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Fifth Disease (parvovirus B19) and Pregnancy

This sheet talks about the risks that exposure to fifth disease can have during pregnancy. With each pregnancy, all women have a 3% to 5% chance of having a baby with a birth defect. This information should not take the place of medical care and advice from your health care provider.

What is fifth disease?

Fifth disease, also called erythema infectiosum, is a viral illness caused by human parvovirus B19. It occurs most commonly in children ages 4 to 14. The infection often starts with mild fever, sore throat, and flu-like symptoms. Children also develop a bright red rash on the face that looks like “slapped cheeks.” Along with the facial rash, a lacy or bumpy rash may appear on the body, arms, and legs. Joint aches occur more commonly in adults than children. Rash and joint symptoms may develop several weeks after infection. A pregnant woman who develops symptoms of fifth disease may or may not develop facial or body rash. About 20 to 30 percent of adults infected with parvovirus B19 have no symptoms.

Is fifth disease contagious?

Yes, fifth disease is contagious. The virus is spread through contact with secretions of the nose and lungs, and through contact with blood. The incubation period (the time between infection and the development of the illness) is between 4 and 21 days.

Individuals with fifth disease are most infectious before the onset of symptoms and are unlikely to be contagious after the development of the rash and other symptoms. This makes efforts to prevent exposure very difficult.

I don't remember ever having fifth disease. Can I develop the infection?

Because fifth disease is a mild illness, many adults may not be aware that they have had it, especially since many people do not have symptoms. About 50 percent of adults have had the infection, have antibodies to the virus, and are immune. These antibodies prevent infection for you and your unborn baby. A blood test can be done to

look for the antibodies and tell if you have had a recent infection or are not immune.

I don't think I've had fifth disease and I am an elementary school teacher. Could I be exposed at work?

Many women in occupations such as daycare supervision and teaching have antibodies to parvovirus B19 and thus are not at risk for infection. You can ask your doctor to do a blood test for antibodies to parvovirus B19 to see if you are immune to fifth disease. If you are not immune to the disease, there is a 20 to 30 percent risk that you will be infected following exposure in a school or daycare setting. You can lessen your risk of infection by practicing good hygiene such as washing your hands regularly and avoiding sharing food or drinks.

My children had fifth disease about 3 weeks ago and now my joints are sore. I am pregnant. Could I have fifth disease?

Yes, it is possible that you have fifth disease. However, there are many other causes of joint pain. Your doctor may consider ordering a blood test to check for antibodies to fifth disease. If you are not immune, you have a 50 percent risk of becoming infected from contact with an infected family member.

I am 14 weeks pregnant and testing showed that I recently had fifth disease. Is my pregnancy at increased risk of problems because of the infection?

Many studies show that the majority of women who become infected with fifth disease during pregnancy deliver healthy babies. In a small number of cases, fetal loss (miscarriage or stillbirth) can occur. Infection in the first 20 weeks of pregnancy has about a 10% risk of fetal loss.

Infection after 20 weeks gestation has less of a risk for fetal loss (about 1%).

Fifth disease does not cause birth defects. However, if a woman is infected during pregnancy, it is possible for the infection to pass to the baby. Fetal infection with fifth disease can lead to inflammation of the heart (myocarditis) and can damage the bone marrow so that red blood cells cannot be made. This can lead to anemia, a condition in which the body does not have enough healthy red blood cells. If the heart damage or anemia is severe, hydrops (excess fluid in fetal tissues) can occur and may lead to fetal death. Sometimes, the hydrops disappears and most of these babies will not have problems at birth. Rarely, a baby is born unable to make red blood cells and will need transfusions.

I had fifth disease when I was 10 weeks pregnant. Are there any tests I can have done to see if my baby is OK?

An ultrasound (sound wave pictures of the baby) can tell whether the baby has hydrops and can look at the amount of amniotic fluid around the baby. A series of ultrasounds for several months after the time of infection may be helpful. Your doctor may want to do some other tests to detect whether the baby has anemia, such as using ultrasound to measure blood flow through a vessel in the baby's brain.

Are there any treatments available?

At this time there are no vaccines or medications available to prevent or treat maternal fifth disease.

Frequent ultrasounds to detect hydrops are recommended when a mother tests positive for fifth disease. When a fetus develops severe anemia and hydrops in the second and third trimester, fetal blood transfusions have successfully been done. Developmental delay has been observed in a small number of children who underwent blood transfusion before birth. However, most children who received blood transfusions have had normal long-term development.

If you are in your third trimester there may be consideration of an early delivery if your baby is showing signs of hydrops.

My dog has a parvovirus infection. Can I catch it from him?

No. There are many types of parvoviruses. Each type is species-specific, meaning that dog (canine) parvoviruses infect only dogs, cat (feline)

parvoviruses infect only cats, and human parvoviruses infect only humans.

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If you have questions about the information on this fact sheet or other exposures during pregnancy, call OTIS at 1-866-626-6847.