# Clinical Guideline: Guideline for the Management of Neonatal Herpes Simplex Virus Infection

**Authors: Dr Sakina Ali[1], Dr Rahul Roy[2], Dr Samir Dervisevic[3]**

1. Consultant Neonatologist, Luton & Dunstable University Hospital
2. Consultant Neonatologist, Norfolk & Norwich University Hospital
3. Consultant Virologist, Norfolk & Norwich University Hospital

**Updated by: Dr Sakina Ali**

**For use in:** EoE Neonatal Units
Guidance specific to the care of neonatal patients.

**Used by:** All neonatal/paediatric medical & nursing staff

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| Clinical Lead | **Sajeev Job** |

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**Audit Standards:**

1. **All neonates with a maternal history of genital herpes are risk assessed so that a neonatal plan can be made**
2. **Investigations and treatment are followed as per algorithm following risk assessment**
3. **All neonates with suspected symptomatic HSV infection start IV aciclovir promptly**

**KEY POINTS:**

1. **Most neonatal HSV infections are acquired at birth, generally from mothers with an unrecognised genital herpes infection acquired during pregnancy.**
2. **There is no clear pattern of signs and symptoms that identifies babies with neonatal HSV disease, meaning a high index of suspicion is required.**
3. **For all pregnant women with suspected first episode of HSV infection pregnancy and and no previous history or a discordant couple, consider HSV serology during the third trimester to guide management of the neonate. They should also have an anogenital ulcer panel of PCR tests performed where genital ulcers are present. Until results are received, an initial plan of delivery should assume that all first episode lesions are primary/ non-primary initial genital herpes.**
4. **The risk of perinatal transmission is increased by late pregnancy primary infection, rupture of membranes > 4 hours, invasive fetal monitoring and preterm delivery.**
5. **In view of high mortality and morbidity along with rising incidence of neonatal herpes infections, early administration of aciclovir and timely investigations may help to avert adverse outcome.**

## Introduction

*Herpes simplex* virus (HSV) is a member of the *Herpes viridae* family of viruses. It enters human host through inoculation of oral, genital or conjunctival mucosa or breaks in skin. It infects the sensory nerve endings and transports via retrograde axonal flow, to dorsal root ganglia where it remains for the life of the host, thus establishing 'latent' or silent infection and reactivating in the presence of humoral and cell-mediated immune responses. The latent virus is not susceptible to antiviral drugs.

Historically, HSV-2 was the cause of most genital herpes and was almost always sexually transmitted while HSV-1 was mainly transmitted during childhood via non-sexual contacts. However HSV type 1 is emerging as the principal cause of genital herpes in a few developed countries particularly United States and Canada.

The incubation period for infection of HSV-1 or HSV-2 ranges from 2 to 12 days. Most people infected with HSV are unaware they have contracted the virus and most new infections in pregnant women are asymptomatic. In the majority of cases of neonatal herpes disease, there is no antenatal history of herpes. In approximately one third of cases, there will be a pre-pregnancy history of herpes, if this is pursued.

The highest incidence of HSV infections is in women of reproductive age and hence the risk of maternal transmission of the virus to the foetus or neonate is a major health concern. Recent findings reveal that first-time infection of the mother is the most important factor for the transmission of genital herpes from mother to foetus or newborn. The pregnant woman, who acquires genital herpes as a primary infection in the latter half of pregnancy, rather than prior to pregnancy, is at greatest risk of transmitting these viruses to her newborn.

## Epidemiology

Neonatal (HSV) herpes disease is rare in the UK, but surveillance data suggests that the incidence is rising. Data from the British Paediatric Surveillance Unit (BPSU) estimates an incidence of 6.9/100,000 live births (2019-2022) compared to an incidence of 1.65/100,000 live births between 1986 and 1991. It can result in devastating outcomes, including mortality and significant morbidity. Early recognition and the early initiation of high-dose intravenous aciclovir therapy significantly improves survival and morbidity rates.

Neonatal infection can follow **primary** (first episode primary or first episode non primary) or recurrent maternal infection, or be acquired postnatally through direct contact with infected secretions.

**Transplacental** transmission is unusual (5%), and perinatal infection is usually acquired during **vaginal** delivery through an infected birth canal. It is estimated that up to 6 weeks may be required for a mum to develop and transfer immunity after a primary episode. If babies are born prematurely, then the transplacental transfer of immunity is reduced.

Risks of transmission from mother to baby is around **60% for first episode primary infection, 25% for first episode non primary infection (infection with one virus type, e.g. HSV-2, in the presence of antibodies to the other virus type e.g. HSV-1) and fall to 2% following recurrent infection**. Risk of transmission varies with serotype, mode of delivery, invasive obstetric procedures such as scalp electrodes, prolonged rupture of membranes (ROM), extent of viral shedding and prematurity.

## Clinical Presentation

**Congenital HSV infection** accounts for around 5% of all cases of neonatal herpes. In contrast to neonatal herpes infection, the signs of intrauterine HSV infection are present at delivery. The infected babies are usually profoundly affected with microcephaly, hydrocephalus, chorio-retinitis and skin lesions with ulceration and scarring.

**Postnatal acquisition of HSV** is almost always due to HSV-1 and is associated with contact with family members or hospital personnel who are shedding HSV-1.

**Perinatal acquisition** results from exposure to HSV during delivery and accounts for most neonatal infections.

The clinical presentation of perinatal and postnatal infections has been divided into **3 categories,** each of which is associated with different outcomes and clinical manifestations:

1. **SEM disease (skin, eyes and mucosa)**
2. **CNS disease**
3. **Disseminated disease**

## Categories of clinical presentation

| SEM disease – Cutaneous (32%) | CNS HSV infection (35%) | Disseminated HSV infection (33%) |
|---|---|---|
| Median presentation 8 days of life<br><br>Infection is confined to the skin, eyes and mucosa. **Disease elsewhere (disseminated and CNS) must be excluded.**<br><br>May be a single vesicle or group of vesicles, often in a linear distribution if affecting the limbs.<br>If the vesicle is eroded, a shallow ulcer with an erythematous base may be noted.<br>The eye or mouth initially may be asymptomatic but can develop conjunctival erythema, periorbital vesicles, excessive watering and localised ulcerative lesions of mouth, palate and tongue<br><br>**High risk of progression to CNS or disseminated disease if left untreated.** With high dose IV acyclovir, long term outcome is good.<br><br>May have recurrent outbreaks of cutaneous herpes during early childhood. | Median presentation 14 days of life<br><br>Encephalitis, mainly affecting temporal lobes and territory surrounding the middle cerebral artery.<br><br>Associated with lethargy, poor feeding and seizures; can manifest as a multifocal stroke; cutaneous lesions may or may not be present.<br><br>**Pleocytosis** is usually present; HSV DNA in the CSF is the most sensitive lab test for confirming the diagnosis. Samples of CSF obtained early in the illness may be falsely negative.<br><br>Prompt initiation of therapy with Aciclovir can improve outcome and survival.<br><br>Higher morbidity with CNS HSV-2 infection than HSV-1. **Mortality 50% in untreated and 15% in treated CNS HSV infection.**<br><br>Long term morbidities - developmental delay, epilepsy and blindness.<br><br>Relapses of CNS infection may occur, further increasing morbidity.<br><br>Long term suppressive therapy may have a role in reducing morbidity. | Median presentation 6 days of life<br><br>Mimics bacterial sepsis like illness involving multiple organs **(liver, lungs, adrenals, brain) and is indistinguishable from bacterial sepsis.**<br><br>**Signs and symptoms of**<br><br>• **Apnoea**<br>• **Temperature instability**<br>• **Irritability/ Seizures**<br>• **Lethargy**<br>• **Respiratory distress**<br>• **Abdominal distension**<br>• **Unexplained bleeding**<br><br>Vesicles maybe absent in up to 50% of cases.<br><br>Need to ensure blood and CSF sent for HSV PCR.<br><br>Clues in lab tests include **elevated liver transaminases (ALT), coagulopathy, neutropenia, thrombocytopenia**<br><br>If a baby continues to be unwell despite treatment with antibiotics in the first 2 weeks of life, consider herpes presenting as disseminated disease often as hepatitis.<br><br>**Mortality 85% in untreated and 66% in treated disseminated HSV infection.**<br><br>Long term suppressive therapy may have a role in reducing morbidity. |

## Differential diagnosis for Neonatal HSV

**Bacterial pathogens** responsible for neonatal sepsis, sometimes with skin lesions that may be mistaken for disseminated or CNS HSV infection, include Group B Streptococcus, Listeria monocytogenes and gram-negative bacilli.
**Cutaneous infections** resulting in vesicular lesions similar to neonatal HSV are bullous impetigo, Varicella zoster, enteroviruses and disseminated CMV infection.
**Non-infectious cutaneous disorders** that could be confused with neonatal HSV infection include erythema toxicum, neonatal pustular melanosis, acropustulosis and incontinentia pigmenti.

## Investigations

- Routine blood investigations – Blood culture, CRP, Full blood count, Liver function tests, split bilirubin, coagulation profile, Urea & electrolytes
    - **Note: Serum hepatic transaminase (ALT) should be measured to provide supporting evidence of disseminated HSV infection**
- CXR, if respiratory symptoms
- CSF cell count, glucose, protein and HSV DNA PCR for suspected CNS/ disseminated disease
- Consider neuroimaging with MRI/CT regardless of disease classification
- In SEM, seek ophthalmologic opinion early. In all other cases dilated ophthalmologic examination to assess chorioretinitis during the first week and at 6 months
- EEG if suspected to have CNS involvement, especially if seizures observed
    - CFM may be considered to assess seizures
    - EEG typically shows characteristic temperoparietal high-voltage low-frequency activity

| Type of investigation | Site | Specimen container |
|---|---|---|
| Herpes PCR | Skin vesicle base, de-roof and scrub the base | Discuss with local laboratory |
| Herpes PCR | Eyes, Mouth, NPA aspirates | Discuss with local laboratory |
| Herpes PCR | Blood | EDTA sample |
| Herpes PCR | CSF | Clear CSF bottle |

## Management

### Obstetric

Please refer to the joint British Association for Sexual Health and HIV and Royal College of Obstetricians and Gynaecologists national UK guideline for the Management of herpes simplex virus (HSV) in pregnancy and the neonate (2024 update)[1].

At the first antenatal booking appointment (and later if appropriate), all mothers and pregnant people should have a discussion and be given information on infections that can impact the baby in pregnancy or during birth including HSV. This should take place regardless of whether they are known to have HSV already or not. They should also be provided with written information on genital herpes in pregnancy (appendix 1).

Type-specific serologic tests may be useful for identifying mothers and pregnant people at risk for HSV infection acquisition due to having a clinically discordant sexual partner, to guide counselling to reduce acquisition risk. Serologic tests may also be useful for mothers and pregnant people with a first presentation of genital ulceration during pregnancy and no previous history with no confirmed diagnosis of genital herpes or another cause of the ulceration.

Where there is suspected genital herpes for the first time during pregnancy, consider referral to a sexual health physician for an anogenital ulcer panel of PCR tests to include type specific HSV, and if appropriate varicella zoster virus and Treponema pallidum for syphilis.

The use of antivirals is associated with a reduction in the duration and severity of symptoms and a decrease in the duration of viral shedding. It is unknown whether this reduces the risk of neonatal HSV infection. Where there is recurrent genital herpes or a first episode of genital herpes in the first or second trimester consider aciclovir 400mg TDS from 32/40 gestation, or from 22/40 gestation for those at high risk of a preterm delivery, and offer vaginal delivery. Where there is primary acquisition of genital herpes in the third trimester, consider aciclovir 400mg TDS until delivery. A planned LSCS is recommended especially if the episode is within 6 weeks of delivery.

### Neonatal

All pregnant women with suspected first HSV infection during the third trimester should have HSV serology during the third trimester to guide management of the neonate or where there is no known history of HSV in the birthing parent but there is a history in the birthing parent partner (discordant couple). **Until results are received, an initial plan of delivery should assume that all first episode lesions are primary/ non-primary initial genital herpes**

Neonatal risk stratification should be based on presence or absence of symptoms.

Any positive HSV test from a neonate must be managed as highest risk.

Neonates treated for suspected bacterial sepsis with antibiotics and who do not improve rapidly and have negative bacterial cultures at 36 hours incubation – consider neonatal HSV infection and treat pending laboratory confirmation. Particular alerting symptoms are a progressive febrile illness without a confirmed bacterial cause, which is unresponsive to antibiotics and associated with *one or more* of the following: skin vesicles, hepatomegaly, liver dysfunction/hepatitis, pneumonitis, thrombocytopenia, coagulopathy, or seizures. Other factors *recently* suggested to be of diagnostic importance in a neonate without a rash are maternal fever, respiratory distress requiring mechanical ventilation and CSF pleocytosis.

Neonates started on intravenous (IV) antibiotics for suspected sepsis that are found to have unexplained hepatitis - consider neonatal HSV infection and treat pending laboratory confirmation

A sexual history from the parents should be taken.

# Neonatal Risk Stratification, investigations and management

| Risk | Highest | High | Low | Lowest |
|---|---|---|---|---|
| **Delivery method** | All infants with symptoms consistent with HSV infection regardless of delivery method<br><br>Babies with any positive HSV test even if this is suspected to be detection of maternal HSV<br><br>Babies born by vaginal delivery in the presence of active **initial** herpes lesions<br><br>Birthing mother or parent systemically unwell with possible HSV<br><br>Birthing mother or parent presents post-partum with active primary herpes lesions within 4 weeks of delivery | Pregnant parent had an initial HSV infection within the previous 6 weeks and baby is asymptomatic and born by:<br>• Vaginal delivery or<br>• Caesarean section<br>regardless of duration of rupture of membranes | Asymptomatic babies born by any delivery method in the presence of active recurrent herpes lesions<br><br>Asymptomatic babies born at <37 weeks by any delivery method with no active lesions at delivery and a history of HSV infection more than 6 weeks previously | Asymptomatic babies born at >37 weeks by any delivery method with no active lesions in birthing woman or person at delivery AND a history of HSV infection more than 6 weeks previously |
| **Clinical assessment** | Urgently inform the neonatal team<br><br>Urgent assessment soon after birth, bearing in mind that the presentation of neonatal HSV may be non-specific and that skin lesions may not be present<br><br>Isolate infant from other babies and nurse using barrier methods to reduce the risk of postnatal transmission to other babies. Isolation should continue until neonatal herpes has been excluded or treatment completed in the event of neonatal HSV being confirmed.<br><br>Ophthalmology review. | Urgently inform the neonatal team<br><br>Urgent assessment soon after birth bearing in mind that the presentation of neonatal HSV may be non-specific and that skin lesions may not be present.<br>If evidence of neonatal HSV is found, investigate as per symptomatic infants.<br><br>Isolate infant from other babies and nurse using barrier methods to reduce the risk of postnatal transmission to other babies. Isolation should continue until neonatal herpes has been excluded or treatment completed in the event of neonatal HSV being confirmed. | Urgently inform the neonatal team<br><br>Urgent assessment soon after birth bearing in mind that the presentation of neonatal HSV may be non-specific and that skin lesions may not be present. If evidence of neonatal HSV is found, investigate as per symptomatic infants. | Inform the neonatal team<br><br>No investigations required<br><br>Normal postnatal care with a neonatal examination at 24 hours of age, after which the baby can be discharged from the hospital if well and feeding is established with safety netting as below |

| Risk | Highest | High | Low | Lowest |
|---|---|---|---|---|
| **Timing of investigations** | Urgent (note maternal or birth parent HSV may still be detected on surface swabs, and therefore should be repeated if taken <24 hours of life) | 24 hours post-delivery (note maternal or birth parent HSV may still be detected on surface swabs, and therefore should be repeated if taken <24 hours of life) | 24 hours post-delivery (note maternal or birth parent HSV may still be detected on surface swabs taken <24 hours of life | |
| **HSV PCR swab** | Any visible lesions<br>Throat swab<br>Nose swab<br>Conjunctival swabs<br>Rectal swab | Throat swab<br>Nose swab<br>Conjunctival swabs<br>Rectal swab | Throat swab<br>Nose swab<br>Conjunctival swabs<br>Rectal swab | |
| **Bloods** | □ HSV PCR (1mL EDTA) (note may take >24 hours for sufficient HSV replication to occur for a positive result to occur, and so a negative test does not exclude infection, may need to be repeated)<br>□ Full blood count<br>□ Liver function tests<br>□ Coagulation screen | □ HSV PCR (1mL EDTA)(note may take >24 hours for sufficient HSV replication tooccur for a positive result to occur, and so a negative test does not exclude infection, may need to be repeated)<br>□ Full blood count<br>□ Liver function tests<br>□ Coagulation screen | □ HSV PCR (1mL EDTA) (note may take >24 hours for sufficient HSV replication to occur for a positive result to occur, and so a negative test does not exclude infection, may need to be repeated) | |
| **Lumber puncture for CSF** | If clinically safe, undertake lumbar puncture for CSF and send for:<br>□ HSV PCR<br>□ Protein<br>□ Glucose<br>□ Cell count, microscopy and culture | If clinically safe, undertake lumbar puncture for CSF and send for:<br>□ HSV PCR<br>□ Protein<br>□ Glucose<br>□ Cell count, microscopy and culture | | |
| **Other tests** | As guided by the infant's clinical condition (eg. CXR) | | | |

| Risk | Highest | High | Low | Lowest |
|---|---|---|---|---|
| **Management** | Urgently start aciclovir 20mg/kg IV 8 hourly if normal renal function without waiting for results.<br><br>Duration of treatment:<br> All results are negative, and no other cause identified: 10 days<br> Skin, eye and mouth disease only: 14 days<br> CNS or disseminated disease, or no CNS obtainable but other positive HSV tests: 21 days. Send blood and CSF (if previously positive) on day 17-20 for HSV PCR to ensure negative prior to stopping treatment on day 21.<br>If CSF remains positive, continue IV aciclovir for a further week and repeat blood and CSF prior to stopping IV aciclovir.<br><br>If a further positive test is obtained, provide a further week of IV aciclovir.<br><br>A long line may be considered<br><br>Oral aciclovir 300mg/m$^2$ TDS prophylaxis for 6 months | Urgently start aciclovir 20mg/kg IV 8 hourly if normal renal function without waiting for results.<br><br>Duration of treatment:<br> All results are negative, and baby remains asymptomatic: 10 days<br> Positive skin swab from completely intact skin: 10 days.<br> Positive skin swabs from areas of trauma without vesicles should be treated as per highest risk.<br> If baby becomes symptomatic or if any test is positive manage as per highest risk<br><br>A long line may be considered | If any HSV test is positive, manage as per highest risk<br><br>May be discharged from hospital if well and feeding is established after bloods and swabs taken with safety netting as below<br><br>Ensure results are chased in a timely manner | |
| **Advice to parents and carers** | Practice good hand hygiene and take care to reduce risk of postnatal infection from maternal genital secretions or other sources including anyone with oral HSV-1.<br>Seek urgent medical help if they have concerns regarding their baby in the next 6 weeks[2], in particular:<br> Skin, eye and mucous membrane lesions<br> Lethargy/irritability<br> Poor feeding<br> Fever | | | |

## Pharmacological management

- Early therapy with IV aciclovir improves the prognosis **for all three presentations** of Neonatal HSV. Therefore, neonates should be started on IV aciclovir before laboratory confirmation of HSV, as soon as the infection is suspected clinically
- In cases where there is concern around possible aciclovir resistance or there is a shortage of IV aciclovir, IV foscarnet or cidofovir may be considered following discussion with a paediatric infectious diseases team.
- All neonates suspected of symptomatic HSV infection must be treated with intravenous aciclovir, not oral aciclovir. Levels of oral aciclovir are only high enough for suppressive therapy
- Transient neutropenia has been detected in about 20% of infants treated with high dose aciclovir, but it has not been reported to result in clinically significant adverse outcomes

## Long Term Suppressive Treatment

Recent studies have shown that long term suppressive therapy may improve neurological outcomes. Long term oral Aciclovir treatment (300mg/$m^2$ for six months) should be started in disseminated and CNS cases after completion of acute treatment and considered in infants with skin, eye and mouth disease to reduce risk of CNS recurrences. These babies will need regular FBC and LFTs (suggested times at discharge, 1 month, 3 months and 6 months).

## Counselling & Referral

Neonatal HSV infection may cause considerable stress within the family. This is because of concern over a critically ill infant, exacerbated by guilt over transmission of the virus and the demands of the long term care of an often severely impaired child. Because of this, expert education and counselling is required by making a referral to the sexual health team.

## Prevention

**Infants may acquire HSV infection post-natally from contact with active HSV lesions. Therefore the following is recommended:**

- Family members and healthcare workers should be aware of the risk of neonatal transmission from active HSV lesions, including oro-labial herpes. Avoid direct contact between active lesions and neonate. Topical Aciclovir should be used by staff members for cold sores.
- Mothers and pregnant people diagnosed with HSV at least 3 months previously are likely to have HSV antibodies which may persist in the neonate up to around 6 months of age, providing a significant degree of protection
- Avoid direct contact between lesions and the neonate, e.g. no kissing if labial/oral herpes, and covering of lesions if possible
- Use strict hand washing techniques
- Breastfeeding is only contraindicated in the event of a herpetic lesion on the breast. Breast feeding or expressing can continue from the unaffected breast.

## References

1. British Association for Sexual Health and HIV and Royal College of Obstetricians and Gynaecologists national UK guideline for the Management of herpes simplex virus (HSV) in pregnancy and the neonate (2024 update) https://www.bashh.org/resources/24/herpes_in_pregnancy_2024

2. NHS Neonatal herpes information for parents. Neonatal herpes (herpes in a baby) - NHS (www.nhs.uk) (accessed October 2024).

# Appendix 1

Genital herpes and pregnancy — patient information leaflet

What is genital herpes?

Genital herpes is a common sexually transmitted infection (STI) caused by the herpes simplex virus (HSV). There are two types, herpes simplex type 1 and herpes simplex type 2. Globally about 64 out of every 100 people have herpes simplex type 1, and 13 out of every 100 people have herpes simplex type 2. You can get these:

- On the genitals (vulva or penis) or around the bottom, known as genital herpes.
- On the face around the mouth and nose (herpes simplex type 1 only), known as cold sores.
- On the fingers, known as herpetic whitlow.

How do you get genital herpes?

Genital herpes is usually passed from one person to another during sex (including oral and anal sex), by skin-to-skin contact with the affected area. The virus enters the body through small cracks in the skin or through the thin skin of the mouth or genitals.
Once you have the virus it may reappear from time to time (a flare-up), but it stays inactive ('sleeping') for most of the time. You may only get symptoms of herpes once or you may have several flare-ups.

What are the symptoms of genital herpes?

Most people have no symptoms at all and many people are not aware they have herpes.
For some people, the symptoms can be very painful. You might feel unwell with flu like symptoms and develop painful sores or watery blisters. This usually only happens when you have symptoms for the first time. The symptoms can appear within a few days of getting herpes, or it can take weeks or years before you have any symptoms.
For people who have flare-ups, these are usually not as painful or severe as the first occurrence, and tend to become less painful over time. Some people may just get a few blisters or ulcers on their genitals, usually near the place of the first infection. An early-warning tingling feeling might happen before the flare-up.

What should I do if I think I have genital herpes?

If you are pregnant and think you might have genital herpes, it is important to contact your GP or a sexual health clinic as well as telling your midwife. You should have a check-up that will include testing, treatment and advice as well as testing for other sexual transmitted infections. This is important for your health and the health of your baby. Herpes is very common, so you don't need to be embarrassed telling your health team about it. They will protect your confidentiality and support you.

What if I had genital herpes before pregnancy?

After you develop herpes, your immune system makes antibodies (a protein) that help fight the virus. When you fall pregnant, these antibodies cross the placenta and go into your baby, and will provide protection to your baby. If you get genital herpes before you become pregnant, your immune system will provide protection to your baby in pregnancy. Flare-ups of genital herpes during pregnancy do not affect your baby.
To reduce the change of you having a flare up of genital herpes around the time of delivery you will be offered antiviral tablets from 32 weeks of pregnancy until your baby is born. If you are at high risk of preterm labour, these tablets will be offered to you from 22 weeks of pregnancy until your baby is born.
Even if you have a flare-up when you go into labour and give birth, the risk to your baby is extremely low. Most women who have recurrent genital herpes will be able to have a vaginal birth. Your obstetrician (pregnancy doctor) or midwife will talk to you about this. If you have a flare up when you give birth your baby will need to have some tests done. If you are not having a flare up, then you will be able to take your baby home once they are feeding.
What if I get genital herpes for the first time in pregnancy?

What should I do?

It is important that you go to a sexual health clinic or contact your GP who will tell you how to get to a sexual health clinic. You should also tell your midwife who will ask an obstetrician to see you.
You will be offered testing, treatment and support to reduce the risk of your baby becoming unwell. Testing is done with swabs and sometime blood tests, if needed. You will be given antiviral tablets which will help the symptoms get better faster. These tablets are safe to take in pregnancy and while breastfeeding. Later in pregnancy you will be given the tablets again to reduce the chance of you having blisters at the time of delivery of your baby and to reduce the risk of passing the virus to your baby during birth.

What will this mean for me and my baby?

After you develop herpes, your immune system makes antibodies that fight the virus. These cross the placenta and go into your baby, and will help provide protection to your baby in case your baby comes into contact with the herpes virus during birth or after delivery.
If you have a first infection of herpes before the third trimester of your pregnancy (before 28 weeks of pregnancy), your immune system will have time to make antibodies that will protect your baby, and you can have a vaginal birth.
It is different if you get herpes in the third trimester (after 28 week of pregnancy), of if you go into labour less than 6 weeks after you first have symptoms of genital herpes. In this case, your immune system might not have had time to make antibodies. If this happens, there is a higher chance of passing herpes to your baby if you have a vaginal birth, and your obstetrician may recommend that you have a Caesarean section. If your baby is born within 6 weeks of you catching herpes, your baby will need to have some tests done and be given treatment to reduce the risk of them becoming unwell.
When a baby develops a herpes infection at birth, it is known as neonatal herpes. This is a very rare but serious condition that affects 7 out of every 100 000 newborn babies. Prompt treatment of the baby improves the outcome for neonatal herpes and better still is the antenatal treatment of the mother or pregnant parent to prevent any transmission. Most babies with neonatal herpes are born to mothers or birthing parents who don't know that they carry herpes so it has not been possible to do anything to reduce the risk to the baby.

How can I reduce the risk to my unborn baby?

The most important thing you can do is to tell your midwife or obstetrician that you have active genital herpes or have previously been diagnosed with genital herpes, so they can make a treatment plan for you.
If your first symptoms of herpes are before 28 weeks of pregnancy, you will be offered antiviral tablets when you have symptoms, and again from 32 weeks of pregnancy until your baby is born. If you are at high risk of preterm labour (early labour before 37 weeks of pregnancy), you will be offered antiviral tablets when you have symptoms, and again from 22 weeks of pregnancy until your baby is born. You should be able to have a vaginal birth unless there are other pregnancy related reasons preventing this, as the risk to your baby is very low.
If your first have symptoms of herpes after 28 weeks of pregnancy, you will be offered antiviral tablets to take until your baby is born. You may be offered a Caesarean section to reduce the chance of your baby getting neonatal herpes and your baby will need to have some tests and treatment after birth to reduce the risk further.

How soon after birth can I take my baby home?

When you can take you baby home after birth will depend on whether you had any active herpes lesions at delivery and the timing of your first herpes infection. Unless your baby has needed to be given antiviral treatment or is unwell, you will be able to take your baby home once they are feeding and any extra tests that are needed have been done.

What should I do if my baby is ill after birth?

If your baby is ill in the first 6 weeks after birth, you should seek urgent medical help. You can call your GP for an urgent same-day appointment, ring 111, or take your baby to A&E (a hospital emergency department). Tell the doctor or nurse that your baby may have been exposed to the herpes simplex virus.
Things to look out for are:

- Baby has blisters or ulcers on their skin, eyes or mouth.
- Baby is floppy
- Baby is very sleepy or irritable and won't settle
- Baby is not feeding well.
- Baby has a fever or high temperature or feels cold to touch
- Baby has difficulty breathing
- Baby has mottled or blotchy skin
- Baby has a high-pitched cry.

How can I reduce the risk to my baby after birth?

Around 1 in 10 babies with neonatal herpes are exposed to the virus after they are born, rather than during birth, usually from someone with a cold sore. The risk to the baby is highest in the first 4-6 weeks of life. However, if you as the mother or birthing parent have already had cold sores or genital herpes simplex type 1 at least 3 months before birth, then your immune system will likely have shared antibody protection with your baby that lasts 3 to 6 months after birth. There are also a few simple things you can do to reduce the

risk of your baby catching herpes for the first 6 weeks after birth. You can also ask family and friends to do the same things

- Everyone should wash their hands before touching the baby
- Only parents or carers should be allowed to kiss the baby, and it is best to only kiss on the top of the baby's head and avoid kissing near the baby's mouth, nose and eyes • People with a cold sore at the time should never kiss the baby
- People who have had cold sores in the past should avoid kissing the baby
- People with a herpes ulcer or blister anywhere on their body should avoid touching the baby unless they are parents or carers. In this case, they should cover the ulcer or blister, and wash their hands carefully before they touch the baby.

What do I do if I get genital herpes after birth?

If you get an outbreak of genital herpes in the 4 weeks after birth please contact your midwife or GP as soon as possible so they can check your baby. Although the blisters have appeared just after the birth, there is a small chance that the virus may have been there at birth. In this scenario we ask you to keep an eye on your baby and follow the advice above on "what to do if my baby is ill after birth"

Can I breastfeed/chestfeed my baby?

Breastfeeding is a great way to support the health of your baby and antiviral tablets are safe to take whilst breastfeeding if they are needed.

If you get herpes ulcers or blisters on your breast/chest (this is very rare), it is important to see your GP, midwife, or a sexual health clinic that day or as soon as possible for advice.

If they think the blisters are herpes then they will need to assess your baby and risk factors and you will be advised not to breastfeed/chestfeed from that breast. You can express the milk from that side and throw it away.

If my partner has genital herpes or cold sores but I don't, what can I do to reduce the risk to my baby?

Your partner should make an appointment with their GP or at a sexual health clinic to discuss options of how to reduce the risk of passing herpes to you. You should also see your GP or a sexual health clinic who can discuss with you how to reduce the risk of herpes being passed to you from your partner (particularly important after 28 weeks of pregnancy). You might also be offered a blood test to see if you have already have herpes but are not having any symptoms. The blood test is unable to tell which area of the body is carrying the herpes virus.

You can reduce the risk of getting herpes from your partner by:

- Avoiding sex with your partner when they have blisters or ulcers until everything has healed.
    - This includes oral sex if your partner has cold sores and you don't.
- Avoiding sex with your partner if they feel that a flare-up is coming on (there is often a tingling feeling first), until the flare-up has passed or everything is healed.
- Using condoms.
- Your partner could take daily antiviral tablets (these can be given to your partner by a sexual health clinic or by their GP).

After your baby is born, make sure that you and your partner wash your hands after touching any sores.

More information on herpes:

There is more information about genital herpes in the BASHH Patient Leaflet on Herpes (available at bashh.org).

Other organisations who provide information include:

- The Herpes Viruses Association: www.herpes.org.uk
- The Lullaby Trust: www.lullabytrust.org.uk

This leaflet was produced by the Clinical Effectiveness Group of the British Association for Sexual Health and HIV (BASHH). The information in the leaflet is based on the 'British Association of Sexual Health and HIV (BASHH) UK Guidelines on the Management of Herpes in Pregnancy' published by BASHH in 2024.

For more information regarding BASHH: https://www.bashh.org/resources/guidelines

The leaflet was developed following The Information Standard principles developed by NHS England. For more information: www.england.nhs.uk/tis/the-info-standard/

If you would like to comment on this leaflet, e-mail us at: admin@bashh.org.uk. Please type 'Herpes in Pregnancy PIL' in the subject box.

# Exceptional Circumstances Form

Form to be completed in the **exceptional** circumstances that the Trust is not able to follow ODN approved guidelines.

| Details of person completing the form: | |
|---|---|
| Title: | Organisation: |
| First name: | Email contact address: |
| Surname: | Telephone contact number: |
| Title of document to be excepted from: | |
| Rationale why Trust is unable to adhere to the document: | |
| Signature of speciality Clinical Lead:<br><br>Date: | Signature of Trust Nursing / Medical Director:<br><br>Date: |
| Hard Copy Received by ODN (date and sign): | Date acknowledgement receipt sent out: |

Please email form to: mandybaker6@nhs.net requesting receipt.

Send hard signed copy to: Mandy Baker
EOE ODN Executive Administrator
Box 93
Cambridge University Hospital
Hills Road
Cambridge CB2 0QQ