**What is hepatitis B?**

Hepatitis B is a viral infection that affects more than 1 million people in the United States and more than 240 million people worldwide. In the United States, approximately 1% of pregnancies are affected by hepatitis B virus (HBV) infection.

**Am I at risk for hepatitis B infection? Should I be vaccinated in pregnancy?**

In the United States, hepatitis B is usually acquired through sex and intravenous drug abuse. However, in other parts of the world, transmission of HBV from an infected mother to her baby during pregnancy, called perinatal transmission, is the most common reason for infection. Many women, because of their age and job, have been vaccinated against hepatitis B and are not at risk for infection. The hepatitis B vaccine is safe and effective in pregnancy, and recommended at any time during your pregnancy if you are at risk for infection.

**How will my provider determine if I have hepatitis B in pregnancy?**

Some people with HBV have symptoms, but most do not. Because there is effective treatment available to prevent transmission of HBV to your baby at delivery, the American College of Obstetricians and Gynecologists and the United States Preventative Services Task Force recommend that all pregnant women be tested for HBV at their first prenatal visit. If your preliminary test is positive, your doctor will order additional tests to determine if this is an acute or chronic infection, and can assess how much of the HBV is present in your blood. An acute infection is when a person is initially infected with HBV, and most people clear the infection without long-term consequence. However, some people will not clear HBV and will become chronic carriers of the virus capable of passing it to others.

**What are the risks to me and the baby if I am diagnosed with hepatitis B?**

If you are chronically or acutely infected with HBV, the risk of transmitting the virus to your baby may be as high as 90% if no preventative treatment is administered to the baby. However, with the use of preventative treatment (see below), the risk of the baby being infected can be as low as 5%. If your baby is infected, the consequences can be severe. More than 90% of adults who are infected with HBV are able to clear the virus and recover without any complications. However, more than 90% of babies who become infected with HBV will develop a chronic infection. Chronic HBV infection is a leading risk factor worldwide for liver disease and liver cancer. If you have significant liver disease or liver failure (for example, cirrhosis), then chronic HBV can increase your risk of pregnancy complications such as poor growth in the baby, high blood pressure, or early delivery.

**How is transmission of hepatitis B virus from mother to baby typically prevented?**

Transmission of HBV during pregnancy most commonly occurs during delivery when the baby comes into contact with the mother’s infected blood and secretions. Cesarean delivery does not reduce risk for HBV transmission to your baby, therefore, vaginal delivery is recommended unless there are other reasons to consider cesarean delivery. The main approach used to prevent your baby from becoming infected with HBV is a combination of passive and active immunophylaxis [therapy], which will be given to your baby at the time of delivery. Immunophylaxis means prevention of disease by administration of either proteins called immunoglobulins that prevent infection, or vaccines, substances that stimulate your body to make immunoglobulins [antibodies] to prevent infection. With-
in 12 hours of delivery, your baby will receive the HBV immunoglobulin (HBIG), which will help with initial protection against HBV infection (passive immunoprophylaxis). Your baby will also receive the HBV vaccination, which will provide long-term protection (active immunoprophylaxis). Your baby should receive the complete 3-dose HBV vaccine series to gain maximal protection. The combination of these treatments has been shown to reduce the risk of HBV transmission to the baby by 85% to 95%. If your baby is receiving these recommended treatments, it is ok for you to breastfeed with no additional risk of transmission to your baby.

Q | If I need an amniocentesis or another invasive procedure, can its be performed if I have chronic hepatitis B?
Most studies do not suggest an increased risk of transmission of HBV to your baby from amniocentesis or other invasive procedures unless there is a large amount of virus in your blood (high viral load).

Q | What factors determine if immunoprophylaxis to prevent HBV transmission will work in my pregnancy?
Although passive and active immunoprophylaxis dramatically lowers the risk of HBV transmission to your baby, 5% to 15% of babies may become infected despite appropriate treatment. The level of HBV-DNA in your blood, also called the viral load, helps predict the risk for transmission to the baby. Maternal HBV-DNA levels greater than 1 million copies/mL at delivery are associated with an increased risk for perinatal transmission and immunoprophylaxis failure.

Q | Are viral load testing and antiviral therapy recommended to reduce transmission of HBV in pregnancy?
No guidelines currently exist in the United States for use of antiviral therapy against HBV during pregnancy. In Europe, the European Association for the Study of the Liver (EASL; 2012) and the United Kingdom’s National Institute for Health and Care Excellence (2013) have guidelines advocating that physicians discuss antiviral therapy with HBV-infected pregnant women who have viral loads greater than 1 million copies/mL, and offer them treatment in the third trimester. As more experience is gained and studies published, it is likely that similar treatment protocols will emerge in the United States. Based on data from other countries, some centers in the United States are offering antiviral medications for the treatment of HBV in pregnancy, with the understanding that this is still somewhat experimental. Regardless of whether antiviral agents are used in pregnancy, neonatal immunoprophylaxis (administration of both HBV vaccine and HBIG within 12–24 hours of birth) is recommended for all women with HBV infection to prevent neonatal HBV infection.

Q | What other issues do I need to consider in my pregnancy if I am diagnosed as a chronic HBV carrier?
If you are diagnosed with chronic HBV infection in pregnancy, your family and household members should be aware of the risks of transmission and exposure to HBV through contact with blood and body secretions. HBV can be transmitted through sharing of household items such as eating utensils and toothbrushes, as well as through personal contact such as kissing or childcare. Your family and household members should be evaluated to see if they are also infected, and if they are not infected, they should receive HBV vaccination. Anyone identified with HBV infection should also be checked for hepatitis A virus and offered vaccination before or after pregnancy, if not already immune. This is recommended because HBV-infected individuals are at increased risk for serious liver illness if they become infected with another hepatitis virus. Pregnant woman with HBV should avoid medications that affect the liver, including acetaminophen (Tylenol). All individuals with HBV infection should avoid the use of alcohol.

If you have chronic HBV infection, you should have your liver function and levels of HBV-DNA and viral load checked. Even if your viral load is low and antiviral therapy during pregnancy is not recommended, your baby should still receive standard neonatal immunoprophylaxis with HBIG and HBV vaccine within the first 12 hours following delivery. Your provider may refer you to a maternal-fetal medicine (high-risk pregnancy) specialist and/or hepatology (liver) specialist to help care for you during and after the pregnancy.