



Vaginal thrush: over-the-counter management in the pharmacy

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Introduction

Vaginal thrush is an infection caused by the local overgrowth of *Candida* organisms.¹⁻³ These fungi/yeasts live in the gastrointestinal tract and sometimes the vagina. Normally, the presence of *Candida* causes no symptoms. However, when there are changes in the environment of the gastrointestinal tract and vagina (which may be caused by medicines, injury, or stress to the immune system), *Candida* may overgrow and cause vaginal thrush.⁴

Candida albicans is the most common type of fungus to cause thrush. Vaginal thrush caused by other types of *Candida* species may be more difficult to treat.⁵ Vaginal thrush is more common in women of reproductive age. The incidence is low before puberty and in postmenopausal women.^{1,4} Vaginal yeast infections are not sexually transmitted infections. They can occur in women who have never been sexually active, but are more common in women who are sexually active.^{1,4} However, it is possible for men to develop skin irritation on the penis from a yeast infection after sexual intercourse with an infected partner. Treatment of male sexual partners is not considered necessary unless the man develops symptoms.⁶

Predisposing factors

In most women, there is no underlying health problem that leads to a yeast infection. There are several risk factors that may increase the chances of developing an infection.⁴

Lifestyle

Behavioural factors may predispose a woman to vaginal thrush. *Candida* thrives in warm, moist conditions. The risk of developing thrush might be increased by wearing tight-fitting, non-adsorbent clothing that occludes the genital area e.g. wearing tight-fitting jeans or nylon underwear.¹

Medical history

Diabetes mellitus, pregnancy and treatment with broad-spectrum antibiotics are the most common predisposing factors.¹ Women with diabetes are at higher risk for yeast infections, especially if blood sugar is not well controlled. Vaginal discharge becomes more noticeable during pregnancy, although yeast infection is not always the cause. Antibiotic use causes an imbalance in natural vaginal flora.⁵ Most antibiotics kill a wide variety of bacteria, including those that normally live in the vagina. These bacteria protect the vagina from the overgrowth of yeast.⁴ Some women are prone to yeast infections while taking antibiotics.^{4,6}

Other potential risk factors for developing vaginal thrush include¹⁻⁵:

- Higher dose combined oral contraceptives
- General disability – e.g. chronic malnutrition and illness
- Oestrogen-based hormonal replacement therapy
- Iron-deficiency anaemia
- Use of a diaphragm and spermicide or an intrauterine device
- Immunosuppression – immunity suppressed by drugs (such as corticosteroids or chemotherapy drugs) or impaired by a disorder (such as AIDS)
- Other chronic skin conditions e.g. psoriasis

Symptoms of vaginal thrush

Symptoms may range from mild to moderate, and include¹⁻⁶:

- Intense itching or irritation of the vagina or genital area
- Vaginal and vulval discomfort such as pain and soreness
- A burning sensation or pain, especially during intercourse or while urinating

- Reddened and swollen vulvar and vaginal tissues, with excoriations and fissures in severe cases
- Vaginal discharge – some women have no abnormal vaginal discharge. Others have an odourless, white clumpy (curd-like) or watery vaginal discharge.

Treatment for vaginal thrush

Most cases (80–90%) of vaginal thrush are uncomplicated, infrequent infections and may be initially treated with over-the-counter creams which are applied to the affected area, or pessaries which are inserted into the vagina.^{1,6} Oral single-dose therapy is a prescription-only option.^{1,2}

Goals of therapy are to relieve symptoms, eradicate the infection and to re-establish normal vaginal flora. The treatment of vaginal thrush is determined by the severity and frequency of symptoms.⁷ A single course of drug therapy is effective in the majority of cases, although women who experience persistent or recurrent infections may need long-term therapy or higher doses of medication.¹

Table 1. Over-the-counter treatments for mild to moderate symptoms and infrequent episodes of vaginal thrush

Short-course vaginal therapy:

Antifungal creams or vaginal pessaries

• Imidazoles

All imidazoles (“azole”) antifungal creams or pessaries, such as clotrimazole or miconazole are considered equally effective and have similar overall cure rates.¹ These are inserted inside the vagina with a special applicator and are used for one to six days, depending on the product.^{2,3} It is important to complete the full course of treatment, even if the symptoms have resolved.¹

• Nystatin vaginal cream

Nystatin vaginal cream is not as effective as the imidazoles but is better tolerated.

It requires a 14-day course and is more effective against non-albicans species e.g. *C. glabrata* and is best reserved for recurrent infections or in patients who have a local reaction to an azole.¹

- Vaginal creams and pessaries are best used at night, just before going to bed.^{1,4}
- Occasionally, a second course of treatment is required.³
- In the case of administration of a vaginal preparation, the patient should be told to lie on her back with knees bent. Then gently insert the plastic applicator into the vagina and push the plunger to insert the medication.¹
- Oils in these creams and ointments may weaken latex-based condoms (but not diaphragms), so women should not rely on condoms for birth control while undergoing treatment.²

Oral antifungals

Fluconazole and itraconazole

Oral (150 mg as a single dose) fluconazole or two doses of itraconazole (200 mg twice daily for one day) are prescription-only antifungal medicines for treating vaginal thrush. They may be considered if vaginal antifungal therapy was poorly tolerated or if oral therapy is preferred.^{1,6} The onset of symptom relief is not immediate. Some relief may be expected within a day and complete relief in two days.¹ It may be used in conjunction with a topical cream to provide more symptom relief.¹ A single dose of fluconazole is as effective as the creams and ointments.² Most women only need one course of treatment, although women with more complicated infections

(such as those with underlying medical problems, recurrent yeast infections, or severe signs and symptoms) may require a second dose 72 hours (three days) after the first dose.^{4,7}

Recurrent vaginal infections

Between five and eight percent of women have recurrent yeast infections, defined as four or more infections per year.⁴ Women with recurrent symptoms are usually given a longer course of treatment. This might involve several doses of fluconazole taken a few days apart, followed by weekly doses for the next six months.⁴

There is no evidence that eating yoghurt or other “probiotic” products containing live *Lactobacillus acidophilus*, or applying these products to the vagina, is of any benefit in women with recurrent vaginal yeast infections.^{1,4}

Prevention of vaginal thrush

To reduce the risk of developing vaginal thrush, it is best to avoid^{2,3,5,6}:

- Using soap to wash the genital area. Soap substitutes such as sorbolene (with or without glycerine) may be used. It is recommended to clean the genital area from front to back.
- Douching, which removes some of the normal bacteria in the vagina that protect against infection.
- Wearing tight-fitting pants and synthetic underwear.
- Using perfumed toilet paper and scented feminine products, including perfumed sprays, bubble bath, tampons and pads.
- Hot tubs and very hot baths.
- Staying in damp or wet clothes, such as workout attire and swimsuits, for long periods of time.

Conclusion

It is estimated that 75% of women will have at least one vaginal yeast infection in her lifetime. Many women who have had vaginal thrush before and are able to recognise the same symptoms, may be treated with over-the-counter vaginal antifungal products. Women presenting with symptoms for the first time and those with recurrent infections should be referred to the doctor.

References

1. Australian Pharmaceutical Formulary and Handbook (APF22). The everyday guide to pharmacy practice. 22nd Ed. 2012. Pharmaceutical Society of Australia. Vaginal Thrush. Pages 546-549.
2. Goje O. Vaginal Yeast Infection (Candidiasis). Last updated: May 2018. c2019. Available from: <https://www.msmanuals.com/en-au/home/women-s-health-issues/vaginal-infections-and-pelvic-inflammatory-disease/vaginal-yeast-infection-candidiasis>
3. Better health channel. Victoria State Government. Vaginal thrush. c2018. [Accessed: 5/08/2019]. Available from: <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/vaginal-thrush>
4. Sobel JD. Patient education: Vaginal yeast infection (Beyond the Basics). Last updated: Feb 07, 2019. c2019. Available from: <https://www.uptodate.com/contents/vaginal-yeast-infection-beyond-the-basics>
5. Yeast infection (vaginal). Mayo Clinic. c2019. [Accessed: 13/08/19]. Available from: <https://www.mayoclinic.org/diseases-conditions/yeast-infection/symptoms-causes/syc-20378999>
6. Stoppler MC. Vaginal yeast infection. c2019. [Accessed: 13/08/19]. Available from: https://www.medicinenet.com/yeast_infection_in_women_and_men/article.htm
7. Yeast infection (vaginal). Mayo Clinic. c2019. [Accessed: 13/08/19.] Available from: <https://www.mayoclinic.org/diseases-conditions/yeast-infection/diagnosis-treatment/drc-20379004>