

Chapter 17

Locomotion and Movement

- Movements of Body Parts
 - Types of Movements
- Locomotion
- Muscles
 - Structure of Contractile Proteins
- Motor Unit
 - Neuromuscular Junction
- Mechanism of Muscle Contraction
- Muscle Relaxation
 - Red and White Muscle Fibres
- Skeletal System
- Joints
- Disorders of Muscular and Skeletal System

MOVEMENTS OF BODY PARTS

Type of movement

Cells of the human body exhibit three main types of movements, which are as follows:-

- (i) Amoeboid
 - (ii) Ciliary
 - (iii) Muscular.
- i. **Amoeboid movement:** Some specialised cells in our body like macrophages and leucocytes in blood exhibit amoeboid movement. It is effected by pseudopodia formed by the streaming of protoplasm (as in Amoeba). Cytoskeletal elements like micro filaments are also involved in amoeboid movement.
 - ii. **Ciliary movement:** Ciliary movement occurs in most of our internal tubular organs which are lined by ciliated epithelium. The coordinated movements of cilia in the trachea help us in removing dust particles and some of the foreign substances inhaled along with the atmospheric air. Passage of ova through the female reproductive tract is also facilitated by the ciliary movement.
 - iii. **Muscular movement:** Movement of our limbs, jaws, tongue, etc. require muscular movement. The contractile property of muscles are effectively used for locomotion and other movements by human beings and majority of multicellular organisms.