

Orthopedics History & Physical



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Clinic Sitzings

❖ In the clinic sittings, we take only a brief focused history in conjugation with the physical exam

1. Brief History

- Patient profile (mainly name, sex, age)
- Chief complain
- History of presenting illness (Mechanism of injury (in traumas), Risk factors)
- Past medical and surgical history
- Drugs and allergies
- Social history (mainly smoking)

2. Physical exam (Mnemonic: **L**azy **F**at **M**ice **S**andwich)

- **L**ook → **F**eel → **M**ove → **S**pecial tests



Clinic Settings

3. Imaging

- X-ray (The first modality to order)
 - Rule of 2s
 - 2 Absolute: 2 views, 2 joints
 - 2 Relative: 2 times (pre and post reduction, scaphoid bone (at the time of the fracture and after 10 days)), 2 limbs (for compression)
- CT scan (main indications)
 - When the X-rays are not sufficient for the diagnosis
 - In articular surface involvement
- MRI (main indications)
 - Soft tissue involvement
 - Neural tissue involvement
 - In some fractures when the x-rays are non-exclusive (scaphoid bone fracture)

Rounds history

❖ During the clinical rounds, we take a full history in conjugation with the physical exam

1. Detailed History

- Patient profile (Name, Age, Sex, Marital state, address)
- Chief complain
- History of presenting illness (Mechanism of injury, risk factors)
- Systemic review
- Past medical, past surgical, drugs, allergies, family history, social history

2. **Physical exam** (The same steps as mentioned earlier)

3. **Imaging** (discussed earlier)

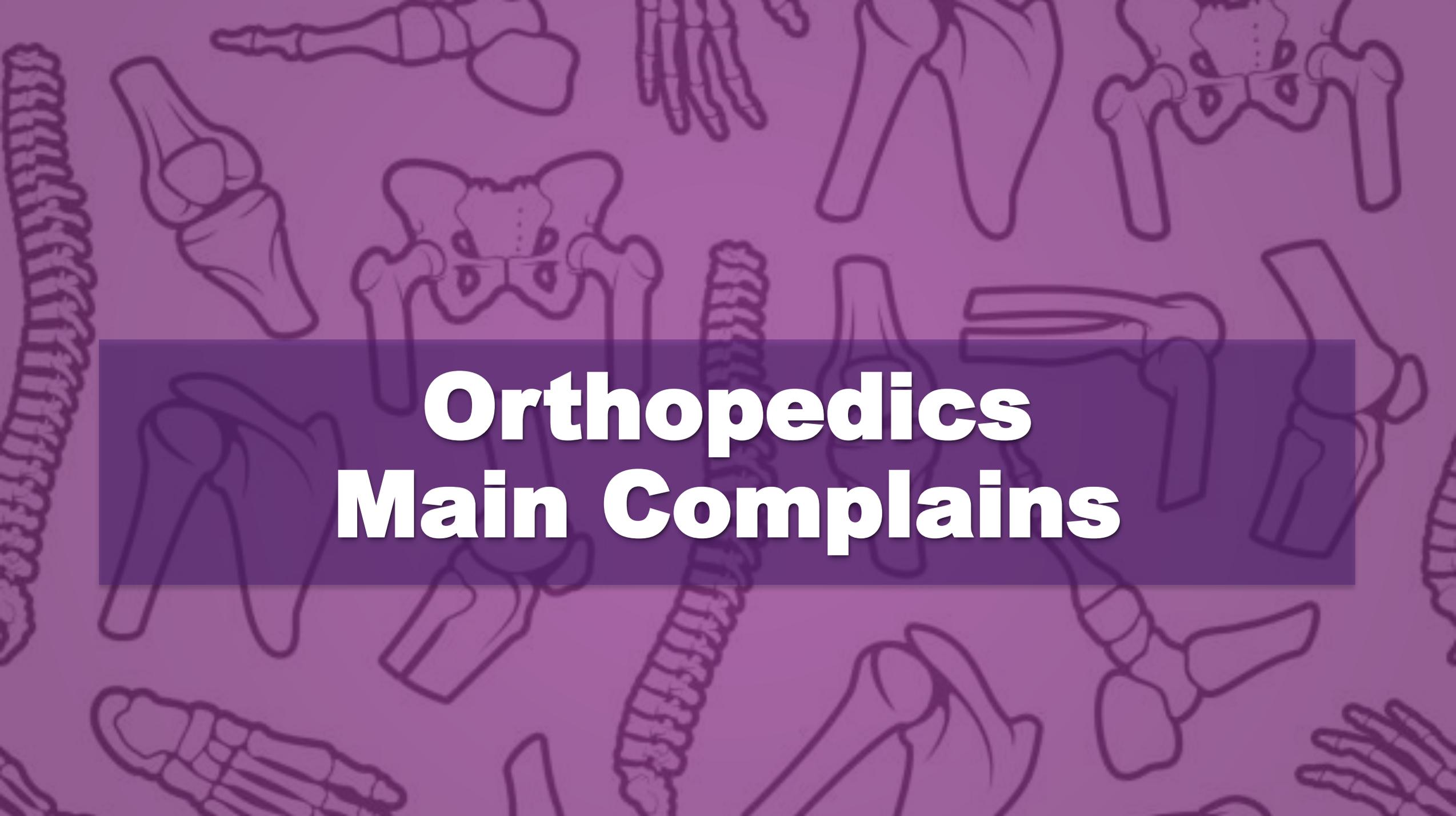
Polytraumatic patient approach

❖ **Polytraumatic patient** are patients with multiple traumas in multiple systems (e.g., Head injury + Ribs fractures + Liver laceration, Femur fracture)

❖ These patient are usually unstable and require ATLS approach

OVERSIMPLIFIED

1. **A**irway and **c**ervical spine,
2. **B**reathing,
3. **C**irculation
4. **D**isability (neurological status))
5. 2 large bore cannula → Blood cross match and start IV fluid (Lactated rigor or normal saline)
6. **E**xposure (a rapid whole-body inspection to avoid missing signs or injuries that impact management)
7. Clean wounds, splint fractures and give analgesia



Orthopedics Main Complains

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1. Pain
2. Stiffness
3. Swelling
4. Deformity
5. Instability
6. Weakness
7. Altered sensibility
8. Loss of function

Orthopedics Main Complains

❖ Pain

- **The most common symptom**
- Its precise location is important, so ask the patient to point to where it hurts
- Don't assume that the site of pain is always the site of pathology
 - Pain arising in or near the skin is usually localized accurately.
 - Pain arising in deep structures is more diffuse and is sometimes of unexpected distribution (Hip pathology in children causes knee pain rather than hip pain)

❖ Stiffness

- Stiffness may be generalized (e.g., Osteoarthritis) or localized to a particular joint
- **'Locking'**: is a term used to describe the sudden inability to complete a certain movement; it suggests a **mechanical block**

Orthopedics Main Complains

❖ Swelling

- Swelling may be in the soft tissues, the joint or the bone, thus we have to distinguish between them
 - Did it follow an injury ?
 - Did it appear rapidly (probably a haematoma or a haemarthrosis) or slowly (soft tissue inflammation or a joint effusion) ?
 - Is it painful ?
 - Is it constant or comes and go ?
 - Is it increasing in size ?

❖ Deformity

- Some 'deformities' are merely variations of the normal (e.g., short stature or wide hips); others disappear spontaneously with growth (e.g., flat feet)
- However, if the deformity is progressive, or if it appears on only one side of the body, it may be serious.

Orthopedics Main Complains

❖ Weakness

- Generalized weakness is a feature of all chronic illness
- Any prolonged joint dysfunction will inevitably lead to weakness of the associated muscles
- Weakness affecting a single group of muscles suggests a more specific neurological disorder

❖ Instability

- The patient complains that the joint **'gives way'** or 'jumps out'. If this happens repeatedly it suggests ligamentous deficiency, recurrent subluxation or some internal derangement such as a loose body
- **Note:** Locking and giving way are called mechanical symptoms and are commonly seen in ligamentous injuries of the knee

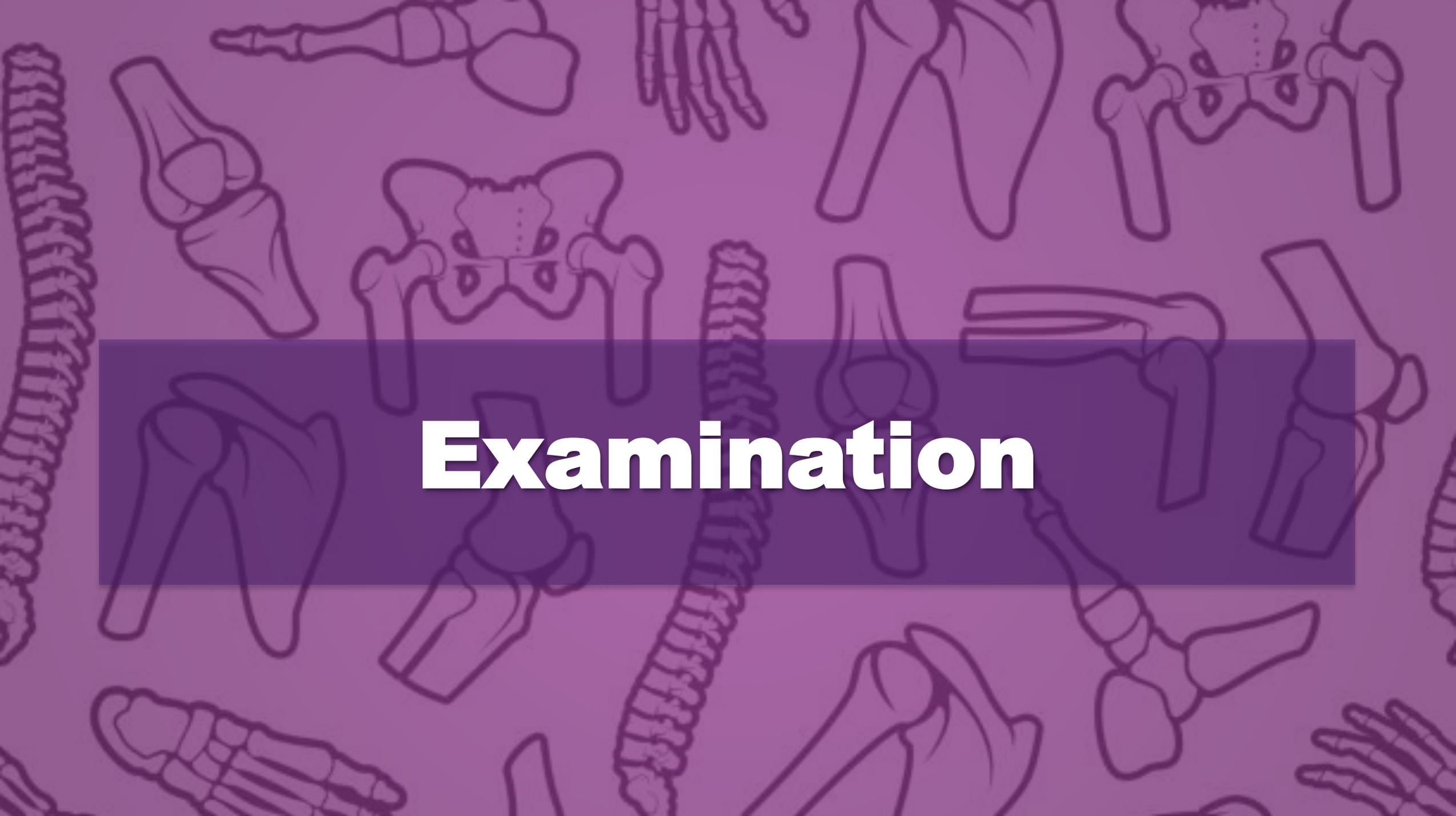
Orthopedics Main Complains

❖ Change in sensibility

- Tingling or numbness signifies interference with nerve function due to
 - Pressure from a neighboring structure (e.g., A prolapsed intervertebral disc)
 - Local ischemia (e.g., Nerve entrapment in a fibro-osseous tunnel)
 - Peripheral neuropathy

❖ Loss of function

- Functional disability is more than the sum of individual symptoms and its expression depends upon the needs of the patient

The background features a repeating pattern of white line-art illustrations of various human bones and joints, including the spine, skull, pelvis, and limbs, set against a solid purple background. A dark purple horizontal band is centered across the image, containing the word "Examination" in white text.

Examination

Examination

❖ Physical exam (Mnemonic: **L**azy **F**at **M**ice **S**andwich)

- Look → Feel → Move → Special tests



❖ Look

- First at the patient's general shape, posture and gait, noting any obvious deformity
- Then, with noteworthy areas suitably exposed, **at the skin**: are there any old scars?
- Then at the **local shape**: is there swelling, wasting, a lump or some local deformity?
- Then at the **local posture**: nerve lesions may cause characteristic changes in normal posture.

Examination

❖ Feel

- **Vascular assessment:** Temperature, Pulse, Capillary refill
- **Neurological assessment:** Sensation
- **The bones and joints:** are the outlines normal? Is there excessive fluid in the joint?
- Local tenderness

❖ Move

- **Active movement:** ask the patient to move the joint and test for power.
- **Passive movement:** here it is the examiner who moves the joint in each anatomical plane. The range of movement should be expressed in degrees, starting from zero which is the neutral or anatomical position of the joint. Note whether movement is painful and whether it is associated with crepitus.
- If the active movement is completely normal no need to test passive

Examination

❖ Special maneuvers

- One of the most telling clues to diagnosis is reproducing the patient's symptoms by applying a specific, **provocative movement**. E.g., shoulder pain due to impingement of the subacromial structures may be 'provoked' by moving the joint in a way that is calculated to produce such impingement; the patient recognizes the similarity between this pain and his or her daily symptoms.
- Likewise, a patient who has had a previous dislocation can be so vividly reminded of that event, by stressing the joint in a way that it again threatens to dislocate, that he or she goes rigid with anxiety at the anticipated result – this is aptly called the **apprehension test**