

Patient information from the BMJ Group

Genital warts

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Genital warts

If you have genital warts, you might be embarrassed and upset. But genital warts aren't usually serious, and treatments work well.

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

What are genital warts?

Genital warts are growths on your skin, which usually grow near your genitals. You can have just one wart or a lot of them.

Genital warts can be flat or lumpy, look like a cauliflower, or be on a stalk.^[1] Warts on moist skin (such as the skin near the vagina or on the penis) are usually soft and flesh-coloured. Warts that grow on dry, hairy skin may be firmer.

Genital warts can grow:^[1] ^[2]

- Around the vagina
- On the penis or scrotum
- Around the anus
- Around the opening of the urethra (the tube that carries urine from your bladder out of your body)
- Around the nose or mouth
- On the cervix (the opening of the womb into the vagina)
- Inside the vagina
- Inside the anus (if you've had anal sex).

Genital warts

Genital warts are caused by a virus called **human papillomavirus** (HPV for short). There are about 100 types of HPV. But 9 in 10 people who get genital warts have been infected with HPV type 6 or type 11. ^[1] ^[2] Some other types of HPV cause cancer of the cervix (cervical cancer).

HPV spreads from one person to another by skin contact. The virus can be spread:

- If you have sex (including oral sex and anal sex)
- If your genitals touch your partner's genital area, even if you do not have sex
- If you touch your partner's genital area (for example, with your fingers)
- If your partner touches you after touching his or her genitals.

You can be infected with HPV but have no symptoms. So even though you or your partner might not see any genital warts, the virus can still spread between you.

A pregnant woman who is infected with HPV can also pass the virus to her child during pregnancy or birth.

There are several things that can increase your risk of being infected with HPV: ^[3] ^[4]

- Having many sexual partners
- Having another **sexually transmitted disease** (such as **chlamydia**)
- Having a condition that affects your **immune system** (such as **HIV infection** and **AIDS**).

Using condoms whenever you have sex can reduce your risk of being infected with HPV. ^[5] But condoms don't give complete protection from the virus. That's because HPV spreads by skin-to-skin contact. So although some parts of the genitals are protected by a condom, not all the skin in that area is. Also, it's possible to get the virus on your fingers and spread it to another person that way.

A **vaccine** to prevent genital warts has been developed. To read more, see [A vaccine to prevent genital warts](#) .

What are the symptoms of genital warts?

Genital warts probably won't make you feel sick or cause any symptoms. But you might be upset by the way they look. If this is the case, you should talk with your doctor about treatment.

Some people do occasionally get symptoms. Genital warts can: ^[1] ^[2]

Genital warts

- Be painful
- Itch
- Break off
- Make it hard to have sex
- Block the flow of urine
- Bleed
- Make it hard for a baby to be born, by blocking the vagina.

Your doctor will probably decide whether you have genital warts by examining you. He or she might take a sample of tissue (a [biopsy](#)) to make sure that you don't have anything more serious. Almost all genital warts are benign (non-cancerous).

How common are genital warts?

Genital warts are very common.

Young people between the ages of 18 and 28 who are sexually active are most likely to get them. [\[2\]](#) [\[12\]](#) [\[13\]](#)

About 1 person in 10 gets genital warts at some time in their life. [\[13\]](#) But many more people (at least half) are infected with the virus (called HPV) that causes genital warts. [\[6\]](#) This is because your [immune system](#) can often fight off the virus without it causing warts.

What treatments work for genital warts?

If your genital warts are not causing you any trouble, you might want to wait to see if they clear up by themselves. But if you are bothered by them, there are many treatments that can help.

Key points about treating genital warts

- Some treatments involve putting a **liquid or lotion** onto the warts. Your doctor might do this, or you might apply it yourself.
- Other treatments involve removing the warts with **surgery**, with **laser therapy** (a kind of light treatment), or by **freezing** them off (**cryotherapy**).
- Your doctor might use a **combination of treatments**. But we don't know which combinations work best.

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- If you have a condition that affects your **immune system**, such as **HIV infection** or **AIDS**, it might be harder to get rid of your warts.
- Some treatments are safe to use during **pregnancy**. But it isn't clear whether treating genital warts helps to prevent your baby having problems.
- None of the treatments get rid of the virus that causes genital warts, so there's a chance that the warts will come back.

A **vaccine** to prevent genital warts has also been developed. To read more, see [A vaccine to help prevent genital warts](#).

Which treatments work best? We've looked at the best research and given a rating for each treatment according to how well it works.

Treatment Group 1

Treatments for genital warts

Treatments that work

- [Imiquimod](#)
- [Podophyllotoxin](#)

Treatments that are likely to work

- [Acid](#)
- [Cryotherapy \(freezing\)](#)
- [Electrosurgery](#)
- [Podophyllin](#)
- [Surgery](#)

Treatments that need further study

- [Laser treatment](#)
- [Interferon injections](#)

What will happen to me?

Without any treatment, genital warts can clear up, get bigger, or stay the same size. What happens to you depends partly on whether you have any other health problems.

Genital warts

Genital warts can clear up on their own as your immune system fights off the virus. But this can take many months or years.^[2] If you have a weak immune system (doctors say you are immunocompromised), you might not get rid of the warts so easily.^[4] Things that can weaken your immune system include:

- Having HIV (human immunodeficiency virus) infection or AIDS (acquired immune deficiency syndrome)
- Having a transplant
- Having cancer or some treatments for cancer.

Genital warts often come back several months after you've had treatment to get rid of them. This is more likely to happen if your immune system is weak. There's also a very small risk that genital warts could become cancer if your immune system is not working as well as it should, although this is very rare.^[2]

Genital warts and pregnancy

Genital warts sometimes grow larger during pregnancy.^[14] This can make passing urine difficult. Or if the warts are inside your vagina, they can cause problems during birth. This is because they can make your vagina narrower and less elastic.^[14]

There is also a very small chance that if you have genital warts while you're pregnant, your child could get a condition called **laryngeal papillomatosis**. This is when warts grow inside the voice box (larynx) or the air passages that lead from the nose into the lungs. It's not clear whether a child gets the virus while the mother is pregnant, during birth, or after birth.

If genital warts are blocking your vagina or there's a risk that they will bleed a lot during labour, your doctor might advise you to have a caesarean section to deliver your baby.^[2] But there's no evidence that having a caesarean reduces the risk of passing the virus to your baby.

Some treatments for genital warts are safe to use during pregnancy. But creams and other treatments that you put on warts might not work so well during pregnancy. Also, your genital warts might clear up on their own after you have your baby and your immune system recovers. So it might be worth waiting a while before you decide to have treatment.

Treatments:

Imiquimod

In this section

Imiquimod is a cream that you put on your genital warts. Its brand name is Aldara.

Genital warts

Results from seven good studies ([randomised controlled trials](#)) show that imiquimod helps to get rid of warts in about half the people who use it for four months. ^[15] ^[16] ^[17] But one study found it didn't help people who had [HIV infection](#) . ^[15]

Imiquimod can also help to reduce the chance of the warts coming back two to four months after you stop using it. ^[15] It doesn't seem to matter whether you use imiquimod once, twice, or three times a day. ^[18] It's just as likely to work however often you use it.

Imiquimod cream can make your skin red, swollen, and itchy. ^[15] Your skin may also get slightly lighter or darker where you use the cream. ^[19] Using it twice a day causes more side effects than using it less often. ^[18]

You shouldn't use imiquimod if you're pregnant.

Podophyllotoxin

In this section

Podophyllotoxin is a cream or solution that you put on your genital warts. Its brand names are Condyline and Warticon. It is also the most [active](#) of the ingredients found in another treatment called [podophyllin](#) .

Eight good studies ([randomised controlled trials](#)) found that using podophyllotoxin for four months helped to get rid of genital warts. ^[20] ^[21] ^[22] ^[23] ^[24] ^[25] ^[26] ^[27] But warts came back in up to one-third of people. ^[22]

Continuing to use podophyllotoxin after it has got rid of your genital warts probably won't stop them coming back. ^[28]

Six studies have also compared podophyllotoxin with podophyllin. ^[29] ^[30] ^[31] ^[32] ^[33] ^[34] Most of these studies found that the two treatments worked equally well for clearing up warts and stopping them coming back. ^[29] ^[30] ^[31] ^[32] ^[33]

Podophyllotoxin can irritate and burn your skin, causing pain and itching. ^[21] It can occasionally make the foreskin and head of the penis inflamed in men who aren't circumcised. ^[35] ^[36]

You should not use podophyllotoxin if you're pregnant.

Acid

In this section

Your doctor can put acid on your genital warts. This dissolves the warts.

Genital warts

Two good studies ([randomised controlled trials](#)) found that an acid called trichloroacetic acid worked about as well as freezing the warts.^[37] ^[38] After six weeks of either treatment, about two-thirds of people had got rid of their warts.^[37] Warts came back in about one-third of people two months later, whichever treatment they had.^[38]

Trichloroacetic acid can cause irritation and scabs.^[38]

It is safe to have acid treatment if you're pregnant.

Cryotherapy (freezing)

In this section

Your doctor can freeze off your warts using liquid nitrogen in a treatment called **cryotherapy**. You can have this treatment every one to three weeks, depending on how quickly the area heals after each treatment and what happens to your warts.

Two good studies ([randomised controlled trials](#)) found that cryotherapy worked about as well as treatment with [acid](#).^[37] ^[38] After six weeks of either treatment, about two-thirds of people had got rid of their warts.^[37] Warts came back in about one-third of people two months later, whichever treatment they had.^[38]

It isn't clear whether cryosurgery works better than using an electrical current ([electrosurgery](#)) to get rid of the warts.^[39]

Cryotherapy can sometimes cause an infection, but this is rare.^[40]

It is safe to have cryotherapy if you're pregnant.

Electrosurgery

In this section

During electrosurgery, doctors use an electrical current to heat up your genital warts to get rid of them. It is also called **diathermy** or a **loop electrosurgical excision procedure** (LEEP).

One good study (a [randomised controlled trial](#)) found that, after six months, warts had cleared up in 8 in 10 people who had electrosurgery.^[41]

It isn't clear whether electrosurgery works better than freezing the warts off ([cryotherapy](#)).^[39]

Electrosurgery can cause scarring, swelling, and pain (both generally and during sex).^[41]

It's safe to have electrosurgery if you're pregnant.

Podophyllin

In this section

Podophyllin is a treatment that your doctor paints onto your warts. It can be done in the doctor's surgery. You might need to have several treatments.

Podophyllin seems to work about as well as [podophyllotoxin](#) for getting rid of genital warts and stopping them coming back.^{[29] [30] [31] [32] [33]}

Podophyllin also seems to work as well as cutting away the warts with [surgery](#). At least 8 in 10 people who are treated with either podophyllin or surgery get rid of their warts.^{[42] [43]} But surgery may be about twice as good at stopping the warts coming back six months to 12 months later.^[43]

Podophyllin can cause pain, redness, and irritation.

You shouldn't use podophyllin if you're pregnant.

Surgery

In this section

Your doctor can cut away your genital warts with surgery. This will probably be done with a [local anaesthetic](#) so you won't feel anything.

Surgery seems to work about as well as [laser treatment](#) or [podophyllin](#) for getting rid of genital warts.^{[42] [43] [44]} But surgery works better than podophyllin for stopping warts coming back six months to 12 months after treatment.^{[42] [43]}

Although you won't feel anything while you're having surgery, you might get some pain when the anaesthetic wears off.

You might also be left with a scar, although this is less likely than with laser treatment. In one study, 1 in 10 people who had surgery to remove warts got a scar.^[44] Out of the people treated with a laser, 3 in 10 got a scar.

It is safe to have surgery if you're pregnant.

Laser treatment

In this section

Your doctor can treat your warts with a [laser](#), which is a highly focused beam of light.

This used to be a popular way to treat genital warts. But it isn't used as much any more because it doesn't work better than other treatments. Also, it needs to be done by someone who is experienced in using a laser, and the equipment is expensive.

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One good study (a randomised controlled trial) found that laser treatment worked as well as surgery for getting rid of genital warts and stopping them coming back.^[44] The side effects of laser treatment include pain and scarring.^[44]

Two studies in pregnant women have found that laser treatment can have side effects. Women have needed extra treatment to heal their wounds and, in some women, their waters have broken early after treatment. Other problems included kidney infections, wound infections, and a cut in the rectum.^[45] ^[46]

Interferon injections

In this section

Interferon can be injected into genital warts (this is called intralesional interferon). Or you can have interferon injections into a muscle or under your skin (this is called systemic interferon). Some studies found that these injections helped to clear genital warts.^[41] ^[47] But others found that they didn't.^[48] ^[49] Systemic interferon may be particularly unlikely to help, with most studies finding it doesn't clear warts any better than a dummy treatment (a placebo).^[50]

Interferon injections can have a lot of side effects. They can cause flu-like symptoms, headaches, fatigue, muscle aches, fever, drowsiness, and allergies. They can also cause blood and liver problems.^[41] ^[47] ^[48] ^[51] Because of these side effects and the fact that these injections are expensive, interferon injections are not often used to treat genital warts.

Further informations:

A vaccine to help prevent genital warts

There is a vaccine to help prevent genital warts. It's called Gardasil.

Gardasil protects against four different types of the **human papilloma virus** (HPV): types 6, 11, 16, and 18. Genital warts are often caused by more than one type of HPV.

- About 9 in 10 cases of genital warts involve HPV types 6 and 11.
- About 7 in 10 cases of cervical cancer involve HPV types 16 and 18.

Gardasil is made in the laboratory and does not contain any live virus.

The Gardasil vaccine is offered to all girls aged 12 to 13 as part of the NHS childhood vaccination programme. This is to protect them from cervical cancer.

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When is it given?

Gardasil is designed to be given at a young age. It is licensed to treat children and young adults between the ages of 9 and 26. It's given as three injections spread over six months.

You need to have the vaccine at a young age because once you have already had sex, there is a very high chance that you have been infected with HPV.^[6] Gardasil won't help to protect against these four types of HPV if you have already been infected with them.

You can still be infected with other types of HPV, though other types of HPV are less common. So if you're a woman, it's important to continue to get cervical smear tests and see your doctor regularly for gynaecological check-ups even if you have had the vaccine.

What does the research say?

We found several good studies that looked at the Gardasil vaccine. These studies included thousands of women between the ages of 16 and 26. Some women got the vaccine and others got a dummy vaccine (a placebo).^{[7] [8] [9]}

- Nearly all of the time, Gardasil helped prevent genital warts that were caused by HPV types 6 and 11, if the women had not already been infected with HPV. One study looked at what happened to women five years after having the vaccine or a placebo.^{[10] [11]} It found that 2 in 100 women who had the vaccine had been infected with HPV. This compares with 23 in 100 women who did not have the vaccine.
- The studies didn't go on long enough to tell whether the vaccine prevents cervical cancer from happening. But the vaccine helped prevent precancerous growths caused by HPV types 16 and 18, so it seems likely that the vaccine will help to prevent cervical cancer.

The vaccine can cause pain or tenderness at the injection site.

Studies are being done for longer periods of time to follow women who have had the vaccine. These studies will also look at whether the vaccine is safe if women get pregnant. The vaccine is being studied for use in boys and men as well.

Glossary:

anus

The anus, which is at the end of the rectum, is where stools leave your body when you go to the toilet. Part of the anus is a muscle that helps you hold in the stool until you are on the toilet.

urethra

Your urethra is the tube that carries urine from your bladder out of your body. In a man, the urethra runs through the inside of the penis. In a woman, the urethra is shorter and opens onto the top of the vagina.

cervix

The cervix is a piece of tissue that sits between a woman's womb and her vagina. It has a small opening in it that gets much bigger when a woman is having a baby.

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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.

chlamydia

Chlamydia is an infection you can get by having sex without a condom. It can cause pain or discomfort and discharge from your sexual organs. If you're a woman, it can also cause infertility or a painful infection inside your body.

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.

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.

vaccination

A vaccination is an injection a doctor can give you to protect you from getting an infectious illness (an illness that spreads between people).

Pap smear test

A Pap smear test looks for changes in the cells of the neck of your womb (cervix). A positive result means that some of the cells look unusual. If you get a positive result, you may need further tests to find out what's causing the changes. There's a chance they could be caused by cervical cancer. This kind of test is called a screening test. It's a way of spotting cancer and other problems early on.

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.

biopsy

Biopsy is when doctors remove some tissue from a part of your body, so that it can be examined under a microscope.

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.

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.

active ingredient

An active ingredient is the substance in a medicine or supplement that causes changes to take place in your body.

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.

local anaesthetic

A local anaesthetic is a painkiller that's used to numb one part of your body. You usually get local anaesthetics as injections.

laser

Genital warts

A laser focuses light in a way that makes it able to cut through things. Surgeons sometimes use lasers when they need to do delicate operations.

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.

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.

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