

## BACTERIAL VAGINOSIS

### INTRODUCTION

Vaginosis is an infection of the vagina. Vaginitis is an inflammation of the vagina that may be due to vaginosis or other factors such as an allergy, irritant, or a decrease in the female hormone estrogen. Vaginitis is a very common condition, most frequently affecting women of child-bearing age. It has been reported by the Centers for Disease Control and Prevention (CDC) to affect over 21 million American women between the ages of 14 to 49 years. The condition can cause genital itching and burning and sometimes an abnormal vaginal discharge. When the external genitalia (vulva) are also inflamed, the condition may be referred to as vulvovaginitis. The most common terms used by the general public for vaginitis/vaginosis are "yeast infection" and "vaginal infection."

The vagina normally maintains a dynamic balance of normal flora – a mixture of "good" microorganisms that help protect the vagina, maintain its moderately acidic environment, and discourage the growth of disease-causing microorganisms. Lactobacilli are the most frequently encountered normal flora bacteria. A mixture of other microorganisms, such as corynebacteria, and some yeast may also be found.

A small amount of daily vaginal discharge is normal. This is usually clear or milky and varies in consistency and quantity during a woman's menstrual cycle. Anything that disrupts the balance of normal flora and/or that irritates the tissues of the vagina or vulva can potentially cause vaginitis. Vaginal symptoms such as abnormal discharge, unpleasant odor, itching, and burning are common reasons for gynecologic consultation and typically lead to a diagnosis of bacterial vaginosis (BV).

### TREATMENT

There are several topical intravaginal



Treatments (creams or suppositories placed inside the vagina) available for bacterial vaginosis and candidiasis, as well as oral treatments for bacterial vaginosis, candidiasis, and trichomoniasis. There are several different timing and dosing options available.

### PREVENTION

It is not always possible to prevent vaginosis or vaginitis, but women can take steps to reduce the likelihood and reduce recurrence. These may include:

- Avoid douching and/or frequent baths.
- Avoid feminine hygiene products, perfumed soaps, and other potential chemical irritants.
- Practice safe sex.
- Practice good hygiene.

### TRANSMISSION

- Antibiotic use (can cause a loss of "good" bacteria)
- Frequent douching (can cause irritation and/or loss of normal flora)
- Multiple sex partners and/or a new sex partner
- Intrauterine device (IUD) use
- Oral contraceptives
- Diseases that affect the immune system.

**INDICATIONS FOR TESTING:** The diagnostic process begins with general physical and pelvic exams. A medical history will discuss symptoms, symptom duration and frequency, prescribed medications (such as antibiotics or oral contraceptives), and any over-the-counter treatments the woman may have tried. The doctor may ask the woman about personal habits (douching, use of feminine products or scented soaps, tight clothing, etc.) and sexual practices.

**CAUSE:** Bacterial vaginosis, caused by a complex change in vaginal flora with a decrease in the number of normal lactobacilli and an increase in other bacteria, such as *Gardnerella vaginalis* and *Mycoplasma hominis*, and less commonly *Atopobium vaginae*, *Clostridiales*, *Megasphaera* spp. and *Prevotella*.

**PATHOGENS TESTED:** *Atopobium Vaginae*, BVAB2, *Gardnerella Vaginalis*, (*Lactobacillus*: *crispatus*, *gasseri*, *iners*, *jensenii*), *Megasphaera* 1&2, (*Mobiluncus curtisii* & *mulieris*), *Prevotella bivia*, *Mycoplasma hominis*, *Ureaplasma urealyticum*

**METHODOLOGY:** Retrogen carries out real-time PCR on DNA extracted from vaginal swabs to screen for microorganisms known to be associated with BV. This quantitative approach uses TaqMan chemistry from Life Technologies to detect 16S rRNA gene sequences from pathogenic bacterial species.

**ANALYTICAL SENSITIVITY AND SPECIFICITY:** 99 percent.

#### **ORDERING**

Test ID: #8002

Turn-around Time: 24-48 hours

Preferred Specimen: Vaginal swab.

[Click Here for Specimen Collection and Shipping](#)

#### **BILLING**

CPT Codes: 87798 & 87511

Billing Information: [View Billing Information](#)

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#### **WEB RESOURCES**

Mayo Clinic Staff (Updated 2012 February 25). Vagina: What's normal, what's not.

<http://www.mayoclinic.com/health/vagina/MY01913/METHOD=print> through <http://www.mayoclinic.com>. Accessed March 2013.

Gore, H. (Updated 2011 October 27). Vaginitis. <http://emedicine.medscape.com/article/257141-overview> through <http://emedicine.medscape.com>.

Samra-Latif, O. (Updated 2012 January 13). Vulvovaginitis. <http://emedicine.medscape.com/article/270872-overview> through <http://emedicine.medscape.com>. Accessed March 2013.

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