

## 📖 Topic Page: [Leucocytes](#)

Definition: **leucocyte (US leukocyte)** from *The Penguin Dictionary of Science*

A white blood cell. Leucocytes are nucleated, and lack ►haemoglobin. They form part of the ►immune system. Special cells in the bone marrow (**multipotent stem cells**) give rise to two functional groups of white cell: those that confer natural immunity, such as ►macrophages, and those that give rise to ►lymphocytes, which provide adaptive immunity. Compare ►erythrocyte.

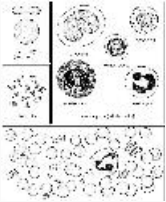


Image from: [blood in The Macmillan Encyclopedia](#)

Summary Article: **white blood cell**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

One of a number of different cells that play a part in the body's defences and give immunity against disease. Some (neutrophils and macrophages) engulf invading micro-organisms, others kill infected cells, while lymphocytes produce more specific immune responses. White blood cells are colourless, with clear or granulated cytoplasm, and are capable of independent amoeboid movement. They occur in the blood, lymph, and elsewhere in the body's tissues. Unlike mature red blood cells they contain a nucleus.

Human blood contains about 11,000 leucocytes to the cubic millimetre – about one to every 500 red blood cells. White blood cell numbers may be reduced (leucopenia) by starvation, pernicious anaemia, and certain infections, such as typhoid and malaria. An increase in their numbers (leucocytosis) is a reaction to normal events such as digestion, exertion, and pregnancy, and to abnormal ones such as loss of blood, cancer, and most infections.

Some white cells can produce antibodies. Antibodies are specific proteins that can attach to chemicals that do not belong to the body, such as toxins or chemicals on disease-causing bacteria. Chemicals that do not belong to the body are said to be 'foreign'. If these chemicals cause the body to produce antibodies, they are called antigens. Once these foreign chemicals have contacted the blood, some white blood cells can retain the memory of the particular antibody that is needed for defence. The next time the antibody is needed it is produced quickly and in large amounts to prevent the body being harmed – the body shows immunity to the disease. This is also the basis of immunization by a vaccine.

### essays

Constituents of blood

How Blood Helps to Prevent Disease

Immunity: T and B cells and monoclonal antibodies

Defence mechanisms, immunization and medicines

Using Monoclonal Antibodies

### images

white blood cell

## animations

white blood cells fight infection

### **APA**

Chicago

Harvard

MLA

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white blood cell. (2018). In Helicon (Ed.), *The Hutchinson unabridged encyclopedia with atlas and weather guide*. Abington, UK: Helicon. Retrieved from [https://search.credoreference.com/content/topic/white\\_blood\\_cell](https://search.credoreference.com/content/topic/white_blood_cell)

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## APA

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## Chicago

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## Harvard

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## MLA

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