WHAT IS GENITAL HERPES?
Genital herpes is a common sexually transmitted infection (STI) caused by herpes simplex virus type 1 (HSV 1) or herpes simplex virus type 2 (HSV 2).
- In the US, about 1 out of every 6 people aged 14 to 49 years has genital herpes caused by HSV 2.
- HSV 2 is the most common cause of genital herpes because it usually affects an individual below the waist (e.g., the genital area, around the anus, the buttocks, and thighs).
- HSV 1 usually infects the mouth and lips, causing cold sores or fever blisters. However, as the prevalence of oral sex rises, HSV 1 is becoming a common cause of genital herpes, especially in college students.
- HSV 2 can also be transmitted to the mouth and lips through oral sex though it rarely recurs there.

Unlike many common viruses, the herpes virus causes a lifelong infection.
- Most of the time, the virus remains dormant or inactive. It avoids the immune system by hiding in the nerve roots near the spine.
- Under certain circumstances, the virus may become active again, multiply, and travel back to the surface of the skin, causing symptoms to recur.
- Possible triggers include stress, illness, sun exposure, friction in the genital area, and menstruation.

HOW IS HERPES TRANSMITTED?
HSV is spread by skin-to-skin contact, such as kissing, genital-to-genital contact, and oral sex.
- Avoid touching visible lesions because the fluid inside a herpes sore carries the virus itself. Wash your hands immediately if any sores are touched.
- The risk of spreading the infection is much greater when someone has symptoms of an active infection. However, HSV can be transmitted even when there are no symptoms. This can occur when the virus is released from the skin via asymptomatic viral shedding.

It is estimated that most genital HSV infections are transmitted by persons who are asymptomatic and do not know that they are infected. Therefore, condoms or latex barriers should be used with every sexual encounter.

WHAT ARE THE SYMPTOMS?
The symptoms of HSV vary greatly among individuals and among episodes. Most people with HSV have no or very mild symptoms. About 67% of people with HSV are unaware that they are infected.

Primary HSV Outbreaks
A primary outbreak refers to the first episode of HSV infection in a person who has never been exposed to HSV 1 or 2.
- Symptoms of the first outbreak appear an average of 4 days (range is 2-12 days) following HSV exposure and can last up to 2-4 weeks if left untreated.
- Symptoms typically begin as small red bumps that develop into blisters on or around the genitals or rectal area. After the blisters break open, painful shallow sores or ulcers develop, which then crust over and heal without scarring.

Nonprimary HSV Outbreaks
A nonprimary first episode refers to infection with HSV 2 in a patient who has been previously infected with HSV 1 (and vice versa).
- Symptoms tend to be milder than a primary infection because antibodies against one HSV type offer some protection against the other.
- One study has shown that prior HSV 1 infection leads to a 3-fold increase in asymptomatic HSV 2 infection.

Recurrent HSV Outbreaks
Recurrent HSV infections are common, especially during the first year after infection when viral activity is highest.
- Symptoms tend to be milder and shorter than the first outbreak. Flu-like symptoms usually do not occur.
- About half of patients with recurrent outbreaks will experience mild prodromal symptoms, which can precede the appearance of lesions by about 2 days. This is often described as a localized tingling/burning in the skin or shooting pain in the buttocks or legs. Some people only experience the prodromal symptoms without ever developing visible sores.

HOW OFTEN ARE RECURRENTS?
Recurrent genital infections are more common with HSV 2 than HSV 1. They are also more likely to occur if the initial episode was severe or prolonged.
- Up to 90% of people with a symptomatic genital HSV 2 infection will experience a recurrence within the first 12 months. These individuals can expect about 4-5 recurrent outbreaks in the first year.
- In contrast, the recurrence rate for genital HSV 1 is about one outbreak in the first year.
- The number and severity of recurrences gradually decreases over time.

HOW COMMON IS VIRAL SHEDDING?
Asymptomatic viral shedding occurs intermittently after the resolution of both initial and recurrent HSV infections.
- Asymptomatic shedding is more frequent in HSV 2 infections than in HSV 1.
- Asymptomatic shedding is highest during the first 12 months of infection. The rate of shedding then gradually decreases over time, especially after the 2 year mark.
- Most HSV 2 is transmitted during asymptomatic shedding, when no symptoms are present!

(OVER)
WHAT ARE POSSIBLE COMPLICATIONS?
Meningitis and urinary retention occur in a minority of patients with genital HSV infection.

The open sores caused by genital herpes can bleed easily and increase the risk of transmitting or acquiring HIV during sex if you or your partner has HIV. Therefore, anyone diagnosed with HSV should be tested for HIV and other sexually transmitted infections.

HOW DOES HERPES AFFECT PREGNANCY?
If you are pregnant, tell your doctor if you have ever been diagnosed with or exposed to genital herpes. Though transmission of HSV from an infected mother to her baby is rare, it can have serious and potentially fatal consequences for the baby. Transmission risk is highest in women experiencing their first genital HSV infection near the time of delivery. This is because the baby can be exposed to infected skin as it passes through the birth canal.

If a woman experiences herpes symptoms during her pregnancy, antiviral medication may be offered towards the end of pregnancy to reduce the risk of another outbreak and viral shedding at delivery. If herpes symptoms are present at the time of delivery, a caesarian section will be performed to protect the baby.

HOW IS HERPES DIAGNOSED?
Genital herpes can be diagnosed by a visual inspection of the skin and by taking a sample of the fluid from the sore(s) for culture.

- The culture will look for the presence of HSV 1 and 2 in the sample.
- Viral cultures are more likely to be positive with primary episodes compared to recurrent episodes.
- False negative results are less likely to occur if the sample is taken early during the outbreak. Therefore, it is best to see a healthcare provider as soon as symptoms begin.

Newer blood tests for HSV are now available.

- Unlike a viral culture, these tests do not detect the virus itself. Instead they look for the presence of antibodies against HSV 1 or HSV 2. It takes time for antibodies to develop. The ideal time for testing is 3-4 months after exposure.
- A positive HSV 2 antibody test indicates past or present genital HSV infection.
- However, a positive HSV 1 antibody test cannot differentiate between oral and genital herpes.
- Routine screening with these blood tests is not currently recommended because frequent testing in asymptomatic individuals can lead to relatively high rates of false positive HSV 2 results. Talk to your medical provider to see if testing would be appropriate in your case.

HOW IS HERPES TREATED?
Although there is no cure for herpes, early treatment with an antiviral medication can reduce the severity and shorten the duration of symptoms.

- **Antiviral Medications**
  
  Only oral antiviral medications (and not creams like Abreva) have been shown to be effective in the treatment of HSV. The three medications available are acyclovir (Zovirax), valacyclovir (Valtrex), and famciclovir (Famvir).

  - These medications appear to have similar efficacy for both treatment of symptoms and prevention of recurrences.
  - Side effects are rare.
  - The dose and length of treatment depends on whether the outbreak is a first or recurrent episode.
  - Acyclovir is the oldest and least expensive medication but requires more frequent dosing.

- **Treatment of Primary HSV**
  
  - For the first outbreak, antiviral medication is taken for 7-10 days and should be started within 72 hours of symptom onset.
  - If it has been more than 72 hours and new lesions are still developing, medication can still be beneficial.

- **Treatment of Recurrent HSV**
  
  Three options are available:

  - No treatment may be recommended if symptoms are mild or infrequent.
  - **Episodic therapy** involves taking an antiviral medication only when symptoms occur.
    - Therapy should be started at the first sign (ideally within the first 24 hours) of a recurrence, such as tingling, itching, or pain or appearance of the first blister.
    - Treatment decreases the duration of symptoms by about 2 days and also decreases the length of viral shedding.
  - **Suppressive therapy** requires taking an antiviral medication on a daily basis to prevent HSV reactivation and to decrease asymptomatic viral shedding.

    - Suppressive treatment should be considered in individuals with frequent recurrences (usually 6 or more a year), severe symptoms, or those with uninfected sexual partners.
    - Studies show that about half of patients on suppressive therapy remain symptom free. Other patients experience a 75% decrease in recurrences.
    - The drug of choice to prevent transmission to partners is valacyclovir. Long-term use for up to 6 years has been shown to be safe in one study. However, since the number of recurrences naturally decreases over time, experts recommend evaluating the need for ongoing treatment on an annual basis.

- **Self-Care Tips**

  - Avoid touching visible sores. If sores are touched, wash your hands with soap and water immediately.
  - Wear loose clothing and cotton underwear to decrease skin irritation and increase air circulation.
  - Sit in a few inches of warm water or use Burrow’s soaks or compresses to help relieve pain. Two 15-minute soaks twice a day is sufficient.
  - Weaken your urine concentration to decrease pain with urination. Drink plenty of fluids, and use a squat bottle filled with water to dilute the urine stream while voiding.

HOW IS HERPES PREVENTED?

The only foolproof way to avoid HSV is through abstinence. Reduce the risk of exposing yourself to HSV or of passing HSV to your partner by:

- Limiting your number of sexual partners.
- Abstaining from sexual contact when symptoms are present. This includes avoiding oral sex when you or your partner has cold sores.
- Using latex barriers (such as condoms, dental dams, and finger cots) at all times to limit HSV exposure.
- Informing your partner if you have HSV so that you can make educated choices together.
- Considering suppressive treatment with antiviral medications to decrease outbreaks and transmission to uninfected partners.
- Research is ongoing for a herpes vaccine.

RECOMMENDED RESOURCES:

- [www.ashastd.org](http://www.ashastd.org), [www.cdc.gov](http://www.cdc.gov)
- [www.westoverheights.com](http://www.westoverheights.com) (Herpes Handbook)
- CDC National STD Hotline: 1-800-232-4636
- National Herpes Hotline: 1-919-361-8488