



Herpes in Pregnancy

What is herpes?

The Herpes Simplex Virus (HSV) is one of the most common human viruses. There are two types of HSV, Type 1 (HSV-1) and Type 2 (HSV-2).

HSV is a recurrent viral infection, which means that once acquired, a person will always carry the virus. Usually the virus will remain dormant, but occasionally the virus will reactivate and cause an outbreak. During this time, a person is contagious.

How is herpes transmitted?

HSV prefers mucous membranes, but it can affect any area of the body. Infections of the mouth, lip or face (e.g. cold sores) are usually, although not always, caused by Type 1. Genital infections are usually, although not always, caused by Type 2.

HSV can only be spread by direct contact with an infectious person. S/he may have visible sores, sores in difficult to see places (e.g. on her cervix), or not have sores but be "shedding" cells that contain the virus.

It is estimated that up to 30% of North Americans have genital herpes, and about 80% will suffer from a cold sore sometime in their life. As many as 80% of infected adults do not know they carry HSV, either because they never had overt symptoms or because they didn't recognize their symptoms.

How can herpes affect me?

True primary episode

The initial infection with HSV of any type is referred to as a *true* primary episode.

A primary outbreak is usually worse than a recurrent episode; people often report serious symptoms, such as pain, tingling, tenderness, and flu-like symptoms (such as fever, chills, headache, fatigue, muscle and joint aches). Depending on whether they now have oral or genital herpes, they will usually have swollen lymph glands around the neck or groin respectively.

Lesions usually appear on the infected area 2-14 days after being exposed to the virus. The lesions from a primary outbreak are generally larger, more numerous and last longer than those from a recurrent infection. The lesions may last for three weeks if no therapy is initiated.

There is an increased risk of transmission of the virus due to viral shedding for up to three months after the lesions from a primary infection have healed. Symptoms may or may not be present during this period.

Recommendations for Primary HSV Outbreaks in Pregnancy

Treatment at the end of the pregnancy with the anti-viral drug Acyclovir

If the outbreak is in the third trimester, it is recommended to birth by cesarean section due to high chance of viral shedding and therefore transmission to baby during vaginal birth

Non-primary, first episode

If someone with HSV-1 is then infected with HSV-2 (or vice versa), this referred to as a non-primary, first episode. This is not a *true* primary episode, because the HSV-1



antibodies moderate the effects of the HSV-2 infection (or vice versa). These episodes are usually worse than recurrent infections, but less than true primary infections.

Recurrent episodes

A recurrent episode is a repeat outbreak triggered by an event that causes the virus to reactivate. Most people will have at least a few. Usually recurrences get milder and less frequent with time.

Sometimes the onset of an outbreak is preceded by symptoms such as tingling, pain, itching, burning, fatigue, fever and/or tenderness. Usually people with a history of herpes become aware of what their initial or prodromal symptoms are, as well as what can trigger outbreaks.

Sometimes the virus is present without any noticeable symptoms or lesions. This is called viral shedding.

How can herpes affect my baby?

Neonatal herpes infection occurs in 1 of every 2000-10,000 births. The most common time of transmission is as the baby passes through the birth canal, but it can also happen in the uterus or after the birth.

Almost all neonatal herpes infections occur as a result of true primary episode genital infection during late pregnancy when birth occurs before the development of protective maternal antibodies. Having a primary outbreak poses a higher risk to the newborn than a recurrent outbreak (up to 50% vs. 5%).

Neonatal herpes infection can be a variety of symptoms, ranging from an isolated sore to brain infection and, in rare cases, death. Neonatal herpes can be diagnosed only if it is looked for. The problem with treatment is less the difficulty of finding a useful drug and more the delay that often occurs before the diagnosis is made. If the mother has herpes, the pediatrician needs to know in order to consider the possibility of neonatal herpes when seeing a sick baby.

Recommendations for Maternal Herpes Outbreak in Labour

If you are in labour and you have herpes lesions around your cervix, vagina, labia, vulva, or anywhere where the baby might come in contact during the birth, it is recommended that you have a cesarean to avoid transmitting the virus to your baby.

If the lesions are not in an area where the newborn can come in immediate contact, we can cover these lesions with sterile tape and plan for a vaginal birth.

What are my options for testing?

You may already know you have HSV because your infection symptoms were obvious.

It is possible have a blood test to see if you carry antibodies to HSV-1 and/or HSV-2, which would indicate a past or present infection. This test will not tell us where on your body you were infected.

If you have an outbreak, a swab can be taken directly from the sores and used to verify that it is HSV, as well as determine which type.

Recommendation for HSV testing in pregnancy

If you have any lesions that could be HSV, it is recommended to do both a swab and a blood test.

If you have no history of HSV infection but your partner does, you may be at risk of having a primary outbreak. In this case, it is recommended that you have a blood test to see if you have HSV antibodies, and then practice safe sex for the rest of the pregnancy.



What are my options for treatment?

Prevention of infection

The number one preventative against genital herpes is safe-sex, such as using condoms and other barrier methods.

If your partner has a history of genital herpes but you have never had an outbreak (confirmed by a blood test), it may be recommended that your partner take Acyclovir for the duration of the pregnancy to prevent transmission

If either you or your partner is experiencing any prodromal symptoms, it is best to refrain from any intimate contact, wash hands frequently and not share eating utensils, lip balms, etc.

It is also important not to participate in kissing or oral sex if you or your partner has a cold sore.

Prevention of recurrence

HSV is often triggered by stress – emotional stress, illness, inadequate diet, lack of sleep, hormone surges, allergies, etc. It can also be triggered by certain foods that are very acidic, spicy and/or high in a protein called arginine.

Pregnancy is a state of lowered immunity and high hormones, as well as having other unique stresses; therefore some women find they experience more frequent outbreaks during this time.

Prevention centres around stress reduction – exercise, massage, meditation, and diets low in fat, sugar, and processed foods also contribute to lowered stress levels. For those with severe or frequent outbreaks, diet modification to decrease high arginine foods, and increase high lysine foods can help, as well as supporting the immune system with supplements of vitamins, homeopathics, etc.

Diet & nutrition (high lysine)		
Dairy	Fish	
Soy	Meat	
Eggs	Potatoes	
Cultured foods (yogurt, sauerkraut)		
Whole, unprocessed foods		
Avoid (high arginine, acidic, processed)		
Rice	Raisins	Oats
Chocolate	Wheat	Gelatin
Nuts	Popcorn	Citrus
Coconut	Caffeine	Tomatoes
Seeds	Alcohol	Vinegar
Sugar	Salt	

Healing

There are numerous ways to deal with an HSV outbreak, depending on its severity and location.

Acyclovir is an antiviral drug that is commonly prescribed for women experiencing a primary HSV infection during pregnancy because of the increased risk of transmission to the fetus. This therapy is also an option for women experiencing frequent and/or severe recurrent outbreaks during pregnancy.

The current standard is to recommend Acyclovir to women with a history of genital herpes, to be taken from 36weeks till the birth. The aim is to minimize

Supplements	
Vit C	Vit B complex
Vit E	Acidophilus
Zinc	Lysine
Complementary medicines	
Homeopathics	
L-lysine cream	
Tea tree essential oil	



the chance of an outbreak or viral shedding at the time of birth when it is most dangerous to the baby.

It must be understood, however, that Acyclovir, while it is given to many pregnant women in North America every year and there have not been any confirmed risks to the baby, long-term studies continue to be needed.

Recommendation for HSV treatment in pregnancy

Acyclovir should be offered to anyone having a primary HSV outbreak

Acyclovir should also be offered to anyone who is experiencing or at high risk of experiencing severe and/or frequent recurrent HSV outbreaks

Acyclovir should be offered at 36 weeks of pregnancy to women with known genital herpes, in order to prevent an outbreak or viral shedding during birth

If there is any suspicion of neonatal infection, the baby should receive immediate treatment with intravenous Acyclovir