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Sexually Transmitted Infections

This leaflet gives some brief information about sexually transmitted infections (STIs) and what you are advised to do if you suspect that you have an STI. An STI is sometimes referred to as a sexually transmitted disease (STD) or venereal disease (VD). This leaflet also gives some information about genitourinary medicine (GUM) clinics, sometimes called sexual health clinics. For example, how you can find a GUM clinic and what you can expect when you go to one.

What is a sexually transmitted infection?

A sexually transmitted infection (STI) is an infection that can be passed from person to person when having sex. You can get an STI by having vaginal sex, anal sex, or oral sex. There are several different types of STI.

What are the symptoms of a sexually transmitted infection?

Symptoms of each STI can vary, from local symptoms affecting the genitals, to symptoms that affect various other parts of the body. The following is not a full list of all possible symptoms. However, these are the common symptoms to look out for:

- A vaginal discharge.
- Abnormal vaginal bleeding.
- A discharge from the penis.
- A sore, ulcer, rash, or lump that appears on the penis or around the vagina, vulva or back passage (anus).
- Pain when you have sex.
- Pain when you pass urine (although the common reason for this is a urine infection and not an STI).
- Swelling of the glands in your groin.

But remember, in many cases of STI, no symptoms may develop. However, you can still pass on the infection to others even if you have no symptoms. Therefore, if you think that you may have an STI, it is best to get it checked out.

What are the main sexually transmitted infections?

The ten most common STIs in the UK are anogenital warts, chlamydia, genital herpes, gonorrhoea, human immunodeficiency virus (HIV), hepatitis B, hepatitis C, pubic lice, syphilis and trichomonas.

Anogenital warts are small lumps that develop on the genitals and/or around the back passage (anus). They are sometimes just called genital warts. They are caused by a germ (virus) called the human papillomavirus (HPV). However, most people infected with HPV do not develop visible warts. You can carry the virus without knowing it and can pass it on to other people who may then develop warts. Treatment options include applying chemicals to the warts or freezing the warts to destroy them. Read more about [anogenital warts](#).

Chlamydia is caused by a germ (bacterium) called *Chlamydia trachomatis*. It is the most common STI in the UK. Symptoms include a vaginal discharge in women and a discharge from the penis in men. You can be infected with chlamydia for months, even years, without realising it, as it often causes no symptoms. However, even if you have no symptoms, you can still pass on the infection and complications may develop if it is left untreated (such as pelvic infection and infertility in women). A short course of an antibiotic medicine clears chlamydia in most cases. Learn more about [chlamydia](#).

Genital herpes is caused by the herpes simplex virus. Once you catch this virus it stays with you for life but lies dormant without causing symptoms for most of the time. In fact, many people who are infected with this virus never have symptoms. If symptoms occur, they can range from a mild soreness to many painful blisters on the vulva or penis and surrounding area. A first episode of symptoms can last 2-3 weeks but may be shorter. Recurrent episodes of symptoms then develop in some cases from time to time but are usually less severe than the first episode. (It is similar to having cold sores but on the genitals from time to time.) Antiviral medication can ease symptoms when they develop. Discover more about [genital herpes](#).

Gonorrhoea is caused by a bacterium called *Neisseria gonorrhoeae*. Symptoms include a vaginal discharge in women and a discharge from the penis in men. Again, some people infected with gonorrhoea do not develop symptoms. However, even if you have no symptoms, you can still pass on the infection and complications may develop if it is left untreated (such as pelvic infection and infertility in women). A short course of an antibiotic clears gonorrhoea in most cases. Find out more about [gonorrhoea](#).

Human immunodeficiency virus (HIV) is most commonly passed on by sexual contact. HIV attacks cells of the immune system. Over time (usually several years) the immune system weakens so that you cannot defend your body against various bacteria, viruses and other germs. This is when acquired immunodeficiency syndrome (AIDS) develops. Many infections and conditions can develop if you have AIDS. Treatment with antiretroviral medicines can reduce the viral load of HIV and allow your immune system to work effectively. However, treatment does not clear the virus from the body. Therefore, if you are infected with HIV, you will need monitoring for the rest of your life and treatment is long-term. Read more about [HIV and AIDS](#).

Hepatitis B is a virus that primarily attacks the liver. The virus is mainly passed on by sexual contact, sharing contaminated needles to inject street drugs, or from an infected mother to her baby. The hepatitis B virus can cause a short-term (acute) infection, which may or may not cause symptoms. Following an acute infection, some people develop a persistent infection called chronic hepatitis B. Many people with chronic hepatitis B remain well but can still pass on the virus to others (as they are carriers). Some develop serious liver problems. If needed, antiviral medication may prevent or reduce the severity of liver inflammation and liver damage. [See separate leaflet called Hepatitis B.](#)

Hepatitis C is a virus that primarily attacks the liver. Most cases occur in people who share needles contaminated with traces of infected blood, in order to inject street drugs. There is a small risk that an infected person can pass on the virus whilst having sex. Some people clear the infection naturally. Some people with persistent (chronic) infection remain free of symptoms but some have symptoms. After many years of infection, some people develop a severe scarring of the liver (cirrhosis) and some develop liver cancer. Treatment is difficult but it can clear the infection in up to half of cases. [See separate leaflet called Hepatitis C.](#)

Pubic lice (often called crabs) are tiny insects about 1-2 mm long (smaller than a match head). They lay eggs which hatch into lice after seven days. Pubic lice attach strongly to hairs and do not wash or brush off with normal cleaning. Pubic lice are passed on by close bodily contact, especially when having sex. The main symptom is itch, usually in the pubic hair area. However, you may not have any symptoms but may still pass on the lice to others. Treatment with a lotion or cream usually clears the lice. [See separate leaflet called Pubic and Body Lice.](#)

Syphilis is caused by a bacterium called *Treponema pallidum*. If it is not treated, it can spread in the bloodstream from the genital region to cause various symptoms and problems in different parts of the body over many years. A short course of antibiotics usually clears syphilis infection. Learn more about [syphilis](#).

Trichomonas is a protozoan. This is a small germ a bit like a bacterium. It can cause an infection that is not normally serious but symptoms can be unpleasant. Symptoms include a vaginal discharge in women and a discharge from the penis in men. Some people infected with trichomonas do not have symptoms but can still pass on the infection. A course of antibiotics usually clears trichomonas infection. Discover more about [the protozoan called trichomonas](#).

There are some other STIs that are uncommon in the UK - for example, donovanosis and chancroid.

"You may not be able to think logically at a time when you most need to. But you will not be alone. Anyone who is sexually active can acquire an STI and there are trained professionals whose job it is to help you."

Source: Dr Laurence Knott (<https://patient.info/health/sexually-transmitted-infections-leaflet/features/help-i-think-i-have-an-sti>)

Other conditions that are sometimes thought of as sexually transmitted infections

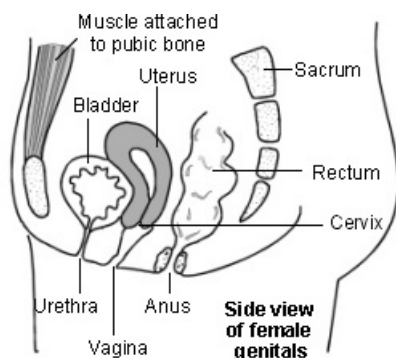
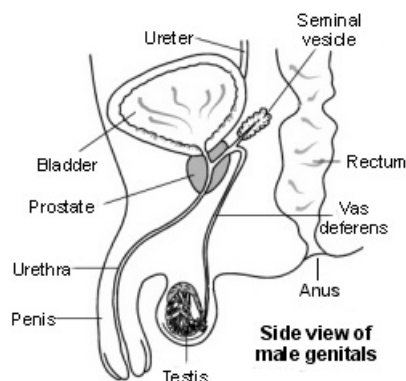
Scabies is a common skin rash that is caused by a tiny insect (mite). It is usually very itchy. You need close skin-to-skin contact with an infected person to catch scabies. Most cases are probably caught from holding hands with an infected person. However, sleeping in the same bed and sexual contact are other common ways of passing on the mite which is why some people regard scabies as an STI. [See separate leaflet called Scabies.](#)

Molluscum contagiosum is a common skin rash that is caused by a germ (virus). It is passed on by skin-to-skin contact. The rash consists of small lumps which are pearly white or slightly pink. Each lump (molluscum) looks like a small wart and is round, firm and about 1-5 mm across. Sometimes the virus is passed on during the close contact of having sex. So, some people regard molluscum contagiosum as an STI. If it is passed on whilst having sex then the first mollusca to appear tend to be on the skin around the penis or vagina.

However, many cases of molluscum contagiosum are not caused by a sexual contact but by simply touching other affected people. It is a common condition that is seen both in adults and in children. [See separate leaflet called Molluscum Contagiosum.](#)

What are urethritis, balanitis, pelvic inflammatory disease and vulvitis?

These terms describe the **site** of a problem rather than a particular cause of the problem.



Urethritis

Urethritis means inflammation of the urethra. The urethra is the tube that passes out urine from the bladder. If you have urethritis you may develop a burning sensation when you pass urine and men may have a discharge from the end of the penis. Urethritis is usually caused by an STI such as chlamydia or gonorrhoea (see above) but can also be caused by injury. [See separate leaflet called Urethritis and Urethral Discharge in Men](#) and read more about [non-gonococcal urethritis](#).

Balanitis

Balanitis means inflammation of the tip of the penis. Balanitis is sometimes caused by an STI. However, it is most commonly caused by non-sexually transmitted infections and skin conditions. Balanitis is common in young children, due to non-sexually transmitted infections. [See separate leaflet called Balanitis](#).

Pelvic inflammatory disease (PID)

PID is an infection of the womb (uterus). Germs (bacteria) that cause the infection usually travel into the womb from the vagina or neck of the womb (cervix). An STI is a common cause of PID. Most cases are caused by chlamydia or gonorrhoea. However, some cases are not due to an STI. Symptoms of PID include pain in the lower tummy (abdomen), high temperature (fever), abnormal vaginal bleeding and a vaginal discharge. Possible complications include infertility, persistent pain and an increased risk of an ectopic pregnancy if you become pregnant. [See separate leaflet called Pelvic Inflammatory Disease](#).

Vulvitis

Vulvitis means inflammation of the vulva. (The vulva is the skin just outside the vagina.) There are various causes of vulvitis, including some STIs. [See separate leaflet called Vulvitis](#).

Conditions that are not sexually transmitted infections

The genitals (vagina and vulva in women, penis in men) can be affected by various other conditions. Some people are confused as to what is and what is not caused by an STI. For example, the following are not usually due to an STI:

- [Thrush is an infection caused by a yeast germ called *Candida* spp.](#) Small numbers of *Candida* spp. commonly live on the skin and around the vaginal area. These are usually harmless. However, when conditions are good for *Candida* spp. they multiply and may invade the vagina and cause symptoms such as a vaginal discharge.
- [Bladder infection \(cystitis\).](#)
- [Bacterial vaginosis is a common condition of the vagina.](#) It is caused by an overgrowth of various germs (bacteria) that are normally found in the vagina. It is the most common cause of a vaginal discharge.

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- A vaginal discharge.
- Abnormal vaginal bleeding.
- A discharge from the penis.
- A sore, ulcer, rash, or lump that appears on the penis or around the vagina, vulva or back passage (anus).
- Pain when you have sex.
- Pain when you pass urine (although the common reason for this is a urine infection and not an STI).
- Swelling of the glands in your groin.

But remember, in many cases of STI, no symptoms may develop. However, you can still pass on the infection to others even if you have no symptoms. Therefore, if you think that you may have an STI, it is best to get it checked out.

What should I do if I suspect that I have a sexually transmitted infection?

42%

of people would visit their GP if they they had an STI. 37% would visit a sexual health clinic.

Source: Patient Sexual Health Survey (<https://patient.info/sexual-health-at-christmas>)

If you have a symptom that you think is due to an STI, or if you have no symptoms but are worried you have caught an STI then you should see a health professional.

You can:

- **See your own GP.** Your GP can give advice and may examine you. However, if your GP suspects that you may have an STI, in the UK he or she is likely to refer you to a GUM clinic. Some GPs may do tests and manage the situation without a referral to a GUM clinic; **or**
- **Go to a GUM clinic directly.** In the UK you do not need a referral from your GP to go to a GUM clinic. You can ring the local hospital or health authority and ask where the nearest clinic is. Local and national information is also available on the internet - for example, from the [Family Planning Association's 'Find a clinic' service](#).

Until you are checked out, and treated if necessary, you should not have sex. This is to prevent you passing on any infection.

What are genitourinary medicine clinics?

GUM clinics are special clinics that help people who have, or may have, an STI or certain other problems with their genitals or urinary system.

Tests

Depending on the initial assessment and examination, the doctor may advise on some tests and ask for your consent to do the tests. Learn more about [tests for STIs](#).

Advice about sexual partners

If you are diagnosed with an STI then the clinic will encourage you to tell any current or recent sexual partners that you have an infection. You are not obliged to do this or to give out any information about other people. However, it is best that any recent sexual partners should know that they might also be infected. They should be offered testing and treatment if necessary, to prevent the infection being spread any further. This telling of sexual partners is sometimes called contact tracing. If you prefer, clinics can contact people anonymously if you do not wish to tell them yourself. You should be aware that recklessly exposing a sexual partner to the risk of infection is against the law.

Treatment

The treatment that you will be offered depends on which STI is found. For example, [a short course of antibiotics](#) can usually clear away chlamydia, gonorrhoea, syphilis and trichomonas. A cream or lotion can clear pubic lice and scabies. Topical treatments can usually clear most anogenital warts. Treatments for genital herpes, hepatitis B, hepatitis C and HIV are more involved and complex. You will be given advice about what treatment options you have and given time to ask questions.

If you are prescribed antibiotics then it is important to finish the full course of tablets, or else the infection may not be fully cleared. If you develop side-effects then seek advice from the GUM clinic or from your GP as to what to do. Do not simply stop taking the medication. For some infections you will be asked to return after a course of treatment to check that the infection has gone.

Do not have sex again until the time advised by the clinic. Depending on the infection, this may be for a certain length of time after treatment has finished or it may be until you are given the all clear from a repeat test. The aim is to prevent you from passing on the infection to others.

Advice from a sexual health adviser

Most clinics will have a sexual health adviser. You are likely to be seen by the adviser in addition to being seen by a doctor or nurse. A sexual health adviser is specially trained and can:

- Tell you more about STIs and how to avoid catching them in future. For example, the risk of infection increases with the number of changes of sexual partner. Wearing a condom during sex helps to prevent against STIs.
- Give you tips on how to cope with any current symptoms.
- Offer you free condoms which can help to prevent STIs.
- Give advice about what to tell your sexual partner or previous partners.
- Help you with contacting previous sexual partners who should be tested or treated. For example, you may be given a card with a number on it, plus a printed message advising the person who is given the card to visit the clinic and to bring the card along. This helps to match them with your notes.

Other services

In addition to diagnosing and treating STIs, if needed, a GUM clinic can also usually:

- Do a pregnancy test.
- Arrange counselling if you are pregnant and are not sure what to do.
- Arrange counselling about the decision to have an HIV test.
- Provide advice about contraception.
- Provide emergency contraception.
- Do a cervical smear test on women if one is due.
- Diagnose and treat some other conditions of the genitals that are not sexually transmitted. For example, a urine infection, thrush and some skin conditions affecting the genital area.

What are anogenital warts and what causes them?

Anogenital warts are sometimes just called genital warts. They are small lumps that develop on the genitals and/or around the back passage (anus). They are caused by a virus called the human papillomavirus (HPV). There are over 100 types of this virus. Most anogenital warts are caused by types 6 or 11. Common warts that many people have on their hands and feet are caused by a different type of HPV.

How do you get anogenital warts?

The virus is passed on by sexual contact. You need close skin-to-skin contact to pass on the virus. This means that you do not necessarily need to have penetrative sex to pass on infection. Sharing sex toys may also pass on infection. Very rarely, anogenital warts may be passed on from hand warts. They may also rarely be passed on to a baby when a woman gives birth.

It can take weeks or months to develop warts after being infected with HPV. Also, most people infected with HPV do not develop warts. You can be a carrier of the virus without realising it and you may pass on the virus to others who then develop warts. It is also possible to pass on the virus after warts have been treated or gone.

Because it can take some time to develop warts after being infected with HPV, if you have just developed noticeable anogenital warts, it does not necessarily mean that either partner has been recently unfaithful. You may have had HPV for a long time without developing warts.

Also, note that you may get anal warts even if you have not had anal sex.

How common are anogenital warts?

53%

of people would be worried about contracting genital warts from a casual sexual encounter.

Source: Patient Sexual Health Survey (<https://patient.info/sexual-health-at-christmas>)

They are common and are **one of the most commonly diagnosed sexually transmitted infections (STIs) in the UK**. Many more people are infected with the virus but do not develop visible warts (they are carriers).

An individual has quite a high chance of having HPV infection in their lifetime. However, most people do not know that they have been infected because they have no symptoms. Therefore it is difficult to know exactly how common it is. Only a few people with HPV infection develop anogenital warts. Around 3 in 100 people are treated for genital warts per year in the UK.

Where do anogenital warts develop?

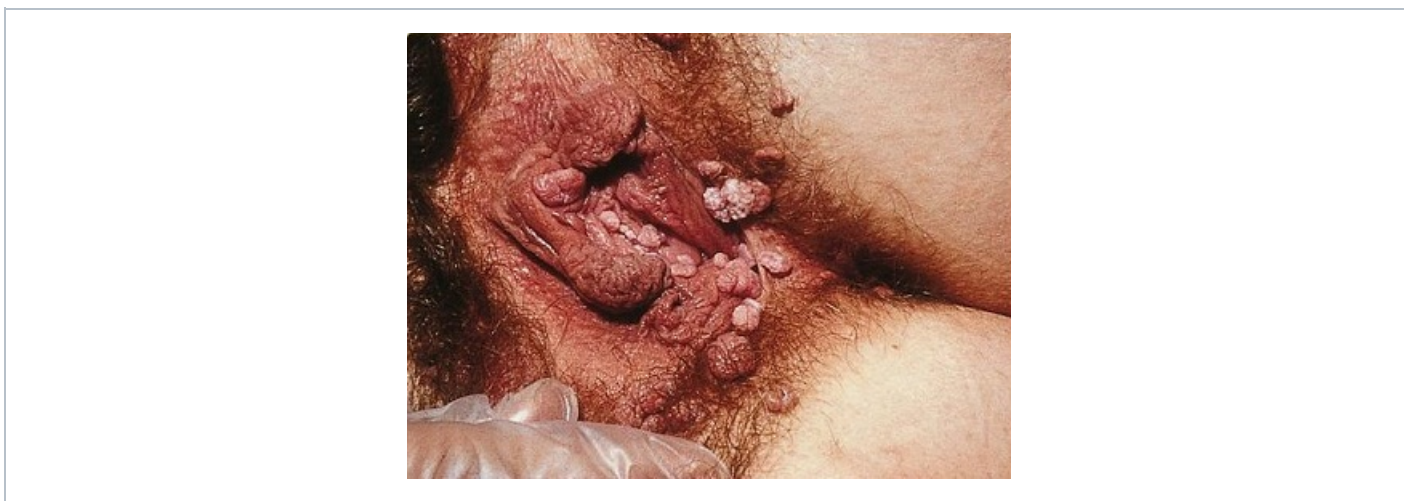
In men, the warts usually develop on the outer skin of the penis. In women, the warts usually develop on the vulva, just outside the vagina. Warts may also develop on the skin around the back passage (anus), both in men and in women.

Sometimes warts develop inside the vagina, on the neck of the womb (cervix), on the scrotum, or inside the anus. They also sometimes occur inside the tube that drains urine from the bladder to the outside (the urethra). Rarely, they occur in the mouth or nose.

What do anogenital warts look like?

Anogenital warts may have several different appearances. There may be one or more. Sometimes individual warts join together to form one large warty area. They may look like small, skin-coloured lumps on the skin (similar to the common warts that many people have on their hands). Others may be red or pink, grey or white. Warts that develop on skin that is warm, moist and non-hairy (such as the vulva) tend to be soft. Warts that develop on skin that is dry and hairy (such as around the bottom) tend to be firm.

The number of warts that develop varies from person to person. Some people have just a few that are barely noticeable. Some people have many around their genitals and anus.



By SOA-AIDS Amsterdam, via Wikimedia Commons

What are the symptoms of anogenital warts?

Often there are no symptoms, other than a lump on the skin being noticed. In most cases, the warts cause no physical discomfort. They sometimes cause irritation and soreness, especially if they occur around the back passage (anus). Sometimes the warts can bleed or cause pain on intercourse. If you have warts inside your anus, this can sometimes cause bleeding when you go to the toilet. If you have warts inside the tube from which your urine is passed (urethra), the stream of urine may be different, or there may be bleeding.

Warts look unsightly and some people become distressed by this. They may cause embarrassment, or interfere with sexual activity.

Do I need any tests?

Anogenital warts can usually be diagnosed by their typical appearance when you are examined by a doctor or nurse. Your doctor or nurse will examine your external genitalia to look for warts. They may also suggest that they do an internal examination of your vagina or back passage to look for warts here.

So, tests are not usually needed to confirm the diagnosis. However, around 1 in 5 people with anogenital warts also have another STI. Tests such as swabs are commonly advised to check for other infections - even if you do not have any symptoms.

If you have anogenital warts, in the UK your doctor or nurse will usually refer you to a [sexual health specialist in a genitourinary medicine \(GUM\) clinic for tests and treatment](#). If you are worried that you may have anogenital warts or another STI, the best option is to visit a GUM clinic from the outset. You do not need a referral from your GP to attend a GUM clinic. You can ring the local hospital or health authority and ask where the nearest clinic is. Local and national information is also available on the internet - for example, from the Family Planning Association's 'Find a clinic' service.

The GUM clinic doctor or nurse will be able to diagnose your warts, and advise on treatment. They will also test you (and your partner if possible) for other infections. They will not normally write to your GP with your results unless you wish them to. All information about your visit to a GUM clinic is confidential and would only be shared with your GP with your permission. If the diagnosis is unclear, or if your warts are not getting better with treatment, you may occasionally need further tests. This usually involves taking a sample of the wart tissue to be looked at through a microscope (a **biopsy**).

What are the treatment options for anogenital warts?

There are a number of different treatments that can be used and they are described below. Whatever the treatment, it usually takes several weeks of treatment to clear the warts. Sometimes it can take up to six months of treatment.

Treatment may be a little uncomfortable and cause some irritation of the skin around the area that is being treated. Also, smokers tend to respond less well to treatment, so stopping smoking may be beneficial to your treatment. Sometimes, one treatment may not be successful. If this is the case, another treatment may be advised. There is also a chance that anogenital warts can return after treatment. This is because the treatments do not clear the HPV virus itself but just treat the warty lumps.

Wart treatments that are sold over the counter in pharmacies should not be used to treat anogenital warts.

No treatment

One option is not to have any treatment. Anogenital warts are not serious but can be unsightly. Some people prefer just to leave them alone. There is a good chance that they will go without any treatment. In fact, about one third of visible warts disappear by themselves over six months.

Chemical treatments

A number of chemicals, when put on to warts, will burn or destroy the wart tissue.

- **Podophyllotoxin** is a chemical that comes as a cream or lotion. This may be prescribed for you to put on the warts at home. You should apply it twice-daily for three days, followed by four days' rest. This is repeated four to five times depending on the type of podophyllotoxin you are given (so the whole treatment lasts about four to five weeks). There are some points to note about podophyllotoxin:
 - You must not use it if you are pregnant.
 - You should not put podophyllotoxin on broken skin or open wounds and you should be careful to avoid getting it on normal skin around the warts.
 - Sexual contact is not recommended soon after the cream/lotion is applied to your skin, as it may cause irritation for your partner.
 - You should make sure you follow the instructions carefully when you are applying the cream/lotion and you should not apply too much. If you apply too much, the cream/lotion may start to have unwanted effects inside your body.
- **Imiquimod cream** is an alternative. You apply the cream to your warts at bedtime and wash it off 6-10 hours later. This is repeated three times per week for up to 16 weeks. It may take some weeks before the treatment works. There are some points to note about imiquimod cream:
 - Imiquimod may weaken condoms and diaphragms so you should not rely on these as contraception whilst you are undergoing treatment.
 - You must not use it if you are pregnant.
 - Sexual contact is not recommended soon after the cream is applied to your skin, as it may cause irritation for your partner.
 - You should not put imiquimod cream on broken skin or open wounds.
 - You should be careful to avoid getting it on normal skin around the warts.
 - In some people, imiquimod cream can cause permanent colour change to the skin where it is applied.
- **Other chemicals** may be advised if there is little success with the above. These are applied by the doctor or nurse in the clinic, rather than you applying them yourself at home.

Physical treatments

Various techniques can destroy the wart tissue. They include:

- **Freezing warts with liquid nitrogen.** This is a common treatment which is called cryotherapy. Liquid nitrogen is sprayed on or applied to the wart. Liquid nitrogen is very cold. The freezing and thawing destroys the wart tissue. To clear the warts fully you may need several treatments, a week or so apart. This treatment may be used if you have a small number of warts. This is often a good option if you are pregnant.
- **Having the warts cut off (surgical removal)** under **local anaesthetic**. This may be an option if you have just a few warts that can be easily removed in this way.
- **Electrocautery.** This is a technique where the warts are destroyed by burning.
- **A laser.** This is another technique sometimes used to destroy the warts by burning.

Which is the best treatment?

Each treatment has pros and cons. The treatment decided upon depends on factors such as:

- How many warts are present. For example, cryotherapy is usually only used for small-to-moderate numbers of warts.
- Where the warts are. For example, some chemical treatments should not be used internally - such as on the neck of the womb (cervix), vagina or inside the back passage (anus).
- Your preference. For example, whether a home-based or clinic-based treatment is preferred.
- Whether you are pregnant. Some chemical treatments should not be used if you are pregnant

The surgical treatments (cutting, freezing, burning treatments) are generally the most successful. However, they are not always appropriate. Warts may come back whichever treatment is used.

What about my sexual partner?

Your current sexual partner(s) may wish to be checked to see if they have warts or other STIs. It is a good idea to advise your current sexual partner, and any partners from the previous six months, to be checked.

Is there a link between anogenital warts and cancer?

The types of HPV that most commonly cause anogenital warts (types 6 and 11) do not increase your risk of cancer. HPV types 6 and 11 cause over 9 in 10 cases of anogenital warts. However, some other types of HPV do increase your risk of developing cancer. You may have more than one type of HPV infection at the same time (one type that causes anogenital warts and one type that may increase your risk of cancer).

It is known that most cases of **cancer of the neck of the womb (cervix)** are caused by HPV infection. So, it is particularly important that women with anogenital warts have cervical screening tests at the usual recommended times and do not put it off. You do not need to have cervical screening tests more regularly if you have anogenital warts. [See separate leaflet called Cervical Screening \(Cervical Smear Test\) for further details.](#)

It also appears that the risk of other cancers is slightly higher if you have HPV infection. This includes other cancers in the genital area and some cancers of the mouth, throat and neck.

Prevention of anogenital warts

Condoms

Condoms (**male** or **female**) may prevent genital warts from being passed on to new sexual partners who are not infected. However, they do not completely protect you from getting HPV infection as the skin that is not covered by a condom can become infected. But condoms do help to protect against other STIs such as chlamydia and HIV. You should also use condoms whilst having oral sex and you should not share sex toys.

When you are being treated for warts, it is commonly advised that you should use condoms when you have sex, until the warts have completely gone.

HPV vaccine

In the UK, the Department of Health originally chose a type of vaccine (Cervarix®) that did not protect against the common types of HPV that cause anogenital warts (types 6 and 11) in its national immunisation campaign. However, from September 2012 the vaccine used was changed to a type that covers HPV-6/11/16/18 (Gardasil®). [See separate leaflet called HPV immunisation for further details.](#)

It is hoped that by vaccinating teenage girls before they catch the HPV infection, the numbers of anogenital warts overall in years to come will be much reduced. This has already been shown to happen in countries such as Australia, which started vaccinating earlier.

What is the outlook?

Anogenital warts can usually be cleared with treatment. However, in about 1 in 4 cases, new warts develop at some time after successful treatment. This is usually because the same infection has re-activated, not because you have a newly acquired infection. If warts do come back, they can be treated in the same way.

What is chlamydia?

Chlamydia is a **sexually transmitted infection (STI)** caused by a germ (bacterium) called *Chlamydia trachomatis*. In women, chlamydial infection usually affects the neck of the womb (cervix) and the womb (uterus). In men, it usually affects the pipe through which urine is passed (the urethra) in the penis. Chlamydia also sometimes causes infection of the eye, throat and lungs.

How do you get chlamydia and how common is it?

59%

of people would be worried about contracting chlamydia from a casual sexual encounter.

Source: Patient Sexual Health Survey (<https://patient.info/sexual-health-at-christmas>)

Most people with chlamydia get the infection by having sex with an infected person. You can become infected with chlamydia if you come into contact with the semen or vaginal fluids of a person who has chlamydia.

In 2015 in England, there were 200,288 new cases of chlamydia. Around 3 to 7 in 100 sexually active young people in the UK are infected with chlamydia. It is most common in those aged under 25. Many of those infected have no symptoms - 7 in 10 infected women and 5 in 10 infected men. They would not be aware they have the infection. You can be infected with chlamydia for months, even years, without realising it. The risk of infection increases with the number of changes of sexual partner. Wearing a condom during sex helps to protect you from chlamydia and other STIs.

Note: you **cannot** catch chlamydia from hugging, kissing or from sharing cups or cutlery.

What are the common symptoms of chlamydia?

Symptoms in women

No symptoms occur in around 7 in 10 infected women. Also, you may not have any symptoms until several weeks (or even months) after coming into contact with chlamydia.

If symptoms do occur in women, they may include:

- Vaginal discharge. This is due to the neck of the womb (cervix) becoming inflamed.
- Pain or burning when you pass urine.
- Vaginal bleeding or spotting between periods. In particular, bleeding after you have sex.
- Pain or discomfort in the lower tummy (abdomen) area (the pelvic area), especially when you have sex.

Symptoms in men

No symptoms occur in 5 in 10 infected men.

If symptoms do occur in men, they may include:

- Pain or burning when you pass urine.
- Discharge from the end of your penis.
- Pain or discomfort at the end of your penis.

Do I need any tests?

Tests for females

The best test is a vaginal swab. A swab is a small ball of cotton wool on the end of a stick which is used to obtain mucus and cells to send to the laboratory for testing. It is inserted about 5 cm into your vagina and turned (rotated) gently for a few seconds. This test can be done by a health professional but it is also possible for you to do the test yourself. This is usually an option you are given if invited to have screening tests for chlamydia.

This is the most accurate test. There are two other possible tests. One is a swab taken from the neck of the womb (cervix) by a nurse or doctor. The other is a urine test. When testing urine for chlamydia you should provide a urine sample after not having passed urine for at least an hour. You catch the first part of the urine stream in the container.

Tests for males

For men the usual test is a urine test, collected in the same way as for women above. The other option is for a health professional to take a swab from the pipe through which urine is passed (the urethra) in the penis.

Other tests

If you have had anal or oral sex then you may have a back passage (rectal) or throat swab taken.

If infection with chlamydia is confirmed, you will be advised to have **tests for other STIs**.

Note: the **cervical screening (cervical smear) test** does **not** test for chlamydia.

What is the treatment for chlamydia?

It is important that treatment for chlamydia should be started without delay. In some people where chlamydia is strongly suspected, this may even mean starting treatment before test results are available. Prompt treatment reduces the risk of complications in the future.

A short course of an **antibiotic medicine** usually clears chlamydial infection. You should tell your doctor if you are (or may be) pregnant or are breast-feeding. This may affect the choice of antibiotic. You should not have sex until you and your sexual partner have finished treatment (or for seven days after treatment with a single-dose antibiotic).

The most commonly used antibiotics are:

- **Doxycycline** one tablet twice a day for seven days; **or**
- **Azithromycin** one tablet only - single dose.

Other options are used if these are not suitable for you. Your doctor will advise.

Does my partner need to be treated?

Yes. Also, any other sexual partners within the previous six months should also be tested for infection.

If your sexual partner is infected and not treated then chlamydia can be passed back to you again after you are treated.

There may be certain occasions when you may not want to contact partners from previous relationships. In these cases staff at the clinic can contact previous partners for you without disclosing your details. This is because it is important that anyone who is at risk of infection with chlamydia be both identified and treated.

Why should I have treatment if I have no symptoms?

If you are infected with chlamydia, it is essential that you take treatment even if you do not have any symptoms of chlamydial infection. Reasons for this include:

- The infection may spread and cause serious complications (see below). This can be months or years after you are first infected.
- You can still pass on the infection to your sexual partner(s) even if you do not have symptoms.

Do I need to be tested again after treatment?

You do not usually need to have a test to check the treatment worked if you have taken an antibiotic medicine correctly. However, it is advisable to have another test for chlamydia in the following situations:

- If you think you have had sex with a person with chlamydia.
- If your symptoms do not improve after treatment.
- If you had unprotected sex before you finished the treatment.
- If you did not complete the course of treatment.
- If you are pregnant. (If you are pregnant and have been treated for chlamydia, you should have another test three weeks later.)

Also in England, the national screening programme advises that if you are aged under 25 and have had a positive test for chlamydia, you should have a repeat test three months later. This is to check the infection has cleared completely and that you have not got it back again.

What are the possible complications of chlamydia?

- If left untreated, the infection may seriously affect the womb (uterus) and Fallopian tubes - **this is called pelvic inflammatory disease (PID)**. 10-40 women in 100 with chlamydia develop PID. This may develop suddenly and cause a high temperature (fever) and pain. It can also develop slowly over months or years without causing symptoms (also known as silent PID). However, over time, scarring or damage to the Fallopian tubes may occur and can cause:
 - Persistent (chronic) pelvic pain.
 - **Difficulty becoming pregnant (infertility)**.
 - An increased risk of **ectopic pregnancy** if you become pregnant. In this condition, the pregnancy develops in a Fallopian tube and can cause serious life-threatening problems.
- The risk of developing some complications of pregnancy, such as **miscarriage**, **premature birth** and stillbirth, is increased in pregnant women with untreated chlamydia.
- If you have untreated chlamydia during childbirth, your baby may develop a chlamydial infection of their eye or lung during the birth.
- Possibly reduced fertility in men.
- **Reactive arthritis** is a rare complication which can occur both in men and in women. In this condition, you get painful swollen joints. When this is combined with inflammation of the eye and of the pipe through which urine is passed (urethra), it is called Reiter's syndrome. It may be due to the immune system 'over-reacting' to chlamydial infection in some cases.

The risk of complications is much reduced if chlamydial infection is treated early.

Who can be screened for chlamydia?

In England there is a National Chlamydia Screening Programme. This offers chlamydial screening for sexually active women and men aged under 25 years. In this age group, screening is undertaken yearly or each time these women and men have a new sexual partner. The aims of this programme are to detect chlamydia early so it can be treated promptly. This should reduce the risk of transmission and also reduce the risk of developing complications. You can find information about screening at your GP surgery or local pharmacy. It is also available through family planning clinics, genitourinary medicine (GUM) clinics or online.

In countries where there is not a screening programme, testing is still offered regularly to sexually active young people. You can request testing regularly if you are in this category. You can do this through your GP or by attending a GUM clinic. It may be available in other ways (for example, online) depending on the area in which you live.

Certain other groups of people are also recommended to undergo screening for chlamydia. For example:

- If you have a partner with chlamydia.
- If you have another STI.
- If you are a semen or egg donor.
- If you are having an abortion (termination of pregnancy).
- If you have had two or more sexual partners in the past year.

Men will be asked to give a urine sample and women can either give a urine sample or take a swab. A swab is a small ball of cotton wool on the end of a stick, used to take a sample of mucus and cells for laboratory testing. Women can take the swab themselves from the lower vagina.

Genital herpes symptoms

The first time you are infected with genital herpes simplex it is called the primary infection. This may, or may not, cause symptoms (described below). Following a primary infection, the virus is not cleared from the body but lies inactive (dormant) in a nearby nerve. In some people, the virus 'activates' from time to time and travels down the nerve to the nearby skin. This causes recurrent symptoms of genital herpes if the primary infection was in the genitals, or recurrent cold sores if the primary infection was around the mouth.

It is common not to develop any symptoms

Most people never develop any symptoms when they are infected with the virus. At least 8 in 10 people with genital herpes simplex virus do not know that they are infected. (Or, they only have a short bout of very mild symptoms which is not recognised as genital herpes. For example, just a slight area of itch or a small red area which soon goes.) In such people, the virus stays inactive in the root of a nerve that supplies the genitals, but never causes recurrent episodes of symptoms. However, even people who do not develop symptoms may, on occasions, have virus in their genital area and therefore be infectious to sexual partners. In fact, this is how many genital herpes simplex infections are passed on.

A first episode of symptoms

At first you may feel generally unwell with a mild fever and aches and pains. Groups of small, painful blisters then appear around your genitals and/or back passage (anus). They tend to erupt in crops over 1-2 weeks. The blisters soon burst and turn to shallow, sore ulcers.





Images above via Wikimedia Commons

The glands in your groin may swell and feel like lumps at the top of your legs. It is common to have pain when you pass urine, especially in women.

In women, a vaginal discharge may occur. Women may also have blisters and ulcers on the neck of the womb (cervix) at the top of the vagina. The inside of the back passage may also be affected. The ulcers and blisters can last up to 10-28 days and then gradually heal and go without scarring.

Sometimes less typical symptoms occur. For example, you may just have a small raw area, one or two small ulcers, or just an area of irritation with nothing to see. Sometimes symptoms last just a few days.

Note: sometimes a first episode of symptoms appears months or years after being first infected. This is why a first episode of symptoms can occur during a current faithful sexual relationship. You may have been infected months or years ago from a previous sexual partner who did not realise that they were infected.

It is not clear why some infected people develop symptoms, some don't and some have a first episode of symptoms months or years after first being infected. It may be something to do with the way the immune system reacts to the virus in different people.

Recurring episodes of symptoms

After the first episode, further episodes of symptoms occur in some people from time to time. This is called recurrent infection. It is not clear why the dormant virus erupts from time to time. Recurrences tend to be less severe and shorter than the first episode. It is more usual to have 7-10 days of symptoms with a recurrence, unlike the longer phase of symptoms that may occur during the first episode. Most people do not develop a fever and do not feel particularly unwell during a recurrence. A tingling or itch in your genital area for 12-24 hours may indicate a recurrence is starting. The time period between recurrences is variable.

Recurrences tend to become less frequent over time. In people who have recurrences, their frequency can vary greatly. Some people have six or more a year. For others it is less frequent than this. On average, people tend to have 1 to 4 recurrences per year during the first two years after the first episode. Some people do not have recurrences at all after a first episode of symptoms. Some people can identify some things that may trigger a recurrence. Such triggers include sunlight, physical illness, excess alcohol, or stress. If you can identify a trigger, it may be helpful to try to avoid this in the future, if possible.

How do you get genital herpes?

61%

of people would be worried about contracting genital herpes from a casual sexual encounter.

Source: Patient Sexual Health Survey (<https://patient.info/sexual-health-at-christmas>)

Genital herpes is an infection of the genitals (penis in men, vulva and vagina in women) and surrounding area of skin. It is caused by the herpes simplex virus. The buttocks and anus may also be affected. There are two types of herpes simplex virus:

- Type 1 herpes simplex virus is the usual cause of cold sores around the mouth. It also causes more than half of cases of genital herpes.
- Type 2 herpes simplex virus usually only causes genital herpes. It can sometimes cause cold sores.

Genital herpes is usually passed on by skin-to-skin contact with the affected area of someone who is already infected with the virus. The moist skin that lines the mouth, genitals and back passage (anus) is the most susceptible to infection. This means that the virus is most commonly passed on by having vaginal, anal or oral sex, or just close genital contact with an infected person. For example, if you have a cold sore around your mouth, by having oral sex, you may pass on the virus that causes genital herpes.

Herpes simplex virus can also enter through a cut or break in the ordinary skin on other parts of the body. In this way the virus can sometimes affect fingers, hands, knees, etc, if they are in contact with another person's infected area. It is called a whitlow when it is on the fingers.

You are not likely to re-infect yourself with your own virus through accidental touching, or to catch back your own virus from an infected partner, on a different part of your own body.

Who should I see if I think I have genital herpes?

If you suspect that you have genital herpes or any other STI then see your GP or contact your local genitourinary medicine (GUM) clinic. You can go to the local GUM clinic without a referral from your GP. You can look for a GUM clinic near you in the UK by searching the Family Planning Association's 'Find a clinic' service. Your GP would also be able to advise you where your nearest clinic is.

Do I need any tests?

Yes. A blister can be swabbed by a doctor or nurse to obtain a small sample to send to the laboratory. This can confirm the infection is due to the herpes simplex virus. It may also find out which type of herpes virus has caused the infection. **Tests to look for other STIs** may also be done at the same time. These swab tests are best carried out in a GUM clinic. Your GP may sometimes do the tests but will normally advise you to attend a GUM clinic as soon as possible. You can make an appointment at most GUM clinics yourself without needing a referral from your GP. Sometimes a blood test is done as well. This determines whether you have had a herpes infection in the past, or whether this is the first time. It can also tell which type of herpes simplex virus it is.

Genital herpes treatment

General measures that may help to ease symptoms when they occur

- **Painkillers** such as **paracetamol** may help to ease pain.
- If it is painful when you pass urine, it is often less painful if you pass urine whilst sitting in a warm bath or with water flowing over the area.
- A numbing (anaesthetic) ointment that you can buy at pharmacies, called lidocaine 5% gel, may relieve itching or pain. Some people also apply ointment about five minutes before passing urine if this is painful. **Note:** some people are sensitive (allergic) to anaesthetic ointments, and the ointment then makes skin symptoms worse. Applying Vaseline® before passing urine may be a helpful alternative to anaesthetic ointment.
- Ice wrapped in a tea towel (an ice pack) placed over the sores for 5-10 minutes may be soothing. Do not put ice directly on to skin, as this may cause an 'ice burn'.
- Have plenty to drink. This can help to make your urine less strong and less concentrated. This may make passing urine less painful.
- Do not use scented soaps, bubble bath, etc, as these may irritate. Gentle cleaning of the sores with just cotton wool and plain or salt water is best. Gentle drying with a hairdryer on its lowest setting may be more comfortable than with a towel.
- When you resume sexual activity after an episode has cleared, a lubricant may help, as some people find the friction of having sex may trigger a recurrence.

Other points:

- You will not pass on this virus through using towels, facecloths, toilets or swimming pools.
- You should avoid having sex until the sores and blisters have cleared and/or you have seen a doctor for follow-up.
- It is best to be honest and tell your sexual partner if you have been diagnosed with genital herpes. If they have not got the infection, the doctor or nurse at the GUM clinic will explain ways to reduce the chances of passing it on to them. The doctor or nurse will also help explain that because of the way the virus works, it is not possible to tell how long ago you acquired the infection. Sometimes people are scared to tell their partners in case their partner thinks they have been unfaithful. Or it may be that they are worried their partner has been unfaithful and given them the infection. But because there is often a long time lag, this is often not the case. Your GUM clinic doctor or nurse will help you with these worries.

Antiviral medication

There are three antiviral medicines that are currently usually used to treat genital herpes:

- Aciclovir
- Famciclovir
- Valaciclovir

They all come in different **brand names**. They work by stopping the herpes virus from multiplying. If an antiviral medicine is started early in an episode of symptoms, it tends to reduce the severity and duration of symptoms during an episode of genital herpes.

It is thought that these medicines all work as well as each other when used to treat genital herpes.

Antiviral medication for a first episode of genital herpes

An antiviral medicine is commonly prescribed for a first episode of genital herpes. (A first episode of genital herpes is also called a primary episode.) A five-day course of treatment is usual but this may be extended by a few days if blisters are still forming. With a first episode of genital herpes, the sores and blisters may last from about 10 days up to 28 days. This is usually much reduced if you start an antiviral medicine within five days of the onset of symptoms. The earlier the medicine is started, the better the chance of easing symptoms.

Antiviral medication for recurrent episodes of genital herpes

Further episodes of symptoms (recurrences) tend to be milder and usually last just a few days. You usually have 7-10 days of symptoms rather than 10-28 days that can occur with a first episode. Antiviral medication is often not needed for recurrences. **Painkillers**, salt baths, and local anaesthetic ointment (such as lidocaine) for a few days may be sufficient to ease symptoms. However, an antiviral medicine may be advised for recurrent episodes of genital herpes in the following situations:

- **If you have severe recurrences.** If you take a course of an antiviral medicine as soon as symptoms start, it may reduce the duration and severity of symptoms. You may be prescribed a supply of medication to have ready at home to start as soon as symptoms begin. This kind of 'as needed' treatment tends to be prescribed if you are getting severe attacks of genital herpes fewer than six times a year. There are a number of different options of courses of treatment to take, ranging from one to six days in length, and with different daily regimes.
- **If you have frequent recurrences.** You may be advised to take an antiviral medicine every day. In most people who take medication every day, the recurrences are either stopped completely, or their frequency and severity are greatly reduced. A lower maintenance dose rather than the full treatment dose is usually prescribed. A typical plan is to take a 6- to 12-month course of treatment. You can then stop the medication to see if recurrences have become less frequent. This type of continuous treatment can be repeated if necessary. This type of daily treatment tends to be prescribed if you have severe attacks of genital herpes more than six times per year.
- **For special events.** A course of medication may help to prevent a recurrence during special times. This may be an option even if you do not have frequent recurrences but want to have the least risk of a recurrence - for example, during a holiday or during exams.

Antiviral medication for genital herpes whilst you are pregnant

A specialist will normally advise about what to do if you develop genital herpes whilst you are pregnant, or if you have recurrent genital herpes and become pregnant. This is because there may be a chance of passing on the infection to your baby.

A first episode of genital herpes whilst you are pregnant

If you develop a first episode of genital herpes within the final six weeks of your pregnancy, or around the time of the birth, the risk of passing on the virus to your baby is highest. In this situation there is about a 4 in 10 chance of the baby developing a herpes infection. The baby may develop a very serious herpes infection if he or she is born by a vaginal delivery.

Therefore, in this situation your specialist is likely to recommend that you have a caesarean section delivery. This will greatly reduce the chance of the baby coming into contact with the virus (mainly in the blisters and sores around your genitals). Infection of the baby is then usually (but not always) prevented.

However, if you decide against a caesarean section and decide to opt for a vaginal birth, the specialist is likely to recommend that you be given antiviral medication (usually aciclovir). This is given into your veins (intravenously) during your labour and birth. They may also suggest that antiviral medication be given to your baby after he or she is born.

As long as there are two months between you catching the virus and giving birth to your baby, a normal vaginal delivery is likely to be safe for the baby. This is because there will be time for your body to produce **protective proteins called antibodies**. These will be passed on to the baby through your bloodstream to protect it when it is being born. The specialist may advise that you should be treated with antiviral medication at the time of infection. This helps the sores to clear quickly. In addition, your doctor may advise that you should take antiviral medication in the last four weeks of pregnancy to help prevent a recurrence of herpes at the time of childbirth. Antiviral medicines such as aciclovir have not been found to be harmful to the baby when taken during pregnancy.

If you have recurrent genital herpes and become pregnant

If you have recurring episodes of genital herpes, the risk to your baby is low. Even if you have an episode of blisters or sores during childbirth, the risk of your baby developing a serious herpes infection is low. This is because you pass on some antibodies and immunity to the baby during the final two months of pregnancy.

For most women with recurrent genital herpes, it is felt to be safe to have a normal vaginal delivery. This is even the case if you have a recurrence whilst giving birth. However, you and your specialist will weigh up the pros and cons of vaginal delivery vs caesarean section. If you do have a recurrent episode when you go into labour, you should discuss your options with your specialist and together decide the best way that your baby should be delivered.

Often antiviral medication will be advised in the last four weeks running up to childbirth. This may help to prevent a recurrence of blisters during childbirth. Again, your specialist will be able to advise on the pros and cons.

In summary

A first episode of herpes around the time of birth can be serious for the baby and a caesarean section is usually advised. In any other situation - an earlier primary infection or a history of recurrent episodes - the risk to the baby is low and your specialist will advise on possible options. This may include taking antiviral medication, as well as the type of delivery method.

Are there any side-effects from antiviral medicines?

Most people who take antiviral medication get no side-effects, or only minor ones. Feeling sick (nausea), being sick (vomiting), diarrhoea, and tummy (abdominal) pain, as well as skin rashes (including photosensitivity and itching) are the most common side-effects.

Read the leaflet inside the medication packet for a full list of possible side-effects.

How can genital herpes be prevented?

There is not yet a vaccine to protect against the herpes virus. There are a number of things to consider which may reduce your risks of getting genital herpes or of passing it on to others. These include:

- Consider the use of condoms always, even in settled relationships. This is because a person can carry the herpes virus for a very long time and pass it on without ever being aware of it. Condoms do not completely protect against herpes but they reduce the risk.
- The more sexual partners you have, the more the risk of picking up any sexually transmitted infection, including herpes. So avoiding having too many partners will cut down your risk.
- Avoid having sex with somebody with an active genital herpes infection (ie somebody with visible genital sores or blisters).
- Also avoid intimate contact with a person who has a cold sore.
- If you have an active herpes infection yourself, avoid having sex with anyone else in order to prevent passing it on.
- If one partner finds out they have herpes, it is wise to tell the other. This can reduce transmission rates.
- If a person knows they have recurrent herpes, taking a regular antiviral medicine can reduce the risk of passing on the virus.
- In particular, a pregnant woman should avoid having sex with somebody with active herpes, because of the extra risk to the baby during delivery.

Should I have sex if I have genital herpes?

When you have symptoms (during a primary episode or recurrence)

Herpes simplex virus is very contagious when blisters are present. There is a high chance of passing on the virus if you have sex. You should not have sex from the time symptoms first start until they are fully over. If you do have sex, using a condom may not fully protect against passing on the virus, as the condom only protects the area that is covered.

When you do not have symptoms (which is most of the time)

It is less likely that you will pass the virus on when you have sex. However, some virus will be present on the genital skin surface from time to time, although infrequently. So, there is still a small chance that you may pass on the virus when you have sex when you do not have symptoms. It is best to discuss things with your sexual partner. Using a condom each time you have sex is thought to reduce the chance further. However, using a condom cannot completely stop the chance of passing on the virus.

Taking antiviral medication long-term to prevent recurrences (suppressive treatment) also reduces the risk of passing on the virus. However, very few people need to take this treatment all the time.

Note: if your sexual partner already has the same virus then you cannot re-infect each other. Your partner may be infected but may not have symptoms. It may be helpful to discuss things with a doctor or nurse at a GUM clinic.

What is gonorrhoea?

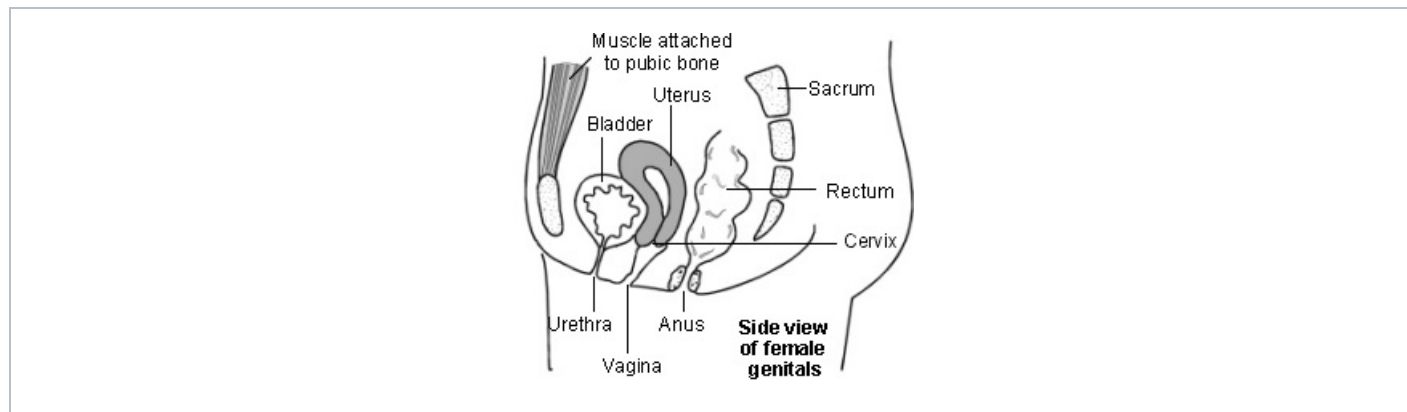
Gonorrhoea is a sexually transmitted infection (STI) caused by a germ (bacterium) called the gonococcus.

How do you get gonorrhoea?

It is passed on if you have sex with an infected person. This can be due to vaginal, anal or oral sex. It can therefore be passed during sex between men and women or sex between men and men. In men, the infection usually affects the urethra (the tube between the bladder and the end of the penis) but can cause infection of the mouth or anus of both sexes. Vaginal liquid can be a source of infection so in theory it could be passed on during sex between women but this is very uncommon.

What are the symptoms of gonorrhoea?

Possible symptoms in women with gonorrhoea



- About 1 in 2 women develop an increase or change in **vaginal discharge**.
- About 1 in 4 women develop pain in the lower part of the stomach.
- Rarely, women may notice **bleeding between periods**, or **heavy periods**.
- Pain when passing urine can sometimes mimic a urine infection.
- Infection of the rectum or back of the throat (pharynx) can develop. Such infections do not usually cause symptoms, although occasionally rectal itching or a sore throat may be noticed.

Possible symptoms in men with gonorrhoea

Infection of the urethra (urethritis) is the typical infection in men. This commonly develops 5-7 days after having sex with an affected person. Symptoms include:

- Fluid (discharge) from the penis. This may stain underpants.
- Pain or burning when passing urine.
- Irritation inside the penis, or a feeling of wanting to pass urine frequently.
- Redness at the opening of the urethra at the end of the penis.

Gonorrhoea is believed to cause symptoms in most infected men (about 9 in 10 affected). However, about 1 in 2 women with gonorrhoea do not get any symptoms.

The symptoms may clear over time, even without treatment. This may take up to six months but can be just a couple of weeks or so. However, without treatment, some germs (bacteria) usually remain in the urethra. It is just that the symptoms may go.

Note: even if symptoms go or are not present, there is a good chance that you can pass on the infection if you do not have treatment.

Do I need tests?

You will normally be advised to have tests if gonorrhoea is suspected - even if symptoms go. You may be referred to a local genitourinary medicine (GUM) clinic for this. You can also go to the local GUM clinic without a referral from your GP. (See later for details.)

A **urine sample** and/or a sample (swab) of the discharge will be taken to try to identify the germ (bacterium) that causes gonorrhoea. In men, the swab will be taken from the urethra. In women, a swab is taken from high up in the vagina. Another swab is taken from the inside the neck of the womb (the endocervix) at the womb's entrance. You may also be advised to have **tests for other STIs**.

Are there any possible complications from gonorrhoea?

In women

- Infection can spread to the womb (uterus) to cause **pelvic inflammatory disease**. This can cause long-standing (chronic) pelvic pain and can lead to infertility.
- Pregnancy can be complicated by **premature labour**, **ectopic pregnancy** or **miscarriage**.

- Infection present during pregnancy can lead to infection spreading to the eyes of a newborn baby. This is called ophthalmia neonatorum.
- Pelvic infection can spread to the liver.
- Abscesses can develop in the Bartholin's glands on either side of the lower part of the vaginal opening.

In men

- In a small number of cases the infection travels up the urethra to the prostate gland. Rarely, a narrowing (stricture) of the urethra may develop.
- Spread in the bloodstream to other parts of the body is rare.
- Men who have sex with men can get infections of the back passage (anus) and throat.

What is the treatment for gonorrhoea?

The usual treatment is a single injection of an antibiotic medicine plus a single large dose of a different antibiotic taken by mouth. However, sometimes other treatment regimes and schedules are used. For example, if you have an allergy to the usual antibiotic, or if you have another infection at the same time.

Does my sexual partner need treatment?

Yes. They should be tested for infection, even if they have no symptoms. Treatment with antibiotics is usually advised for sexual partners, even if the tests are negative, because:

- Germs (bacteria) that cause gonorrhoea are often passed on during sex. Tests for bacteria are not foolproof. Treatment with antibiotics helps to make sure that any possible infection is cleared.
- If a sexual partner is infected and not treated, infection can be passed back to you.
- If you have gonorrhoea without symptoms then you may have had it for some time. In this situation any sexual partners within the previous three months should be tested and treated.

Follow-up

A doctor or healthcare professional will normally want to know that treatment has worked. It is usual to be reviewed soon after you finish treatment. This is to check that symptoms have gone and to do a test to check that the infection has gone. Sometimes further treatment (perhaps with a different antibiotic) is needed if the infection has persisted despite treatment.

You should not have sex until both you and your sexual partner have finished treatment. **Note:** this will normally be for at least seven days after treatment has commenced. Even if the treatment is the usual one-dose schedule of two antibiotics as described above, it takes several days for the infection to clear after taking the treatment.

Can gonorrhoea be prevented?

Wearing a condom during sex (including anal sex and oral sex) helps to prevent the spread of STIs.

The risk of STIs increases with the number of changes of sexual partner.

If you suspect that you have gonorrhoea or any other STI then contact your local GUM clinic or see your GP. In the UK you can go to the local GUM clinic without a referral from your GP. You can ring the local hospital or health authority and ask where the nearest clinic is. Local and national information is also available on the internet - for example, from the Family Planning Association's 'Find a clinic' service.

What are HIV and AIDS?

HIV stands for human immunodeficiency virus. This is a virus in the group of viruses called retroviruses. HIV destroys cells in the body, called CD4 T cells. CD4 T cells are a type of white blood cell (a lymphocyte). These are important cells involved in protecting the body against various bacteria, viruses and other germs. HIV actually multiplies within CD4 cells. HIV cannot be destroyed by white blood cells, as it keeps on changing its outer coat, so protecting itself.

AIDS stands for acquired immunodeficiency syndrome. This is a term which covers the range of infections and illnesses which can result from a weakened immune system caused by HIV. Because antiretroviral therapy (ART) has altered the way we think about the condition, the term 'late-stage HIV' is being increasingly used instead of AIDS.

HIV and AIDS are not the same thing and people who get HIV infection do not automatically develop AIDS. AIDS is unlikely to develop in people who have been treated in the early stages of HIV infection. Even in people who do not receive treatment, there is usually a time lag of several years between first being infected with HIV and then developing infections and other AIDS-related problems. This is because it usually takes several years for the number of CD4 T cells to reduce to a level where your immune system is weakened.

Note: people with HIV can pass the virus on to others whether or not they have any symptoms.

How do you become infected with HIV?

- **Sexual transmission.** This is the most common way to pass the virus on. In 2013, it accounted for about 19 in 20 new confirmed cases in the UK. Semen, vaginal secretions and blood from an infected person contain HIV. The virus can enter the body through the lining of the vagina, vulva, penis, rectum or mouth during sex. Having vaginal or anal sex with an infected person is the most common route. Oral sex carries a much lower risk. However, this can increase if you have a condition affecting the defence barriers of the mouth, such as ulcers, bleeding or damaged gums or a sore throat. You cannot be infected with HIV by coming into contact with the saliva of an infected person (for example, through kissing or coming into contact with spit). HIV is not passed on by coughing or sneezing.
- **Needle sharing.** HIV (and other viruses such as hepatitis B and hepatitis C) can be passed on by people who are dependent on injectable drugs and share needles, syringes and other injecting equipment which is contaminated with infected blood. However, needle-exchange services run by hospitals, clinics and drug dependency units and the more ready availability of medicines taken by mouth (such as methadone) have drastically reduced needle-sharing as a source of infection.
- **Infected blood.** In the past, quite a number of cases occurred from infected blood transfusions and other blood products. This is now rare in the UK, as since 1985 all blood products are checked for HIV before being used. It is still a significant problem in developing countries.
- **Accidental needlestick injuries.** There have been no cases of HIV infection from needlestick injuries in a healthcare setting in the UK since 1999. HIV infection from a needlestick injury outside of a healthcare setting has never been recorded anywhere in the world.
- **From mother to child.** HIV can be passed to an unborn child from an HIV-positive mother. However, with appropriate treatment the risk of transmission of HIV from mother to baby can be reduced to less than 1 in 100. This means that, with appropriate treatment, the vast majority of babies born to HIV-positive mothers will not have HIV. Achieving this depends on detecting HIV before pregnancy, or, in early pregnancy, when antiretroviral medicines can be taken by the mother. Having a caesarean section to deliver the baby reduces the risk even further. HIV can occasionally be passed to babies through breast milk during breast-feeding. If formula milk is available, mothers with HIV are encouraged not to breast-feed.

To become infected with HIV, some infected blood, semen or vaginal secretions would have to get into your body.

Note: you **cannot** catch HIV from ordinary contact with someone with HIV, such as hugging, shaking hands or touching, or from sharing food, towels, utensils, swimming pools or telephones.

How common is HIV?

66%

of people would be worried about contracting HIV from a casual sexual encounter.

Source: Patient Sexual Health Survey (<https://patient.info/sexual-health-at-christmas>)

The number of new people diagnosed with HIV in the UK peaked at 8,000 in 2006 and dropped to 6,000 in 2013. The total number of people living with HIV in the UK in 2013 was 107,800. Of these, about 6 in 10 resulted from men having sex with men and about 4 in 10 were due to heterosexual sex. A heterosexual person is attracted to people of the opposite sex. HIV infection is much more common in many other countries in the world.

How does HIV cause problems in the body?

Once HIV is in your body the virus attaches to and gets into the CD4 T cells. The virus then uses the genetic code inside the cell (the DNA) to make copies of itself (replicate). As new virus particles break out of a CD4 T cell, the cell dies. The new virus particles then attach and enter new CD4 T cells and so the process continues. Millions of new virus particles are made in CD4 T cells each day and millions of CD4 T cells die each day.

To counter the virus destruction, the body continues to make new CD4 T cells each day. However, over time, the virus usually wins and the the number of CD4 T cells gradually falls (usually over several years). Once the level of CD4 T cells goes below a certain level, your immune system is weakened. If your immune system is severely weakened by HIV infection, you are likely to develop various opportunistic infections. These are infections caused by germs which are commonly around us. You would not normally develop infections from these germs if you have a healthy immune system. A low level of CD4 T cells also increases the risk of developing other conditions which the immune system helps to prevent, such as certain cancers.

What are the symptoms of HIV and AIDS?

HIV symptoms

When you first become infected with HIV it is known as the primary infection. About 8 in 10 people develop symptoms at this time. The three most common symptoms (sometimes known as the classic triad) are sore throat, high temperature (fever) and a blotchy red rash. Other symptoms can include feeling sick, diarrhoea, swollen glands, headache, tiredness and general aches and pains. The symptoms can last up to three weeks and are often just thought of as flu or a mild viral illness.

After any primary infection settles, you can remain without any symptoms for several years. Early testing and treatment have revolutionised our concept of HIV infection which is now considered a long-term disease (see 'What is the outlook?', below). Even without treatment, there are often no symptoms for a long time (often up to ten years) and many people do not realise that they are even infected. However, the virus continues to multiply, the number of CD4 T cells tends to gradually fall and you can pass on the virus to others. During this time some people with HIV who are otherwise well may develop persistent swollen lymph glands (persistent generalised lymphadenopathy) or night sweats.

In time you may start to develop problems such as repeated mouth ulcers, repeated herpes or shingles infections, or a skin condition called seborrhoeic dermatitis, caused by a yeast. Old tuberculosis (TB) infection may reactivate in some cases even before AIDS develops, especially in people in the developing world. Other symptoms of HIV that may occur before AIDS develops include diarrhoea, skin rashes, tiredness and loss of weight.

AIDS symptoms

The term AIDS is used to describe the most advanced stages of HIV infection and is being overtaken by the term late-stage HIV. People who are treated early in an HIV infection do not develop this stage. AIDS is a general term which includes various diseases which can result from a very weakened immune system. Typically, a person with AIDS has:

- A very low level of CD4 T cells (around 200 cells per cubic millimetre of blood or below); **and/or**
- One or more opportunistic infections such as *Pneumocystis jirovecii* pneumonia, severe thrush in the vagina or mouth, fungal infections, TB, *Mycobacterium avium* complex, toxoplasmosis, cytomegalovirus, etc. These infections can cause a range of symptoms including sweats, fever, cough, diarrhoea, weight loss and generally feeling unwell.

In addition, people with AIDS have an increased risk of developing other conditions such as:

- Certain cancers. Kaposi's sarcoma is a cancer which is usually only seen in people with AIDS. There is also an increased risk of developing cancer of the neck of the womb (cervix) and lymphoma.
- An AIDS-related brain illness such as AIDS dementia (HIV encephalopathy).
- A severe body wasting syndrome.

Many different symptoms can develop from the above conditions. Children with AIDS can develop the same opportunistic infections and problems experienced by adults. In addition, they may also develop severe common infections of childhood such as severe ear infections or severe tonsillitis.

What tests are done?

Most sexual health clinics offer a rapid blood test for HIV and can give results within thirty minutes. Even if rapid testing is not available, the results are usually back within a week. Modern tests will pick up the infection a month after first being infected (as opposed to three months with the older tests). GPs can also arrange blood tests. The result will go on your health record but negative results are no longer considered important by organisations such as insurance and loan companies. It is recommended that all gay and bisexual men should be tested every year. They should be tested more often if they:

- Have anal sex without a condom.
- Have multiple partners.
- Have been diagnosed with another sexually transmitted infection (STI).
- Develop symptoms of primary or late-stage HIV.

It became legal to sell HIV home testing kits in the UK in April 2014. However, to date, none of the available products has been awarded the CE (Conformité Européenne) mark indicating they are safe for home use.

Assessing the extent of disease

If you are confirmed to have HIV, your doctor may do a blood test to check the amount of virus in your blood (the viral load) and the number of CD4 T cells in your blood. These tests may be done from time to time to assess how far the disease has progressed (and the response to treatment).

Tests to diagnose AIDS-related conditions

There is no test for AIDS but you may have a range of other tests to detect opportunistic infections or other AIDS-related conditions. These will depend on the type of symptoms that you develop.

HIV treatment

Although there is still no cure for HIV, treatment is now effective at allowing people with HIV to live their lives as normally as possible. Since the introduction of medicines to treat HIV, the death rates from AIDS have reduced dramatically. With effective treatment, very few people go on to develop AIDS.

It is not uncommon for people with HIV to feel low or even depressed, especially soon after the diagnosis is made. If you have any feelings of depression then you should speak with your doctor.

Treatment to tackle the virus itself

HIV is now a treatable medical condition and most people with the virus remain fit and well on treatment. Since the 1990s a number of medicines have been developed called **antiretroviral medicines**. Antiretroviral medicines work against HIV infection by slowing down the copying (replication) of the virus in the body. Newer medicines are more effective than medicines used in the past. There are several classes of these medicines which include:

- Nucleoside reverse transcriptase inhibitors (NRTIs).
- Nucleotide reverse transcriptase inhibitors (NtRTIs).
- Protease inhibitors (PIs).
- Non-nucleoside reverse transcriptase inhibitors (NNRTIs).

Newer classes of medicines have recently been introduced which are integrase inhibitors, fusion inhibitors and CCR5 antagonists. The medicines in each class work in different ways but all work to stop the HIV from replicating itself. This method of treatment is called antiretroviral therapy (ART). You may still occasionally see this referred to as highly active antiretroviral therapy (HAART).

There is a growing body of evidence that taking ART reduces the risk of passing the HIV infection on to others.

Taking three or more antiretroviral medicines at the same time, each attacking HIV at different points in its cycle of replication, is more effective than one or two medicines alone. Taking a combination of different medicines also reduces the risk that the virus will become resistant to any individual medicine. In 2008 the first one pill a day treatment was launched. Each pill contains three different medicines. This is popular, as it is convenient to take and has few side-effects.

The choice of medicines is considered and chosen for each individual patient. The treatment for HIV can be complicated but the majority of people diagnosed with HIV now take ART in a combination format just once or twice a day. A team of healthcare professionals is usually involved in looking after you and giving you your treatment.

The aim of treatment is to reduce the viral load to low levels. In most people who are treated with ART, the viral load reduces to very low levels and the number of CD4 T cells rises. This means your immune system is no longer as weakened and you are not likely to develop opportunistic infections. However, it is vital to take the medication regularly and exactly as prescribed to maintain success and to help prevent the virus from becoming resistant to the medicines.

As with other powerful medicines, antiretroviral medicines can cause side-effects in some cases. In addition, some of these medicines can react with other commonly used medications. It may be necessary to change an initial combination of medicines to a different combination because of problems with side-effects, reactions or resistance of the virus to an initial medicine. Therefore, different people with HIV can often take different combinations of medicines. Common side-effects include feeling sick (nausea), being sick (vomiting) and headaches.

When is treatment with antiretroviral medicines started?

As a general rule, antiretroviral medicines are usually started if:

- Your CD4 T cells fall below a certain level (around 350 cells per cubic millimetre of blood or less) - even without symptoms. The exact level when treatment is started depends on various factors which your doctor will discuss with you. These include any symptoms present and the rate of decline of the CD4 T cells.
- Opportunistic infections or other AIDS-related problems develop.

However, the treatment of HIV is a rapidly changing area of medicine. Trials are underway to assess whether antiretroviral medicines should be started earlier in people who have no symptoms, even as early as when first infected with HIV. The trials aim to show whether there are benefits from treatment before symptoms develop, which outweigh the risk of side-effects from the medicines. You are likely to have regular blood tests to monitor for side-effects whilst taking treatment.

Treatment and prevention of infections

Wearing a condom when having sex is very important to protect against other STIs, including herpes and hepatitis. People with HIV are usually vaccinated against **hepatitis A** and **hepatitis B**, **influenza** and the **pneumococcus** (a common cause of pneumonia).

Opportunistic infections are usually treated with antibiotics, antifungals or anti-TB medicines, obviously depending on which infection develops. Even if you have not developed an infection, once the CD4 T cells fall to a low level, you will normally be advised to take a regular dose of one or more antibiotics or other medicines to prevent certain opportunistic infections from developing.

How can infection with HIV be prevented?

There is no vaccine to prevent HIV. Development of one is proving to be very difficult, as the HIV virus is constantly mutating and changing. Therefore, the main way to prevent infection by HIV is to avoid activities that put you at risk, such as sharing needles and having sex without a condom.

Some cases of HIV can be prevented in other ways - for example:

- If you are an injecting drug user then do not share needles or other injecting equipment. If available, use local needle exchange schemes.
- If you think you have been exposed to HIV through sharing needles or sexual contact, you should contact your GP or a sexual health clinic as soon as possible. If it is thought that there is a high risk that you may pick up the infection, you will be offered a course of anti-HIV medicines. These are most effective when taken as soon as possible after exposure and certainly within 72 hours.
- Healthcare workers should follow local guidelines to reduce the chance of needlestick injury. If you do have an injury, see your occupational health specialist urgently. A course of anti-HIV medicines started as soon as possible and no later than 72 hours after the injury may prevent infection with HIV developing.
- If you are pregnant and have HIV infection then you need special antenatal care to reduce the risk of passing on the virus to your baby. HIV treatments can be taken during pregnancy. An HIV test is offered to all pregnant women in the UK.

What is the outlook?

People with HIV who are diagnosed in good time can expect to lead a near-normal lifespan. A study to predict the life expectancy of men infected with HIV at 30 years of age in 2010 found that they could expect to live to 75, based on access to current treatments. Those who are diagnosed late (with a CD4 count below 350 - the point at which treatment should commence), are more likely to have a poor outlook (prognosis). However, even when someone has been diagnosed with a low CD4 count, treatment can effectively bring them back to a good level of health. Life expectancy also depends on other factors such as smoking, alcohol intake and use of other medicines.

In short - for people who have access to modern medicines, the outlook has improved greatly in recent years.

Clinical Editor's Note

November 2017 - Dr Hayley Willacy read the latest report from Public Health England looking at HIV transmission and deaths in the UK - see Further reading. It says that antiretroviral therapy (ART) is now so effective that those who are treated can have an undetectable viral load resulting in levels of virus that cannot be transmitted, even if having sex without condoms. The time from diagnosis to starting ART has also reduced. In 2016 7-8 people out of 10 started ART within 90 days of diagnosis, compared to 3 out of 10 in 2007. It also notes that for the first time, the overall mortality rate among those diagnosed promptly was similar to that of the general population. However, those diagnosed late remain at high risk of death in the first year of diagnosis. Prevention, early diagnosis and prompt ART are all important.

What is urethritis?

The urethra is the tube between the bladder and the end of the penis. Urethritis means inflammation of the urethra.

- **Gonococcal urethritis** is caused by a germ (bacterium) called *Neisseria gonorrhoeae*. **Gonorrhoea** is one type of sexually transmitted infection (STI).
- **Non-gonococcal urethritis (NGU)** is due to causes other than gonorrhoea. This used to be called nonspecific urethritis (NSU). This leaflet describes NGU further.
- **Some men have both** gonococcal and non-gonococcal urethritis at the same time.

What causes non-gonococcal urethritis?

- **Infection with chlamydia** causes about half of cases of NGU. Chlamydia is a germ (bacterium) that is usually caught by sexual contact with an infected person. You can pass chlamydia on during vaginal, anal or oral sex.
- **Various other bacteria or viruses** which are sexually transmitted can cause NGU.
- **A non-infective problem** is, rarely, the cause. For example, injury from a thin, flexible tube (a catheter), surgery to the tube between the bladder and the end of the penis (the urethra), a narrowing (stenosis) of the urethra, or conditions affecting the lining of the urethra can cause inflammation.
- **No cause** can be found in about 3 in 10 cases. STIs that are not identified by tests are probably the cause of some of these but not all. However, it is not possible to say which of these cases are due to infection and which are not.

Who develops urethritis?

You are at higher risk of developing urethritis if you are sexually active, aged under 35 and have had a recent partner change. Men who have sex with men and those who have unprotected vaginal intercourse are also at higher risk.

What are the symptoms of non-gonococcal urethritis?

- A white fluid (discharge) from the end of the penis is common but does not occur in every case.
- Pain or burning when you pass urine. This may be confused with a urine infection.
- Irritation or itch inside the penis.
- A feeling of wanting to pass urine frequently.
- In a small number of cases the infection travels up the tube between the bladder and the end of the penis (the urethra) to the testicles (testes) and causes pain and swelling in one or both testicles. **See separate leaflet called Epididymo-orchitis.**
- A rare complication is a type of arthritis which can be triggered by NGU. It may be due to the immune system over-reacting to some germs (bacteria) that can cause NGU.

- Up to half of men with chlamydial infection (the most common cause of NGU) do not have any symptoms.

The symptoms may clear over time, even without treatment. This may take up to six months but can be just a couple of weeks or so. However, without treatment, bacteria that cause NGU often remain in the urethra. It is just that the symptoms may go.

Note: even if symptoms go, there is a good chance that you can pass on the infection if you are not treated.

Do I need tests?

Yes - you will normally be advised to have tests if NGU is suspected, even if symptoms go. You may be referred to a local genitourinary (GUM) clinic for this. Some GPs provide treatment for sexual health conditions as an 'enhanced service'. You can also go to the local GUM clinic without a referral from your GP. (See the end of the leaflet for details.)

You will probably be asked to provide a urine specimen to try to identify the cause of the infection. You will usually also be advised to have tests for other STIs, including for HIV and syphilis. This might be a tiny sample (swab) from the tube called the urethra (between the bladder and the end of the penis), or blood tests. Men who have sex with men may also be advised to have a swab from the back of the throat (pharynx) and back passage (rectum).

What is the treatment for non-gonococcal urethritis?

A course of medicines called antibiotics usually clears NGU. The antibiotic prescribed may depend on which germs (bacteria) are likely to be found (often chlamydia) and whether other infections are also present. One antibiotic is usually given as a large single dose, although sometimes a four-day course is needed - **azithromycin**. The other is taken twice-daily for seven days - **doxycycline**.

If no bacteria are found by the tests, you may still be advised to take a course of antibiotics if you have symptoms of NGU. Infection is still the likely cause, even if a bacterium cannot be identified.

Most people get better with antibiotic treatment. It is important to finish the course.

Does my sexual partner need treatment?

Yes. Any person you have had sex with in the previous four weeks should be tested for infection, even if they do not have any symptoms. A course of medicines called antibiotics is usually advised for sexual partners, even if the tests are negative, because:

- Many women who are infected with chlamydia do not have symptoms. If this is left untreated, it can cause complications at a later time, such as a serious infection of the womb (uterus) and tubes, called pelvic inflammatory disease, and infertility.
- Germs (bacteria) that cause NGU are often passed on during sex. Some of these bacteria may cause pelvic inflammatory disease in women. Tests for bacteria are not foolproof. A course of antibiotics helps to make sure that any possible infection is cleared.
- If your sexual partner is infected and not treated, the infection can be passed back to you.

If you have NGU without any symptoms then you may have had it for some time. In this situation, any sexual partners within the previous six months should be tested and treated.

Follow-up

A doctor or healthcare professional will often want to know that treatment has worked. It is common to be reviewed a couple of weeks after you start treatment, to check that symptoms have gone. Sometimes re-testing and a second antibiotic medicine are needed if symptoms persist.

Note: you should not have sex until both you and your sexual partner(s) have finished treatment.

Can non-gonococcal urethritis be prevented?

Wearing a condom during sex (including anal and oral sex) helps to prevent the spread of STIs. The risk of STIs increases with the number of changes of sexual partner.

Note: if you suspect that you have NGU or any other STI, then contact your local GUM clinic or see your GP. In the UK you can go to the local GUM clinic without a referral from your GP. You can ring your local hospital or your GP and ask where the nearest clinic is. Local and national information is also available on the internet - for example, from the Family Planning Association's 'Find a clinic' service.

What is syphilis?

Syphilis is an infectious disease caused by a germ (bacterium) called *Treponema pallidum*. Syphilis is one of the less common sexually transmitted infections (STIs) in the UK. The number of cases are, however, rising. In the UK, the rates of infection are highest amongst men who have sex with men.

Syphilis is much more common in other countries, especially in developing parts of the world.

How do you get syphilis?

Sexual activity with an infected person

63%

of people would be worried about contracting syphilis from a casual sexual encounter.

Source: Patient Sexual Health Survey (<https://patient.info/sexual-health-at-christmas>)

Syphilis is an STI. The infection is passed from person to person through contact with a syphilis sore (ulcer) - described below. So, depending where the ulcer is, the infection can be passed on during vaginal, back passage (anal), or oral sex.

Note: syphilis is not spread by toilet seats, door knobs, bathtubs, shared clothing, etc. You need to have very intimate and direct contact with an infected person.

Syphilis infection in pregnancy

If you have syphilis and become pregnant, you can pass on syphilis to your unborn baby (fetus). It is passed on via the placenta. Infection in the fetus can lead to serious problems in pregnancy (see later) and/or **congenital syphilis**.

Blood transmission

Syphilis is also transmitted in the blood. Syphilis can be transmitted through receiving infected blood products (a blood transfusion). In the UK, all blood products are rigorously screened for infections, including syphilis and human immunodeficiency virus (HIV). However, syphilis can be passed from person to person through sharing needles between injecting intravenous drug users (IVDUs).

Classification of syphilis

Syphilis infection is divided up into:

Acquired syphilis

This is generally transmitted through sex with an infected partner. There are several stages:

- **Primary syphilis.** This is the earliest stage and generally occurs from ten days to three months after infection. It typically causes a painless ulcer on your genitals.
- **Secondary syphilis.** This is the second stage of syphilis. Many different symptoms can occur (see later) but usually last several weeks. They can, however, come and go for up to two years.
- **Latent syphilis.** Latent means 'hidden'. This occurs after the symptoms of secondary syphilis have cleared. With latent syphilis you have no symptoms. Latent syphilis can last for many many years. It is divided into two types:
 - **Early latent syphilis.** This lasts for a year or so and you are still infectious - that is, you can pass syphilis on to other people.
 - **Late latent syphilis.** About two years after secondary syphilis has cleared you can become non-infectious and are no longer able to pass syphilis on to others.
- **Tertiary syphilis.** This is the final stage of syphilis. It can affect many organs of the body, including your brain and heart. It can result in death.

Congenital syphilis

This means syphilis infection that is passed from a pregnant mother to her unborn baby. It is divided into:

- Early congenital syphilis. This is diagnosed in the first two years of life.
- Late congenital syphilis. This is diagnosed after the age of 2 years.

Syphilis symptoms

If left untreated, the infection typically follows the pattern of four stages as described above - primary, secondary, latent and final-stage (tertiary) syphilis. Neurosyphilis (syphilis affecting your brain) is considered separately, as it can occur at any stage of syphilis.

Primary syphilis

Typically, one small ulcer (sore) develops where syphilis germs (bacteria) enter your body. This ulcer is called a chancre. It is commonly on the penis in men, on the vulva or vagina in women, or on the back passage (anus) in either men or women. The ulcer usually appears about 2-3 weeks after having sex with an infected person but it may appear at any time up to three months later.

The ulcer is usually painless and about the size of a small coin. A clear fluid (serum) oozes from the ulcer. This fluid is highly infectious and teeming with germs. The ulcer lasts up to six weeks, then heals - but this does not mean the infection has gone.

When you have a syphilis ulcer, the nearby glands (lymph nodes) in your groin may swell. These feel like small lumps at the top of your legs in the groin crease.

Sometimes the primary stage is non-typical. For example:

- You may have more than one ulcer.
- The ulcer may be painful.
- Pus may come from an ulcer.
- The ulcer may be in your mouth (if you catch the infection during oral sex), or in the rectum (from anal sex).
- The ulcer may be on the cervix in women and is not seen or felt.
- You may have no symptoms, or very mild symptoms that you take little notice of.

People with HIV infection as well as syphilis tend to get multiple, deep, large chancres.

Secondary syphilis

If the primary ulcer is not treated, or not noticed, the germs may spread to many parts of your body. Symptoms of secondary syphilis may then develop. These tend to appear a few weeks after the ulcer has healed but may develop whilst the ulcer is healing. Symptoms of secondary syphilis are numerous and vary from person to person. Some symptoms are nonspecific and are similar to those that can occur with other medical problems.

Symptoms of secondary syphilis may include:

- Rash. This is a common symptom of secondary syphilis. The rash consists of dark patches that appear on your skin, each about the size of a penny. The rash may occur in many areas of the body, or be only in a few areas. However, the palms of the hands and the soles of the feet are almost always involved. The rash is not usually itchy or painful.
- Condylomata lata are wart-like growths that may develop around the penis in men, or vagina in women.
- A feeling of 'unwellness' (general malaise) and tiredness (lethargy).
- Mild high temperature (mild fever) and headaches are common.
- Sore throat.
- Joint pains.
- Swollen lymph nodes may develop in various places in your body (such as your groin, armpits or neck).
- Patchy hair loss (alopecia) can occur but is not that common.
- Less commonly, inflammation may develop in other parts of your body such as the liver, eyes, brain, or kidneys.

Without treatment, the rash and other symptoms from secondary syphilis usually go after several weeks. However, they may come and go for up to two years.

Latent syphilis

After the symptoms of secondary syphilis have cleared, you may not have any symptoms for several years. In this 'hidden' (latent) period you may think that the disease has gone. In some cases, there is no further development. In the first year or so of latent syphilis you can still pass the infection on. After this time, you are no longer infectious to others but you still have syphilis infection. If left untreated, the germs can slowly damage various parts of your body and symptoms of the final (tertiary) stage may eventually appear.

Tertiary syphilis

Tertiary syphilis can develop many years after the initial syphilis infection. Some manifestations of the disease can occur up to 50 years later. Many of these complications are potentially very serious and can make you extremely unwell. Some problems are life-threatening and can lead to death if untreated.

Syphilis is not considered to be infectious in its tertiary stage. Tertiary complications are slowly progressive and can affect any organ of your body.

Tertiary syphilis may cause several types of complications:

- **Brain (neurological) complications.** This is also called **neurosyphilis** (see next section).

- **Cardiovascular complications.** These are problems affecting your heart and blood vessels (the cardiovascular system). Most commonly, syphilis affects the main blood vessel leading out of your heart (the aorta). Inflammation here can cause weakening of your aorta, which can stretch, forming an aneurysm. Aneurysms have thin weak walls and can burst (rupture), potentially leading to death. Even if an aneurysm does not rupture, it can seriously affect one of your heart valves (the aortic valve), leading to a heart murmur. In turn, the heart does not pump very well and becomes swollen (distended) with blood. This condition is known as heart failure. See separate leaflets called [Heart Failure](#) and [The Heart and Blood Vessels](#) for more details.
- **Gummatous disease.** Gummas are soft growths (tumours) caused by inflammation. They are not cancerous (malignant) tumours but are long-term (chronic) and can affect any part of the body. They can grow on your skeleton and affect your joints; they can also cause large lumps in or under the skin. Gummas can grow on your internal organs (such as your liver) and affect organ function. Quite commonly they appear on your leg, below your knee. Gummas may be single or multiple and can vary in size between one and several centimetres. They can cause bone pain at night and the chronic inflammation can cause a high temperature and a low blood count (anaemia).

Neurosyphilis

This means that the syphilis infection is affecting your central nervous system (CNS). The CNS includes your brain, your spinal cord and their coverings (the meninges).

Neurosyphilis can occur at any stage of syphilis infection. However, commonly it is thought of as a tertiary complication, occurring late on in untreated disease. Neurosyphilis is generally a slow and gradual loss of mental and physical function, with alterations in mood and personality. It is possible to have a more acute illness which is quicker in onset and more severe. On average it occurs between one and ten years after the initial infection.

Neurosyphilis used to be a lot more common in the days before antibiotic treatment was widely available. Probably between 2 and 4 people in every 10 with syphilis infection, developed neurosyphilis. Neurosyphilis is now more common in people who also have HIV infection.

The four main types of neurosyphilis are:

- **Asymptomatic neurosyphilis** (no symptoms). Before effective antibiotic treatment was available, 3-4 people in every 10 with secondary syphilis had neurosyphilis which did not cause any symptoms.
- **Meningovascular syphilis.** This involves inflammation of the coverings and small blood vessels in your brain. On average, this complication occurs about seven years after initial syphilis infection. It can cause headaches and dizziness and can result in a stroke. Meningitis - inflammation of the coverings of the brain (the meninges) - can also occur as a more sudden-onset (acute) complication. Total loss of vision (severe sight impairment) and deafness can also occur.
- **General paresis.** This is also known (historically) as 'general paresis of the insane'. It is a chronic dementia that represents a severe complication of neurosyphilis, usually in its late stages. On average, death follows within only 2-3 years. There is progressive personality change, memory loss and confusion. Sometimes depression or hallucinations occur.
- **Tabes dorsalis.** This is another, late form of neurosyphilis, more common before antibiotic treatment. The nerves in the spinal cord are damaged, leading to poor balance and co-ordination and problems with walking. Additionally, there is loss of pain and temperature sensation in the feet. As a result, deep foot ulcers can occur.

Syphilis in pregnancy and congenital syphilis

Syphilis infection can be passed from a pregnant mother to her unborn baby (fetus), via the placenta. This can result in serious pregnancy complications such as:

- Miscarriage. This means death of the fetus before 24 weeks of gestation.
- Stillbirth. This means death of the fetus after 24 weeks of gestation.
- Hydrops. This is a condition of severe swelling due to fluid (oedema) in the fetus. It is a serious condition that can result in death of the fetus.
- Polyhydramnios. This is a condition of pregnancy where there is an abnormally large amount of amniotic fluid surrounding the fetus. This can cause serious pregnancy complications such as:
 - Placental abruption (where the placenta suddenly detaches from the uterus).
 - Postpartum haemorrhage (PPH) when there is excessive bleeding at delivery.
- Preterm (premature) labour. This is labour and delivery of the baby before 37 weeks of gestation.

Congenital syphilis is syphilis infection in the baby or the child, transmitted from the mother. It is divided into early and late cases, dependent on when the child shows symptoms of syphilis infection. (See 'Classification of syphilis' section, above.)

Early symptoms and signs of untreated congenital syphilis occur before the age of 2 years. They include:

- Rashes - typically a peeling rash of the palms, the soles and around the mouth and back passage (anus).
- An enlarged liver and/or spleen.
- Abnormal bone X-rays.
- Anaemia.
- Enlarged glands (lymph nodes).
- Yellowing of the skin or the whites of the eyes (jaundice).

Late congenital syphilis is rare. It can cause symptoms similar to neurosyphilis in an adult. Problems affecting the eyes and joints are seen, as well as deafness, gummas and dental abnormalities.

How is syphilis diagnosed?

Syphilis can be difficult to diagnose just based on symptoms. This is because there are very many different symptoms and often these symptoms can occur with other conditions. This is why syphilis used to be called 'the Great Imitator' because it mimics many other illnesses.

Now, however, there are specific tests for syphilis. So, as long as it is suspected as a possibility, it can be easily diagnosed with a test.

Genitourinary medicine (GUM) clinics often perform STI screening. Testing for syphilis is part of this. There are two main types of test:

- A small sample (swab) from the sore can be looked at under the microscope. The typical germs (bacteria) can be seen.
- If the sore (ulcer) has gone, a blood test can detect if you have syphilis. The blood test looks for proteins in your blood, called antibodies. These antibodies are made by your immune system in order to fight infection. The antibody test can be positive or negative. A negative result might mean the test has been carried out too early. It can take a while for the antibodies to be present in the blood. If this is the case, a repeat test will usually be advised after a period of about three months. A positive test will either mean that you have syphilis or have had syphilis in the past.

Additionally, all pregnant women are screened for syphilis. This is part of the routine antenatal blood tests that are usually done between 8 and 16 weeks of pregnancy.

Are any other tests needed?

In primary and secondary syphilis, generally no other tests are required. However, in the final stage (tertiary syphilis), where there are complications affecting other parts of the body, further tests may be required.

Other tests may include a chest X-ray or **ultrasound of the heart (echocardiogram, or 'echo')** in cardiovascular syphilitic disease. Brain scans (such as **computerised tomography (CT)** or **magnetic resonance imaging (MRI)**) may be needed if there is suspected brain (neurological) involvement.

Syphilis treatment

Because syphilis is caused by a germ (bacterium), it is readily treatable with antibiotics.

- **Antibiotic injections** are the usual treatment. Benzathine penicillin is the antibiotic usually used. This kills the germs (bacteria) and prevents the disease from progressing any further. The injections are given intramuscularly (IM), usually into the buttock. A single dose can be given for primary and secondary syphilis. Later stages may need a course of three injections, at weekly intervals. Neurosyphilis usually requires more frequent, daily doses for a couple of weeks.
- **Other antibiotics are sometimes used** if you are allergic to penicillin. Azithromycin is often used in this situation.

Note: it is important to avoid sex until the syphilis sores are completely healed and a test confirms that the syphilis infection has gone.

Remember: it is not just penetration and ejaculation that lead to transmission of syphilis. It is caught by close skin-to-skin (sexual) contact with the oozing fluid (serum) from the ulcer (chancre).

Treatment during the primary or secondary stages of the disease will usually prevent any permanent long-term damage.

Some of the problems associated with the final stage (tertiary syphilis) cannot be completely cured with antibiotics. However, antibiotic treatment may prevent further worsening of your condition. Heart and blood vessel (cardiovascular) complications may still become worse, despite treatment.

If you have syphilis, **you should usually be investigated**, treated and followed up by a GUM clinic. If you have caught syphilis, there is a good chance that you may also have another STI. A GUM clinic will take small samples (swabs) and blood tests to exclude other STIs such as chlamydia, gonorrhoea and HIV. Local and national information is also available on the internet - for example, from the Family Planning Association's 'Find a clinic' service.

The GUM clinic can organise contact tracing. This means informing your previous sexual partners (confidentially and anonymously) that they need testing for STIs, including syphilis. This is especially important if you are unable or unwilling to do this yourself.

It is important to tell your current sexual partner(s) so that they can also be tested and treated if necessary.

Can syphilis be prevented?

If you practise safe sex, and always use a condom, your risk of catching syphilis (and other STIs) is very much reduced. However, condoms do not provide complete protection, as syphilis ulcers can sometimes be on areas not covered by a condom.

If you have had syphilis and had it treated, you can still be re-infected if you have sex with an infected person. (The antibodies in your blood are not sufficient to protect you from another infection if you come into contact with syphilis again.)

What should I do if I think I have syphilis?

If you suspect that you have syphilis, or another STI, see your GP or contact your local GUM clinic.

In the UK you can go to the local GUM clinic without a referral from your GP and many clinics offer a 'walk-in' service. All treatment at a GUM clinic is completely confidential and your GP does not have to be informed, if you do not wish them to be. (However, sometimes this can be very helpful as part of your continuing 'whole body' (holistic) medical care.) You can find out where your nearest GUM clinic is by the following methods:

- Asking your GP practice.
- Contacting your local hospital.
- Checking in the telephone directory.
- Search the Family Planning Association's 'Find a clinic' service.

What is trichomonas and how common is it?

Trichomonas is a protozoan, which is a tiny germ, similar to bacteria. It can infect your genital area. That is, the vagina and urethra in women, and the urethra and sometimes the prostate gland in men. This infection is passed on to other people by having sex (intercourse). This infection does not usually go further into your body and so does not tend to be as serious as other sexually transmitted infections (STIs).

Trichomonas is actually the most common curable STI in the world. However, it is thought that many cases are still not recognised and are not diagnosed.

What are the symptoms of a trichomonas infection?

Women

- A **vaginal discharge** is common. This is typically greeny-yellow and may be 'frothy'. The discharge usually has an unpleasant or fishy smell.
- Your vagina and **vulva may be itchy** and uncomfortable. The irritation may extend into your groin. Sex may be painful.
- You may have pain in the lower part of your tummy (abdomen).
- It may be sore when you pass urine.
- No symptoms occur in some women. However, you can still pass on the infection even if you have no symptoms.

Men

- Discharge from the penis is common.
- It may be sore when you pass urine.
- You may pass urine frequently (due to irritation inside the penis).
- No symptoms occur in most infected men. However, you can still pass on the infection even if you have no symptoms.

How does trichomonas infection occur?

Trichomonas infection is usually passed on by having sex (intercourse) with an infected person. As no symptoms may occur in both men and women who are infected, you can pass on the infection without realising it.

What are the possible complications with trichomonas infection?

- **Pregnancy.** If you have untreated trichomonas infection during **pregnancy**, you have an increased risk of having an early labour and a baby with a low birth weight.
- **In men**, trichomonas infection can, rarely, cause an unpleasant infection of the prostate gland (called **prostatitis**).
- **HIV.** If you have untreated trichomonas infection, you have an increased risk of developing **HIV infection** if you have sex (intercourse) with someone who is infected with HIV.

How is trichomonas infection diagnosed?

It is important to obtain the correct diagnosis, as the same symptoms can be caused by a number of different infections:

- A sample (swab) of the discharge from your vagina or penis is sent to the laboratory to be tested. This may be taken by a healthcare professional, or they may show you how to take one yourself.
- Trichomonas is sometimes seen by chance when a **smear test** is done in women.
- A sample of urine from men may also show the infection.

What is the treatment for trichomonas infection?

An **antibiotic medicine** called **metronidazole** is the common treatment. You and your partner should be given treatment at the same time and you should avoid having sex (intercourse) for at least one week after receiving your treatment.

Most people with this infection clear with a short course of **metronidazole tablets**. Treatment is usually straightforward. Read the leaflet that comes with the tablets for a full list of possible side-effects and cautions. However, the main points to note about metronidazole include:

- This is usually given as a tablet twice a day for 5-7 days or a higher dose as a single dose.
- Some people feel sick, and may be sick (vomit) when they take metronidazole. This is less likely to occur if you take the tablets straight after food.
- A metallic taste is also a common side-effect.
- Do not drink any alcohol while taking metronidazole and for at least 48 hours after stopping treatment. The interaction with alcohol can cause you to be sick and can cause other problems.
- Breast-feeding: metronidazole can get into breast milk but is not thought to affect breast-fed babies. However, to play safe, the standard seven-day course with the lower dose is preferred so that a baby does not receive a large dose. If it is essential to use the large 2-gram single dose then breast-feeding should be discontinued for 12-24 hours after taking it.

Tinidazole is an alternative antibiotic medicine that is sometimes used. This cannot be taken if you are pregnant. Breast-feeding should be avoided when taking tinidazole and also for three days after stopping it.

Does my sexual partner need treating?

Yes. Even if they do not have symptoms. You and your partner should be treated at the same time.

Some other points about trichomonas infection

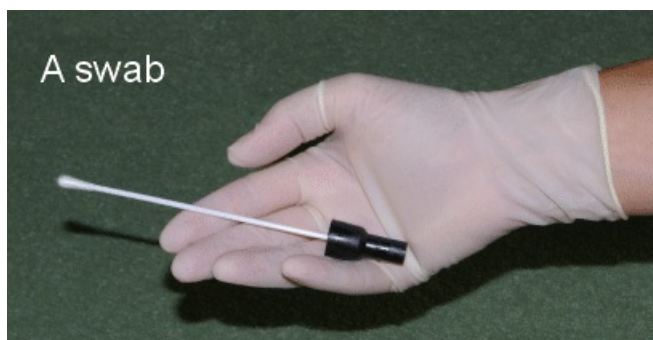
- After you are treated, you may get the infection back if your sexual partner was not treated, or if you have sex with a new partner who has this infection.
- Other STIs are more common in people with trichomonas infection. You (and your partner) may be advised to be tested for other infections.

If you suspect that you have trichomonas or any other STI then contact your local genitourinary medicine (GUM) clinic or see your GP. In the UK you can go to the local GUM clinic without a referral from your GP. You can ring the local hospital or health authority and ask where the nearest clinic is. Local and national information is also available on the internet - for example, from the Family Planning Association's 'Find a clinic' service.

How are sexually transmitted infections detected?

This depends on which sexually transmitted infection (STI) is involved. Conditions such as **anogenital warts** and **pubic lice** are usually diagnosed during an examination by a doctor and may not need any laboratory tests to confirm the diagnosis.

Testing for **chlamydia**, **gonorrhoea** and **trichomonas** usually involves taking 'swabs'. A swab is a small ball of cotton wool on the end of a thin stick, rather like a long cotton bud. It can be gently rubbed in various places to obtain a sample of mucus, discharge, or some cells. These samples can be taken from the vagina, penis, throat and/or back passage (rectum). The sample can then be looked at under a microscope and sent away to the laboratory for testing. A swab sample can also detect **thrush**, **bacterial vaginosis** and various other germs (bacteria) which are not STIs.



Chlamydia can also be detected using **samples of urine**. HIV, **hepatitis B**, **hepatitis C** and **syphilis** are usually tested for using a **blood sample** which is sent to a laboratory for analysis.

How can I get checked for sexually transmitted infections?

42%

of people would visit their GP if they they had an STI. 37% would visit a sexual health clinic.

Source: Patient Sexual Health Survey (<https://patient.info/sexual-health-at-christmas>)

If you have a symptom that you think is due to an STI, or if you have no symptoms but are worried you have caught an STI, you should see a health professional. You can:

- See your own GP. Your GP can give advice and may examine you. However, if your GP suspects that you may have an STI, in the UK he or she is likely to refer you to a genitourinary medicine (GUM) clinic. Some GPs may do tests and manage the situation without a referral to a GUM clinic; **or**
- Go to a GUM clinic directly. You do not need a referral from your GP to go to a GUM clinic; **or**
- Check to see if you can send your own sample to a laboratory by post. This service may be offered by the NHS to certain age groups, or by private companies via the internet.

Until you are checked out, and treated if necessary, you should not have sex. This is to prevent you passing on any infection.

What are genitourinary medicine clinics?

GUM clinics are special clinics in the UK that help people who have, or may have, an STI or certain other problems with their genitals or urine system. Staff in most GUM clinics include doctors, nurses and sexual health advisors. Many GUM clinics are attached to hospitals. Some are based in community settings. Other names that have been given to GUM clinics include STI clinics, STD clinics (STD is short for sexually transmitted disease), VD clinics (VD is short for venereal disease), and sexual health clinics.

Most STIs are diagnosed and treated at GUM clinics. Some people are diagnosed with an STI in another type of clinic - for example, at a GP surgery, or in a family planning clinic. In these situations you are still likely to be referred to a GUM clinic for treatment, and for any follow-up or counselling that may be required.

Anyone can attend a GUM clinic. You do not have to be aged over 16. If you want, you can take a friend or relative with you when you attend. You can go to any GUM clinic - it does not have to be the one nearest to you.

Do I need to make an appointment to attend a genitourinary medicine clinic?

This may vary depending on the clinic. For many, you do not need to forward book an appointment but can just turn up. However, you may have to wait some time to be seen depending on how busy it is. It may be best to give the clinic a call in advance to check if you can just turn up without an appointment, and the times the clinic is open. Some clinics can become quite busy.

How do I find a genitourinary medicine clinic?

If you suspect that you have an STI, then contact your local GUM clinic or see your GP. In the UK you can go to the local GUM clinic without a referral from your GP. You can ring your local hospital or your GP and ask where the nearest clinic is. Local and national information is also available on the internet - for example, [from the Family Planning Association's 'Find a clinic' service](#).

What can I expect when I attend a genitourinary medicine clinic?

Registration

When you arrive at a clinic you will have to register. You will be asked for your name, address, date of birth, contact telephone number and the name of your GP. This information is treated confidentially. The clinic will not contact you at home or contact your GP without your permission. Also, any records from GUM clinics will not go on your main medical record without your permission.

However, if you have a concern, you do not have to give any details. You can even give a false name. The important thing is that whatever name you do use, you should use the same name for any follow-up appointment, to avoid any confusion; for example, when you return for the result of any tests. To help identify you as the correct person for any follow-up, you will be given a card with your clinic number on it, which you should bring back to any follow-up appointment.

Initial assessment

You will be seen initially by a doctor or a nurse or a sexual health adviser. They will ask you some questions to try to assess the situation and to determine what tests (if any) you may need. Examples of questions that you may be asked include:

- What symptoms and/or concerns do you have?
- How many people have you had sex with in the last few weeks and were they male or female?

- What type of sex have you had - vaginal, oral, anal?
- Have you previously had an STI?
- What is the state of your general health?
- Do you take any regular medication?
- Do you have any allergies?

If you are a woman you may be asked about the date of your last period and whether there is a chance that you may be pregnant, as this might affect treatment options.

After the initial assessment you will be advised what will happen next. You will normally be examined and at the same time some tests may be taken.

What happens during a sexual health examination?

A doctor will usually examine you. You can ask for a male or female doctor, but you may have to return at a different time (or even to a different clinic) if a doctor of a particular sex is not currently available. The examination includes looking carefully at your genitals for signs of discharge, redness, lumps or ulcers. The doctor may also feel the tops of your legs (your groins) to check for enlarged or tender glands called lymph nodes. If necessary, the doctor may also do a general examination to check on your general health.

In women, your doctor may also examine your vagina and womb (uterus) by gently inserting a lubricated, gloved finger.

Men may have their testicles (testes) examined.

How are the tests done?

After the examination is complete your doctor may also take some tests.

Women

The way in which tests are done can vary from clinic to clinic; the following is a general guide.

After the examination of the outside of the genitals the doctor will ask your permission to insert a speculum. This is a plastic or metal device which is also used to take a cervical smear. It helps the doctor to see the neck of the womb (the cervix) and allows some samples to be taken.

The doctor will usually warm the speculum if it is metal and cover the tip in lubricating jelly. Once the speculum has been inserted it is slowly opened and held in place by a catch. The doctor will then look closely at the walls of the vagina for any discharge or redness. A swab is usually taken from the vagina and from the cervix. A swab is a small ball of cotton wool on the end of a thin stick, used to collect samples. The doctor will then slowly remove the speculum.

After this has been done a small plastic spatula may be used to take cells from the urethra (the opening which allows urine to pass from the bladder to the outside of the body). This may feel a little scratchy. Depending on the information you have given initially it may also be necessary to take swabs from the back passage (rectum) or the throat. After all the swabs are taken you will be able to get dressed. You may be asked to provide a urine sample.

Men

After the examination of the outside of the genitals the doctor will ask for your permission to insert a swab into the urethra. This may feel a little uncomfortable but most people do not find it painful. Depending on the information you have given initially it may also be necessary to take swabs from the rectum or the throat.

If there is any possibility of infections that may affect the rectum, your doctor may ask your permission to examine this area more closely. Sometimes this is done using a proctoscope. This is a small tube, usually made of plastic, that makes it possible to see inside the rectum. After all the swabs are taken you will be able to get dressed. You may be asked to provide a urine sample.

Men and women - blood tests

A sample of blood from a vein may be taken. This is mainly used to test for syphilis, hepatitis B, hepatitis C and HIV. Sometimes you may be advised to delay having a blood test. For example, following an initial infection of HIV it can take several weeks for a blood test to become positive. So, for example, if within the previous few days you had sex with someone who is HIV-positive, you may be advised to wait several weeks to have a blood test to see if you have become infected.

What happens next?

If you are seen at your GP surgery, the swabs and blood tests will be sent to a laboratory for further testing. Your doctor will advise you about when the test results will be available; this can take up to a fortnight.

If you are seen in a GUM clinic some of your results may be available on the day of your test.

Your doctor or nurse will take the swabs and smear them on to special slides. This allows him/her to look at the cells taken from the swabs under the microscope. Some germs (bacteria) that cause infections can be seen in the cells you have provided by having swabs done. For example, the bacteria that cause gonorrhoea can sometimes be identified by looking through a microscope. This may mean you are given a positive result on the day, if you have the infection.

However, even though the bacteria can be detected under the microscope, they are not always seen, even if they are present. To make sure the test result is reliable, the sample you give is put into a special pot. This pot also contains a substance that allows the bacteria to grow. The pot, known as a plate, is then put into an incubator allowing any bacteria present to grow. The plates are then checked to see if any bacteria which cause STIs have grown. It takes a while for the bacteria to grow; this is why you may be asked to check back with the clinic for more results in a few weeks' time. Trichomonas can also be seen under the microscope.

The results of tests for chlamydia and blood tests for syphilis, hepatitis B and hepatitis C are usually not available on the same day.

Some clinics offer same-day HIV testing. This means you get the result of the test on the day your blood sample is taken. Most clinics ask you to make an appointment for this service, as it may only take place at certain times.

The swabs that are taken sometimes show other infections which are not considered to be STIs. This includes bacterial vaginosis and thrush. These infections can also be seen by looking at the samples you give under the microscope.

What about the results from a genitourinary medicine clinic?

After your doctor or nurse has checked your samples they will call you back into the consulting room. They will give you any results available from checking the cells under the microscope.

You will also be advised about how long it should take to get any other test results back to the clinic. Each clinic has a different method of giving test results. Some may ask you to come back or ring the clinic; some work on a 'no news is good news' policy. It is important you understand how you will get your results and that the contact information you give is reliable.

My test results show I have a sexually transmitted infection - what now?

If you have a positive test result for an STI on the day of your attendance at clinic you will be given treatment and advice on the same day. You will also be asked to speak to a sexual health advisor to help trace any of your sexual partners who may have come into contact with the infection.

If the test results come after you have left the clinic you will be given advice about what to do next when you receive your result.

How are sexually transmitted infections treated?

The treatment that you will be offered depends on what STI is found. For example, a **short course of antibiotic medicine** can usually clear away chlamydia, gonorrhoea, syphilis and trichomonas. A cream or lotion can clear pubic lice and **scabies**. Topical treatments can usually clear most anogenital warts. Treatments for genital herpes, hepatitis B, hepatitis C, and HIV are more involved and complex. You will be given advice about what treatment options you have and given time to ask questions.

If you are prescribed antibiotics then it is important to finish the full course of tablets, or else the infection may not be fully cleared. If you develop side-effects then seek advice from the GUM clinic or from your GP as to what to do. Do not simply stop taking the medication. For some infections you will be asked to return after a course of treatment to check that the infection has gone.

Note: do not have sex again until the time advised by the clinic. Depending on the infection, this may be for a certain length of time after treatment is finished or it may be until you are given the 'all clear' from a repeated test. The aim is to prevent you from passing on the infection to others.

Reducing your risk of sexually transmitted infection

'Safer sex' usually refers to having sex in a way which reduces your risks of catching a sexually transmitted infection (STI). Although sex should be an enjoyable activity, it can put you at risk in several ways. Because it involves being very close (intimate) with another person, it may allow infections to pass from one person to another. Other risks to think about include pregnancy, emotional consequences and legal issues.

'Safe sex' guidelines often are called 'safer sex' guidelines because sex can never be completely without any risk at all. However, taking a few sensible precautions can reduce the risks greatly.

Listed below are various important ways in which you can reduce your risk of catching an STI.

Barrier methods

The most commonly used barrier method is the **male condom**. Other options are **female condoms** and dental dams. A dental dam is a sheet of latex (or similar material) used during oral sex to help stop STIs being spread.

Condoms have been shown to reduce the risk of passing on most STIs including:

- HIV and AIDS
- Chlamydia
- Gonorrhoea
- Syphilis
- Genital herpes

They are not completely guaranteed to prevent any risk but they do greatly reduce the risk. Latex condoms are the most effective but for those who are sensitive to latex, condoms made of polyurethane also help to reduce the risk.

Female condoms have also been shown to be effective in reducing the risk of catching an STI.

In the UK, condoms are available free of charge from family planning clinics. They are also available in some genitourinary medicine (GUM) clinics and some GP surgeries. They can also be bought from pharmacies. Consider always having a condom with you 'just in case'.

Tips to make condoms more effective:

- Ideally, use a condom every time you have vaginal, anal or oral sex. Even using a condom as often as possible is safer than not using one at all. If you forget to use a condom on one occasion, it is still worth using one on future occasions.
- Practise using a condom so you can reliably put one on even if it is dark or you are in a hurry.
- You can pass on an STI even if you don't come (ejaculate) so use a condom for all penetrative sex.
- Put the condom on before having sex.
- Remove all air from the condom before rolling it on.
- Do not unroll the condom before putting it on.
- Hold the condom on after having sex as you withdraw your penis.

Number of partners

It makes sense that the fewer sexual partners you have, the less chance you have of catching an STI. People who think of sex as something to enjoy in a committed relationship are less at risk of infections than people who think of it as a more casual activity.

Even people who have never been aware of having an STI may be carrying an infection. For example, you can pass on herpes without ever having any symptoms. Or you can pass it on many years after you had symptoms of an infection. This is why even in a regular committed relationship, it can be worth considering using a condom.

Sexual practices

Some kinds of sexual practices are higher-risk than others. If you are in no contact with another person whatsoever (for example, phone sex, self-masturbation) you are not at risk of catching an infection. Sex involving penetration (with a penis, sex toy, tongue, finger, fist, etc) involves more risk than sex without penetration. However, it is possible to catch some infections without penetration. For example, by rubbing genitals you can catch **genital warts** or **genital herpes**. You can catch genital herpes from having oral sex with somebody who has a cold sore. Other STIs which can be passed on during oral sex include HIV, gonorrhoea, syphilis, **human papillomavirus (HPV)**, **hepatitis B** and **hepatitis C**.

Anal sex is particularly high-risk because the lining of the anus and rectum are very thin. This makes it easier for germs to enter the body. HIV and hepatitis B in particular are more likely to be passed on through anal sex.

STIs can be caught from infected sex toys. Therefore, to have safer sex, always wash and clean sex toys or use them with a barrier such as a condom.

Alcohol and recreational drugs

Alcohol and recreational drugs can loosen inhibitions. Therefore, they may make you more likely to have higher-risk sex (for example, with a stranger, without a condom, anal sex) than you might normally do. Consider this risk in advance of a situation where alcohol or drugs might be involved. You may then be able to make plans to reduce your risk.

Having tests for STIs

It is recommended that you think about **having tests for STIs** before having sex with somebody new, and also ask them to have the tests. If you are at high risk of catching an STI, it is sensible to have regular tests. You might be at higher risk of an STI if you:

- Are a man who has sex with men.
- Have had a lot of sexual partners.
- Have sex as part of your job.
- Have a past history of an STI.
- Have a partner who has had STIs in the past or currently has an STI.
- Use intravenous recreational drugs and share needles.
- Come from, or have visited, a country with a high rate of HIV or other STIs.

In the UK you can have tests for STIs at your GUM clinic. You do not need a referral from your GP to attend a GUM clinic. Your GP would also be able to advise you where your nearest clinic is. Local and national information is also available on the internet - for example, from the Family Planning Association's 'Find a clinic' service.

Vaccinations

Vaccines are not available for most STIs. However, if you are at high risk, your GP or GUM clinic may advise you to consider **vaccination against hepatitis B or hepatitis A**. Teenage girls in the UK are now routinely **vaccinated against HPV**. This is expected to reduce rates of genital warts and cervical cancer drastically in the future.

There is no vaccine to protect against HIV. People with known HIV will be given specialist advice from those treating them about avoiding passing it on. Antiviral treatment and the use of condoms reduce the risk but cannot remove risk completely.

Reducing your risk of unwanted pregnancy: contraception

'Safer sex' usually refers to protecting yourself against STIs. However, if you do not wish to become pregnant, this is something else to consider before having sex. There are many ways of avoiding becoming pregnant when you have sex (contraception). **These are discussed generally in the separate leaflet called Contraception Guide**. There are also specific leaflets on the following forms of contraception:

- Combined oral contraceptive pill.
- Progestogen-only contraceptive pill.
- Contraceptive patch.
- Contraceptive vaginal ring.
- Barrier methods: male condom, female condom, diaphragms and caps.
- Contraceptive injections.
- Contraceptive implants.
- Coils (intrauterine contraceptive devices and the intrauterine system).
- Sterilisation - vasectomy and female sterilisation.
- Emergency contraception.

Most contraceptive methods do not protect you from STIs, so remember always to consider using a condom as well.

The Family Planning Association (FPA) website has a lot of information about contraception.

Sex and the law

Another part of having safer sex which you may need to think about is not breaking the law. Laws about sex and consent vary from country to country and may be confusing. In the UK the laws are broadly similar by country but have some slight differences.

Consent

Sex must always be consensual. That means both partners wish to have sex, without having been pressured in any way. This means the person has not been threatened or bullied or manipulated, or made to take alcohol or drugs which may influence their decision. Never assume consent - always ask first. Because a person has consented once does not mean they have consented for future times. Also, because a person has consented to one form of sexual activity, you cannot assume consent for any type of sexual activity. Make sure your partner is capable of giving consent - ie they are capable of understanding what is involved. They need to be old enough, conscious enough and have the intellectual capacity to make an informed choice.

Note: if you have sex or sexual activities without consent, you may be charged with a number of possible sex offences. These include rape, sexual assault, indecent assault and indecent exposure.

Age of consent

In the UK, the age of consent for sex is 16. In other words, a person under the age of 16 is thought not old enough to give consent. It is therefore a crime (an offence) to have any type of sexual activity with a person under the age of 16. Potentially anyone having sex with a person under the age of 16 can be prosecuted, even if that person consents and even if both are under 16. This may result in a prison sentence. Usually, however, if both are under 16, and both consent, this is not enforced. The law is even stricter for anyone found guilty of sexual activity involving children aged 12 or younger, with possible life imprisonment sentences. It is also illegal for a person over 18 who holds a position of trust (for example, a teacher) to have sex with a person under the age of 18 who is under their influence as a result of that position.

Contraception for young people

Even though it is illegal for a person under the age of 16 to have sex, doctors and other health professionals can help keep them safe. This means if a doctor is satisfied that to provide advice on contraception or prevention of STIs is in your best interests, they can do so. They are under no obligation to tell your parents just because you are under 16. You will be treated with confidentiality, just as you are over the age of 16. However, if a health professional feels you have been forced or coerced into having sex, they would have to take this concern further.

Staying safe: emotions

Because sex is such a close experience, it will usually have an emotional effect. Many people connect sex with love. If you are thinking of sex as a more casual experience, check your partner feels the same first. You will both be safer if you can talk about where you are emotionally beforehand. In this way you can make sure you are both feeling the same way and one person will not get hurt. It may also be wise to talk about previous sexual experiences where possible. You may wish your partner to have tests for STIs before starting a sexual relationship if they have had many past sexual partners, or an STI in the past.

If you are a teenager thinking about having sex, make sure in your own mind this is something you want. Do not be pressured into it by your partner or because you think others of your age group are doing it. Think it through carefully first to be sure you are not going to get hurt, get pregnant or get an STI.

Summary: tips for safer sex

- Do not have lots of sexual partners. Get to know a person before having sex with them. Only have sex with somebody who is happy to practise safer sex and listen to your wishes.
- Make sure each partner consents and is happy with the consequences of having sex. Do not start a sexual relationship until both partners are ready for it.
- Always use a condom for all types of penetrative sex. Consider a barrier method for oral sex.
- Keep sex toys clean.
- Beware of having sex under the influence of alcohol or drugs. Make plans in advance to protect yourself.
- Think about getting yourself and your partner tested for STIs before you start having a sexual relationship. Always go to your GP or GUM clinic as soon as possible if you have any symptoms of an STI, such as soreness of, or discharge from, your vagina or penis. Don't have unprotected sex until you have been checked out.
- Consider contraception if needed.
- If you take steps to keep yourself safe, sex should be a pleasure and not a risk.

Further reading & references

- [Sexually transmitted infections \(STIs\): surveillance, data, screening and management](#); Public Health England, 2016
- [Sexually Transmitted Infections in Primary Care](#); Royal College of General Practitioners and British Association for Sexual Health and HIV (Apr 2013)
- [National guideline for the management of chancroid](#); British Association of Sexual Health and HIV (2014)
- [Towards elimination of HIV transmission, AIDS and HIV-related deaths in the UK](#); Public Health England (November 2017)

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