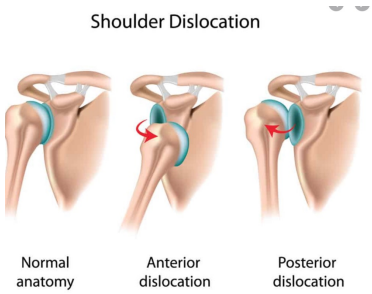
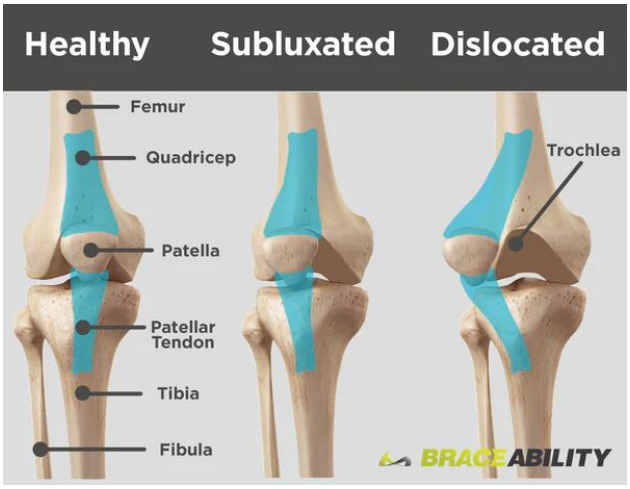
FRACTURE

Fracture: discontinuity of bone.
Dislocation: disruption of the continuity of a joint. ljoint surface are no longer in continuity"
Subluxation: partial disruption of the continuity of a joint. Joint surface are still opposed."
Fracture dislocation: dislocation together with a fracture of one or more of the bones forming the joint.





TYPES OF FRACTURES

According to Etiology

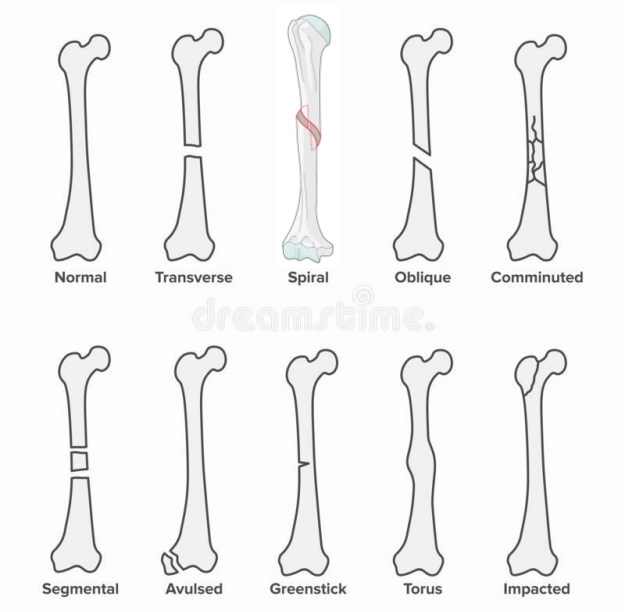
1. Traumatic fracture
2. Pathological fracture
3. Stress fracture

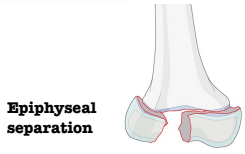
According to relation to surrounding structures

1. Closed (simple) fracture: does not communicate with the exterior environment.
2. Open (compound) facture: communicates with the exterior environment or body cavity e.g. skull fracture communicating with air sinus.
3. Complicated fracture: there is associated damage to nerve, blood vessels or internal structure.

According to Shape of Fracture Line

1. Transverse (angle < 30o).
2. Oblique (angle >30o).
3. Spiral.
4. Comminuted = > 2 fragments.
5. Double level fracture or segmental fracture.
6. Epiphyseal separation





للاطلاع Complications of Fractures

A- General:
1- Shock.
2- Fat embolism.
3- Infections.
4- Crush $.
5- Complications of prolonged recumbency.

B- Local:
1- **Skin:**
   a. Injury.
   b. Infection.
   c. Sores.
2- **Muscles & tendons:**
   a. Injury.
   b. Myositis ossificans.
3- **Blood vessels:**
   a. Acute ischemia.
   b. Compartmental $.
   c. Volkmann's Ischemic contracture.
4- **Visceral injury.**
5- **Nerve injury**
6- **Bones:**
   a. Non-union.
   b. Delayed union.
   c. Malunion.
   d. Ischemic necrosis.
   e. Growth arrest & stimulation.
   f. Shortening in LL fractures.
   g. Epiphyseal Injuries.
7- **Joints:**
   a. Sudeck's atrophy.
   b. Traumatic Ossification.
   c. Ligamentous injuries & sprain.
   d. Hemarthrosis.
   e. Intra-articular fracture.
   f. Osteoarthrosis.
   g. Dislocation & subluxation.
   h. Septic arthritis.
   i. Effusion.
   j. Post traumatic joint stiffness.

FRACTURE HEALING (video)

Phases

1- Repair by granulation tissue. " few weeks ".
2- Union of primary callus (an irregular mass of vascular bone and calcified cartilage at the site of fracture). " 2-3 months ".
3- Formation of mature bone. " 4-6 months".

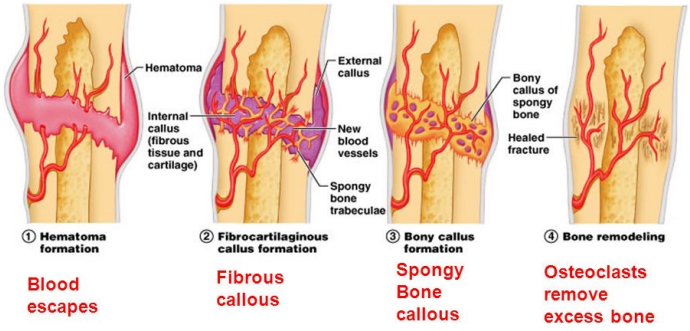


Figure 6.14

REHABILITATION

Physiotherapy & active movement .

Aims:

1-To prevent 5

- To prevent stiffening of joints.
- To prevent wasting of bones & muscles.
- To prevent osteoporosis.
- To prevent secondary syndromes.
- To prevent edema.

2- Early: to maintain the function of the uninjured parts.

3- Later: restoring function of the injured parts, once fracture healing occurs.