

# Fifth disease

**Erythema infectiosum** or **fifth disease** is one of several possible manifestations of infection by parvovirus B19.<sup>[3]</sup>

The name "fifth disease" comes from its place on the standard list of rash-causing childhood diseases, which also includes measles (first), scarlet fever (second), rubella (third), Dukes' disease (fourth, but is no longer widely accepted as distinct), and roseola (sixth).

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Erythema infectiosum	
Other names	Slapped cheek syndrome, slapcheek, slap face, slapped face <sup>[1][2]</sup>
	
16-month-old with erythema infectiosum	
Specialty	Infectious disease

## Signs and symptoms

Fifth disease starts with a low-grade fever, headache, rash, and cold-like symptoms, such as a runny or stuffy nose. These symptoms pass, then a few days later, the rash appears. The bright red rash most commonly appears in the face, particularly the cheeks. This is a defining symptom of the infection in children (hence the name "slapped cheek disease"). Occasionally, the rash will extend over the bridge of the nose or around the mouth. In addition to red cheeks, children often develop a red, lacy rash on the rest of the body, with the upper arms, torso, and legs being the most common locations. The rash typically lasts a few days and may itch; some cases have been known to last for several weeks. Patients are usually no longer infectious once the rash has appeared.<sup>[1][2]</sup>

Teenagers and adults may present with a self-limited arthritis. It manifests in painful swelling of the joints that feels similar to arthritis. Older children and adults with fifth disease may have difficulty in walking and in bending joints such as wrists, knees, ankles, fingers, and shoulders.<sup>[1][2]</sup>

The disease is usually mild,<sup>[4]</sup> but in certain risk groups, it can have serious consequences:

- In pregnant women, infection in the first trimester has been linked to hydrops fetalis, causing spontaneous miscarriage.
- In people with sickle-cell disease or other forms of chronic hemolytic anemia such as hereditary spherocytosis, infection can precipitate an aplastic crisis.<sup>[1][2]</sup>
- Those who are immunocompromised (HIV/AIDS, chemotherapy) may be at risk for complications if exposed.<sup>[5]</sup>

## Transmission

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Fifth disease is transmitted primarily by respiratory secretions (saliva, mucus, etc.), but can also be spread by contact with infected blood. The incubation period (the time between the initial infection and the onset of symptoms) is usually between 4 and 21 days. Individuals with fifth disease are most infectious before the onset of symptoms. Typically, school children, day-care workers, teachers, and parents are most likely to be exposed to the virus. When symptoms are evident, the risk of transmission is small; therefore, symptomatic individuals do not need to be isolated.<sup>[1][2]</sup>

## Treatment

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Treatment is supportive, as the infection is frequently self-limiting. Antipyretics (i.e., fever reducers) are commonly used. The rash usually does not itch, but can be mildly painful. No specific therapy is recommended.

## Epidemiology

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Any age may be affected, although it is most common in children aged 5 to 15 years.<sup>[6]</sup> By the time adulthood is reached, about half the population will have become immune following infection at some time in their past.<sup>[1][2]</sup> Outbreaks can arise especially in nursery schools, preschools, and elementary schools. Infection is an occupational risk for school and day-care personnel.<sup>[7]</sup> No vaccine is available for human parvovirus B19,<sup>[2]</sup> though attempts have been made to develop one.<sup>[8]</sup>

## History

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It, or a disease presenting similarly,<sup>[9]</sup> was first described by Robert Willan in 1799 as "rubeola, sine catarrho". It was better defined by Anton Tschamer in 1889 as a rubella variant (*Ortliche Rotheln*), identified as a distinct condition in 1896 by Theodor Escherich, and given the name "erythema infectiosum" in 1899.<sup>[10]</sup> The term "Fifth disease" was coined in 1905 by the Russian-French physician Léon Cheinisse (1871-1924), who proposed a numbered classification of the six most common childhood exanthems.<sup>[11][9][12][13][14]</sup> The virus was first described in 1957 at the University of Pennsylvania by Werner, Brachman et al.<sup>[15]</sup>

## See also

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- List of cutaneous conditions
- Roseola

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## External links

<b>Classification</b> <b>ICD-10:</b> B08.3 ( <a href="http://apps.who.int/cla">http://apps.who.int/cla</a> )
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<ul style="list-style-type: none"> <li>■ <u>Parvovirus B19</u> (<a href="https://www.cdc.gov/ncidod/diseases/parvovirus/B19.htm">https://www.cdc.gov/ncidod/diseases/parvovirus/B19.htm</a>) at the <u>Centers for Disease Control and Prevention</u></li> </ul>	ssifications/icd10/browse/2016/en#/B08.3) • <b>ICD-9-CM:</b> 057.0 ( <a href="http://www.icd9data.com/getICD9Code.ashx?icd9=057.0">http://www.icd9data.com/getICD9Code.ashx?icd9=057.0</a> ) • <b>MeSH:</b> D016731 ( <a href="https://www.nlm.nih.gov/cgi/mesh/2015/MB_cgi?field=uid&amp;term=D016731">https://www.nlm.nih.gov/cgi/mesh/2015/MB_cgi?field=uid&amp;term=D016731</a> ) • <b>DiseasesDB:</b> 4442 ( <a href="http://www.diseasesdatabase.com/ddb4442.htm">http://www.diseasesdatabase.com/ddb4442.htm</a> )
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