

# Fifth Disease and Pregnancy

(Parvovirus B19, Erythema Infectiosum)



Region of Waterloo  
PUBLIC HEALTH

## What is fifth disease?

Fifth disease, also known as parvovirus B19 and erythema infectiosum, is a viral infection. It received the name because it was the fifth childhood illness identified. It is common in children but can affect people of all ages. Increased activity is usually seen in late winter and early spring and can cause outbreaks in schools and day cares. Between 50–65 per cent of young adults and 90 per cent of older adults are believed to have had fifth disease and are now protected against this infection for life.

## What are the symptoms?

The infection begins with mild flu-like symptoms (headache, mild fever, tiredness), followed by a “slapped cheek” rash several days later. After 1–4 days, a red lacey rash appears on the rest of the body. The rash may be itchy and often worsens with exposure to heat (i.e. bathing) or sunlight. It may come and go for weeks or even months. In adults (especially women), the illness may be more severe and include joint pains affecting the hands, wrists, ankles and knees which can last for months. Adults often do not have the rash at all. Between 20–25 per cent of people infected have only mild symptoms or no symptoms at all.

## What is the incubation period?

A person can develop symptoms 4–21 days after being exposed to an infectious person.

## How is it spread?

Fifth disease can be passed from person to person just like the common cold. It is transmitted through contact with respiratory secretions (i.e. coughing, touching contaminated objects) from someone who is infected and contagious. The contagious period is during the flu-like illness the week before the onset of the rash. Once the rash has appeared, the infected person is not contagious. Good hand washing is the best way to protect against the spread of this infection.

## Should an infected person be excluded from school, day care or work?

No, as long as the person is feeling well enough to participate in normal activities. Once the rash has appeared the person is not considered to be contagious so there is no reason for exclusion.

## Is fifth disease dangerous?

Most people recover completely with no complications. It can be a serious concern for pregnant women or persons with blood disorders such as sickle cell anemia or leukemia. These people should contact their doctor if they have been in contact with someone with fifth disease.

## What are the concerns in pregnancy?

The virus can affect the developing red blood cells and cause anemia in the fetus. This can lead to fluid build up under the skin and around the organs called “fetal hydrops” which can lead to fetal loss/miscarriage. If the pregnant woman is infected, the risk of fetal loss is approximately 2–15 per cent with the greatest risk when the infection occurs before 20 weeks gestation. However, if the hydrops is detected early, fetal loss can be prevented by correcting the anemia with fetal transfusions. This typically results in normal fetal outcome and a healthy baby. There is no risk of congenital anomalies with fifth disease.

## What should I do if I am pregnant and have been exposed to fifth disease?

Consult your physician about having a blood test to determine if you have been infected or are immune. The blood tests check for antibodies and are called “Parvovirus IgG” and “Parvovirus IgM”.

1. If the blood tests confirm you are immune and have not been recently infected then you are not at risk.
2. If you are not immune but have not been infected you should try to avoid exposure to infected persons during an outbreak situation. Your doctor may repeat the antibody tests 2–4 weeks later.
3. If you have been infected then your doctor will refer you to an obstetrician who will order regular specialized ultrasounds to see if hydrops develops. If hydrops develops you will be referred to a hospital centre capable of doing fetal transfusions. This treatment typically results in the woman having a healthy baby.

## References

Committee on Infectious Diseases, American Academy of Pediatrics (2009). Red Book (28th ed).

Clinical Practice Obstetrics Committee, SOGC (2002, Sept). Clinical Practice Guidelines: Parvovirus B19 Infection in Pregnancy. *JOGC* 119:1-8.

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