

WHAT IS ANATOMY AND PHYSIOLOGY?

❑ Anatomy – ana + temhein

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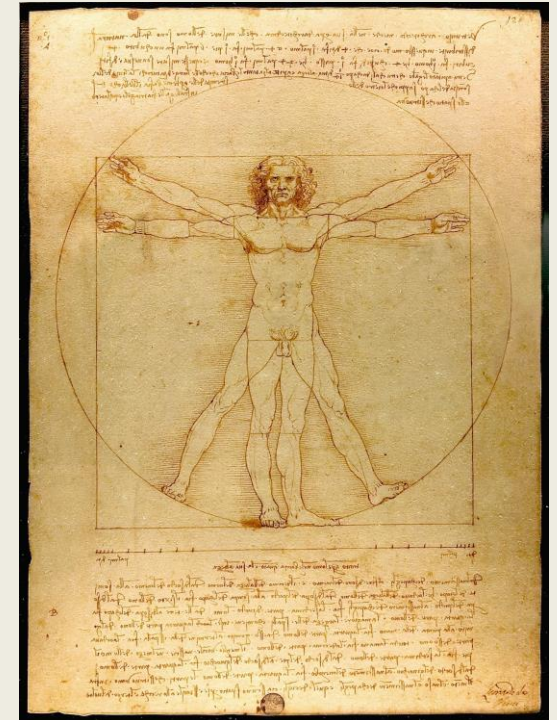
cutting

❑ Defined as “study of the structures of the body”

❑ Physiology – **study of nature**

❑ Defined as “study of functions of the structures of the body”

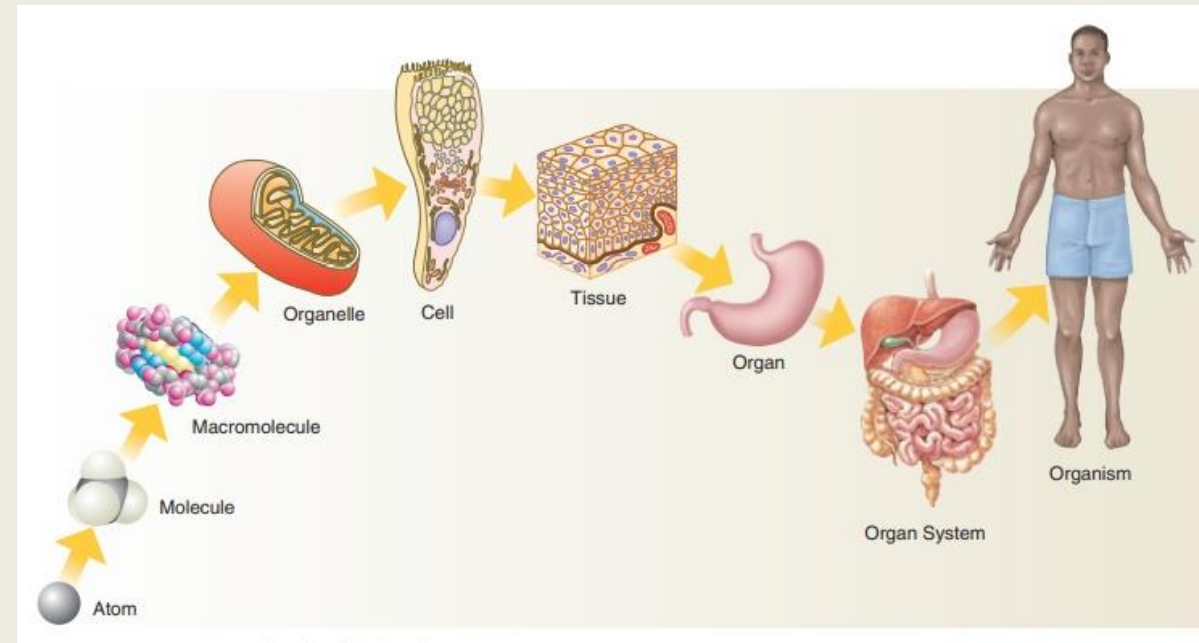
❑ Mainly deals with maintaining homeostasis



Vitruvian Man, drawing by Leonardo da Vinci, c. 1490; in the Galleries of the Academy of Venice.

STRUCTURAL ORGANIZATION OF THE HUMAN BODY

- ❑ The human body is made up of cells
- ❑ Similar type of cells are arranged into tissues
- ❑ One or more type of tissues are arranged into organs
- ❑ Several organs are organized into systems

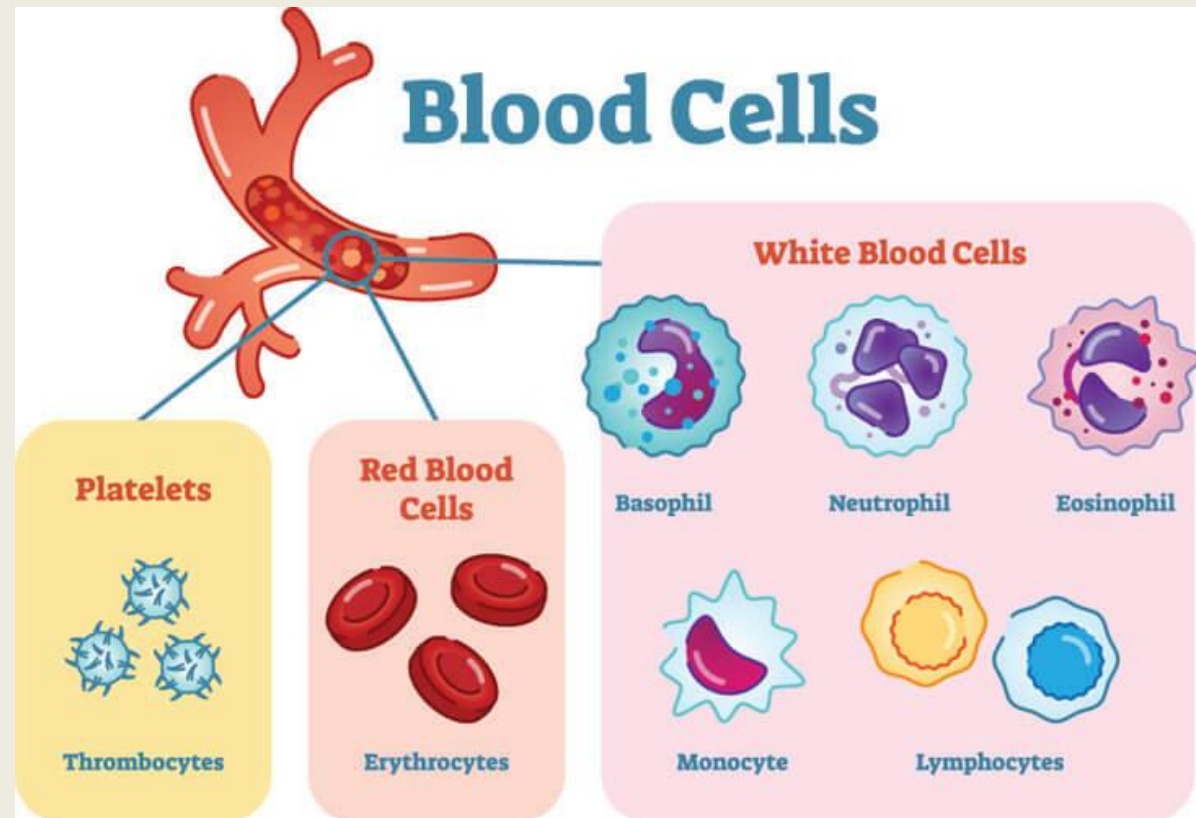


BLOOD CELLS

Three types of blood cells are present,

- i. Red blood cells (RBC's) / Erythrocytes
- ii. White blood cells (WBC's) / Leukocytes
- iii. Platelets / Thrombocytes

Produced in the bone marrow



NERVE CELLS

- ❑ Fundamental unit of the nervous system
- ❑ Known as 'neurons'
- ❑ Responsible for sending, receiving, and transmitting electrochemical signals throughout the body
- ❑ Excitable cells
- ❑ Once the cells die, they cannot be reproduced or regenerated
- ❑ Three type are present,
 - i. Motor neurons
 - ii. Sensory neurons
 - iii. Interneurons