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Module: Musculoskeletal system (MSK)

Session No. 6

Lecture: 2

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Injuries of Joints: Fractures and Sprains

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Learning Objectives (**LO**):

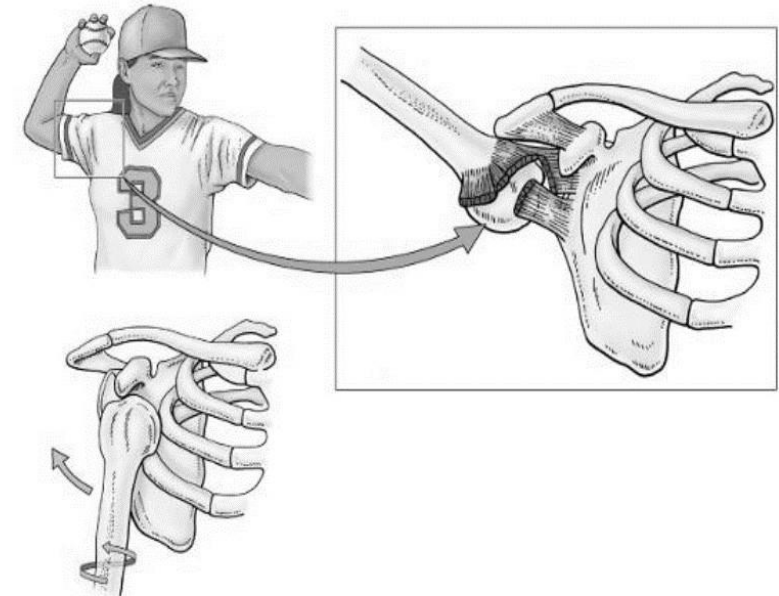
- Explain the signs and symptoms of common joint injuries
- Outline the type of investigations to determine joint injury
- Outline the soft and hard tissue injuries to joints
- Briefly explain joint dysfunction and movement disorder in common examples of such injuries, with relevance to anatomical structures of the joints.

Joint damage can be caused by injuries or diseases.

Injuries to Joints Usually happens with:

- Sports injury
- Road traffic accident (RTA)
- Fall on the ground
- Occupational activities..etc

p. 794: Dislocation of the glenohumeral joint



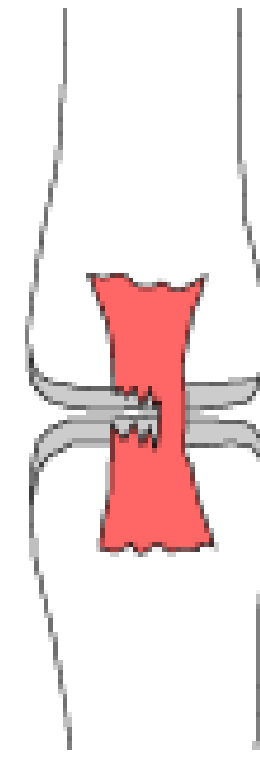


Joint injury could be to:

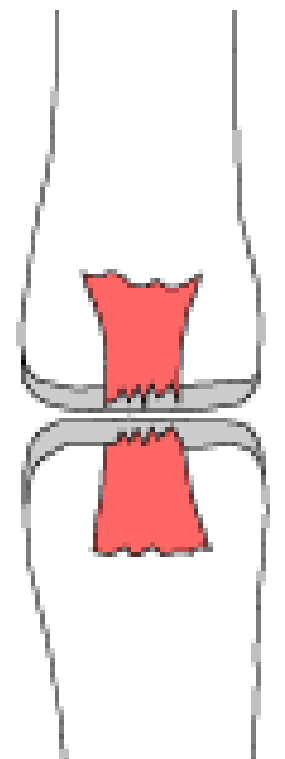
1. Injuries to **soft** tissues (e.g. muscles, tendons, ligaments, capsule, bursa, etc.) and
2. Injuries to **hard** tissues (e.g. cartilage and bone) of a joint.
3. Injury to **both** tissues

Types of soft tissue Joint injuries

- **Rupture**= **Complete** tear
- **Strain, sprain**= **Partial** tear



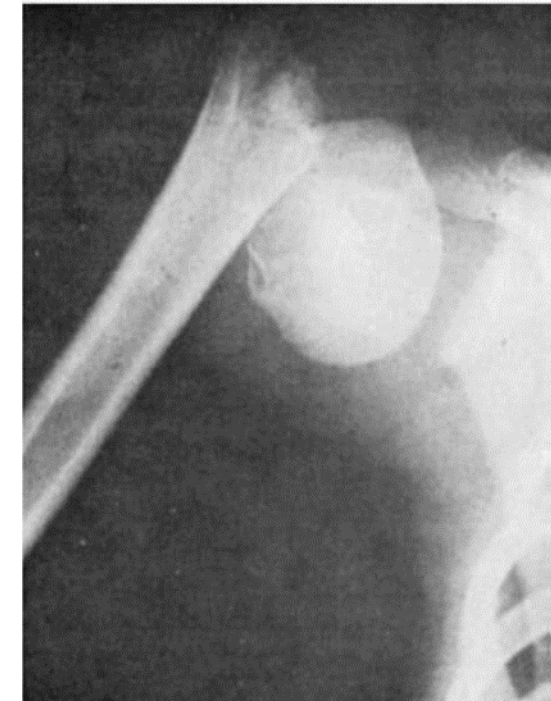
**Partial
ligament
tear**



**Complete
ligament
tear**

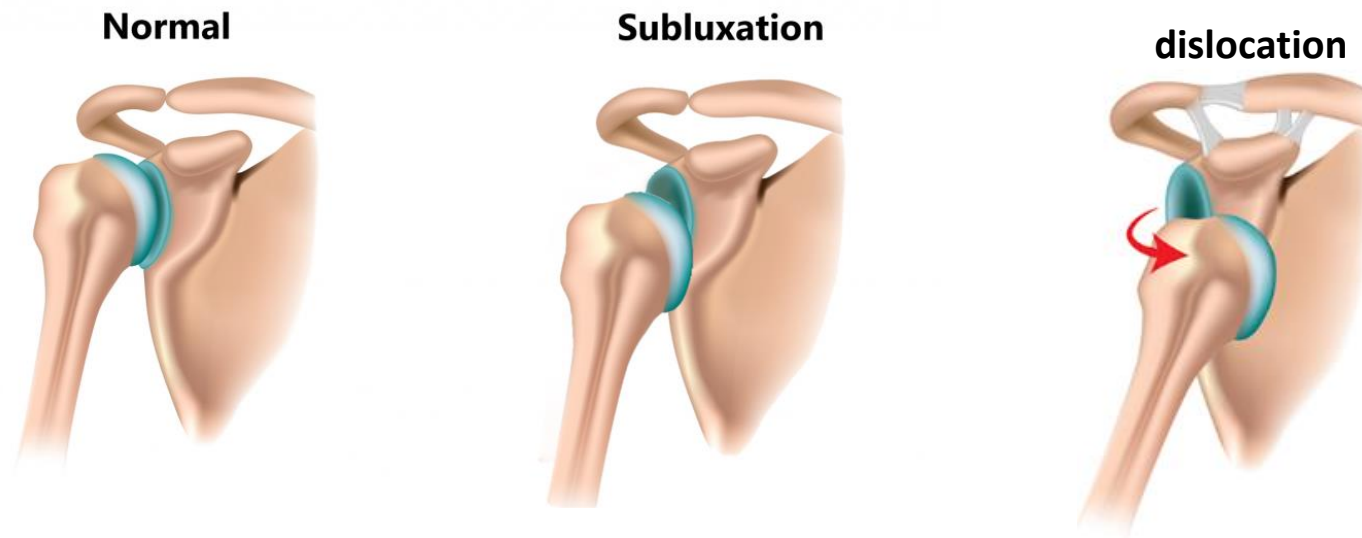
Types of bony Joint injuries

- 1. Dislocation** – disruption of joint in which normally opposing surfaces have **no contact**. (Most commonly shoulder, hip, elbow)
- 2. Subluxation** – disruption of joint in which normally opposing surfaces have **partial contact**.
- 3. Fracture** – a structural **break in the continuity** of bone. Associated with dislocation or only fracture.



Dislocation & Subluxation

- **Dislocation** – disruption of joint in which normally opposing surfaces have no contact
- **Subluxation** – disruption of joint in which normally opposing surfaces have partial Contact



Commonest Symptoms and signs associated with joint injury:

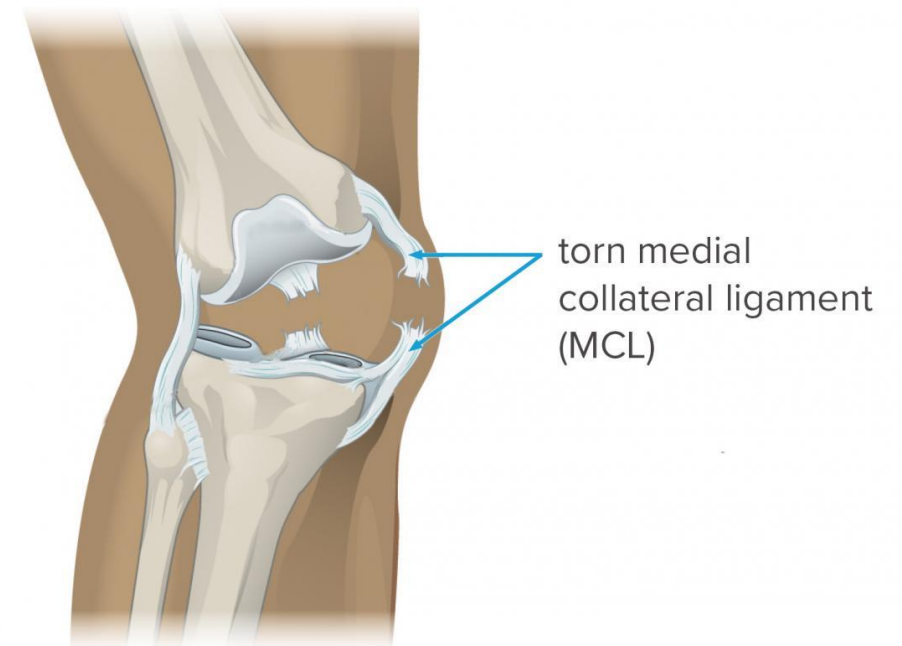
- Joint redness,
- Joint swelling,
- Joint giving way
- Joint tenderness,
- Limping
- Loss of range of motion of the joint,



Abnormal movement of injured joint

- **Complete loss** of movement: usually fracture or dislocation
- **Partial loss of** movement: usually partial injury of soft tissue
- **Excessive** movement: usually complete rupture of soft tissue

- **All of them are painful in different intensity**



Investigation of joint injuries

Imaging studies are often unnecessary:

1. **Plain x-rays** in particular reveal mainly bony abnormalities, and most joint disorders do not affect bone primarily.
2. **MRI** is the most accurate study for fractures not visible on plain x-rays and for soft tissue injury
3. **CT scan** for more details of fracture.
4. **Ultrasound examination** shows fluid collection in joint or bursa





Thank You

