



# Fifth Disease

(Parvovirus B19, Erythema Infectiosum, “Slapped Cheeks Syndrome”)

## What is Fifth Disease?

Fifth disease is a mild infection caused by erythrovirus, previously called parvovirus B19. It is also known as erythema infectiosum or slapped cheeks syndrome. It is common in children between the ages of five and 14 years old, but may also occur in adults. Most outbreaks of fifth disease occur in school-age children, rather than pre-schoolers. Many children infected with this virus do not become ill. It is common in late winter, spring and early summer months. The rates of infection may also increase every three to four years.

## Symptoms of Fifth Disease

Initially, the symptoms may be mild which often goes unrecognized. The person may have a fever, runny nose, sore throat, headache and mild gastrointestinal pain, including nausea and diarrhea. In two to five days, the rash appears with the following characteristics:

- Distinctive rash that has a “slapped cheek” appearance. This is more common in children than adults. Occasionally the rash will extend over the bridge of the nose or around the mouth.
- Red, lace-like rash on the arms and legs may appear one to four days later.
- Rash may come and go over the next one to three weeks and may itch.
- Rash may be exaggerated by exposure to sunlight, heat or emotional stress.

In children, the infection is usually mild and of short duration. Teenagers and adults may have self-limited arthritis. Older children and adults may have difficulty walking and in bending their joints such as wrists, knees, ankles, fingers and shoulders.

It is important that this infection be diagnosed by a doctor because the symptoms closely resemble rubella and scarlet fever. The illness may be more severe in a child with chronic anemia. The majority of adults who had fifth disease in childhood will not get it again if exposed to an infected person.

## How Fifth Disease spreads

Fifth disease spreads from person-to-person through contact with the respiratory secretions of an infected person. Also, it can be spread by contact with infected blood because it can withstand the usual thermal treatment aimed at infectious agents in blood products.

Infected persons are infectious for several days before the onset of the rash. Persons with the rash are not as contagious and are no longer likely to spread the infection once the rash appears. The time between the initial infection and the onset of symptoms varies from four to 20 days.

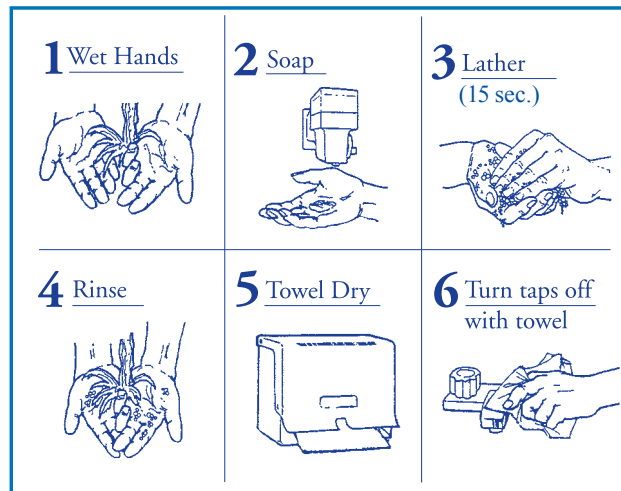
For further information, please call:  
**York Region Health Connection 1-800-361-5653**  
**TTY 1-866-252-9933 or visit [www.york.ca](http://www.york.ca)**

## Preventing Fifth Disease

The most effective method of preventing fifth disease is frequent hand washing and to avoid sharing items with an infected person such as cups, glasses and utensils.

## Treating Fifth Disease

There is no treatment for fifth disease and there isn't a vaccine to prevent it. Frequent hand washing may help to reduce the spread of the virus. The child may continue with usual activities provided they feel well. People with weakened immunity and pregnant women who have been in contact with fifth disease should see their doctor.



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## Fifth disease and Pregnancy

Fifth disease (also known as Erythema Infectiosum) is a respiratory infection seen most often in children, but can also develop in adults. In children, it may start with flu-like symptoms, fever, and headache, followed 1 to 4 days later by a rosy to bright red “slapped-cheek” rash that becomes lacy and net-like in appearance. After about one week, the rash may spread to the trunk and limbs.

Approximately 20 to 25 % of adults who develop Fifth disease will not have any symptoms. The remaining 75 to 80 % of infected adults experience joint pain or swelling that may last several weeks to months. Persistent anemia (low levels of red blood cells or haemoglobin) has been seen in people with compromised immune systems.

Mothers of young children, workers at daycare centers, and school teachers are at higher risk of contracting Fifth disease because they are exposed more often to the illness in children. The virus that causes Fifth disease (parvovirus B19) usually spreads by contact with the respiratory secretions of an infected person, or from hand to mouth contact. The virus can also spread through infected blood transfusions, organ transplants or from mother to fetus.

A pregnant woman who has been exposed to Fifth disease should discuss her risk with her physician. Blood tests can be done to determine if the woman is presently infected, susceptible to infection, or immune to it.

For most pregnant women, exposure to Fifth disease does not usually affect the baby. Several circumstances have to be in place for there to be a risk of harm to her fetus:

- **The woman must be susceptible to Fifth disease.** Fortunately, at least 50 to 65% of women of reproductive age are immune to Fifth disease, probably through previous exposure to this disease. These women and their babies are protected from infection and illness.
- **The infection must spread from the woman to her fetus.** Even if a woman contracts Fifth disease, there is a good chance that it might not spread to her baby. Research has found that in 67 to 83 % of the cases, the infection does not spread from an infected woman to her fetus.

However, in the infrequent cases where Fifth disease spreads from the pregnant woman to her fetus, the consequences can be serious. Studies have estimated the miscarriage rate for fetuses infected by this virus before 20 weeks gestation to range from 8 to 17%. If the infection occurs after the 20<sup>th</sup> week of pregnancy, this rate falls to 0 to 6%. Fifth disease infection has also been shown to account for a small percentage of cases of swelling in the fetus or newborn, which can be fatal. Some pregnant women may require a series of ultrasounds up to 8 to 12 weeks after the infection to watch for the development of this condition.

Children born to mothers who had Fifth disease during their pregnancy usually do not suffer long-term effects. Currently there is no evidence that this infection increases the risk of birth defects in humans.

Current research suggests that pregnant women do not reduce their risk of infection by leaving the workplace when there is an outbreak of the virus in the school or daycare. However, a work leave may be considered for susceptible pregnant women with medical conditions that increase their risk for complications due to parvovirus B19 infection.

Keeping people with symptoms of Fifth disease away from daycares, schools, or other settings is not likely to prevent the spread of this illness. These individuals were contagious before the symptoms appeared, and have already spread the virus. As with most viruses, frequent handwashing is your best protection.

**If you have any further questions please contact York Region Health Connection at 1-800-361-5653.**