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## **Patient information: Genital herpes (Beyond the Basics)**

### WHAT IS GENITAL HERPES?

Genital herpes is a common sexually transmitted disease that is caused by the herpes simplex virus. It is estimated that at least one in five adults in the United States is infected with the virus, but many people have no symptoms and do not realize that they are infected.

After getting infected, most people have recurrent episodes of genital ulcers for several years. Although the infection can stay in the body for years, symptom outbreaks become less and less common over time. The infection can be managed with medication and self-care measures.

People who have genital herpes are encouraged to talk to their sexual partner, use condoms, and take other preventive measures to prevent transmission (passing the virus to others). Genital herpes can be spread even when there are no visible ulcers or blisters.

Being diagnosed with genital herpes can be an emotional and distressing experience, and it is important to speak with your healthcare provider about how to manage symptoms and avoid passing the virus to sexual partners. Counseling and support groups can also be beneficial to individuals living with genital herpes infection.

### GENITAL HERPES CAUSE

Genital herpes is caused by infection with the herpes simplex virus (HSV, usually type 2). It can also be caused by herpes simplex virus type 1, which is the cause of oral herpes (cold sores on the mouth and lips). The spread of HSV is discussed below. (See '[Genital herpes transmission and risk factors](#)' below.)

### GENITAL HERPES SYMPTOMS

The symptoms of genital herpes can vary widely, depending upon whether you are having an initial or recurrent episode. However, many people infected with genital herpes never experience symptoms.

**Initial episode** — For most people, the first herpes outbreak is the most severe, and symptoms tend to be more severe in women than men. The first outbreak usually occurs within a few weeks after infection with the virus. Symptoms tend to resolve within two to three weeks.

The signs of an initial (or primary) episode of genital herpes include multiple blisters in the genital area. For women, the sites most frequently involved include the vagina, vulva, buttocks, anus, and thighs; for men, the penis, scrotum, anus, buttocks and thighs may be affected. Signs and symptoms typically include blisters that become painful ulcers. Blisters on the penis or outer labia may crust over and heal. New lesions may develop for up to five to seven days after the first group appears.

There may also be tender, swollen lymph nodes in the groin, flu-like symptoms, such as joint pain, fever, and headache, and it may be painful to urinate.

A small percentage of people can develop headache, nausea and vomiting, or difficulty urinating. These symptoms occur when the herpes infection affects the nervous system.

People who have pain when they try to defecate may have proctitis (inflammation of the rectum or anus). Men who have sex with men are more prone to this complication than other patients.

Latent stage — After the initial outbreak, the virus travels to a bundle of nerves at the base of the spine, where it remains inactive for a period of time. This is called the latent stage. There are no symptoms during this stage.

Recurrent episodes — Many people experience recurrent episodes of genital herpes, which occur when the virus travels through nerves to the skin's surface, causing an outbreak of ulcers. These recurrent episodes tend to be milder than the initial outbreak.

Ulcers may develop in the same area as those of the first outbreak, or may appear in other areas. It is possible to develop lesions in areas where there was no direct contact; for example, it is possible to have lesions around the anus without having had anal sex.

Likelihood of recurrence — Genital herpes recurs frequently in many patients, especially in those with HSV type 2. Over time, recurrences generally become less frequent and less severe. However, it is also possible to have a recurrence a few years after the initial HSV infection was acquired. This type of delayed herpes outbreak can be especially distressing if you never had symptoms during the initial infection, leading you to worry about the sexual activities of your past or present sexual partner(s). (See ['When did I become infected?'](#) below.)

Prodrome — As many as 50 percent of people with a recurrent outbreak experience mild symptoms before ulcers develop. These are called prodromal symptoms, and may include itching, tingling, or pain in the buttocks, legs, or hips. Recurrences tend to become less frequent and less severe after the first year.

Triggers for recurrence — Illness, stress, sunlight, and fatigue can trigger recurrent herpes outbreaks. In women, menstrual periods may trigger an outbreak.

When did I become infected? — The first time a person has noticeable signs or symptoms of herpes may not be the initial episode. For example, it is possible to be infected for the first time, have few or no symptoms, and then have a recurrent outbreak with noticeable symptoms several

years later. For this reason, it is often difficult to determine when the initial infection occurred, especially if a person has had more than one sexual partner. Thus, a current sexual partner may not be the source of the infection.

## GENITAL HERPES DIAGNOSIS

The diagnosis of genital herpes is based on an individual's medical history, their signs and symptoms, and the results of tests. It is important to distinguish genital herpes from other sexually transmitted diseases, particularly those that also produce genital ulcers, such as syphilis and chancroid.

Several diagnostic tests may also be used to diagnose genital herpes. These tests can usually confirm infection and identify which virus (HSV-1 or HSV-2) is responsible. The choice of testing will depend on your symptoms and whether you have any blisters or ulcers at the time you see your doctor.

**Culture test** — A culture test determines if herpes simplex virus is present in blisters or ulcers. However, a herpes culture detects the virus in only about 50 percent of individuals with genital ulcers. The culture is more likely to detect the virus when ulcers are new and open, as compared to when they are older and healing. Therefore, it is important to see a healthcare provider within 48 hours of the first symptoms. The test is also more sensitive in individuals experiencing an initial episode of genital herpes than in individuals experiencing a recurrent episode.

**Blood test** — Blood tests are often used when a person believes he or she may have been exposed to the herpes virus in the past, but has no visible ulcers. A blood test can detect antibodies (proteins that are produced by the body in response to a foreign substance) to HSV type 1 and type 2. Having a positive test for these antibodies indicates that the person was infected with the virus at some time in the past, although it is usually not possible to know when or from whom the virus was transmitted.

The results of antibody testing may be negative early on during the initial episode of infection since antibody formation takes a few weeks. The antibody test remains positive for life.

Blood tests may be helpful for couples if one person has a history of genital herpes and the other does not. If the partner has not been infected, then it is important to discuss ways to prevent transmission.

Determining the type of herpes (1 or 2) can also help to predict the likelihood of future recurrences, given that type 2 recurs more frequently than type 1 (see ['Likelihood of recurrence'](#) above).

**Polymerase chain reaction (PCR) test** — The polymerase chain reaction (PCR) test is a very sensitive test for identifying the herpes virus in cells and secretions from the urinary and genital tracts. The PCR test is more sensitive than the culture test, but is not routinely used due to its higher cost.

## GENITAL HERPES TRANSMISSION AND RISK FACTORS

Transmission between sexual partners — The herpes virus is most often transmitted between partners during oral, anal, or vaginal sex.

It is also possible for a person to develop genital herpes after exposure to a cold sore on an infected person's lip during oral sex; in this case, genital herpes may be due to infection with HSV type 1. Transmission from person to person can occur even if there are no visible ulcers

There is no risk of becoming infected after exposure to environmental surfaces (door knobs, toilet seats, utensils, bed sheets).

The risk of transmission from an infected male to an uninfected female partner is slightly higher than the risk of transmission from an infected female to an uninfected male partner. As with any sexually transmitted infection, the risk of contracting genital herpes increases according to the number of sex partners you have, how often you have sex, and how infrequently you use condoms.

When am I most likely to spread the virus? — The risk of spreading the infection is much greater when a person has signs or symptoms of active infection. But it is still possible to spread the infection even when no ulcers are present.

One study examined rates of genital herpes transmission in heterosexual couples when only one partner was initially infected [1]. Over one year, the virus was transmitted to the other partner in 10 percent of couples. In 70 percent of cases, infection occurred at a time when there were no symptoms.

Use of condoms and suppressive antiviral medication can decrease the risk of spreading the infection to partners who are not infected, especially during the first year after a person becomes infected (see '[Suppressive therapy](#)' below).

Pregnancy and herpes — Women who have their first outbreak of genital herpes near the time of delivery are at risk of transmitting herpes to their newborn. Careful planning during the pregnancy and precautions during pregnancy and at the time of delivery can reduce the likelihood of transmission.

Since herpes in infants is a very serious condition, women should inform their healthcare provider if they have a history of the infection. While women who acquire genital herpes before becoming pregnant are not likely to pass the virus to the baby, it is still possible for this to happen. For example, transmission from mother to child can occasionally occur if the mother has a recurrence at the time of delivery.

For this reason, preventive antiviral therapy with acyclovir is often recommended for women with one or more recurrences during pregnancy. A caesarean delivery is usually recommended in women who experience an outbreak of symptoms at the time of labor.

Women with no history of genital herpes whose partner has a history of cold sores (generally HSV type 1) or genital herpes (generally HSV type 2) should avoid oral, vaginal, and anal sex during the last trimester of pregnancy. Condoms are recommended during the entire pregnancy.

## GENITAL HERPES AND HIV

Individuals with genital herpes are at an increased risk of acquiring HIV. During an outbreak, blisters and ulcers make it easier for a partner's genital fluids to enter the body. Therefore, if a person with herpes is exposed to HIV through sexual contact while herpetic lesions are present, HIV can more easily travel through the skin. Condoms help decrease the spread of HSV and HIV. (See "[Patient information: Symptoms of HIV infection \(Beyond the Basics\)](#)".)

## GENITAL HERPES TREATMENT

Although there is no cure for genital herpes, the infection can be managed with antiviral drug therapy and self-care measures.

**Antiviral medications** — Three antiviral medications are used to treat genital herpes: acyclovir (Zovirax®), famciclovir (Famvir®), and valacyclovir (Valtrex®). They are usually taken by mouth (in pill form). Acyclovir (Zovirax®) is the oldest and least expensive antiviral medication. It usually requires more frequent dosing than famciclovir and valacyclovir.

**Treatment regimen** — The dose and length of treatment depends upon whether the outbreak is the first episode or is a recurrence.

**Initial episode** — The first episode of genital herpes is generally treated with 7 to 10 days of one antiviral medication, taken by mouth.

**Episodic therapy** — Episodic therapy is a treatment strategy of taking antiviral medicines only when outbreaks occur. Episodic therapy may be recommended if you have fewer than six outbreaks each year. Unfortunately, episodic treatment does not reduce the frequency of outbreaks.

The advantage of episodic therapy is that it can decrease the duration and severity of the illness by hours to a few days.

Treatment is most likely to be effective if it is started within 72 hours of the first symptoms. People with a history of recurrent genital herpes are often advised to keep a supply of antiviral medication in their home, which they can initiate at the first signs of a recurrence (eg, pain or tingling symptoms or at the sign of their first blister).

**Suppressive therapy** — Suppressive therapy is low dose antiviral treatment that is taken every day to prevent outbreaks.

The advantage of suppressive therapy is that it decreases the frequency and duration of recurrences, and can reduce the risk of transmitting HSV to an uninfected sex partner.

Suppressive therapy may be recommended if you have six or more recurrences each year or have a weakened immune system due to the human immunodeficiency virus (HIV), use of immune-suppressing drugs, or other factors.

Suppressive therapy may also be an option if you are in a sexual relationship with a partner who does not have a history of genital herpes or antibodies to HSV-1 or 2 (as determined by blood testing). One study of valacyclovir showed that taking suppressive therapy can reduce the chances of transmitting the virus by approximately one-half.

It is not clear how long suppressive therapy should continue. Some experts recommend taking a break from treatment periodically (every few years) to determine if suppressive therapy is still needed. If recurrent outbreaks develop, suppressive therapy may be restarted.

**No treatment** — It is not necessary to treat a recurrent episode of genital herpes. No treatment may be appropriate for some patients, particularly those with infrequent outbreaks or minimal symptoms. It also may be appropriate if the patient is not currently sexually active, so transmission of HSV is not a consideration.

**Which treatment regimen is right for me?** — Many people with recurrent herpes are unsure which treatment regimen (episodic or daily suppression) is right for them. The factors you should consider include how often you have outbreaks, how severe your symptoms are, and the risk of passing the infection to a sexual partner.

- If you have frequent outbreaks, severe symptoms, or want to avoid infecting a sexual partner, suppressive treatment might be recommended.
- If you do not have frequent outbreaks, are not bothered by symptoms (pain) during an outbreak, and are not concerned about infecting a sexual partner (because you are not sexually active), episodic therapy or no therapy are reasonable options.

**Self-care measures** — In addition to antiviral medications, local treatments may be used to relieve the pain of a herpes outbreak. Sitting in a few inches of cool water (called a sitz bath) can temporarily decrease ulcer pain. This can be done in a bathtub or a specially designed sitz bath, available at most pharmacies without a prescription.

Women who are having trouble urinating may find it helpful to urinate in the sitz bath or at the end of a warm bath. Soaps and bubble baths should be avoided. It is important to keep the genital area clean and dry, and to avoid tight or irritating underwear and clothing.

Acetaminophen (Tylenol®) or ibuprofen (Advil®) may also help relieve the pain of genital ulcers. Over-the-counter creams and ointments are generally not recommended.

## COUNSELING AND SUPPORT

The diagnosis of genital herpes can cause feelings of shame, fear, and distress. While these reactions are normal, it is important to remember that genital herpes is a manageable condition.

Education is important for infected individuals and their partner to know what to expect and how to protect themselves.

Many patients find that counseling, either with their family healthcare provider or a mental health professional, is helpful in dealing with the issues that come with a diagnosis of genital herpes. Counseling may be especially important for people who have tested positive for the virus, but have not developed symptoms.

There are many genital herpes support groups in the United States and worldwide; these provide a safe environment for people to share their experiences and feelings, and also to learn accurate information about the disease. Infected individuals are encouraged to speak with their healthcare provider or visit the websites listed below (see ['Where to get more information'](#) below).

## GENITAL HERPES PREVENTION

Because all sexually active people are at some risk of acquiring genital herpes, it is important to communicate with a sexual partner before the first sexual encounter. Discussing herpes can be uncomfortable and embarrassing, but it ensures that both partners understand the possibility of transmitting the infection through sexual activity. Regular testing for sexually transmitted diseases is also recommended, especially if one or both partners have other sexual partners.

After being diagnosed with genital herpes, it is still possible to have a safe and healthy sex life; however, it is important to take precautions.

- Using a latex condom with every sexual encounter can reduce the risk of herpes transmission when only one member of a couple has the virus. The more often you use latex condoms, the lower the risk of transmission.
- Even when a person has no ulcers or blisters, use of a condom is recommended.
- Sex should be avoided any time genital ulcers are present. Oral sex should be avoided if there are ulcers or blisters around the mouth because a person with the oral form of herpes can give a partner genital herpes by performing oral sex.

## SUMMARY

- Genital herpes is a viral infection that is spread during sex.
- Symptoms of genital herpes include blisters in the genital area (eg, penis, buttocks, anus, vulva). The blisters become painful ulcers. Some people have no symptoms at all.
- Symptoms are usually most severe when they first appear. Outbreaks usually become less intense and less frequent over time. Most people have an outbreak of genital herpes more than once in their life. The frequency of these outbreaks varies from individual to individual.
- Several tests are available to diagnose genital herpes. Some tests use blood while others require a swab of the blister.
- It is possible to spread herpes even if there are no visible ulcers. It is not possible to catch herpes by touching a surface (door knobs, toilet seat, bed sheets).

- Several medications are available to treat genital herpes (acyclovir, valacyclovir, and famciclovir). These drugs help to speed healing of ulcers in people who have just been infected or in those who are having repeat outbreaks.
- Some people who have herpes outbreaks take medicine every day to prevent future outbreaks or prevent spread to their sex partner.
- There are ways to lower the risk of being infected with genital herpes. People should use a latex condom every time they have sex. Sex (oral, vaginal, and anal) is not recommended if a person has blisters or ulcers.

## WHERE TO GET MORE INFORMATION

Your healthcare provider is the best source of information for questions and concerns related to your medical problem.

This article will be updated as needed on our web site ([www.uptodate.com/patients](http://www.uptodate.com/patients)). Related topics for patients, as well as selected articles written for healthcare professionals, are also available. Some of the most relevant are listed below.

Patient level information — UpToDate offers two types of patient education materials.

The Basics — The Basics patient education pieces answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials.

[Patient information: Genital herpes \(The Basics\)](#)

[Patient information: Genital warts \(The Basics\)](#)

[Patient information: Syphilis \(The Basics\)](#)

[Patient information: Screening for sexually transmitted infections \(The Basics\)](#)

[Patient information: Urethritis \(The Basics\)](#)

Beyond the Basics — Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are best for patients who want in-depth information and are comfortable with some medical jargon.

[Patient information: Symptoms of HIV infection \(Beyond the Basics\)](#)

Professional level information — Professional level articles are designed to keep doctors and other health professionals up-to-date on the latest medical findings. These articles are thorough, long, and complex, and they contain multiple references to the research on which they are based. Professional level articles are best for people who are comfortable with a lot of medical terminology and who want to read the same materials their doctors are reading.

[Acyclovir: An overview](#)

[Approach to the patient with genital ulcers](#)

[Epidemiology, clinical manifestations, and diagnosis of genital herpes simplex virus infection](#)

[Famciclovir: An overview](#)



[Genital herpes simplex virus infection and pregnancy](#)  
[Prevention of genital herpes virus infections](#)  
[Treatment of genital herpes simplex virus infection](#)  
[Valacyclovir: An overview](#)

The following organizations also provide reliable health information.

- National Library of Medicine

([www.nlm.nih.gov/medlineplus/healthtopics.html](http://www.nlm.nih.gov/medlineplus/healthtopics.html))

- Centers for Disease Control and Prevention (CDC)

Phone: (404) 639-3534

Toll-free: (800) 311-3435

([www.cdc.gov](http://www.cdc.gov))

- National Institute of Allergy and Infectious Diseases

([www.niaid.nih.gov/](http://www.niaid.nih.gov/))

- Herpes Resource Center

American Social Health Association

Phone: (800) 230-6039

([www.ashastd.org](http://www.ashastd.org))

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[1-11]

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