

## Patient information from the BMJ Group

# Thrush, vagina

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## Thrush, vagina

Thrush is very common. You get a discharge from your vagina and you may also feel itchy and sore. With treatment, thrush is usually easy to get rid of. But some women find the infection keeps coming back.

We've brought together the best research about thrush and weighed up the evidence about how to treat it. You can use our information to talk to your doctor and decide which treatments are best for you.

## What is thrush?

Thrush can feel uncomfortable. You get a discharge from your vagina that is usually thick and white (like cottage cheese). You'll probably feel itchy and sore, and the area outside your vagina will probably be affected too.



In the majority of women, thrush is not serious.

In most women, thrush is caused by a type of yeast known as *Candida albicans*.<sup>[1] [2]</sup> Yeast is a type of fungus. Candida is usually harmless and lives naturally in your body. You can have this yeast in your vagina without getting any symptoms.

But sometimes too much of this yeast can grow. This makes your vagina inflamed and causes thrush. The vagina is the most common part of the body for Candida infection.

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Candida likes warm, moist, airless conditions best. So wearing loose, cotton underclothes and stockings rather than tights may help prevent thrush, although there hasn't been research on this.

You can also get thrush on other areas of the body, such as your groin and inside your mouth. Babies can get thrush in their nappy area.

Your vagina also contains mucus and 'friendly' bacteria that help keep a healthy balance and protect you from infections like Candida. But some things can upset these natural defences and make you more likely to get thrush. You are more likely to get yeast infections if: <sup>[3]</sup> <sup>[4]</sup> <sup>[5]</sup>

- You are pregnant. Pregnancy changes your **hormone** levels, and this can make you more prone to thrush
- You have **diabetes**
- You take **antibiotics** for another infection. Antibiotics are medicines that kill bacteria. Sometimes they kill off the 'friendly' bacteria that help prevent thrush
- Your **immune system** has been affected by illness or by other medicines you are taking. This isn't a common cause of thrush. Your immune system normally protects you against infection
- You become sexually active.

We don't really know if your chances of getting thrush increase if you use certain types of contraceptives, such as the contraceptive pill or coil (intrauterine device, or IUD for short), or a diaphragm with spermicide. Different studies say different things. <sup>[1]</sup> <sup>[2]</sup> You might want to ask your GP about trying a different contraceptive if your thrush keeps coming back. But you shouldn't stop taking the contraceptive pill if you get thrush.

Doctors call thrush **vulvovaginal candidiasis**. Some women find their thrush keeps coming back. If you have bouts of thrush four or more times a year, doctors call this **recurrent candidiasis**.

### Can I get thrush from my sex partner?

We know that your risk of getting thrush goes up around the time you start having sex. Even so, there's no clear evidence that this infection is passed between partners during sex. <sup>[1]</sup> <sup>[2]</sup> Doctors don't consider it a **sexually transmitted infection**.

A few men get symptoms such as a rash on their penis and itchiness after sex with a woman who has symptoms of thrush. Doctors call this **balanitis**. If your partner gets this, he should seek treatment.

### Thrush and other conditions

In the vast majority of women, thrush is not serious. But thrush that doesn't go away even with treatment, or keeps coming back, may be an early sign of **HIV** (human immunodeficiency virus) infection. People with HIV or **AIDS** (acquired immune deficiency syndrome) may also get this infection in the mouth, on the skin, and in other areas.

Yeast infections may also be an early sign for diabetes or cancer.

Sometimes this infection can be caused by other types of *Candida* yeast, such as *Candida glabrata*, but this is far less common.<sup>[6]</sup> It may be more common in women with diabetes.<sup>[7]</sup>

### What are the symptoms of thrush?

The most common symptom of thrush is a discharge from your vagina.

This is usually thick and white (a bit like cottage cheese). But some women get a discharge that is watery.<sup>[8]</sup>

Your symptoms may be mild and not bother you. Or you may find your symptoms cause you a lot of discomfort and keep coming back.

The area outside your vagina may also feel sore and itchy. The skin might be red and cause you discomfort. You may find it hurts or burns when you pass urine or have sex.

A lot of women feel they can diagnose and treat thrush themselves, especially if they've had it before. But research has shown that 1 in 2 women who diagnose themselves as having thrush do not actually have it.<sup>[9]</sup>

If you have symptoms for the first time, or if you are unsure whether your symptoms are caused by thrush, it's best to visit your doctor. He or she will be able to find out if you have thrush.

Other **infections** can cause similar symptoms to thrush. But you need different treatments for these other infections. So it's important for your doctor to find out what is causing your symptoms.

Your doctor will want to examine your vagina. He or she can also order a test to find out what is causing your vaginal infection. Your doctor or nurse may take a swab of discharge from your vagina to be sent to the laboratory.

If your symptoms keep coming back, it's important to go back to the doctor to check that the symptoms are caused by thrush. Some women get symptoms returning for other reasons, such as an **allergy**. So it's important you get the right diagnosis.<sup>[10]</sup>

### How common is thrush?

Thrush is very common, but it's difficult to say exactly how many women get it.

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One study found more than 7 in 10 women say they have had thrush at some time in their lives. <sup>[11]</sup>

Thrush is the second most common cause of an **inflamed** vagina (vaginitis). The most common cause is bacterial vaginosis. This is an **infection** caused by **bacteria**. <sup>[12]</sup>

Thrush is most common in women in their 20s, 30s, and 40s. It is very rare for anyone to get thrush before **puberty**. There haven't been studies on how common thrush is in women at or after the **menopause**. <sup>[11]</sup>

It's also common to get the symptoms back, although they're not always caused by thrush.

### What treatments work for thrush?

Treatments for thrush usually work well. But some women have thrush that keeps returning, and this can be more difficult to treat.

- The medicines for thrush are called antifungals, and most women find they get rid of the infection.
- You can use either creams or pessaries in your vagina, or you can take medicines by mouth.
- These treatments all work equally well, but medicines taken by mouth are more likely to have side effects.
- If your thrush keeps coming back, your doctor might prescribe a longer course of treatment.
- You can try natural remedies for thrush, such as yoghurt. But there hasn't been enough research to say if they work.
- Many of the studies we found were small and had problems, so they might not be reliable.

We've looked closely at the research and ranked the treatments into categories, according to whether they work.

### Treatment Group 1

#### Treatments for thrush

##### Treatments that work

- [Vaginal pessaries or creams with imidazoles](#)
- [Fluconazole tablets](#)

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- [Itraconazole tablets](#)

### Treatments that need further study

- [Tea tree oil](#)
- [Yoghurt containing Lactobacillus acidophilus](#)
- [Garlic](#)
- [Douching](#)

### Treatments that are unlikely to work

- [Treating a male sex partner](#)

## What will happen to me?

Thrush usually clears up with the right treatment.

There hasn't been much research on what happens if you don't have treatment. But doctors say thrush often goes away on its own.

If you don't get treated, thrush can cause you discomfort, such as pain when you urinate or have sex. <sup>[13]</sup>

Thrush isn't serious. It doesn't cause any long-term damage to your vagina or spread to your womb. If you're pregnant and have thrush, your baby won't be harmed.

If you have symptoms of thrush, your male sex partner may get symptoms like itching and rash. But this isn't very common.

Some women find thrush more difficult to get rid of completely than other women, or their thrush may be more likely to come back again after treatment. If you have thrush four or more times a year, doctors say you have **recurrent candidiasis**.

It can be distressing to get repeated bouts of thrush. Some women get depressed and also have problems with sex. <sup>[14]</sup> If you have symptoms that keep coming back, it's important to get them diagnosed and treated properly. <sup>[15]</sup>

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## Treatments:

### Vaginal pessaries or creams with imidazoles

In this section

You can treat your thrush with a pessary or cream you put high up in your vagina. These types of treatments often contain a medicine called an **imidazole**. One brand name is

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Canesten. We found three studies (called randomised controlled trials) that showed treatments with an imidazole clear up thrush in 8 in 10 women after one to five weeks. <sup>[16]</sup> <sup>[17]</sup>

Putting pessaries and creams in your vagina works just as well as taking antifungal medicines by mouth. <sup>[18]</sup> But medicines you swallow may give you more side effects.

You can get some types of imidazole pessaries and creams over the counter at a pharmacy, while others need to be prescribed by your doctor. Depending on which type you get, you normally have to use them for between three days and 14 days. <sup>[19]</sup>

There is one pessary, called clotrimazole, which you need to insert only for one day. Research shows that shorter and longer courses of treatment work equally well. <sup>[16]</sup>

You can get combination packs containing pessaries to put inside your vagina and a cream to treat irritation on the skin around your vagina. You put the pessaries in at night. You can also use them during your period.

Here are the names (and brand names) of some of the imidazole pessaries and creams available:

- Clotrimazole (Canesten)
- Econazole (Ecostatin)
- Miconazole (Gyno-Daktarin).

Studies show that all these medicines work equally well. <sup>[16]</sup>

The most common side effect is irritation in the vagina. But most women who use these medicines don't get side effects. <sup>[16]</sup> <sup>[17]</sup>

There is a chance that creams and pessaries you put into your vagina can damage latex condoms or diaphragms. <sup>[20]</sup> You may want to change the kind of contraception you use to avoid getting pregnant.

These treatments are safe if you are pregnant or breastfeeding. <sup>[19]</sup> But it's best to check with your doctor before treating yourself if you're pregnant.

If you have repeated bouts of thrush (four or more each year), your doctor may suggest that you use creams or pessaries regularly each month to stop the thrush coming back. <sup>[19]</sup> But there's not enough research to show if this works any better than using a pessary only when you get symptoms. <sup>[21]</sup> <sup>[22]</sup> Most women in the studies preferred to use creams and pessaries only when they had symptoms.

### Fluconazole tablets

In this section

Fluconazole (brand name Canesten Oral Capsule) is an antifungal medicine you take by mouth. You normally take two tablets. Some women prefer taking a tablet to using antifungal pessaries and creams. Both methods work equally well, but taking tablets has more side effects. <sup>[18]</sup>

There's quite a lot of evidence to show that fluconazole can clear up thrush. We found seven studies, called **randomised controlled trials**, which found that fluconazole worked well for about 8 in 10 women. <sup>[23]</sup>

You can ask your doctor for a prescription or buy a single dose at your pharmacy.

You're more likely to have side effects such as headache and nausea if you take a fluconazole tablet. <sup>[24]</sup> <sup>[25]</sup> One study found that slightly more than 1 in 10 women taking this medicine got a headache and fewer than 1 in 10 got pain or nausea. <sup>[24]</sup> But women using creams and pessaries have more problems with skin irritation and discharge from their vaginas.

If you have repeated bouts of thrush (four or more each year) your doctor might prescribe a longer course of fluconazole. This is known as **maintenance treatment** and it is likely to work. One large study found that 9 in 10 women who took a fluconazole tablet each week for six months no longer had thrush, compared with one-third of the women who took a dummy treatment (a placebo). <sup>[26]</sup> But many women got thrush again as soon as they stopped their maintenance treatment.

And 3 in 100 people taking fluconazole dropped out of the study because of side effects, including headache.

You shouldn't have this treatment if you are pregnant because it may not be safe for your unborn baby. <sup>[19]</sup> <sup>[27]</sup>

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### Itraconazole tablets

In this section

Itraconazole (brand name Sporanox) is another antifungal medicine you take by mouth. You normally take a single dose. Some women prefer taking a tablet by mouth to using antifungal pessaries and creams. Both methods work about the same, but taking tablets by mouth has more side effects. <sup>[23]</sup>

One study (called a **randomised controlled trial**) found that itraconazole gets rid of thrush in about 8 in 10 women. <sup>[28]</sup> Two studies found itraconazole worked as well as another antifungal drug called **fluconazole**. <sup>[29]</sup> <sup>[30]</sup> However, fluconazole is used more commonly than itraconazole to treat thrush.

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Itraconazole can have side effects. In one study one-third of the women taking itraconazole had side effects such as nausea, headache, dizziness, and bloating.<sup>[28]</sup> You shouldn't use this treatment if you are pregnant or if you have liver disease.

If you have repeated bouts of thrush (four or more each year), your doctor might prescribe a longer course of itraconazole. This is known as **maintenance treatment**. One study (a randomised controlled trial) found that two-thirds of women who took an itraconazole tablet each month for six months got rid of their thrush.<sup>[31]</sup> But the women were just as likely to get thrush again once treatment had ended.

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### Tea tree oil

In this section

Some women try natural remedies for thrush, including tampons dipped in tea tree oil. There hasn't been enough research to tell us if this works. But this essential oil can cause skin irritation and a severe rash in some people.<sup>[32]</sup> One report has linked tea tree oil to a dangerous allergic reaction.<sup>[33]</sup>

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### Yoghurt containing *Lactobacillus acidophilus*

In this section

Some women have tried using yoghurt in their vagina as a treatment for thrush. They think it might help restore the natural defences in the vagina against infection. *Lactobacillus acidophilus* is a type of 'friendly' bacteria that lives in the gut and is found in some yoghurt.

But there's no research about whether putting yoghurt into your vagina works. And there hasn't been enough research to say if eating this type of yoghurt each day helps with thrush or stops it returning. One very small study (called a randomised controlled trial) found that eating yoghurt did reduce the risk of thrush returning, but the study had problems, so the results aren't very reliable.<sup>[34]</sup>

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### Garlic

In this section

We didn't find any studies looking at whether eating garlic or putting it inside your vagina can help get rid of thrush or stop you getting it again. But some people get heartburn, nausea, diarrhoea, wind (flatulence), bloating, and body odour if they eat garlic.<sup>[32]</sup> And there's a risk of allergic reactions or chemical burns if garlic is put inside your vagina for a long time.<sup>[32]</sup>

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### Douching



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In this section

Douching is when you rinse or clean your vagina with water or sometimes other solutions, such as water and vinegar. The liquid is held in a bottle and squirted into the vagina through a tube and nozzle. In the UK, douching isn't done very much.

We don't know if douching can help with thrush or stop it coming back because there hasn't been any research. Also, douching might make you more likely to get other types of [infections](#). <sup>[32]</sup> <sup>[35]</sup>

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## Treating a male sex partner

In this section

Research shows that treating your partner is unlikely to help you get rid of your symptoms. <sup>[36]</sup> <sup>[37]</sup> Male sexual partners need treatment only if they have symptoms of thrush on their penis, such as itchiness and rash (this is called balanitis).

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## Further informations:

### Glossary:

#### fungus

A fungus is an organism that is sometimes considered to be a type of plant. A fungus lives by feeding on other organisms. The mushrooms we eat in salads are fungi, but so are candida and cryptococcus, which can cause infections in people's bodies.

#### inflammation

Inflammation is when your skin or some other part of your body becomes red, swollen, hot, and sore. Inflammation happens because your body is trying to protect you from germs, from something that's in your body and could harm you (like a splinter) or from things that cause allergies (these things are called allergens). Inflammation is one of the ways in which your body heals an infection or an injury.

#### infection

You get an infection when bacteria, a fungus, or a virus get into a part of your body where it shouldn't be. For example, an infection in your nose and airways causes the common cold. An infection in your skin can cause rashes such as athlete's foot. The organisms that cause infections are so tiny that you can't see them without a microscope.

#### bacteria

Bacteria are tiny organisms. There are lots of different types. Some are harmful and can cause disease. But some bacteria live in your body without causing any harm.

#### hormones

Hormones are chemicals that are made in certain parts of the body. They travel through the bloodstream and have an effect on other parts of the body. For example, the female sex hormone oestrogen is made in a woman's ovaries. Oestrogen has many different effects on a woman's body. It makes the breasts grow at puberty and helps control periods. It is also needed to get pregnant.

#### diabetes

Diabetes is a condition that causes too much sugar (glucose) to circulate in the blood. It happens when the body stops making a hormone called insulin (type 1 diabetes) or when insulin stops working (type 2 diabetes).

#### antibiotics

These medicines are used to help your immune system fight infection. There are a number of different types of antibiotics that work in different ways to get rid of bacteria, parasites, and other infectious agents. Antibiotics do not work against viruses.

#### immune system

Your immune system is made up of the parts of your body that fight infection. When bacteria or viruses get into your body, it's your immune system that kills them. Antibodies and white blood cells are part of your immune system. They travel in your blood and attack bacteria, viruses and other things that could damage your body.

#### sexually transmitted infection

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An infection that is spread by people having sex is called a sexually transmitted infection (STI) or a sexually transmitted disease (STD). Examples are HIV, gonorrhoea and syphilis.

## HIV

HIV stands for human immunodeficiency virus. It's the virus that causes AIDS. It makes you ill by damaging cells called CD4 cells. Your body needs these cells to fight infections. You can get HIV by sharing needles for injecting drugs, or by having sex without a condom with someone who has the virus.

## AIDS

AIDS stands for acquired immunodeficiency syndrome. People who are infected with the human immunodeficiency virus (HIV) get AIDS when the virus has destroyed most of their immune system. When people have AIDS, their body isn't able to fight infections. So even common infections, such as colds, can cause serious problems.

## allergy

If you have an allergy to something (such as pollen or a medicine), your body always overreacts to it. The reaction happens because your immune system (your body's system for fighting infection) is too sensitive to it.

## puberty

Puberty is the time when boys and girls develop secondary sexual characteristics. For boys, the major changes include pubic hair, a deeper voice, and growth of their penis and testicles. For girls, major changes include pubic hair, breasts and starting to have periods. After puberty, girls are able to become pregnant and boys are able to father children.

## menopause

When a woman stops having periods, it is called the menopause. This usually happens around the age of 50.

## randomised controlled trials

Randomised controlled trials are medical studies designed to test whether a treatment works. Patients are split into groups. One group is given the treatment being tested (for example, an antidepressant drug) while another group (called the comparison or control group) is given an alternative treatment. This could be a different type of drug or a dummy treatment (a placebo). Researchers then compare the effects of the different treatments.

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## placebo

A placebo is a 'pretend' or dummy treatment that contains no active substances. A placebo is often given to half the people taking part in medical research trials, for comparison with the 'real' treatment. It is made to look and taste identical to the drug treatment being tested, so that people in the studies do not know if they are getting the placebo or the 'real' treatment. Researchers often talk about the 'placebo effect'. This is where patients feel better after having a placebo treatment because they expect to feel better. Tests may indicate that they actually are better. In the same way, people can also get side effects after having a placebo treatment. Drug treatments can also have a 'placebo effect'. This is why, to get a true picture of how well a drug works, it is important to compare it against a placebo treatment.

## liver

Your liver is on the right side of your body, just below your ribcage. Your liver does several things in your body, including processing and storing nutrients from food, and breaking down chemicals, such as alcohol.

## allergic reaction

You have an allergic reaction when your immune system overreacts to a substance that is normally harmless. You can be allergic to particles in the air you are breathing, like pollen (which causes hay fever) or to chemicals on your skin, like detergents (which can cause a rash). People can also have an allergic reaction to drugs, like penicillin.

## diarrhoea

Diarrhoea is when you have loose, watery stools and you need to go to the toilet far more often than usual. Doctors say you have diarrhoea if you need to go to the toilet more than three times a day.

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