

# Parvoviruses

The most important member of this family is Parvovirus B19. Parvovirus B19 is also the only virus in this family that is primarily pathogenic to humans. It belongs to the genus *Erythrovirus*.

## Parvovirus B19

- Non-enveloped ssDNA virus;
- the genome is made up of linear single-stranded DNA;
- common human pathogen;
- it multiplies in red blood cell precursors (especially in pronormoblasts and normoblasts), it has a cytotoxic effect;
- the name is derived from the Latin word *parvum* (small) and from the number of the serum sample in which it was first discovered (sample 19 from panel B); parvoviruses B1-18 do not exist.<sup>[1][2]</sup>

## Virion

It is one of the smallest: 18–22 nm. It is **highly resistant** to external conditions.

## Diseases

- **Childhood rash**; manifested by fever, rash on the face and the torso.
- risk of **aplastic anemia** in children with hemoglobinopathies.
- **primoinfection in pregnancy** – can cause miscarriage (1st trimester), or fetal damage (hydrops fetalis).

## Diagnostics

- Serological examination predominates – ELISA;
- PCR.

## Epidemiology

- Massive shedding of the virus by **nasopharyngeal secretion** and its easy spread due to considerable resistance.
- **Toddlers**, school-age children and adults have the disease.
- It can be an infection of pregnant women with miscarriage.



The fifth disease (*erythema infectiosum*)

## Sources

- ws:Parvovirus

## related articles

- Viruses
- The fifth disease

## External links

- ViralZone: Parvoviridae ([https://viralzone.expasy.org/103?outline=all\\_by\\_species](https://viralzone.expasy.org/103?outline=all_by_species)),

## Reference

1. Medscape <https://emedicine.medscape.com/article/961063-overview>
2. LUBUŠKÝ, M, et al. Prenatal infection of the fetus with parvovirus B19. Czechoslovak gynecology [online] . 2005, vol. 4, vol. 70, pp. 306-311, also available from < [http://www.lubusky.com/cc\\_11\\_prenatalni-infekce-plodu-parvovirem-b19.html](http://www.lubusky.com/cc_11_prenatalni-infekce-plodu-parvovirem-b19.html) >.

## References

- HORACEK, Jiri. Basics of medical microbiology. 1st edition. Prague: Karolinum Publishing House, 2000. vol. 1. ISBN 80-246-0006-4 .

