WHAT IS HERPES?
Genital herpes is a sexually transmitted infection caused by herpes simplex virus type 1 (HSV 1) or herpes simplex virus type 2 (HSV 2).
- HSV 2 is the most common cause of genital herpes because it usually affects an individual below the waist (in and around the vaginal area, on the penis, around the anus, and on the buttocks or thighs).
- HSV 1 usually infects the mouth and lips, causing cold sores or fever blisters.
- However, through oral sex, HSV 2 can be transmitted to the mouth and lips, and HSV 1 can infect the genital area.
- Sores can also appear on other parts of the body where the virus has entered through broken skin.
This is more likely to occur during the first, or primary, episode of infection.

Unlike many common viruses, the herpes virus causes a lifelong infection.
- In between outbreaks, the virus retreats to the nerve roots near the spine, where it is able to avoid the immune system’s efforts to kill it.
- Most of the time, the virus remains dormant or inactive.
- Under certain circumstances, the virus becomes active again, multiplies, and travels 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.
- The sores caused by an HSV infection are contagious because they carry the viruses themselves.
- Therefore, it is important to avoid contact with visible sores and to wash your hands immediately if they are touched.
Unfortunately, HSV can also be transmitted even when there are no visible sores or discomfort. This is called asymptomatic viral shedding, where the virus is released from the skin without causing symptoms.
- Primary HSV 2 infections have been linked to more frequent and prolonged viral shedding compared to HSV 1 infections.
- Viral shedding also occurs with recurrent infections, but the duration is generally shorter.
- Therefore, it is important to always use latex barriers with sexual activity, even when no lesions are visible.
HSV may also make people more susceptible to infection with HIV.
- HSV can also make HIV positive individuals more infectious.
- Therefore, it is important for people with HSV to get tested for HIV and other STDs.

WHAT ARE THE SYMPTOMS?
The symptoms of HSV vary greatly among individuals and among episodes. One out of five Americans over the age of 12 has genital herpes; however, up to 90% experience no symptoms and are not aware that they are infected.

Primary HSV Outbreaks
The first episode can occur within 2-14 days of exposure to HSV and can last up to 2-4 weeks if left untreated.
- The earliest symptoms of an outbreak can include itching or burning in the genital or rectal area, vaginal discharge, and pain in the legs, buttocks, or back.
- This is followed in a few days by small painful red bumps that appear where the virus entered the body, such as the penis or vaginal area. These lesions can also be found inside the vagina or on the cervix of women and in the urinary tract of men and women.
- The bumps eventually develop into blisters that become shallow, open sores.
- Over a few days, the sores crust over and heal without scarring.
- The development of these lesions can be accompanied by flu-like symptoms, such as fever, headache, muscle aches, and swollen lymph nodes in the groin area.

For some people, the primary episode is very severe because the immune system is not yet familiar with the infection. As a result, the virus is able to replicate faster and in more locations than it could in later episodes.

For others, the first episode may be so mild that it goes completely unnoticed. Occasionally, it is the reactivation, or later episode, that is noticed weeks to years later. Some individuals never experience symptoms at all.

Recurrent HSV Outbreaks
Like primary outbreaks, symptoms of recurrent infection can vary greatly.
- Over time the number and severity of recurrences generally decrease.
- A recurrent outbreak usually lasts less than half the time of the primary episode.

Some people experience what is known as a prodromal period that precedes the appearance of lesions by about 2 days.
- During this period, itching, tingling, or a painful feeling in the area where the lesions will appear may be felt.
- In some cases, only the prodromal symptoms are experienced without the development of lesions.
- In other cases, very mildly tender lesions (not the classic blisters) can occur and heal in a few days. Isolated atypical symptoms (such as fissures or genital irritation) are more common in women.

HOW OFTEN ARE RECURRENTS?
Individuals with a significant primary episode of HSV 2 in the genital area can expect to experience, on average, 4-5 outbreaks a year.
- Approximately 80% of people with a primary episode of HSV 2 will experience at least one recurrence.
- Several episodes of asymptomatic viral shedding (recurrences that do not produce symptoms) are also expected to occur.
- The highest degree of viral activity usually occurs during the first year following diagnosis. The number of recurrences usually decreases over time.
- HSV 2 rarely recurs on the mouth and lips.
Compared to HSV 2, recurrences of genital infections with HSV 1 are less frequent.
- HSV 1 is the cause of up to 30% of primary outbreaks in the genital area.
- The recurrence rate is 50%, with an average of only one recurrent outbreak per year.
- Episodes of asymptomatic viral shedding are also fewer with HSV 1 than with HSV 2.

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

HOW DOES HERPES AFFECT PREGNANCY?
Fortunately, transmission of HSV from an infected mother to her baby is rare. However, a woman who experiences a primary episode of HSV near the time of delivery is at risk for passing the virus to her unborn child. This can result in premature delivery, as well as serious problems that can affect the eyes, skin, and brain of the newborn.

If a pregnant woman experiences a recurrent episode of HSV at the time of delivery, the physician will perform a cesarean section in order to protect the infant. However, without symptoms of an outbreak, a woman may deliver vaginally.

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.
- Test results are 80% accurate in primary episodes and 50% accurate in 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.

If no sores are visible, blood tests for HSV are available.
- Unlike a viral culture, these tests do not detect the virus itself. Instead they look for the presence of antibodies to HSV 1 or HSV 2.
- Because it takes time for the body to develop antibodies, it can take up to 12-16 weeks after the initial infection for blood tests to become positive.
- These tests only tell you if you have ever been infected with HSV 1 or HSV 2.
- Blood tests cannot predict if or when you will have another outbreak or if you are capable of shedding the virus (transmitting the virus without symptoms).
- Using blood tests frequently in asymptomatic individuals can lead to a relatively high rate of false positive results.
- Since these tests only provide limited information, routine screening is not recommended. Talk to your healthcare provider for more information.

HOW IS HERPES TREATED?
Unfortunately, there is no cure for herpes. However, 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. They decrease symptoms by stopping the virus from multiplying. Again, they cannot cure an infection.

Antiviral medications used for HSV treatment include acyclovir (Zovirax), valacyclovir (Valtrex), and famciclovir (Famvir).
- Antiviral medications should be started within 72 hours of symptom onset to decrease the duration and severity of symptoms. However, if it has been more than 72 hours and new lesions are still developing, treatment is also recommended.
- These medications appear to have similar efficacy for the treatment of symptoms and for the suppression of recurrent infection. Side effects are rare.
- Valacyclovir requires less frequent dosing.
- Acyclovir tends to be the least expensive.

Treatment of Recurrent Outbreaks
Two options are available:
Episodic therapy involves taking antiviral medications only when symptoms occur.
- Therapy should be started at the first sign of prodromal symptoms, such as tingling, itching, or pain that may occur before the appearance of skin lesions.
- Treatment usually shortens the duration of symptoms by about 2 days.

Suppressive therapy requires taking an antiviral medication on a daily basis to prevent HSV recurrences and to decrease asymptomatic viral shedding.
- Suppressive therapy can decrease the overall number of outbreaks by 75% or more.
- Studies show that about half of patients on suppressive therapy remain symptom free.
- Suppressive therapy can also decrease the risk of HSV transmission to uninfected partners.
- This type of treatment is most appropriate for individuals with frequent recurrences (usually 6 or more a year), severe symptoms, or those with uninfected sexual partners.

Treatment Tips
- Avoid touching visible sores. If you do touch them, wash your hands with soap and water right away.
- Wear loose-fitting cotton underclothes to decrease irritation to the skin.
- Sit in a few inches of cool water or use Burrow’s soaks or compresses to help relieve pain.
- Weaken your urine concentration to decrease discomfort with urination. Drink plenty of fluids, and use a squirt bottle filled with water to dilute the urine stream while voiding.

HOW IS HERPES PREVENTED?
There is no foolproof way to avoid transmission other than 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.
- 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 to decrease transmission to partners.
- A herpes vaccine is not yet available, but research is ongoing.

RECOMMENDED RESOURCES:
- CDC National STD Hotline: 1-800-232-4636
- National Herpes Hotline: 1-919-361-8488
(Monday-Friday, 8am - 8pm EST)