



Sexually Transmitted Infections

Herpes Simplex Virus (oral and genital herpes)

Herpes is a general term for two different diseases: one that affects the area around the mouth (oral herpes, cold sores, fever blisters) and another that affects the area around the genitals (genital herpes). Herpes viruses cause both of these diseases.

Herpes simplex virus-1 (HSV-1) causes oral herpes; and both HSV-1 and herpes simplex virus-2 (HSV-2) cause genital herpes. While HSV-1 and HSV-2 are different viruses, they look very much the same and are treated similarly.

Herpes cannot be cured. Once someone is infected with either virus, it cannot be cleared from the body. Both viruses live in nerve cells, usually under the skin. Most of the time they stay silent or inactive in these cells, sometimes for many years or even a lifetime. This is called “latency.”

For reasons not entirely understood by scientists, the viruses can become active and cause symptoms, which include sores. This is called “reactivation.” These symptoms can come and go as an outbreak, or “flare-up.”

During a flare-up, the virus causes a chain of events leading to a cluster of small bumps to form. The bumps may rupture, heal, and then disappear for an indefinite period of time.

Anyone infected with either virus, regardless of their HIV status, can experience these flare-ups. About 95 percent of people living with HIV in the United States are infected with one of the two viruses. Herpes is spread by direct contact with an infected area, usually during a flare-up of the disease. Kissing and oral-genital sex can spread HSV-1. Other sexual activity, including vaginal or anal intercourse, is the way HSV-2 is usually spread.

Sometimes these viruses can become active without causing symptoms. This is known as viral “shedding.” A person with activated HSV can infect another person whether or not they currently have sores.

Anyone infected with herpes can experience flare-ups. In people with healthy immune systems, a flare-up can last a few weeks. In people with weakened immune systems, the herpes sores can last longer. Severe flare-ups can be incredibly painful. In a very small number of cases, herpes can spread to other organs, including the eyes, throat, lungs and brain.

What are the symptoms?

Symptoms depend on the disease site:

- Oral herpes: Sores around the mouth and nostrils are usually raised and may itch or be painful. They usually are reddened and sometimes produce fluid or pus and may be crusty or hard to the touch.
- Genital herpes: Sores may be found on the penis or near or in the vaginal opening. Sores may also be present near the anus, including the area between the anus and the genitals. Sometimes, genital herpes can cause pain when peeing or defecation.

How is herpes diagnosed?

Oral and genital herpes are well-known diseases. Many clinicians know herpes when they see it; however, simply looking at the lesions is not enough to diagnose it. Many cases go unreported or do not have symptoms that cause a person to seek medical help. Therefore, blood tests and swabs taken from the sores are used to diagnose the virus. Genital sores should be tested to determine which virus is present, as this may impact treatment decisions. HSV-1 recurs less often in the genitals than HSV-2.

How is herpes treated?

Once either virus is inside the body and settles into nerve cells, it cannot be eliminated or cured. But it can be treated to reduce symptoms and the risk of transmission. Treatment can speed up healing time, reduce pain, and delay or prevent additional flare-ups. Treatment should take in account the frequency of flare-ups and risk for genital ulcer disease.

Treatment is usually used during a flare-up, which is called “episodic therapy.” In people with weakened immune systems, flare-ups can occur often and may need long-term treatment to prevent recurrences. This is called “suppressive therapy.” Some people can tell when they are about to have a flare-up, usually because of tingling or itching at the site where a sore will appear, which is called the “prodrome” stage.

Four medications are available to treat herpes:

- Acyclovir (Zovirax): Acyclovir has been well studied in people living with HIV and used for many years to treat both types of herpes. It is available in a topical cream, pills and IV formulation, and rarely causes side effects. Most experts agree that the cream is not very effective and that pills are best for mild to moderate flare-ups or suppressive therapy. IV acyclovir is used for

serious flare-ups or outbreaks that affect internal organs, such as the central nervous system. The oral dose used to treat flare-ups is taken three times a day, usually for 5–10 days. It works best if it's started within 24 hours of the first sign of symptoms or the prodrome stage. The dose can be doubled if the sores fail to respond. Acyclovir has been well studied during pregnancy and appears safe to use.

- **Valacyclovir (Valtrex):**Valacyclovir has been approved specifically for treating herpes in people living with HIV and rarely causes side effects. For mild to moderate herpes flare-ups, the dose is taken twice a day for 5–10 days. Treatment will work best if it is started within 24 hours of the first sign of symptoms or the prodrome stage. Valacyclovir appears safe to use during pregnancy, and offers better dosing.
- **Famciclovir (Famvir):**Famciclovir is taken by mouth twice a day for 5–10 days. Treatment will work best if it is started within 24 hours of the first sign of symptoms or the prodrome stage. Famciclovir appears safe to use during pregnancy, and offers better dosing.
- **Trifluridine (Viroptic):**Trifluridine drops are used to treat HSV infection of the eye(s). One drop is placed in the affected eye, every two hours, for up to 21 days. It is not used to treat or prevent HSV disease in other parts of the body.

In some cases, herpes flare-ups do not respond to acyclovir, valacyclovir or famciclovir, probably due to resistant forms of HSV-1 and HSV-2. People living with HIV with suppressed immune systems—CD4 counts below 100—who have been on long-term acyclovir have developed drug-resistant herpes. Because acyclovir is similar to the other two drugs, simply switching one for the other is not usually effective.

Currently, foscarnet (Foscavir) is the most common treatment for acyclovir-resistant herpes. It must be given by an IV line, usually three times a day, often in a hospital or under the close supervision of an in-home nurse.

Some healthy tips:

- During a flare-up, it's important to keep the sores and the area around the sores as clean and dry as possible. This will help it heal well. Some doctors recommend warm showers to cleanse the infected area. Afterwards, towel dry gently, or dry the area with a hair dryer on a low or cool setting. To prevent chaffing, avoid tight-fitting underwear. Most creams and lotions do no good

and may even irritate the area.

- The amino acids lysine and arginine have been shown to play a role in herpes flare-ups.

According to some new research, lysine can help control flare-ups. On the other hand, arginine can actually make them worse. In turn, foods that are rich in lysine—but low in arginine—can help control both oral and genital herpes. Fish, chicken, beef, lamb, milk, cheese, beans, brewer's yeast, mung bean sprouts and most fruits and vegetables have more lysine than arginine, except for peas. Gelatin, chocolate, carob, coconut, oats, whole wheat and white flour, peanuts, soybeans, and wheat germ have more arginine than lysine.

Can herpes be prevented?

Vaccines to prevent herpes infections are currently being studied and may be available in 3-5 years. Vaccines will only prevent the infection from occurring in the first place—they won't likely help control flare-ups in people who already have herpes.

Since herpes is often transmitted when it's shedding with no symptoms, people with herpes may want to take suppressive treatment in order to prevent passing the virus onto others. In this case, acyclovir, valacyclovir and famciclovir may be used. The correct and consistent use of condoms can also help prevent transmission, as well as disclosing herpes status to sex partners.

To prevent transmission to a newborn, Caesarian section may be recommended if HSV-2 prodrome or disease is present prior to childbirth.

Are there any experimental treatments?

New drugs are being studied for treating herpes, including a topical foscarnet cream and a topical cidofovir gel. Trifluridine is also being studied as a topical cream.

If you would like to find out more about these studies, visit [ClinicalTrials.gov](https://clinicaltrials.gov), a site run by the U.S. National Institutes of Health. The site has information about all HIV-related clinical studies in the United States. For more info, you can call their toll-free number at 1-800-HIV-0440 (1-800-448-0440) or email contactus@aidinfo.nih.gov.

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