

What is fifth disease?

Fifth disease is a viral infection caused by human parvovirus B19. In most instances, fifth disease is a mild rash illness of childhood.

Who is at risk for fifth disease?

Anyone can become infected with the virus that causes fifth disease, but the disease is most often recognized in elementary school-aged children. Fifth disease is common worldwide and can occur throughout the year in all age groups as either sporadic cases or as clusters of cases.

Pregnant women who are not immune usually have only mild illness if they are exposed to fifth disease. Also, their babies usually do not have any problems. Rarely, a baby will develop severe anemia caused by its mother's infection with fifth disease, and the woman may have a miscarriage. But this is not common. It happens less than 5% of the time among all pregnant women with parvovirus B19 infection, and it happens more commonly during the first half of pregnancy.

What are the symptoms of fifth disease?

Low-grade fever, headache, muscle aches and tiredness are often followed by a distinctive facial rash often referred to as red "slapped cheeks." The facial rash may then progress to a lace-like rash on the trunk, arms, buttocks and thighs; this rash tends to fade and reappear with exposure to heat. While rare in children, adults with fifth disease may have severe joint pains. Many infected children and adults do not have any symptoms.

How soon do symptoms appear?

Symptoms generally appear four to 14 days after exposure to the virus, but can appear as much as 21 days after exposure.

How is fifth disease spread?

The virus is spread by exposure to airborne droplets from the nose and throat of infected people. About 50 percent of susceptible (have not been previously infected) household contacts of a case of fifth disease will become infected. It can also be spread by exposure to blood or from mother to fetus.

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

People with fifth disease are contagious during the week before the appearance of the rash. By the time the rash is evident, the individual is no longer contagious (except for people with compromised immune systems).

How is a person diagnosed?

In most cases, fifth disease is diagnosed based on the appearance of the characteristic rash.

What is the treatment?

At this time, there is no specific treatment for fifth disease. Infected people who have compromised immune systems and certain blood disorders should contact their health-care provider for possible supportive care.

Does past infection make a person immune?

It is thought that people who have previously been infected acquire long-term or lifelong immunity. Studies have shown that about 50 percent of adults and more than 90 percent of elderly people are immune to parvovirus B19 and therefore are not susceptible.

Should children or others be excluded from child care, school, work or other activities if they have fifth disease?

Because the risk of transmitting B19 virus to others is greatest before signs and symptoms develop, transmission cannot be prevented by identifying and excluding symptomatic individuals. Routine exclusion is NOT recommended unless:

- The child has sickle cell disease or a compromised immune system. These children may shed large amounts of the virus.
- The child is unable to participate, and the staff believes they cannot care for the child without compromising the ability to care for other children.

Pregnant women may continue going to their workplace if there is an outbreak of fifth disease happening. However, if you are not immune to parvovirus B19 and are not currently infected, you may want to stay away from people with fifth disease while you are pregnant. Your health care provider may test you for immunity to parvovirus B19. Talk with your health care provider to decide what is best for you.

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

Measures to effectively control fifth disease have not been developed yet. Good hand washing may be a practical and effective method to reduce the spread of the virus in schools or day-care centers where there are known cases.

Additional Information:

Additional information is available at www.ndhealth.gov/disease or by calling the North Dakota Department of Health at 800.472.2180.

Resources:

American Academy of Pediatrics. [Parvovirus B19]. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015: 593-596.

Centers for Disease Control and Prevention: www.cdc.gov/parvovirusb19/pregnancy.html.