

Herpes simplex virus: oral and genital herpes

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What is it?

Herpes is a general term for two different diseases: one that effects the area around the mouth (oral herpes, also known as cold sores) and another that effects the area around the genitals (genital herpes). Viruses cause both of these diseases. The herpes simplex virus-1 (HSV-1) causes oral herpes; 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 human body.

Both HSV-1 and HSV-2 live in nerve cells, usually under the skin. Neither virus is always active. They often remain silent or inactive in these cells, sometimes for many years or even a lifetime. This is called “latency.” For reasons not entirely understood by researchers, the viruses can become active and cause symptoms, which include sores around the mouth or near the genitals. This is called “reactivation.” These symptoms can come and go in what is known as outbreaks, or “flare-ups.”

During a flare-up, the virus becomes active and 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 oral or genital herpes flare-ups. Approximately 70% of all adults living in the United States are infected with one—or both—viruses. HSV-1 is spread via direct contact with an infected area, usually during a flare-up of the disease. Kissing and oral-genital sex can spread HSV-1. More serious sexual activity, including penile-vaginal or penile-anal intercourse, is the main route by

which HSV-2 is spread. Both types of HSV can actively reproduce without causing symptoms, this is known as viral “shedding.” A person with HSV can infect another person when they are shedding, even if they do not currently have any sores.

Anybody infected with either virus can experience flare-ups. In people who have healthy immune systems, a herpes flare-up usually lasts a few weeks. In people with compromised immune systems, including people with HIV and AIDS, the herpes sores can last longer than a month. Severe herpes flare-ups can be incredibly painful. In a very small number of cases, herpes can spread to other organs, including the eyes, the throat, the lungs, and the brain.

What are the symptoms, & how is it diagnosed?

The symptoms of herpes depends on the site of disease:

- **Oral herpes** (cold sores):

Sores around the mouth and nostrils. They may itch or be painful. They might look like the sore in this picture:



- **Genital herpes:** Sores

on the penis in males or near or in the vagina in women. Genital herpes can also cause sores near the anus, including the area between the anus and the genitals (the perianum). Sometimes, genital herpes can cause pain when urinating or defecation. They might look like the sores in this picture:



How is herpes diagnosed?

Oral and genital herpes are well-known diseases. Most doctors and other health-care providers know herpes when they see it. In turn, both types of herpes can often be diagnosed—and treatment recommended—simply by examining the sores. However, guidelines published by the Centers for Disease Control and Prevention (CDC) recommends that mouth sores in particular be confirmed by laboratory testing as oral herpes can sometimes be more difficult to diagnose in people with HIV.

When in doubt, a small sample of the sore is sent to a lab for testing. If the virus is found in the sample, a confirmed diagnosis can be made.

Because a large number of people are infected with HSV-1 and/or HSV-2, there is no value in having blood samples tested for the presence of antibodies to either virus. Being infected with the virus does not necessarily mean that herpes sores will occur.

How is Herpes treated?

Herpes cannot be cured. Once either virus is inside the body and settles itself into the nerve cells, it cannot be eliminated. However, herpes sores can be treated. Treatment can speed up healing time, reduce pain, and delay or prevent additional flare ups. Typically, treatment is used only during a flare up. This is called “episodic therapy.” In people with compromised immune systems, flare-ups can be frequent and may require long-term therapy 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 at the site where a sore will appear. This is called the “prodrome” stage.

There are four treatments available for the treatment of herpes:

- **Acyclovir** (Zovirax): Acyclovir has been studied and used for many years as a treatment for oral and genital herpes. It has been studied specifically in people with HIV and herpes and has been shown to be safe and effective. Acyclovir is available in a topical cream, pills, and an intravenous formulation. Most experts agree that the cream is not very effective and that pills are best for mild to moderate flare-ups or long-term suppressive therapy. Intravenous acyclovir is used to treat serious flare-ups

or outbreaks that effect internal organs (especially HSV infection of the central nervous system). The oral dose used to treat flare-ups is 400 mg taken either three or four times a day, usually for five to ten days. Treatment will work best if it is started within 24 hours of the first sign of symptoms or the prodrome stage. For this reason, people with more frequent outbreaks not on suppressive therapy may wish to keep acyclovir on hand in case of a flare up. The dose can be doubled if the herpes sores fail to respond. Taking 400 mg of the drug three-times daily or 800 mg of the drug twice a day for a prolonged period of time can help prevent flare-ups from recurring. However, this is usually recommended only for patients who have a history of frequent recurrences.

- **Valacyclovir** (Valtrex): Valacyclovir is a “pro-drug” of acyclovir and has been approved specifically for the treatment of herpes in HIV-positive people. Unlike acyclovir, valacyclovir needs to be broken down by the body before its active ingredient—acyclovir—can begin controlling the disease. This allows for higher amounts of acyclovir to remain in the body, thus requiring a lower dose of the drug to be taken by mouth. For mild to moderate herpes flare ups the dose of valacyclovir in people with HIV is 500 mg twice daily. For episodic therapy, valacyclovir is taken for five to ten days. However, the drug can be taken every day for a prolonged period of time using half the dose needed to treat flare-ups (500 mg every day). Treatment will work best if it is started within 24 hours of the first sign of symptoms or the prodrome stage. For this reason, people with more frequent outbreaks not on suppressive therapy may wish to keep valacyclovir on hand in case of a flare up. Like acyclovir, valacyclovir rarely causes side effects.
- **Famciclovir** (Famvir): Famciclovir is the pill form of a topical cream called penciclovir (Denavir). Usually, 500 mg of the drug is taken by mouth, twice daily, for five to ten days. Treatment will work best if it is started within 24 hours of the first sign of symptoms or the prodrome stage. A dose of 500 mg twice daily, taken for a prolonged period of time, is considered to be a safe and effective preventative therapy for recurrent herpes flare-ups.

- **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 cannot be used to treat or prevent HSV disease of other parts of the body.

In some cases, herpes flare-ups do not respond to acyclovir, valacyclovir, or famciclovir, probably due to the emergence of drug-resistant forms of HSV-1 and HSV-2. HIV-positive patients with suppressed immune systems—usually a CD4 cell count less than 100—who have been receiving long-term acyclovir for the treatment and prevention of recurrent herpes flare-ups have been known to develop drug-resistant herpes. Because acyclovir is similar to both valacyclovir and famciclovir, simply switching to these two drugs is not usually effective.

At the present time, foscarnet (Foscavir) is the most common treatment for acyclovir-resistant herpes. The drug must be administered via an intravenous (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 is important to keep the sores and the area around the sores as clean and dry as possible. This will help your natural healing processes. Some doctors recommend warm showers in order 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, some people also find it helpful to avoid tight-fitting undergarments. 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 herpes flare-ups. Arginine, on the other hand, can actually make flare-ups 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 virus infections are currently being studied and it is felt that an effective vaccine may be available in three to five years. Vaccines will only function to prevent the infection from occurring in the first place—they won't likely help control flare-ups in patients who are already infected.

People who are infected with herpes can transmit the virus during periods where the virus is shedding, but there are no symptoms. Because of this, the Centers for Disease Control and Prevention recommends that people with herpes who have a regular sex partner who is not infected with herpes may want to take suppressive treatment as an added precaution, in addition to consistent and correct condom use.

Are there any experimental treatments?

Some researchers are studying new therapies for the treatment of herpes, including a topical foscarnet cream and a topical gel of the anti-CMV drug cidofovir. Another topical drug being studied for oral and genital herpes is trifluridine, a drug already approved for the treatment of herpes infection of the eye.

If you would like to find out more about these studies, there is an interactive web site run by ACRIA, the AIDS Community Research Initiative of America. Another useful service for finding clinical trials is AIDSinfo.nih.gov, a site run by the U.S. National Institutes of Health. They have "health information specialists" you can talk to at their toll-free number at 1-800-HIV-0440 (1-800-448-0440).

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