

## Patient information from the BMJ Group

# Bacterial vaginosis

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## Bacterial vaginosis

Bacterial vaginosis is an infection in your vagina. You might get a discharge from your vagina, but many women don't have any symptoms.

We've brought together the best research about bacterial vaginosis 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 bacterial vaginosis?

Usually, there are a lot of 'friendly' bacteria called *lactobacillus* in your vagina. They help keep your vagina healthy. If you have bacterial vaginosis, these 'friendly' bacteria have been replaced with other bacteria called anaerobes.



Bacterial vaginosis is very common. Millions of women get it.

Doctors aren't sure what causes bacterial vaginosis. But some things increase your chances of getting it.

You might be more likely to get bacterial vaginosis if you: <sup>[1]</sup> <sup>[2]</sup> <sup>[3]</sup>

- Have a new male sexual partner
- Have sex with other women

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- Have sex at an early age
- Have a lot of sexual partners
- Have, or once had, a sexually transmitted infection
- Use douches
- Smoke
- Have an IUD (an intrauterine device or contraceptive coil).

Women with bacterial vaginosis have many more types of bacteria in their vaginas than women without bacterial vaginosis.<sup>[4]</sup> And these bacteria are different from the usual types. The vaginas of women with bacterial vaginosis are also less acidic than normal.<sup>[1]</sup> But we don't know why.

A lot of women seem to get bacterial vaginosis when they are having their period.<sup>[5]</sup>

### Can I get bacterial vaginosis from my sexual partner?

Bacterial vaginosis seems to be linked in some way to having sex. But researchers don't think you can 'catch' it from a male sex partner. The infection does not seem to pass from a man to a woman during sex.<sup>[6]</sup>

If you are a sex partner of a woman who has bacterial vaginosis, some research shows you have a higher chance of being infected, too. But researchers aren't sure why.<sup>[3]</sup>

### What are the symptoms of bacterial vaginosis?

You might have a discharge from your vagina. It can have a fishy smell. But you might not get symptoms.

About half the women who have bacterial vaginosis don't notice any symptoms.<sup>[7]</sup>

Bear in mind that many other things, such as having a yeast infection, can cause a discharge from your vagina. But bacterial vaginosis is the most common cause.

Also, it is normal to have some discharge from your vagina, and it can change in its appearance or thickness at different times of the month.

Your doctor will take a sample of the fluid from your vagina if he or she thinks you have bacterial vaginosis. He or she will use a cotton swab to do this and will send the sample to a lab for testing.

Doctors say you have bacterial vaginosis if you have at least three of the following four signs:<sup>[7]</sup> <sup>[8]</sup>

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- A thin grey or white vaginal discharge that sticks to the walls of your vagina
- Vaginal fluid that is less acidic than usual
- A fishy smell when a chemical (potassium hydroxide) is added to a sample of your vaginal fluid
- 'Clue' cells when your vaginal fluid is examined under a microscope. (These are cells with a lot of bacteria stuck to them.)

Your doctor might also look at your vaginal fluid under a microscope to check for the types of bacteria that you get in bacterial vaginosis.<sup>[9]</sup>

### How common is bacterial vaginosis?

Bacterial vaginosis is very common.

Millions of women have this condition.<sup>[10]</sup> Out of every 10 women, between 1 and 4 will have it.<sup>[11]</sup>

### What treatments work for bacterial vaginosis?

Bacterial vaginosis often gets better without treatment. But it often comes back, whether you have treatment or not.

- **Antibiotics** can help get rid of bacterial vaginosis, but the infection often comes back.
- There are things you can try to keep your vagina healthy, such as not using douches. To learn more see [Is there anything I can do to prevent another infection?](#)
- You can use antibiotic tablets, or creams and gels that you put in your vagina. All these methods work equally well.
- If you are pregnant or breastfeeding, your doctor will advise you about which antibiotics are best for you.
- If you are having an abortion, using antibiotics to treat bacterial vaginosis will help prevent you from getting an infection afterwards.

Your doctor may test you for bacterial vaginosis and offer you treatment if you:

- Have symptoms such as a discharge from your vagina
- Are pregnant and have had problems with a pregnancy before, such as having a baby too early (prematurely)

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- Are having an abortion or another procedure in your pelvic area.

We found only one treatment for bacterial vaginosis: antibiotics. We've looked closely at the research and found that this is a treatment that works.

## Treatment Group 1

### Treatments for bacterial vaginosis

#### Treatments that work

- [Antibiotics](#)

### What will happen to me?

In some women, bacterial vaginosis clears up without any treatment. But other women have a hard time getting rid of it.

Even after treatment, about half of the women with this condition will get it again, usually within six months. <sup>[6]</sup>

#### If you are pregnant

This condition has been linked to serious problems if you are pregnant.

Bacterial vaginosis has been linked to: <sup>[12]</sup>

- Having a miscarriage
- Having your waters break early
- Having your baby too early (before your 37th week of pregnancy)
- Having a baby that weighs less than 2.5 kilograms (5 pounds, 8 ounces)
- Getting an infection in your uterus (womb) during pregnancy
- Getting an infection in your uterus after delivery
- Getting an infection after a caesarean section (this is when a surgeon delivers your baby through a cut in your abdomen).

If you have had a baby who was born early (premature) before, you might be more likely to get problems caused by bacterial vaginosis. For example, you might have a higher chance of having another early delivery. <sup>[13]</sup> If you are pregnant and have had past pregnancy problems, or if you have symptoms of bacterial vaginosis, your doctor will usually check you for this infection. <sup>[14]</sup>

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## If you are having an abortion or a hysterectomy

If you are having a **hysterectomy**, an abortion, or another operation in your **pelvic** area, then having bacterial vaginosis increases your risk of getting an infection afterwards.

This type of infection is called pelvic inflammatory disease.<sup>[15]</sup> To read more about this condition, see [Pelvic inflammatory disease](#) in our section on fertility problems.

## Getting HIV infection

Having bacterial vaginosis might make you more likely to get **HIV**, if you have sex with a partner infected with HIV.<sup>[16]</sup>

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## Treatments:

### Antibiotics

In this section

Your doctor will prescribe antibiotics to treat your bacterial vaginosis. Antibiotics are drugs that kill **bacteria**. You can take them as tablets that you swallow, or as a gel, a cream, or capsules (called ovules or pessaries) that you put in your vagina. All of these methods work equally well.

Here are the types of antibiotics normally used for bacterial vaginosis (followed by their brand names).<sup>[18]</sup> <sup>[19]</sup>

- clindamycin tablets (Dalacin C)
- clindamycin vaginal cream or ovules (Dalacin)
- metronidazole tablets (Flagyl)
- metronidazole vaginal gel (Zidoval)

You have to use these medications for between five and seven days. There is also a stronger dose of metronidazole that you can take just once.

If you are pregnant or breastfeeding, your doctor will advise you about which treatment is suitable for you.

You can get side effects from antibiotics, including feeling sick and having thrush (a **yeast infection**) in your vagina. Metronidazole tablets can cause a metallic taste in your mouth.<sup>[20]</sup> <sup>[21]</sup> It's important to avoid alcohol while taking metronidazole because it could make you very ill, with symptoms such as redness in the face, headaches, trouble breathing, nausea, and vomiting.<sup>[18]</sup>

Clindamycin cream and ovules are oil-based, which means that they can weaken latex condoms and diaphragms.<sup>[18]</sup> If you usually use these types of contraception, you should

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use other methods while you're having treatment. You can discuss options with your doctor.

There is some good evidence that these antibiotics will clear up bacterial vaginosis.<sup>[20]</sup><sup>[22]</sup> One big summary of research (called a **systematic review**) found that using clindamycin cream or metronidazole gel helped about three-quarters of women get better. But up to half the women who used a dummy treatment for comparison (called a **placebo**) also got better.<sup>[22]</sup>

There's also lots of research to show that creams, gels, and tablets work equally well.<sup>[22]</sup> <sup>[23]</sup> In these studies, about 8 in 10 women were cured after using any of these treatments.

The different ways of using tablets, creams, and gels mostly seem to work about the same for getting rid of symptoms.<sup>[21]</sup> <sup>[24]</sup> <sup>[25]</sup> <sup>[26]</sup> But taking metronidazole tablets twice a day for seven days might get rid of symptoms better than just taking one big dose.<sup>[22]</sup>

Most of these studies didn't look at how often the symptoms of bacterial vaginosis came back. But one small study found that about half the women with bacterial vaginosis needed treatment again within two months.<sup>[27]</sup>

### **If you are pregnant and have had a premature birth in the past**

Having bacterial vaginosis has been linked with having problems in pregnancy, such as having your baby too early (before the 37th week of pregnancy). Doctors call this a premature or preterm birth. So researchers have looked at whether treatment with antibiotics helps to avoid these types of problems.

There hasn't been much good research on this, and studies have had different results. One summary of the research (a **systematic review**) looked at three good-quality studies with 421 pregnant women who'd all had a premature birth before and had bacterial vaginosis.<sup>[28]</sup> Overall, it found that taking antibiotics didn't seem to lower the women's chances of having another premature birth or a small (low birth weight) baby.

### **If you are pregnant and haven't had any problems in pregnancy before**

If you've not had any problems with pregnancy and childbirth before, it's hard to say if using antibiotics for bacterial vaginosis will help you avoid problems if you are pregnant. That's partly because there are lots of problems with the research. A lot of studies, for example, used different doses of antibiotics, or used them at different times during pregnancy, so it's hard to compare the results.<sup>[29]</sup> <sup>[30]</sup> <sup>[31]</sup> <sup>[32]</sup> <sup>[33]</sup> <sup>[34]</sup> <sup>[35]</sup>

Most pregnancies go well. This is good news, but it also makes it harder to work out whether treatment helps to prevent pregnancy problems.

One big summary of research (a **systematic review**) found that treatment with antibiotics made no difference to whether pregnant women with bacterial vaginosis had problems

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such as having their baby early or having a small (low birth weight) baby.<sup>[28]</sup> Another summary of research found that women treated with clindamycin before 22 weeks of pregnancy were less likely to have their baby early.<sup>[36]</sup>

Some research has found that using clindamycin cream (brand name Dalacin) if you are pregnant might do more harm than good. Three high-quality studies (called **randomised controlled trials**) found that pregnant women who were treated with clindamycin cream had a slightly higher chance of delivering early or of having a small baby.<sup>[37] [38] [39]</sup> But not all studies agree.<sup>[30] [31]</sup>

One study found that using clindamycin cream might actually bring about bacterial vaginosis in women who'd had past pregnancy problems.<sup>[40]</sup>

### If you are having surgery

If you have bacterial vaginosis and are having an abortion, research shows that treatment with antibiotics is likely to help protect you from getting an infection. Three good-quality studies (called **randomised controlled trials**) found that using antibiotic tablets, a cream, or a gel right before an abortion reduced the risk of getting an infection called pelvic inflammatory disease.<sup>[41] [42] [43]</sup> To read more about this condition, see [Pelvic inflammatory disease](#) in our section on fertility problems.

We don't know if using antibiotics for bacterial vaginosis can help you avoid infections during other kinds of operations, or when having an **IUD** (intrauterine device or contraceptive coil) put in. There haven't been any good studies. But if you have bacterial vaginosis, your doctor might offer you treatment with antibiotics before you have an operation on your uterus (womb), **fallopian tubes**, or **ovaries**.

### Should my partner be treated too?

Experts don't think that bacterial vaginosis can be passed from a man to a woman during sex. Treating a steady male sexual partner with antibiotics will not help stop you getting bacterial vaginosis again.<sup>[44]</sup> The same is probably true for women who have a steady female sexual partner. But we didn't find any studies that looked at whether treating female sexual partners helped stop women getting bacterial vaginosis.

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## Further informations:

### Is there anything I can do to prevent another infection?

There are things you can try yourself to avoid getting bacterial vaginosis, although there hasn't been much research on whether they work.

One self-help treatment is to put live yoghurt (containing *Lactobacillus acidophilus*) in your vagina. But there hasn't been any research to show this helps to clear bacterial vaginosis, or that this will stop you getting it.



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One study found that vaginal capsules containing 'friendly' bacteria helped keep bacteria levels normal after treatment with [antibiotics](#).<sup>[17]</sup> The strain of bacteria used in the study was *Lactobacillus casei rhamnosus* (Lcr35).

You should avoid vaginal douching (where you force water or another liquid into your vagina to rinse it out). And don't use shower gels, antiseptic agents, or shampoo in the bath.

## Glossary:

### sexually transmitted infection

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.

### intrauterine device (IUD)

An intrauterine device (IUD) is a type of contraceptive. It is a small device made of copper or plastic, with threads at the end. These threads can be left in your vagina while the rest of the device sits in your womb (cervix). IUDs stop eggs sticking to your womb and growing.

### yeast infection

Infections with certain types of fungus are called yeast infections. These infections are common and can affect many different parts of your body. For example, a yeast infection called thrush can affect people's mouths or, if they're women, their vaginas. If you get infected with thrush in your mouth, it makes white spots appear on your tongue or on the roof of your mouth. If thrush affects your vagina, you can get itchy, sore and have a discharge. You're more likely to get a yeast infection if your immune system is weakened.

### caesarean section

A caesarean section is an operation to take a baby out of a mother's womb. The surgeon makes a cut through her abdomen to take the baby out. You have this if there's a risk that a normal delivery through your vagina would cause harm to you or your baby.

### hysterectomy

A hysterectomy is an operation to take out a woman's womb (also called her uterus). Sometimes the ovaries and fallopian tubes are removed as well.

### pelvis

Your pelvis is the area between your hips.

### 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.

### 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.

### 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.

### systematic reviews

A systematic review is a thorough look through published research on a particular topic. Only studies that have been carried out to a high standard are included. A systematic review may or may not include a meta-analysis, which is when the results from individual studies are put together.

### 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.

### randomised controlled trials



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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.

## **fallopian tubes**

Fallopian tubes are the two tubes that come out of the top of a woman's womb. They carry eggs from the ovaries to the womb.

## **ovaries**

Women have two ovaries, one on each side of their womb. They are small glands that store eggs. Inside the ovaries are hundreds of thousands of pre-eggs, called follicles. Some of these grow into eggs.

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