not douche. Douching is the use of a solution to rinse the inside of the vagina. Some women douche to feel "clean," although there is no proven benefit of douching. The vagina is normally able to maintain a healthy balance of bacteria; douching can upset this balance and potentially flush harmful bacteria into the upper genital tracts (uterus, fallopian tubes).
- Limit the number of sexual partners. Women with multiple sexual partners are at higher risk of developing bacterial vaginosis and sexually transmitted infections.
- Finish the entire course of treatment for BV, even if the symptoms resolve after a few doses.
- Use of birth control pills may be helpful; however, use of condoms is advised for male partners of women with recurrent BV.

## SUMMARY

- Bacterial vaginosis (BV) can cause "fishy smelling" vaginal discharge, which may be worse after sex. Some women do not have this discharge.
- BV is considered by some experts to be a sexually transmitted infection. Sexual partners do not need to be treated since treatment of males is not effective for preventing infection of the female partner. Some experts recommend that male partners use condoms. Female partners should be treated with standard therapy.
- Do not treat yourself for abnormal vaginal discharge. A doctor or nurse should first perform an exam to determine the reason for the discharge.
- Several prescription medications are available to treat BV; some are vaginal gels or creams while others are pills that you take by mouth. Pills may be more convenient but usually cause side effects (nausea, metallic taste).
- Some women develop BV repeatedly. A treatment may be recommended to prevent infections. This includes a vaginal gel twice per week for three to six months.
- Pregnant women with BV infection should be treated. This usually includes pills that are taken by mouth.

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## WHERE TO GET MORE INFORMATION

Your health care provider is the best source of information for questions and concerns related to your medical problem.

This article will be updated as needed on our web site ([www.uptodate.com/patients](http://www.uptodate.com/patients)). Related topics for patients, as well as selected articles written for health care professionals, are also available. Some of the most relevant are listed below.

**Patient level information** — UpToDate offers two types of patient education materials.

**The Basics** — The Basics patient education pieces answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials.

[Patient education: Vulvovaginal yeast infection \(The Basics\)](#)

[Patient education: Bacterial vaginosis \(The Basics\)](#)

[Patient education: Vaginal discharge in women \(The Basics\)](#)

[Patient education: Probiotics \(The Basics\)](#)

**Beyond the Basics** — Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are best for patients who want in-depth information and are comfortable with some medical jargon.

[Patient education: Vaginal discharge in adult women \(Beyond the Basics\)](#)

[Patient education: Genital herpes \(Beyond the Basics\)](#)

[Patient education: Gonorrhea \(Beyond the Basics\)](#)

[Patient education: Chlamydia \(Beyond the Basics\)](#)

**Professional level information** — Professional level articles are designed to keep doctors and other health professionals up-to-date on the latest medical findings. These articles are thorough, long, and complex, and they contain multiple references to the research on which they are based. Professional level articles are best for people who are comfortable with a lot of medical terminology and who want to read the same materials their doctors are reading.

[Bacterial vaginosis: Clinical manifestations and diagnosis](#)

[Acute cervicitis](#)

[Desquamative inflammatory vaginitis](#)

[Approach to females with symptoms of vaginitis](#)

[Pelvic inflammatory disease: Pathogenesis, microbiology, and risk factors](#)

[Screening for sexually transmitted infections](#)

The following organizations also provide reliable health information.

- National Library of Medicine

[www.nlm.nih.gov/medlineplus/healthtopics.html](http://www.nlm.nih.gov/medlineplus/healthtopics.html)

- National Institute of Allergy and Infectious Diseases

[www.niaid.nih.gov/diseases-conditions/std-research](http://www.niaid.nih.gov/diseases-conditions/std-research)

- Centers for Disease Control and Prevention

[www.cdc.gov/STD/BV/default.htm](http://www.cdc.gov/STD/BV/default.htm)

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## Contributor Disclosures

**Jack D Sobel, MD** Nothing to disclose **Robert L Barbieri, MD** Nothing to disclose **Kristen Eckler, MD, FACOG** Nothing to disclose

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