

Parvovirus B19 Infection (Slapped Cheek Disease) in Pregnancy

What is parvovirus B19 infection and why is it important?

Parvovirus B19 infection is also known as slapped cheek disease, fifth disease or erythema infectiosum.

It is a viral infection that mainly affects school-age children, therefore mothers with young children are particularly at risk of exposure to the infection as well as women working with children (e.g. teachers, childcare workers).

Every 3-4 years there is a seasonal outbreak in the UK peaking during the late winter and early spring months.

Parvovirus B19 usually causes a mild and self-limiting disease in healthy individuals that is followed by lifelong immunity.

Over a half (50-70%) of pregnant women will be immune to parvovirus infection already.

However, if contracted during the pregnancy, it can have a significant impact on the baby.

There is no vaccine or preventative treatment available therefore pregnant women are not routinely screened for past parvovirus infection.

How does the Parvovirus B19 infection spread?

Infection is usually passed by airborne respiratory droplets (coughing and sneezing) from person to person directly or by touching contaminated objects and then touching your face.

The infection usually occurs 14-21 days after the exposure to the virus.

How can the infection be prevented?

To reduce the risk of parvovirus B19 infection you should avoid close contact with people who are unwell, wash your hands regularly and avoid touching your face with unwashed hands.

What are the symptoms of Parvovirus B19 infection?

Symptoms may include feeling unwell, mild fever, headache, runny nose, sore throat, nausea and abdominal pain.

In children 'slapped cheek' rash that the disease was named after appears about 7-10 days later as red areas on both cheeks followed by body rash a few days later. The rash is not painful or itchy. One day after the rash appears the child is not infectious anymore.

In adults the rash is less common, and majority will have mild symptoms (if any). Apart from flu-like symptoms described above, commonly reported symptom in adults is joint pain.

What if I have suspected infection or was in contact with a person infected with Parvovirus B19?

Significant contact with an infected person is defined as being in the same room for 15 minutes or more or having face-to-face contact with the person for any length of time.

If you think you've been in significant contact with a person with suspected or confirmed Parvovirus B19 infection, contact your midwife or the hospital without delay.

Your midwife will arrange testing of your blood sample that was taken at the time of your booking appointment to determine if you are already immune to Parvovirus B19.

This will help us determine if any further steps are required. If you are immune, no further follow-up is needed as you have antibodies that protect you from the infection. If you are not immune, you are at risk of contracting the infection and we will arrange another blood test screen for infection.

If we do not have your booking blood sample, we will arrange a blood test urgently to find out if you are immune or if you currently have parvovirus infection.

The test results should be available within 3 working days, once requested. You should be contacted with the result as soon as they are received by the hospital. If you do not hear back, it is strongly advised that you contact your midwife or Liverpool Women's Hospital Antenatal Clinic.

Please avoid contact with other pregnant women and other people at risk of complications (immunocompromised – e.g. receiving chemotherapy, have organ transplant, HIV positive) until you are found to be immune to infection or infection is excluded.

What if I have confirmed Parvovirus B19 infection in pregnancy?

If the blood tests show that you have the infection you will be referred to our Fetal Medicine Unit where your baby will be closely monitored by ultrasound scans.

The monitoring usually starts within 4 weeks of maternal infection and the purpose is to look for any signs of anaemia in the baby (see below).

Please avoid contact with other pregnant women and other people at risk of complications until you are no longer infectious.

Make sure you get enough rest, stay hydrated and take paracetamol for symptom relief (fever, headache, painful joints).

If you have concerns with fetal movements contact Maternity Assessment Unit (Tel. 0151 702 4413) for advice as soon as possible.

What effects does it have on the pregnancy?

It is unusual (occurring in less than 5% of pregnancies) to have a parvovirus B19 infection for the first time in pregnancy.

Complications for the baby usually occur 3-5 weeks after the start of mother's infection.

In majority of women (70%) the infection will not be transferred through the placenta to the baby and there will be no complications.

Parvovirus B19 is not known to cause birth defects. However, if the infection is passed from the mother to the baby (30% cases of parvovirus in pregnancy) it may cause the baby to become anaemic. 3-11% of these babies can develop hydrops (excess water build up in body cavities).

Because of severe anaemia and/or hydrops, parvovirus infection can cause miscarriage or stillbirth. If infection happens before 20 weeks of gestation, the risk of pregnancy loss is about 7%. The risk of complications is very low if infection is acquired after 20 weeks (<1%), especially in the third trimester.

Intrauterine blood transfusion is a treatment option for severe anaemia that can be done from around 16 weeks, and it involves giving blood to the baby before birth. Majority of the babies will not need treatment and anaemia will resolve spontaneously. If the treatment is required, all the details will be discussed with you in Fetal Medicine Unit.

References:

<https://www.gov.uk/guidance/parvovirus-b19>

<https://cks.nice.org.uk/topics/parvovirus-b19-infection/>

<https://patient.info/doctor/parvovirus-infection>

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