

Parvovirus B19

Parvovirus B19 infection, also known as erythema infectiosum, fifth disease, or slapped cheek syndrome, is a viral infection that only affects humans. Outbreaks of the infection are common in preschool and young school aged children. Studies have shown that more than 50% of adults have been infected with parvovirus B19 at some time and therefore have lifelong immunity. Parvovirus B19 cannot be transmitted to or from animals and is not the same condition as dog 'parvo'.

Signs and Symptoms:

Parvovirus B19 usually causes a mild illness. An infected person may be mildly unwell with a slight fever and "cold" symptoms which last for a few days, followed in most cases by an itchy rash.

Children with parvovirus B19 typically have a bright red rash on their cheeks (hence "slapped-cheek" syndrome) along with a lacy rash on the body, arms and legs. The skin may be itchy, often on the soles of the feet and also where the rash appears on the body. The rash fades quite quickly but can reappear over the next few weeks on exposure to sunlight or heat (e.g. in the bath).

Affected adults usually have few or no symptoms and are less likely to get the 'slapped cheek' rash. Adults may get joint pain and/or swelling, mainly in small joints of the hands and feet, but sometimes in knees, ankles or wrists. This joint pain usually settles in a week or two but can last for months.

Complications are rare with parvovirus B19. However an unborn baby that is infected (especially in the first half of the pregnancy), or people with pre-existing anaemia (Sickle Cell Disease) or immune system problems may suffer severe anaemia and become very unwell.

A doctor can often diagnose parvovirus B19 by seeing the typical rash during a physical examination. In cases in which it is important to confirm the diagnosis, a blood test can be taken to test for parvovirus B19.

Treatment:

For mild disease, usually no treatment is required other than to rest, with pain relief as needed. Blood transfusions and other treatments may be needed for people who suffer from severe anaemia.

Transmission:

Parvovirus B19 spreads through respiratory secretions such as saliva, sputum, or nasal mucus when an infected person coughs or sneezes. Infected people are probably not contagious by the time the rash develops. Parvovirus B19 can also spread through blood or blood products. A pregnant woman who is infected with parvovirus B19 can pass the virus to her baby.

The time from contact with the virus to the development of symptoms varies from 4 to 20 days.

Prevention:

There is no vaccine or medicine that prevents parvovirus B19 infection.

You can reduce your chance of being infected with parvovirus B19 or infecting others by

- washing your hands often with soap and water
- covering your mouth and nose when you cough or sneeze
- not touching your eyes, nose, or mouth
- avoiding close contact with people who are sick
- staying home when you are sick.

Excluding children or adults with parvovirus B19 infection from work, child care centres, schools, or other settings is unlikely to prevent spread, because people are most contagious before they develop the characteristic rash.

Susceptible pregnant women should not routinely be excluded from a workplace where a parvovirus B19 outbreak is occurring, as exposure may have already occurred and the risk to the unborn baby is low. Whether to stay away from a workplace where there are cases of parvovirus B19 is a personal decision for a pregnant woman to make, after discussion with her family, doctor, and employer.

Health outcome:

Parvovirus B19 is usually a mild illness that resolves on its own in healthy children and adults. Joint pain and swelling in adults usually resolves without long-term disability.

Parvovirus B19 infection in pregnancy

Usually there are no serious complications for a pregnant woman or her baby following exposure to a person with parvovirus B19 infection. About

50% of pregnant women are already immune to parvovirus B19, and these women and their babies are protected from infection and illness.

Most susceptible (non-immune) women who are infected with parvovirus B19 experience only mild illness. There is virtually no risk to the unborn baby if infection occurs in the second half of pregnancy. However, up to 10% of parvovirus B19 infections in pregnant women in the first half of pregnancy can result in severe anaemia in the unborn baby, and miscarriage.

Pregnant women, and people who are immunosuppressed who may have been in contact with someone with Parvovirus B19 or who think they may have the disease, should contact their doctor for further advice.

Other resources:

[Handy facts about hygiene brochure](https://www.health.qld.gov.au/__data/assets/pdf_file/0020/444314/handwash-6steps.pdf) (https://www.health.qld.gov.au/__data/assets/pdf_file/0020/444314/handwash-6steps.pdf)

[Hand Hygiene Australia—resources for the community](http://www.hha.org.au/ForConsumers.aspx) (<http://www.hha.org.au/ForConsumers.aspx>)

[Staying Healthy: Preventing infectious diseases in early childhood education and care services](https://www.nhmrc.gov.au/guidelines-publications/ch55) (<https://www.nhmrc.gov.au/guidelines-publications/ch55>) (5th Edition)

Help and assistance:

For further information please contact your local doctor, or call 13 HEALTH (13 43 25 84) 24 hours a day 7 days a week for the cost of a local call.

References

Heymann, D. (2015). Control of communicable diseases manual. (20th edition). Washington, DC: American Public Health Association, pp.202-204.

Bennett, J., Dolin, R., Blaser, M., Mandell, G. & Douglas, R. (2014). Mandell, Douglas, and Bennett's principles and practice of infectious diseases (8th edition). Philadelphia, PA: Elsevier/Saunders, pp. 1840-1846.