

New York State Department of Health

Fifth Disease (erythema infectiosum, parvovirus B19 infections)

Last Reviewed: November 2006

What is fifth disease?

Fifth disease is a viral infection which often affects red blood cells. It is caused by a human parvovirus (B19) . For many years, fifth disease was viewed as an unimportant rash illness of children. Recently, studies have shown that the virus may be responsible for serious complications in certain individuals.

Who gets fifth disease?

Anyone can be infected, but the disease seems to occur more often in elementary school-age children.

How is the virus spread?

The virus is spread by exposure to airborne droplets from the nose and throat of infected people.

What are the symptoms and when do they appear?

One to two weeks after exposure, some children will experience a low grade fever and tiredness. By the third week, a red rash generally appears on the cheeks giving a slapped face appearance. The rash may then extend to the body and tends to fade and reappear. Sometimes, the rash is lacy in appearance and may be itchy. Some children may have vague signs of illness or no symptoms at all.

When and for how long is a person able to spread the disease?

People with fifth disease appear to be contagious during the week prior to the appearance of the rash. By the time the rash is evident, the person is probably beyond the contagious period. People who are immunosuppressed or who have certain anemias may be contagious for a longer period.

How is fifth disease diagnosed?

In most cases, the disease is diagnosed based on the appearance of typical symptoms. A specific blood test to confirm the diagnosis has recently become available but is not necessary in healthy children.

Does past infection with the virus make a person immune?

It is thought that people who have been previously infected acquire long-term or lifelong immunity. Studies have shown that more than 50 percent of adults are immune to parvovirus B19.

What is the treatment?

At this time, there is no specific treatment.

What are the complications associated with fifth disease?

While there is no evidence that parvovirus B19 infection is a significant cause of fetal defects, some studies have shown that infection may increase risk of miscarriage or spontaneous abortion. In people with chronic red blood cell disorders, such as sickle cell disease, infection may result in severe anemia. Infection has also been associated with arthritis in adults.

What can be done to prevent the spread of fifth disease?

Measures to effectively control fifth disease have not been developed yet. During outbreaks in schools, pregnant school employees and people with chronic red blood cell disorders should consult their physician and the local or state health department for advice.

What should I do if I am exposed to a child with fifth disease during my pregnancy?

If you are exposed to a case or develop symptoms of fifth disease while pregnant, you should consult your doctor. Blood testing is available at some private laboratories and at the New York State Health Department laboratory to determine if you are already immune or infected with parvovirus B19.

Where can I call for additional information regarding fifth disease and pregnancy?

In addition to your doctor, information can be obtained from your local health department or the New York State Department of Health Growing Up Healthy Hotline at (800) 522-5006.

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