

## DEFORMITIES OF LOCOMOTOR SYSTEM

### GENERAL CAUSES

Deformities may arise from an abnormality in the bone (e.g., a malunited fracture), joint (e.g., tuberculosis of the knee), or soft tissues (e.g., clubfoot).

These may be either congenital or acquired.

### CONGENITAL DEFORMITIES

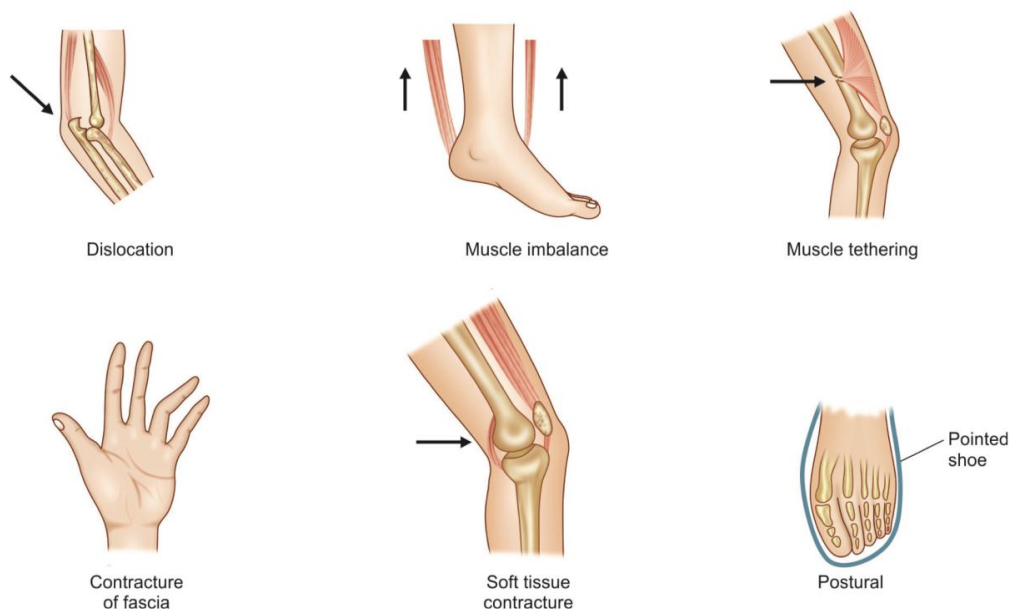
These are deformities or malformations present at birth. The underlying **causative factors** may be: (i) a genetic abnormality (e.g., diaphysial aclasis, mongolism etc.); (ii) environmental factors (e.g., phocomelia); and (iii) combined – genetic and environmental factors (e.g., congenital dislocation of the hip, clubfoot).

### ACQUIRED DEFORMITIES

Deformities acquired later in life may be divided into those arising at a joint or in a bone.

#### \*DEFORMITIES ARISING AT A JOINT

- Dislocations and subluxations: these may be traumatic or pathological.
- Muscle imbalance: All joints are spanned by two opposing groups of muscles. The muscle imbalance may arise from paralysis of a group (e.g. polio) or overactivity (e.g. spasticity in cerebral palsy).
- Tethering or contracture of muscles and tendons: e.g. tethering of the quadriceps to the femur in a fracture
- Contracture of soft tissues. e.g. Dupuytren's contracture
- Arthritis.
- Posture: e.g. is seen in women who wear narrow pointed high-heeled shoes.
- Unknown factors: genu valgum commonly seen in children, often has no cause.



Causes of deformities at joints

\*DEFORMITIES ARISING IN A BONE

- a) Fracture: This is the commonest cause of deformity of a bone.
- b) Bone diseases: Some diseases of the bone result in a softening and bending of the bones (eg: rickets, osteomalacia, Cushing's syndrome, etc).
- c) Abnormal bone growth: Bone deformity may result from uneven growth occurring at the epiphyseal plate.