

Lec:1

Introduction to musculoskeletal system

What is the musculoskeletal system?

is an organ system that gives humans the ability to move using their muscular and skeletal systems.

What are the components?

Bones, muscles, cartilage, tendons, ligaments, joints.

What are the functions?

- *Body movement.
- *Shape of the body.
- *Support and protection.
- *Produces blood for the body.
- *Stores minerals (calcium & phosphorus).

Relation with other systems?

Because many other body systems, including the vascular, nervous, and integumentary systems, are interrelated, disorders of one of these systems may also affect the musculoskeletal system and complicate the diagnosis of the disorder's origin.

Approach to patient with locomotor disease

1-History: Items of diagnostic significance (and related primarily to pain) include:

1. Date of onset and type of onset (suddenly or slowly).
2. Location: (joints, muscles, soft tissues)
3. Presence of swelling (before and now)
4. Present status (better, same or worse).
5. Previous condition.
6. Morning stiffness: Generalized that last for > 30 minutes (inflammatory arthritis).

2-Physical examination:

Recommended sequence:

Patient in sitting position inspect and palpate all of these structures:

*Upper limbs: Hands, Wrists, Elbows, Shoulders.

* Neck and upper back.

*Lower limbs: Hips, Knees, Ankles, Feet.

Patient in standing position:

* Lower back movement, * Popliteal regions, * Calves, * Arches of the Feet, * Stance الوقوف and gait المشي.

3-Investigation:

*X-ray *CT scan *MRI *Joint fluid samples *Electromyography

*DEXA Scan (Dual-energy X-ray absorptiometry), A DEXA scan measures the density of bones.