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## Infectious mononucleosis

Infectious mononucleosis is also known as 'glandular fever'. It typically affects young adults aged 15 to 25 years. Infectious mononucleosis is caused by Human herpes virus type 4, more often known as Epstein Barr virus (EBV). This virus is passed from person to person by saliva such as sharing a glass or kissing. The incubation period from contact until symptoms is 1 to 2 months.

### What are the clinical features of infectious mononucleosis?

The most common presentation of infectious mononucleosis is with a fever, enlarged lymph nodes and a sore throat. However the virus can also affect other organs, as shown in the table below.

Organ involved	Symptoms & signs
Spleen	<ul style="list-style-type: none"> <li>• Splenomegaly (an enlarged spleen)</li> </ul>
Joints	<ul style="list-style-type: none"> <li>• Arthritis in one or more joints</li> </ul>
Kidneys	<ul style="list-style-type: none"> <li>• Glomerulonephritis</li> </ul>
Nervous system	<ul style="list-style-type: none"> <li>• Meningoencephalitis</li> <li>• Bell's palsy (facial palsy)</li> <li>• Transverse myelitis</li> <li>• Guillain-Barré syndrome</li> </ul>
Gastrointestinal tract	<ul style="list-style-type: none"> <li>• Hepatitis</li> </ul>
Lungs	<ul style="list-style-type: none"> <li>• Interstitial pneumonia</li> </ul>
Heart	<ul style="list-style-type: none"> <li>• Pericarditis</li> </ul>
Eyes	<ul style="list-style-type: none"> <li>• Eyelid swelling</li> <li>• Keratitis</li> <li>• Uveitis</li> <li>• Conjunctivitis</li> <li>• Retinitis</li> </ul>
Blood system	<ul style="list-style-type: none"> <li>• Autoimmune haemolytic anaemia (breakdown of red cells)</li> <li>• Thrombocytopenia (reduced platelet count)</li> <li>• Neutropenia (reduced white cell count)</li> <li>• Cold agglutinins (proteins that precipitate in cooler conditions)</li> <li>• Immunodeficiency</li> </ul>

### Involvement of the skin

Involvement of the skin is seen in about 10% of non-hospitalised patients. Most commonly, there is a faint, widespread, non-itchy rash, which lasts for about a week. It is described as maculopapular [exanthem](#), i.e. there are flat patches that may contain small bumpy red spots. It thought to be directly due to the virus. This rash often appears on the trunk and upper arms first, and a few days later extends to involve the face and forearms. Other appearances of this rash include:

- Morbilliform (small, flat, measles-like patches)
- Papular (small bumps)
- Scarletiform (tiny spots like scarlet fever)
- Vesicular (little blisters)
- Purpuric (bruise-like)

This is in contrast to a more intense itchy maculopapular rash which appears on extensor surfaces and pressure points 7 to 10 days after treatment with beta-lactam [antibiotics](#) such as ampicillin, amoxicillin and cephalosporins. This rash indicates a 'hypersensitivity reaction' to the antibiotic. It is not a true allergy and does not occur if the antibiotic is given later on in the absence of EBV infection.

There is also a variety of less common skin conditions associated with EBV infection, including:

- [Gianotti-Crosti syndrome](#) (infantile papular acrodermatitis)
- [Erythema multiforme](#)
- [Erythema nodosum](#)
- [Urticaria](#) including [cold urticaria](#)
- [Urticarial vasculitis](#)
- Acrocyanosis (bluish hands and feet)
- [Annular erythema](#)
- [Pityriasis lichenoides](#)
- Palmar dermatitis
- Genital ulceration
- Chronic bullous disease of childhood ([linear IgA bullous dermatosis](#))
- [Hairy leukoplakia](#)
- [Hydroa vacciniforme](#)

## How is the diagnosis made?

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Usually a blood test is taken, which detects characteristic atypical lymphocytes (white blood cells). A positive 'monospot' screening test may be requested, as there are several other viral infections that may cause similar symptoms in which atypical lymphocytes are detected.

Liver function is usually checked. Other tests will depend on what organs are affected by the infection.

Other more sensitive and specific blood tests are generally only done in acute EBV infection with atypical features. These include: antibodies to EBV capsid and nuclear antigen, and polymerase chain reaction assay for EBV DNA.

## What treatment is available for infectious mononucleosis?

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Treatment may require bed rest and simple analgesia such as paracetamol during the febrile stage. [Aciclovir](#) is sometimes prescribed but it is not very effective. Antibiotics are not helpful.

Recovery is generally complete, but it can take several weeks to months to feel quite well again. Prolonged tiredness is common.

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## Related information

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### References:

- Emedicine:
  - [Infectious Mononucleosis](#)
  - [Mononucleosis](#)
- Harrison's Principles of Internal Medicine. 16th Ed. (2005)
- Dermatology. Bologna JL, Jorizzo JL, Rapini JL. 1st Edition (2003)

### On DermNet NZ:

- [Viral infections](#)
- [Viral exanthems](#)
- [Gianotti–Crosti syndrome](#)

### Other websites:

#### Books about skin diseases:

See the [DermNet NZ bookstore](#)

**Author:** Dr Sarah Hill, Dermatology Registrar, Health Waikato

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