

CORPUSCULAR ELEMENTS OF BLOOD

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MALUMOTI****MAQOLA TARIXI:***Received: 02.12.2025**Revised: 03.12.2025**Accepted: 04.12.2025***KALIT SO'ZLAR:**

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ANNOTATSIYA:

Corpuscular elements of blood are the formed cellular components essential for maintaining life and physiological balance. These include erythrocytes (red blood cells), leukocytes (white blood cells), and thrombocytes (platelets). Each type plays a specific role in oxygen transportation, immunity, and blood clotting. Proper functioning of these components ensures healthy blood circulation, oxygen delivery to tissues, and protection against infections. This paper provides an overview of the structure, function, and significance of corpuscular elements in human blood and discusses how abnormalities can lead to various diseases and health complications.

Introduction

Blood is a vital connective tissue responsible for transporting oxygen, nutrients, hormones, and waste products throughout the body. It consists of plasma and corpuscular elements. Corpuscular elements make up about 45% of blood and are essential for survival. They ensure proper tissue oxygenation, defend the body against pathogens, and maintain hemostasis. Understanding their functions helps in diagnosing and preventing blood-related diseases.

Main Part**Erythrocytes (Red Blood Cells):**

Erythrocytes contain hemoglobin, the protein responsible for binding and transporting oxygen from the lungs to body tissues.

Functions:

- Transport oxygen and carbon dioxide
- Maintain acid-base balance

Low erythrocyte levels cause anemia, leading to fatigue, weakness, and pale skin.

Leukocytes (White Blood Cells):

Leukocytes defend the body against infections and foreign substances. They are divided into granulocytes (neutrophils, eosinophils, basophils) and agranulocytes (lymphocytes, monocytes).

Functions:

- Fight infections
- Produce antibodies
- Remove damaged cells

High leukocyte count may indicate infection or inflammation, while low levels increase infection risk.

Thrombocytes (Platelets):

Platelets play a major role in blood clotting and wound healing.

Functions:

- Prevent excessive bleeding
- Form clots to repair damaged vessels

Low platelet levels lead to bleeding disorders, while high levels may cause thrombosis.

Conclusion

Corpuscular elements of blood are essential for maintaining life, supporting immune function, providing oxygen to tissues, and preventing blood loss. Disorders in these cellular components can lead to anemia, infections, or clotting diseases. Understanding their functions and maintaining a healthy blood composition through proper diet and medical care is crucial for overall health and well-being.

References

1. World Health Organization. Hematology Guidelines, 2024.
2. American Society of Hematology. Blood Cell Function Review, 2023.

- 3. National Institutes of Health. Human Blood Components, 2023.
- 4. Mayo Clinic. Blood Disorders Overview, 2024.
- 5. Harvard Medical School. Hematology Research, 2023.
- 6. British Journal of Haematology. Cellular Structure of Blood, 2022.

