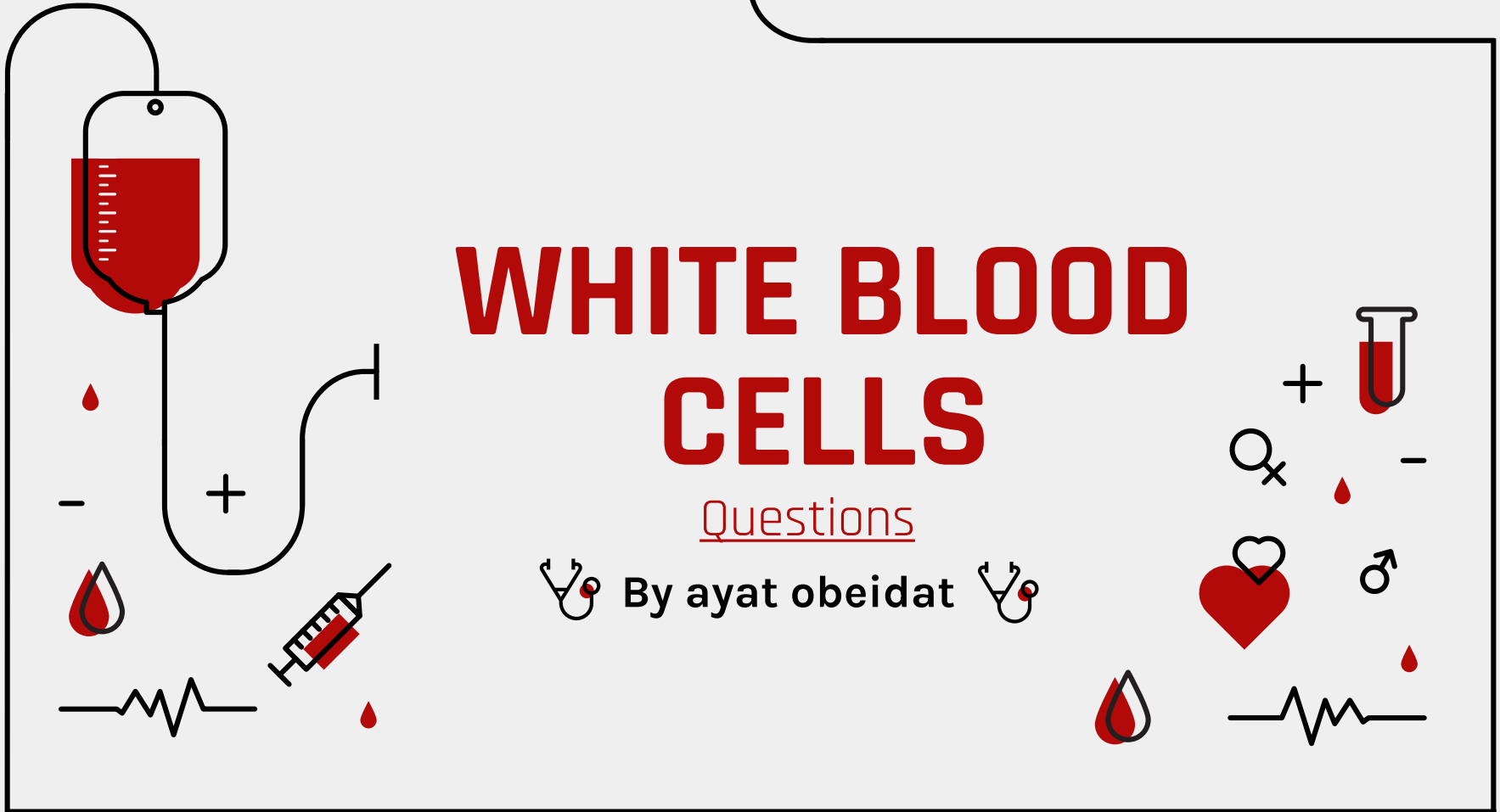


# WHITE BLOOD CELLS

Questions

By ayat obeidat





1. What is the normal average percentage of lymphocytes in a differential WBC count?

- a) 20%
- b) 30%
- c) 40%

**\*Answer:\*** b) 30%

2. The mnemonic "Never Let Monkey Eat Banana" corresponds to which WBC types in order?

- a) Neutrophils, Lymphocytes, Monocytes, Eosinophils, Basophils
- b) Neutrophils, Lymphocytes, Monocytes, Basophils, Eosinophils
- c) Neutrophils, Lymphocytes, Eosinophils, Monocytes, Basophils

**\*Answer:\*** a) Neutrophils, Lymphocytes, Monocytes, Eosinophils, Basophils

3. Which process allows neutrophils to move through capillary walls into tissues?

- a) Chemotaxis
- b) Diapedesis
- c) Aggregation

**\*Answer:\*** b) Diapedesis

#### 4. Neutrophils exhibit "amoeboid movement"

- a) Release histamine
- b) Migrate toward chemotactic substances
- c) Form platelet plugs

**\*Answer: b) Migrate toward chemotactic substances**

#### 5. Which WBC type releases heparin and histamine?\*

- a) Eosinophils
- b) Basophils
- c) Monocytes

**\*Answer: b) Basophils**

#### 6. Eosinophils are primarily involved in:\*

- a) Fighting bacterial infections
- b) Antiparasitic and antiallergic responses
- c) Phagocytosing large pathogens

**\*Answer: b) Antiparasitic and antiallergic responses**

7. **Cellular immunity is mediated by:**

- a) B-lymphocytes
- b) T-lymphocytes
- c) Monocytes

**\*Answer: b) T-lymphocytes**

8. **Antibodies in humoral immunity are produced by:**

- a) Plasma cells derived from B-lymphocytes
- b) Macrophages
- c) Neutrophils

**\*Answer: a) Plasma cells derived from B-lymphocytes**

9. **Monocytes differentiate into which highly phagocytic cells?**

- a) Neutrophils
- b) Macrophages
- c) Increasing Basophils

**\*Answer: b) Macrophages**



10. A key role of monocytes/macrophages is:

- a) Tissue repair
- b) Blood clotting
- c) Antibody production

**\*Answer: a) Tissue repair**

11. The first stage of hemostasis is:

- a) Platelet plug formation
- b) Vasoconstriction
- c) Blood coagulation

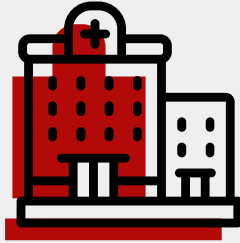
**\*Answer: b) Vasoconstriction**

12. Clot retraction involves the conversion of:

- a) Soluble fibrin to insoluble fibrin
- b) Prothrombin to thrombin
- c) Fibrinogen to fibrin

**\*Answer: 8 a) Soluble fibrin to insoluble fibrin**





13. **Vasoconstriction in hemostasis is triggered by:**

- a) Serotonin and thromboxane A<sub>2</sub>
- b) Histamine and heparin
- c) Antibodies and cytokines

**\*Answer: a) Serotonin and thromboxane A<sub>2</sub>**

14. **Myogenic contraction during vasoconstriction refers to:**

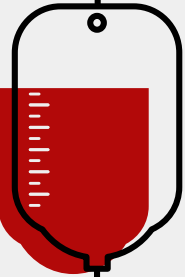
- a) Muscle contraction in the vessel wall
- b) Platelet activation
- c) Nerve impulses

**\*Answer: a) Muscle contraction in the vessel wall**

15. **Platelet adhesion occurs when platelets bind to:**

- a) Collagen in the sub-endothelium
- b) Fibrinogen in plasma
- c) Red blood cells

**\*Answer: a) Collagen in the sub-endothelium**





16. The correct sequence of platelet plug formation is:

- a) Adhesion → Activation → Aggregation
- b) Activation → Aggregation → Adhesion
- c) Aggregation → Adhesion → Activation

**\*Answer: a) Adhesion → Activation → Aggregation**

17. Factor II in coagulation is also known as:

- a) Prothrombin
- b) Fibrinogen
- c) Calcium

**\*Answer: a) Prothrombin**





18. Which factor is termed "Antihemophilic Factor A"?

- a) Factor VIII
- b) Factor IX
- c) Factor X

**\*Answer: a) Factor VIII**

19. The intrinsic pathway of coagulation requires:

- a) Tissue factor (Factor III)
- b) Calcium ions ( $\text{Ca}^{2+}$ )
- c) Vitamin K

**\*Answer: b) Calcium ions ( $\text{Ca}^{2+}$ )**

20. Soluble fibrin threads become insoluble during:

- a) Clot retraction
- b) Platelet activation
- c) Vasoconstriction

**\*Answer: a) Clot retraction**





**DR. Ayat Obeidat**