

# YEAST INFECTIONS

Yeast (candida) is **considered part of the normal vaginal flora**, but an overgrowth of the organism and infiltration of superficial epithelial cells can result in a vaginal infection.

Although a large proportion of women do not feel anything wrong (asymptomatic), the most common symptoms include **vulvar burning, soreness, and irritation** and sometimes pain during urination and during intercourse. Often there is a white, thick, adherent, and clumpy (**curd-like or cottage cheese-like**) **vaginal discharge** with no or minimal odor.

The vulva and vagina appear red, and vulvar excoriation and fissures may be present. The diagnosis is best made by finding candida on a microscopy slide or a vaginal swab.

**Self-medication with over the counter medications is acceptable after 1 or perhaps 2 episodes of a suspected yeast infection.** If you are not better quickly, then you should be seen by a health care provider. Other vaginal infections can cause a discharge, and other conditions can cause itchiness. It is important to rule them out. This is usually achieved with an exam and vaginal swabs.

**Treatment is indicated to relieve symptoms.** The majority of infections are due to the strain called **candida albicans**, which responds well to the regular over the counter medications. Oral and topical creams drugs achieve comparable clinical cure rates, which are in excess of 80 percent. The best treatment is a single dose of oral fluconazole 150 mg (CanesOral) for treatment of uncomplicated infections. More intense and repetitive infections require longer treatments.

The second most common strain is called **candida glabrata**, which responds better to boric acid or nystatin. Please note that **boric acid can be very toxic in children** if ingested by mouth, so it should be stored securely. Compounding pharmacies such as Lakeside Pharmacy in Kelowna can prepare the boric acid for you.

**There are a number of factors that predispose some women to develop symptoms include:**

- poorly controlled diabetes,
- taking antibiotics,
- urinary incontinence,
- increased estrogen levels, such as in the birth control pills,
- pregnancy,
- estrogen therapy in menopausal women,
- immunosuppressed patients, if taking glucocorticoids or immunosuppressive drugs,
- patients with human immunodeficiency virus (HIV) infection,
- using vaginal sponges and diaphragms.

Yeast infections are not traditionally considered a sexually transmitted disease (STD) since it occurs in celibate women and since candida species are considered part of the normal vaginal flora. However, this does not mean that sexual transmission of candida does not occur or that vaginal infections are not associated with sexual activity. For example, an increased frequency of vulvovaginal candidiasis has been reported at the time most women begin regular sexual

activity. In addition, partners of infected women are four times more likely to be colonized than partners of uninfected women, and colonization is often the same strain in both partners. Although sexual transmission of candida species can occur, most experts do not recommend treatment of sexual partners since sexual activity is not a significant cause of infection or reinfection. However, in woman with recurrent vaginal infections, the question of treating the male partner remains controversial.

## **I HAVE A POSITIVE YEAST TEST BUT NOTHING IS BOTHERING ME. WHAT DO I DO?**

**It is not harmful to have a positive yeast on a vaginal swab.** 10-20% of women during their reproductive age will harbor yeasts (also called candida) in their vagina, often without knowing it. Usually the yeasts are balanced with healthy vaginal bacteria that are protecting against infections (lactobacilli).

There are certain situations where an imbalance will develop, most commonly if you need to take antibiotics for an infection, or start taking the birth control pill, as they may reduce the number of healthy bacteria. If you need to take antibiotics, you could take a single dose of Fluconazole (Diflucan, CanesOral) at the beginning and end of the antibiotic treatment, to prevent the yeast from overgrowing and causing symptoms.

## **RECCURENT YEAST INFECTIONS**

Recurrent yeast infections are defined as having **four or more** episodes of **symptomatic** vaginal yeast infections in a 12-month period. The treatment of women with recurrent infections can be challenging and frustrating for the patient and the doctor alike.

**Interventions that may decrease the chance of getting recurrent yeast infections include:**

- Good blood sugar control in diabetic women,
- Stopping the birth control pill, or switching to a lower estrogen dose, or to the IUD,
- Avoidance of panty liners, pantyhose, cranberry juice and sexual lubricants,
- Cutting down sugars and alcohol,
- Rarely, if a man has balanitis, treatment of the partner may help.

## **CLASSICAL PRESCRIPTION TREATMENT FOR RECURRENT YEAST INFECTIONS**

The best results are obtained by the so called “**long term suppressive therapy**” protocol, which involves taking **fluconazole** (Diflucan, CanesOral) **150 mg every 72 hours for three doses**, followed by maintenance **fluconazole** therapy **once per week for six months**. **Clotrimazole** 200 mg (**Canesten 3**) vaginally twice a week is another alternative. Sometimes fluconazole treatment can be extended to 1 year or even longer. Fluconazole is a very safe medication, and laboratory monitoring is not necessary. It works the best for the most common subtype of yeast infections called candida **albicans**.

If the episodes of yeast vaginitis are infrequent, then treat each recurrent episode with Fluconazole 150 (single dose). In women who have bacterial vaginosis and yeast infections, a single day oral **metronidazole (2 g)** and single day oral **fluconazole (150 mg)** once a month for 6 months has shown some success.

If you need to take antibiotics, you could take a single dose of Diflucan at the beginning and end of the treatment, to prevent the yeast from overgrowing and causing symptoms.

### **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 of the vagina.

1. **Probiotics:** oral or vaginal administration of a healthy gut and vaginal bacteria called **lactobacilli (probiotics)** might be useful. 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
<b>Fem-Dophilus®</b>	<i>L. rhamnosus</i> GR-1 2.5B <i>L. reuteri</i> RC-14 2.5B	Oral capsule	5B/capsule	1 capsule	[10,16]	[10,16]
<b>ProB™</b> (RePhresh ProB)	<i>L. rhamnosus</i> GR-1 2.5B <i>L. reuteri</i> RC-14 2.5B	Oral capsule	5B/capsule	1 capsule	[16,16]	[10,16]
<b>Probiacac BV®</b>	<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		[10]
<b>Provacare™</b>	<i>L. rhamnosus</i> Lcr35	Vaginal capsule	3.41B/capsule	2 capsules	[2]	[10,14]
<b>Purifem™</b>	<i>L. rhamnosus</i> PB01 1B <i>L. gasseri</i> EN-153471 (EB01) 1B	Vaginal ovule	2B/ovule	1 ovule		[10,16]
<b>UltraFlora™ Women's</b>	<i>L. reuteri</i> RC-14 1B <i>L. rhamnosus</i> GR-1 1B	Oral capsule	2B/capsule	2 capsules	[2]	[10,12]

2. **Vitamin C (PREVEGYNE):** a six-day treatment with this vaginal tablet preparation may help treat yeasts. Some women use it once a week afterwards to prevent relapses. The dose is 250 mg. Some patients just use the regular Vitamin C tablet for oral consumption as it is cheaper. If you can't get the 250 mg tablet, cut the 500 mg into two.

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 yeast infections 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 30, 2017.

*Dr Roberto Leon*