

Candidiasis (Vaginal thrush)

Introduction

Most women experience occasional bouts of a common yeast infection known as vaginal thrush.

It causes itching, irritation and swelling of the vagina and surrounding area, sometimes with a creamy white cottage cheese-like discharge.

Vaginal thrush is fairly harmless but it can be uncomfortable and it can keep coming back, which is known as recurrent thrush.

When to see your DOCTOR

It makes sense to see your DOCTOR if you have the symptoms of vaginal thrush for the very first time.

That's because the symptoms of vaginal thrush are sometimes similar to those of a sexually transmitted infection (STI). Your DOCTOR will be able to tell the difference.

Your DOCTOR can diagnose vaginal thrush and prescribe the most suitable anti-thrush medication for you.

If you've had diagnosed vaginal thrush before and you recognise your symptoms, you can go directly to a pharmacy to buy anti-thrush medication over the counter.

However, you should return to your DOCTOR if your thrush doesn't improve after treatment, or if you have frequent bouts (at least one every few months).

Why thrush happens

Thrush is a yeast infection, usually caused by a yeast-like fungus called *Candida albicans*.

Many women have *Candida* in their vagina without it causing any symptoms. Hormones in vaginal secretions and 'friendly' vaginal bacteria keep the fungus under control. Problems arise when the natural balance in the vagina is upset and *Candida* multiplies.

Vaginal thrush isn't a sexually transmitted infection but it can sometimes be passed on during sex. So, if you have thrush it's best to avoid having sex until you've completed a course of treatment and the infection has cleared up.

Treating thrush

Thrush can usually be easily treated with either a tablet that you take by mouth or anti-thrush pessaries that you insert into your vagina. Anti-thrush creams are also available that you can apply to the skin around the vagina to ease any soreness and itchiness.

Anti-thrush remedies are available either on prescription from your DOCTOR or over the counter from a pharmacy.

Treatment works well for most women and vaginal thrush usually clears up within a few days.

However, about 1 in 20 women may have recurrent thrush (four or more episodes in a year). Around 1 in 100 women may have thrush almost constantly. In these instances, longer courses of treatment, for up to six months, may be needed.

Who gets vaginal thrush?

Vaginal thrush is very common. Around three-quarters of women will have a bout of thrush at some point. Up to half of these will have thrush more than once.

Thrush most commonly affects women in their twenties and thirties. It is less common in girls who have not yet started their periods and women who have been through the menopause.

While any woman can experience a bout of thrush, you're particularly prone to it if you:

- are pregnant

- take antibiotics

- have diabetes

- have a weakened immune system

Thrush in pregnancy

You are more at risk of getting thrush while you're pregnant.

There is no evidence that thrush affects your chances of getting pregnant. And, if you have thrush while you are pregnant, it won't harm your unborn baby.

However, if you're pregnant or breastfeeding and you have thrush, you should avoid taking oral anti-thrush treatments. Instead, use vaginal pessaries, plus an anti-thrush cream if necessary.

Symptoms of vaginal thrush

The symptoms of vaginal thrush are usually obvious.

Typical symptoms include:

itching and soreness around the entrance of the vagina

pain during sex

a stinging sensation when you urinate

vaginal discharge, although this isn't always present; the discharge is usually odourless and it can be thin and watery or thick and white like cottage cheese

Severe symptoms

In addition to the above symptoms, you may also have:

a red and swollen vagina and vulva

cracked skin around the entrance of your vagina

sores in the surrounding area – this is rare, but it may indicate the presence of another fungal condition or the herpes simplex virus (the virus that causes genital herpes)

Doctors sometimes refer to 'uncomplicated' or 'complicated' thrush depending on your symptoms and how often you get the yeast infection.

Uncomplicated thrush is mild thrush that you've had for the first time, or where you haven't had it very often. Complicated thrush refers to severe thrush that keeps coming back (where you've had four or more episodes in a year).

When to visit your DOCTOR

Always visit your DOCTOR if:

this is the first time that you've had thrush

you're under 16 years of age or over 60

you're pregnant or may be pregnant

you're breastfeeding

you have abnormal menstrual bleeding or a blood-stained discharge

you have lower abdominal pain

your symptoms are different from previous bouts of thrush – for example, if the discharge is a different colour or has a bad smell

you have vulval or vaginal sores

you've had two cases of thrush within the last six months

you or your partner have previously had a sexually transmitted infection (STI)

you've reacted badly to an antifungal treatment in the past, or it didn't work

your symptoms don't improve after 7-14 days

Thrush, vaginal – Causes

Causes of vaginal thrush

Vaginal thrush is a yeast infection that is usually caused by a type of fungus that lives naturally in the vagina.

Most cases of thrush (80-90%) are caused by *Candida albicans*. The rest are due to other types of *Candida* fungi.

Up to half of women have *Candida* living naturally in their vagina without it causing any symptoms.

It's thought that there has to be a change in the natural balance of the vagina that leads to an explosion in the growth of *Candida* and causes the symptoms of thrush.

This change can be a chemical change, such as when you take antibiotics, or it can be a hormonal change, for instance, during pregnancy.

What increases your chances of thrush?

Your risk of developing thrush increases if you:

take antibiotics

are pregnant

have diabetes

have a weakened immune system

Antibiotics

Thrush happens in about a third of women who take antibiotics because antibiotics get rid of the friendly bacteria in the vagina.

Any type of antibiotic can increase your chances of developing thrush. But for you to develop the yeast infection, the Candida fungus must already be present in your vagina.

Pregnancy

If you're pregnant, changes in the levels of female hormones, such as oestrogen, increase your chances of developing thrush and make it more likely to keep coming back.

Diabetes

Diabetes is a long-term condition that's caused by too much glucose in the blood. It's usually kept under control by having regular insulin injections and maintaining a healthy, balanced diet.

If you have poorly controlled diabetes – that is, your blood glucose levels go up and down rather than staying stable, you are more likely to develop thrush.

Weakened immune system

Your risk of developing thrush is also increased if your immune system is weakened – for example, when you have an immunosuppressive condition, such as HIV or AIDS, or if you are having chemotherapy.

This is because in these circumstances your immune system, which usually fights off infection, is unable to control the spread of the Candida fungus

Diagnosing vaginal thrush

Vaginal thrush can usually be easily diagnosed.

If you visit your DOCTOR because you think that you may have vaginal thrush they will ask you about:

your symptoms

whether you've had thrush before

whether you've already used any over-the-counter medications to treat thrush

whether you're prone to developing thrush – for example, if you're taking antibiotics for another condition

It is likely that you have thrush if you have the typical symptoms of vulval itching and a thick, creamy discharge. However, you may need to have further tests to be absolutely sure of the diagnosis.

Further tests

Your DOCTOR may want to carry out some further tests if:
you've already used anti-thrush treatment but it hasn't worked
the thrush keeps returning
your symptoms are particularly severe
you may have a sexually transmitted infection (STI)
Some possible tests are described below.

Vaginal swab

A vaginal swab is similar to a cotton bud. It is used to take a sample of the secretion from inside your vagina so that it can be analysed in a laboratory.

The results of the analysis will show whether you have a yeast infection or whether your symptoms are being caused by an STI, such as trichomoniasis.

A vaginal swab can also establish the type of fungus that is causing your thrush.

Blood test

You may have a blood test to check whether you have a condition that increases your risk of developing thrush.

For example, your DOCTOR may test the level of glucose in your blood if they think you might have diabetes.

If you have diabetes, you will probably have other symptoms such as an increased thirst and you may urinate more often.

pH level

Testing the pH (acid/alkaline balance) of your vagina may be recommended if the treatment for thrush hasn't worked and it keeps returning.

To do this, a swab is taken from inside your vagina and wiped over a piece of specially treated paper. The paper will change colour depending on the pH level.

A pH level of 4-4.5 is normal. A pH above 4.5 may be a sign of a common vaginal infection called bacterial vaginosis.

Treating vaginal thrush

For mild vaginal thrush, a short course of anti-thrush medicine may be recommended. It is usually taken for between one and three days.

If your thrush symptoms are more severe, you'll need to take the treatment for longer.

Anti-thrush medicines are available as:

an anti-thrush pessary to deal with Candida in the vagina. A pessary is a specially shaped lump of medication that you insert into your vagina using an applicator, in a similar way to how a tampon is inserted

an anti-thrush cream to deal with Candida on the skin around the entrance to the vagina

anti-thrush tablets, which can be used instead of creams and pessaries; these are taken by mouth and are called oral treatments

Pessaries and oral treatments have been found to be equally effective in treating thrush. Around 80% of women are successfully treated regardless of the type of medication they use.

Deciding on the type of treatment

Many women use anti-thrush pessaries and creams to treat a straightforward bout of thrush. Pessaries and creams are recommended if you're pregnant or breastfeeding.

Oral treatments are simpler and more convenient than pessaries and creams, but they can have side effects. They tend to only be used for troublesome thrush that keeps coming back.

Anti-thrush tablets

The two main types of anti-thrush tablets that are prescribed by doctors to treat vaginal thrush contain the antifungal medicines fluconazole or itraconazole.

Anti-thrush tablets can cause side effects including:

nausea
vomiting
headache
diarrhoea
wind
constipation
bloating
an upset stomach

Anti-thrush pessaries

Pessaries that are often prescribed for thrush include the anti-fungal medicines:

clotrimazole
econazole
miconazole

Vaginal pessaries don't cause as many side effects as anti-thrush tablets but they can:

be awkward to use

cause a mild burning sensation, slight redness or itching

leave a whiteish creamy stain on your underwear (it washes out)

damage latex condoms and diaphragms, so you will have to use another form of contraception while using them

You shouldn't use vaginal pessaries too often. Read more about why vaginal pessaries should not be used frequently.

Pharmacy anti-thrush treatments

Some tablets, creams and pessaries to treat vaginal thrush are available over the counter from your pharmacist without a prescription.

Anti-thrush pessaries and creams containing clotrimazole are widely sold from pharmacies under the brand name Canesten.

Flucanazole is also available over the counter from pharmacies as a single-dose tablet for treating thrush under the brand name Diflucan.

These treatments can be useful for treating thrush if you've had it before and it's returned. However, avoid buying thrush medication direct from a pharmacy if it's your first bout of thrush. Visit your DOCTOR first.

Also, you shouldn't continue to use over-the-counter thrush treatments over a long period of time without consulting your DOCTOR.

Advice if you're pregnant or breastfeeding

If you have thrush and you're pregnant or breastfeeding, you should always visit your DOCTOR rather than buying anti-thrush medication over the counter from a pharmacy.

You won't be prescribed oral treatment because it may affect your baby. An anti-thrush pessary, such as clotrimazole, econazole or miconazole will probably be prescribed to be used for at least seven days.

If you're pregnant, take care when inserting a pessary because there's a risk of injuring your cervix (neck of the womb). To reduce the risk, it may be better to insert the pessaries by hand instead of using the applicator.

If you have symptoms around your vulva, such as itching and soreness, you may also be prescribed an anti-thrush cream.

Complementary therapies

Some women find that complementary therapies, such as bathing the genital area with diluted tea tree oil gel or plain bio-live yoghurt helps to ease their thrush symptoms.

However, tea tree essential oil can sometimes cause skin irritation. You should not use more than one or two drops in the bath and if there is any irritation stop using the oil and wash the area with clean, warm water.

Although using yoghurt won't do you any harm, there's no evidence to suggest that it will relieve the symptoms of thrush or help treat it and it should not be considered a main treatment.

If you want to try using plain live yoghurt, one method is to smear it directly over the vulva to ease any soreness or irritation and then insert it directly into the vagina.

The easiest way to do this is to use a tampon with an applicator. Push the tampon back inside the applicator, add about one teaspoon of plain live yoghurt to the space and insert the tampon in the usual way. Remove the tampon an hour later.

Complications of vaginal thrush

The main complications of thrush are:

the treatment doesn't work

the thrush keeps coming back

depression and sexual problems

penis problems in male partners

When thrush treatment fails to work

Anti-thrush medication fails to work in up to one in five cases. You can tell if the treatment hasn't worked if your symptoms don't clear up within 7-14 days.

There are several reasons why treatment for thrush may not work. It may be that you have a different infection, such as bacterial vaginosis, which is the most common cause of an abnormal vaginal discharge.

You should visit your DOCTOR if your treatment doesn't work. They may run further tests to confirm your diagnosis and offer you some alternative treatment.

When thrush keeps coming back

If you have recurrent yeast infections, your DOCTOR may run further tests to confirm the diagnosis and rule out other conditions. They may suggest trying a longer course of anti-thrush treatment or they may give you a prescription you can use whenever the symptoms return.

Some research has suggested that a strategy known as 'maintenance therapy' can help reduce the recurrence of thrush. Maintenance therapy involves taking an anti-thrush oral treatment or pessaries on a weekly or monthly basis for up to six months.

Maintenance therapy has been shown to reduce the recurrence of thrush during treatment. It may also help to protect against thrush after treatment has stopped.

Depression and sexual problems

Depression and psychosexual problems, such as anxiety about having sex, can sometimes develop if you have recurrent thrush. Your DOCTOR will be able to advise you about specialist treatments, such as counselling.

More useful information and advice about sexual health problems is available in the sections about good sex and sexual health.

Male thrush

In rare cases, male partners of women who have thrush can develop a condition called candidal balanitis, which is where the head of the penis (glans) becomes inflamed.

In these cases, a course of antifungal medication will usually be recommended.

Preventing vaginal thrush

If you're prone to getting thrush, there are a number of self-help techniques you can try to help prevent it coming back.

To reduce your risk of developing vaginal thrush:

wash your vaginal area with water and avoid using perfumed soaps, shower gels, vaginal deodorants or douches

avoid using latex condoms, spermicidal creams or lubricants if they irritate your genital area

avoid wearing tight-fitting underwear or tights

wear cotton underwear and loose-fitting trousers and skirts

Some women eat plain live yoghurt or take probiotic supplements to try to prevent getting vaginal thrush. However, there's no firm evidence to suggest that this works.

Thrush, men

Thrush is a yeast infection caused by a fungus called *Candida albicans*. Both men and women can get thrush though it is more often associated with women.

The medical term for thrush is candidiasis.

What it looks like

In men it usually affects the head of the penis causing inflammation, a smelly lumpy discharge, and pain while passing urine. Read more about the symptoms of thrush.

It can also affect the skin, known as candidal skin infection, and the inside of the mouth, known as oral thrush.

Should I see a doctor?

If you suspect thrush for the first time it's best to see a doctor for a diagnosis. This is because the symptoms can be similar to those of a sexually transmitted infection (STI). Your DOCTOR will be able to tell the difference.

If you've had thrush before and you recognise the symptoms, you can treat it yourself with over-the-counter medication.

You should also visit your DOCTOR if you have a weakened immune system and you have thrush. This is because there is a risk that a thrush infection could progress to a more serious case of invasive candidiasis. See complications of thrush for more information.

Treating and preventing thrush

You can treat thrush without prescription medications. For thrush affecting your penis ask your chemist for a tablet called fluconazole. For thrush infections in your groin or elsewhere the chemist can supply a cream or ointment.

It is possible for thrush to spread during sex, but it is not a sexually transmitted infection (STI). However both sexual partners may need thrush treatment to prevent re-infection. Re-infection from a female partner is common. Seek advice about this from a pharmacist or your DOCTOR.

Not all cases are caused in this way and many cases develop in men and women who are not sexually active.

Read more about treating thrush.

You can help prevent thrush by cleaning your penis regularly and using a condom while having sex with your partner (if they have thrush).

Avoid using perfumed shower gels or soaps on your genitals, as they can cause irritation. Make sure you dry your penis properly after washing.

Wearing loose-fitting cotton underwear can help prevent moisture building up under your foreskin, which lowers the chances of the candida fungus multiplying.

What causes thrush?

The fungus candida albicans occurs naturally in your body, particularly in warm, moist areas, such as inside the mouth and around the genitals. It does not usually cause problems because it is kept under control by your immune system (the body's natural defence against illness and infection) and other types of bacteria in the body.

However, certain conditions can cause the fungus to multiply and lead to infection. You are more likely to be at risk of thrush if:

you have a weakened immune system

are obese, with large rolls of skin (an environment where fungi can often thrive)

have type 1 diabetes or type 2 diabetes – as the high levels of glucose associated with diabetes can encourage the fungus to breed; also, people with diabetes tend to sweat more creating a perfect breeding environment for the fungus

Symptoms of thrush in men

If you have balanitis thrush, you will have a number of distinctive symptoms.

Your symptoms are likely to include:

red skin around the head of the penis

swelling of the head of the penis

irritation and soreness of the head of the penis

thick, lumpy discharge under the foreskin

itchiness around the head of the penis

an unpleasant odour

difficult retracting (pulling back) the foreskin of your penis (phimosis)

pain when passing urine

pain during sex

Thrush as a skin infection

Most candidal skin infections develop in areas of the body where folds of skin come together, such as the:

armpits

groin

areas between your fingers

skin between your genitals and anus (the opening where faeces are expelled from the body)

People who are obese are also at risk of developing a skin infection between their rolls of skin.

The infection usually begins as a red and painful itchy rash. Small red spots can also develop on the rash. Affected skin may then scale over, producing a white-yellow curd-like substance. If the skin between your fingers is affected, it becomes thick, soft and white.

Causes of thrush in men

Thrush is caused by the *Candida albicans* fungus.

Candida albicans

Many people have a small amount of this fungus in their bodies. However, it does not usually cause problems because it is kept under control by the body's immune system and other harmless bacteria (so called 'good bacteria').

Thrush can develop when the good bacteria in your body (which keeps candida under control) is destroyed. For example, if you are taking antibiotics to treat an infection, the antibiotics will not distinguish between good and bad bacteria, and will fight off both types.

Also, if you are run down and your immune system is weak, the candida fungus that causes thrush may multiply.

Personal hygiene

Candida tends to grow in warm and moist conditions. Therefore, you may develop thrush if you do not dry your penis carefully after washing. Using perfumed shower gels and soaps can irritate your penis, making thrush more likely to develop. *Candida* also thrives on skin already damaged.

HIV, diabetes and other conditions

Men who have HIV, diabetes or other conditions that weaken the immune system are more at risk of developing thrush. This is because the infection develops quickly and the weakened immune system is not strong enough to fight it off.

If you have uncontrolled diabetes (usually because you do not realise that you have the condition), you are more likely to develop thrush.

Typical signs of diabetes include:

excessive thirst

frequently need to pass urine

weight loss

See your DOCTOR if you have these symptoms, or if you have thrush that keeps recurring (coming back), even after treatment.

Diagnosing thrush in men

Visit your DOCTOR if you think you have the symptoms of thrush (either on your penis or skin) and you do not have a history of the condition.

This is because there may be underlying factors that need further investigation. For example, you may have undiagnosed diabetes. Alternatively, your symptoms may be caused by something other than thrush, such as a bacterial skin infection.

If you have a previous history of thrush that has been diagnosed, you usually do not need another diagnosis unless it fails to respond to treatment.

Thrush can be diagnosed by your DOCTOR or by visiting your nearest local sexual health or genito-urinary medicine (GUM) clinic. Find a clinic. Your DOCTOR or a doctor at the GUM clinic can confidentially diagnose thrush by physically examining the head of your penis or the affected area of skin.

Further testing is usually only required if:

your symptoms are severe

your symptoms persist despite treatment

you have recurring episodes of thrush

Testing usually involves using a swab (a small plastic rod with a cotton ball on one end) to obtain a small tissue sample from the affected body part. The tissue will be tested for the presence of any infectious agents, such as the *Candida albicans* fungus.

You may also be referred for a series of blood and urine tests to check whether an underlying condition, such as diabetes, is making you more vulnerable to thrush.

Recurring thrush

If you have had thrush in the past and you recognise your symptoms, over-the-counter treatments from your pharmacist can help clear up the infection.

If you keep getting thrush, or it does not clear up with treatment, visit your DOCTOR so they can investigate and recommend appropriate treatment.

If you are a heterosexual man and have thrush, it is likely your partner may also have the condition. This is because the candida fungus often lives inside the vagina. It is therefore a good idea for both of you to get treatment in order to prevent the infection being passed back and forth between you.

Treating thrush in men

The recommended first-line treatment for thrush in areas apart from the penis is a type of anti-fungal cream called topical imidazole.

Topical imidazoles work by breaking down the membranes (walls) of the fungi cells.

Examples of topical imidazoles include:

clotrimazole

econazole

ketoconazole

miconazole

Most of these are available from your pharmacist without a prescription.

Your pharmacist can advise which treatment is most suitable for you.

The most common side effect of a topical imidazole is a mild burning sensation when you apply the cream.

In a few people, some topical imidazoles have caused more severe burning and a serious skin irritation. If this happens, stop using the cream and contact your DOCTOR for advice.

If you are having symptoms of itchiness, your DOCTOR may prescribe a corticosteroid cream as an additional treatment. Corticosteroids reduce levels of inflammation within the affected tissue. This should help resolve the symptoms of itchiness.

Doctors report re-infection is common so during treatment it is best to avoid sex or use a condom. Occasionally both sexual partners may need treatment to prevent re-infection. Seek advice about this from a pharmacist or your DOCTOR.

Fluconazole

If your symptoms do not improve within 14 days, you may need an alternative antifungal medication. Fluconazole taken in tablet form is the preferred treatment. Fluconazole is also the first choice treatment for treating thrush which affects the penis. Most products that contain fluconazole are available over-the-counter (OTC) without a prescription. Fluconazole works by destroying some of the enzymes (a type of protein that triggers useful chemical reactions inside the body) that fungi cells need to survive and reproduce.

The most common side effects of fluconazole are:

nausea

abdominal (tummy) pain

diarrhoea

flatulence (excessive wind)

Contact your DOCTOR for advice if your symptoms do not improve after 14 days of taking fluconazole. You may need to be referred to a dermatologist for specialist treatment. A dermatologist is a doctor who specialises in treating skin conditions.

Good hygiene

If you have thrush, practising good personal hygiene can help clear up the infection. Wash the affected area carefully using warm water. Showers are a better option than baths. Avoid using perfumed shower gels or soaps on your genitals because they can cause irritation.

After washing, make sure you dry the affected area carefully as the candida fungus thrives in damp conditions. Wearing loose-fitting cotton underwear can help keep your skin and penis dry and cool, which helps prevent build-up of the candida fungus on your skin and under your foreskin.

Complications of thrush in men

If you have a weakened immune system there is a risk that the candida fungus will spread into your blood.

This is known as invasive candidiasis.

Invasive candidiasis

The infection can then spread quickly throughout your body affecting many of your organs. Known risk factors for invasive candidiasis include:

having HIV

having type 1 or type 2 diabetes

taking immunosuppressants – a type of medication used to stop the body rejecting newly donated organs

undergoing high-dose chemotherapy or radiotherapy

having a central venous catheter (CVC) – a tube directly implanted into your chest and used to administer medication; they are often used in order to avoid repeated painful injections during a long-term course of medication

having dialysis – a type of treatment where a machine is used to replicate the functions of the kidney and commonly used to treat kidney failure

Symptoms of invasive candidiasis can be wide ranging, depending on what part of the body is affected by infection. However, initial symptoms can include:

a high temperature (fever) of or above 38°C (101.4°F)

shivering

nausea

headache

Get medical help immediately if you have thrush and any of the risk factors listed above, and you develop any of the above symptoms over a short period of time.

Invasive candidiasis is a medical emergency that requires immediate admission to an intensive care unit (ICU). In an ICU, functions of the body can be supported while the underlying infection is treated with anti-fungal medications.

If you are thought to be particularly vulnerable to invasive candidiasis – for example, you have diabetes and on dialysis, your DOCTOR may recommend you are admitted to hospital as a precaution if you develop a thrush infection.

Oral thrush – adults

Introduction

Oral thrush is a yeast infection in the mouth, caused by a type of fungus called *Candida albicans*.

It causes an unpleasant taste, soreness, a burning sensation on the tongue and difficulty swallowing. Read more about the symptoms of oral thrush.

Oral thrush is not contagious, meaning it cannot be passed to others.

What causes oral thrush?

Candida albicans fungus is naturally found in the mouth in small amounts. Oral thrush develops when these levels increase. This can be the result of taking certain medications (particularly inhaled steroids), poor oral hygiene, smoking, or a weakened immune system.

Your risk of developing oral thrush is also increased if you:

are on a course of antibiotics, particularly over a long period or if you are taking high doses

wear false teeth (around seven in 10 people who wear dentures will get oral thrush at some stage)

have type 1 diabetes or type 2 diabetes (oral thrush is five times more common in people with severe type 1 diabetes than the population at large)

use an asthma inhaler to take corticosteroid medication

Learn more in the causes of oral thrush.

Otherwise healthy newborn babies can also be affected as the condition can be passed from mother to baby during labour if the mother's vagina is infected. It can also be passed through breastfeeding. Learn more in oral thrush in babies.

Treating and preventing oral thrush

Oral thrush can usually be successfully treated with antifungal medicines, delivered in the form of gels, tablets, creams or mouth rinses.

You can reduce the chance of getting oral thrush by:

brushing your teeth twice a day

having regular dental check-ups

keeping your dentures clean

stopping smoking

Symptoms of oral thrush

Symptoms of oral thrush can include:

sore, white patches (plaques) in the mouth that can be wiped off

a painful, burning sensation on the tongue

an unpleasant taste in the mouth that can be bitter or salty

redness and soreness on the inside of the mouth and throat

cracks at the corners of the mouth (angular cheilitis)

difficulty swallowing

Dentures

If you wear dentures and have oral thrush, you may develop sore, red areas in your mouth where the dentures have been. This is known as denture stomatitis and can make wearing dentures uncomfortable.

When to seek medical advice

Speak to your DOCTOR if you develop symptoms of oral thrush. If left untreated, symptoms will persist and your mouth will continue to feel uncomfortable.

Causes of oral thrush

Oral thrush infections are caused by increased levels of *Candida albicans* fungi, which are naturally present in the mouth.

This increase may result from:

using an inhaler to take corticosteroid medication

certain medications which reduce the amount of saliva produced

an injury in the mouth

smoking

the immune system being weakened (immunodeficiency)

an underlying health condition, such as cancer or HIV

Corticosteroids can be used to reduce inflammation (swelling) and treat a variety of conditions such as:

some types of cancer

arthritis, a condition that causes inflammation of the bones and joints

eczema, a long-term skin condition that causes itchy, dry and red cracked skin

asthma, a long-term condition that causes the airways of the lungs to become inflamed and swollen

COPD, (chronic obstructive pulmonary disease) a collective name for lung diseases (including chronic bronchitis, emphysema and chronic obstructive airways disease) that cause breathing difficulties

Inhaled corticosteroids are often used to treat asthma. The medicine is delivered through an inhaler, or spacer, (a plastic cylinder attached to your inhaler which increases the amount of medication reaching the lungs and minimising contact with your mouth). Inhaled corticosteroids cause fewer side effects than other forms of treatment but can change acidity levels in the mouth. The change kills healthy bacteria and causes an imbalance that makes oral thrush more likely to develop.

Risk factors

You are at an increased risk of developing oral thrush if:

you have diabetes

you are a certain age (oral thrush is more common in infants and elderly people)

you have high blood sugar levels

you wear dentures that are poorly fitted or not cleaned regularly

you often take antibiotics (medication used to fight infections)
you have an iron deficiency or B-vitamin deficiency
you are having treatment for cancer such as chemotherapy or radiotherapy

Diagnosing oral thrush

In most cases, your DOCTOR will be able to diagnose oral thrush simply by examining your mouth. However, some tests may also be used to confirm the diagnosis.

Your DOCTOR may recommend you have a blood test to look for certain conditions associated with oral thrush, such as diabetes and nutritional deficiencies.

A biopsy may also be used. This involves taking a sample of the white patches in your mouth to check for the candida fungus under a microscope.

Your DOCTOR may also take a swab from the affected area to monitor how the fungus grows over a period of several days.

Treating oral thrush

Oral thrush can be successfully treated with a course of antifungal medicines taken over seven to 14 days.

Antifungal treatments are available in the following forms:

gels

tablets

lozenges

powders

creams

rinses

Rinses are useful for people with a dry mouth who are unable to swallow antifungal tablets.

If you wear dentures, an antifungal cream can be applied to the affected area of the roof of the mouth and to the bottom of the dentures.

Antifungal lozenges are also effective.

Antifungal medicines used to treat oral thrush include:

miconazole
nystatin
fluconazole
clotrimazole
econazole

If antibiotics or corticosteroids are thought to be causing your oral thrush, the medicine, or the way it is delivered, may need to be changed or the dosage reduced.

Good dental hygiene and not smoking are also recommended.

Some antifungal medications should not be used if you are pregnant, breastfeeding or taking other medications. Always seek advice from your DOCTOR or pharmacist before taking antifungal medicines.

Side effects

Possible side effects of antifungal medicines include:

nausea (feeling sick)

tummy pain

diarrhoea

headache

indigestion

See the topic about Antifungal medicines for more information about this type of treatment.

Preventing oral thrush

Your chances of getting oral thrush are reduced if you keep your mouth clean and healthy. You can do this by:

rinsing your mouth after meals

visiting your dentist regularly for check-ups

eating a healthy balanced diet with no more than the recommended amount of sugar

keeping your dentures clean

brushing your teeth twice a day with a toothpaste that contains fluoride

flossing regularly

using a mouthwash as part of your routine

Denture hygiene

If you wear dentures it is important to clean them regularly to help prevent yeast from growing.

They should be removed and cleaned every night by brushing with warm, soapy water and scrubbing the non-polished side of the dentures with a nailbrush.

Dentures can then be soaked in any liquid used to sterilise babies' bottles. However, products containing bleach should not be used on dentures that contain metal.

You should visit your dentist to correct dentures that do not fit properly. This can also reduce the risk of oral thrush and soreness underneath the dentures.

Speak to your dentist for further advice about how to clean your dentures.

Smoking

Smoking encourages yeast growth in your mouth and increases your chance of getting oral thrush.

Speak to your DOCTOR if you want to give up smoking. Several treatments are available to increase your chance of quitting successfully, and your DOCTOR can put you in touch with local support groups and one-to-one counsellors.

Corticosteroids

If you use inhaled corticosteroids as part of your asthma treatment, you can help prevent oral thrush by:

rinsing your mouth with water after using your inhaler

developing a good technique when you inhale corticosteroids by using a spacer

A spacer is a plastic cylinder which attaches to your inhaler and can help to get the corticosteroid medicine right into your lungs, minimising contact with your mouth

Oral thrush – babies

Introduction

Oral thrush is a common and usually harmless fungal infection in the mouth. It mostly affects children under two years of age.

The main symptom of oral thrush is one or more white spots or patches in your baby's mouth. The patches can look like curd or cottage cheese.

Other symptoms include:

refusing the breast or fussiness at the breast when you try to feed
a whitish sheen to their saliva

Read more about the symptoms of oral thrush in babies.

Treating thrush in babies

Many cases of oral thrush clear up in a few days without the need for treatment.

If symptoms persist or they are particularly troublesome, ask your health visitor for advice or visit your DOCTOR.

There are several antifungal gels that can treat oral thrush. It is important to speak to your DOCTOR or pharmacist before you use them as some gels are not suitable for very young babies.

Read more about treating oral thrush in babies.

Why does my baby have oral thrush?

Oral thrush is caused by a strain of yeast fungus called candida albicans, which lives on the skin and inside the mouth of most people.

It doesn't cause symptoms usually, but it can cause an infection in people with a weakened immune system. As the immune systems of newborn babies are still developing, they are more vulnerable to infection.

Read more about the causes of oral thrush in babies.

Who is affected

Oral thrush is a common condition, affecting around 1 in 20 babies.

It is most common in babies around four weeks old, although older babies can get it too. Premature babies (babies born before 37 weeks) have an increased risk of developing oral thrush.

Advice for breastfeeding mothers

If your baby has oral thrush and you're breastfeeding, it's possible for your baby to pass a thrush infection to you. This can affect your nipples or breasts and is known as nipple thrush.

Symptoms of nipple thrush include:

pain while you're feeding your baby, which may continue after the feed is finished

cracked, flaky or sensitive nipples and areolas (the darker area around your nipple)

You may be prescribed an antifungal cream, such as miconazole. You should apply the cream to your nipples after every feed, and remove any that's left before the next feed.

Antifungal tablets may be recommended for severe nipple thrush.

Symptoms of oral thrush in babies

Symptoms of oral thrush can include one or more white spots or patches in and around the baby's mouth.

These may look yellow or cream-coloured, like curd or cottage cheese. They can also join together to make larger plaques.

You may see patches:

on your baby's gums

on the roof of their mouth (palate)

inside their cheeks

You can easily rub the patches off. The tissue underneath will be red and raw. It may also bleed a little.

The patches may not seem to bother your baby. But if they are sore, your baby may be reluctant to feed.

Other symptoms

Other signs and symptoms of oral thrush in babies are:

a whitish sheen to their saliva

fussiness at the breast (keeps detaching from the breast)

refusing the breast

clicking sounds during feeding

poor weight gain

nappy rash

Some babies may dribble more saliva than normal if they have an oral thrush infection.

Many cases of thrush clear up without needing treatment. However, if these symptoms are particularly troublesome or persistent, ask your health visitor for advice or speak to your DOCTOR.

Read more about treating oral thrush.

If there is any doubt about the diagnosis your DOCTOR can take a swab from your baby's mouth and send it to a lab to be tested.

Causes of oral thrush in babies

Oral thrush is caused by a yeast fungus called candida albicans. Healthy people have this fungus in their mouths and it does not normally cause problems.

However, if the level of fungus increases too much (called overgrowth), membranes (mucosa) in your baby's mouth can become infected.

Immature immune system

Oral thrush may occur in babies because their immune systems take time to mature, making them less able to resist infection.

Oral thrush is more common in premature babies (babies born before 37 weeks of pregnancy) because:

their immune systems are not as strong

they have not had as many of their mother's antibodies passed to them

Antibiotics

Oral thrush infections can also happen after treatment with antibiotics. This is because antibiotics reduce the levels of healthy bacteria in your baby's mouth, which allows fungus levels to increase.

If you are breastfeeding and have been taking antibiotics for an infection, your own levels of healthy bacteria can be affected, making you or your baby more prone to a thrush infection.

In babies, oral thrush is not usually due to poor hygiene.

Treating oral thrush in babies

Can thrush be prevented?

Nobody really knows if thrush can be prevented. Some doctors suggest the following advice may help prevent oral thrush in some cases:
sterilise dummies regularly, as well as any toys designed to be put in their mouth
sterilise bottles and other feeding equipment regularly, especially the teats

Mild oral thrush infections in babies often clear up after a few days without treatment.

Antifungal medicine

If your DOCTOR decides your baby needs treatment, they will probably prescribe an antifungal medicine.

If your baby is less than four months old, a medication called nystatin may be recommended.

In babies older than four months, a medication called miconazole is likely to be recommended. This is because there is a small risk of miconazole causing choking if it's not applied properly.

Nystatin

Nystatin comes as a liquid medicine (suspension). You put the liquid directly on the affected area using a dropper (oral dispenser) supplied with the medicine.

Nystatin does not usually cause any side effects and most babies will have no trouble taking the medication.

Miconazole

Miconazole is available as a gel. You apply the gel to the affected areas using a clean finger. It's important only to apply a little at a time and to try to avoid the back of your baby's mouth to reduce the risk of choking. A small number of babies are sick after being treated with miconazole. This side effect usually passes and is not cause for concern.

General advice on treatment

Medication is most effective if you use it after your baby has had a feed or drink.

Continue to use the medicine for two days after the infection has cleared up as this will help prevent the infection from coming back.

If treatment hasn't cleared the thrush after seven days, contact your DOCTOR for advice.