

Viral organisms that may infect the fetus or infant

Viruses that cause infection in the fetus or infant include, but are not limited to, **herpes simplex virus (HSV)**, **human immunodeficiency virus (HIV)**, **hepatitis**, **cytomegalovirus (CMV)**, **parvovirus**, and **rubella**.^{9,10}

It is important to carefully evaluate the maternal history for viral exposure during any of the trimesters. Infection during the first trimester may result in severe consequences for both fetal growth and organ development. The fetus with viral exposure in early gestation is at greatly increased risk for intrauterine growth restriction (small for gestational age) and visual, hearing, brain, cardiac and/or liver damage. Late pregnancy, intrapartum, or post-partum viral exposure may result from maternal or family illness that presents with diarrhea and/or vomiting. It is important when taking the maternal medical history to ask about early gestation viral exposure, as well as recent viral illness in siblings, other family members and the mother.¹⁷

Herpes simplex virus (HSV) type 1 or 2 may be present in the maternal genital tract without the mother even knowing she has this infection.¹⁰ Therefore, when taking a maternal history, this fact should serve as a reminder that HSV infection may still be possible even if the mother denies symptoms present or past for HSV.^{17,18} It is also very important to interview the mother about her sexual partner(s) history of infection, since the mother may not think to introduce this information if not specifically asked. **Severe neonatal infection** is much more likely if the mother contracted a primary (first episode) HSV infection in late gestation than if she had a HSV infection before or early in pregnancy, or with recurrent infection.¹⁰

- Infants exposed to HSV during delivery may not have symptoms for 3 to 7 days and even as late as 10 to 14 days.¹⁰
- Signs may include skin vesicles (which are not always present), poor feeding, lethargy, fever, shock, and if the infection is in the central nervous system, seizures.¹⁷
- If the history and/or presentation suggest HSV infection, treatment with acyclovir should be strongly considered while awaiting culture or Polymerase Chain Reaction (PCR) testing. Acyclovir can be stopped if the cultures or tests are negative. If the mother has active genital and/or buttock herpes lesions, acyclovir should be administered to the infant.¹⁷



"Blueberry muffin" lesions secondary to extramedullary hematopoiesis in an infant with congenital CMV. These lesions may also be observed with congenital rubella syndrome and other viral infections.

Photo courtesy Dr. David A. Clark



Herpes vesicles on scalp

Photo courtesy Dr. David A. Clark



Herpes vesicles in mouth

Photo courtesy Dr. David A. Clark