



## PATIENT & CAREGIVER EDUCATION

# Facts About Blood and Blood Cells

This information explains the different parts of your blood and their functions.

Your blood carries oxygen and nutrients to all of the cells in your body. Blood cells also fight infection and control bleeding.

Most blood cells are made in your bone marrow. They are constantly being made and replaced. How long a cell lasts before being replaced is called its lifespan.

Your blood is made up of 4 components: red blood cells, white blood cells, platelets, and plasma.

## Blood Components

### **Red blood cells (erythrocytes)**

Red blood cells carry oxygen from your lungs to your tissues. They also bring carbon dioxide back to your lungs.

Red blood cells make up about 44% of your blood. The lifespan of a red blood cell is around 120 days.

### **White blood cells (leukocytes)**

White blood cells fight infection and help you develop immunity

to disease. They make up less than 1% of your blood.

There are 3 types of white blood cells: granulocytes, monocytes, and lymphocytes. Each type has specific functions.

- There are 3 subtypes of granulocytes:
  - Neutrophils, which help fight bacterial and fungal infections.
  - Basophils, which are associated with immune responses, although their exact function isn't well known.
  - Eosinophils, which help fight parasitic infections.
- Monocytes break down and remove foreign organisms and dying cells from your body.
- Lymphocytes make up the immune system.

White blood cells have a wide range of lifespans, from hours to years.

## **Platelets (thrombocytes)**

Platelets are colorless fragments of cells whose main function is to control bleeding. They make up less than 1% of your blood. The lifespan of platelets is about 9 to 12 days.

## **Plasma**

Plasma is the pale-yellow liquid part of your blood that holds all of the blood cells. It makes up about 55% of your total blood.

Plasma transports water, nutrients, minerals, medications, and hormones throughout your body. It also carries waste

products to your kidneys. Your kidneys then filter out the waste from your blood. Plasma made up of water, protein, lipids (fats), and hormones.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.

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