



Al-Maarif University College Department of Nursing Medical Terminology

Stage -1- Medical Terms of the Musculoskeletal System Lec. 6

1

Assit.Lacturer Abdulrahman

2024

In this presentation we will learn:

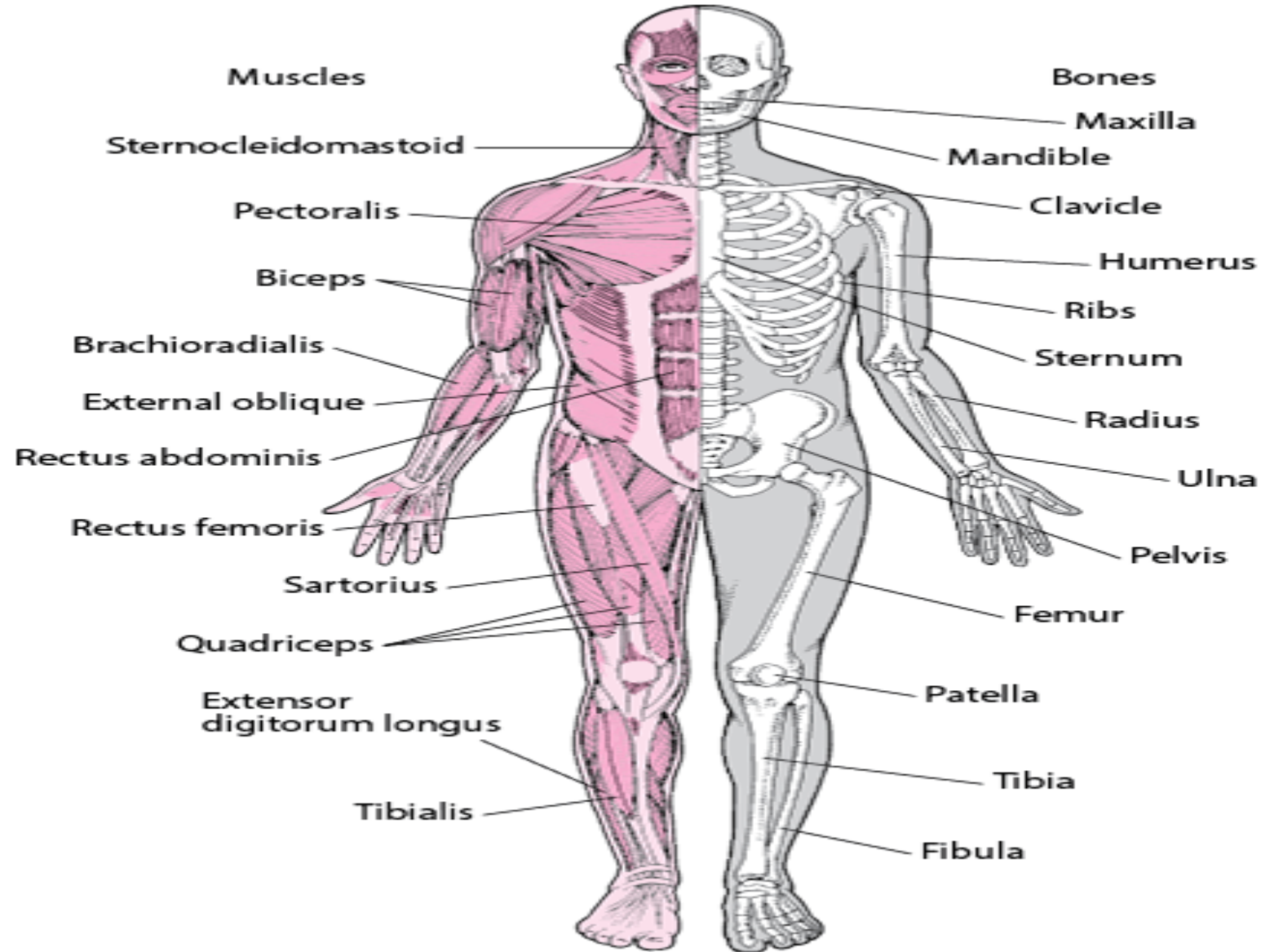
2

- **Word Root and Combining Vowel for the Musculoskeletal System**
- **Musculoskeletal system specific suffixes and prefixes**
- **Musculoskeletal Specialties**
- **The Structure and Functions of the Skeletal System**
- **The Structure and Functions of the Muscular System**
- **Procedures of the Musculoskeletal System**
- **Diseases and Conditions of the Musculoskeletal System**



Word Root and Combining Vowel for the Musculoskeletal System

3



Root/Prefix/ Suffix	Definition/Meaning
Arthro(o), Articular-	joint
Spondyl(o)	vertebra
Chondr(o)	cartilage
Ortho-	feet
Physis-	Growing
Crani(o)	skull
Oste(o), Osteo-, oste-	bone
Cost(o)	rib

Musculoskeletal Specialties

5



MEDICAL SPECIALTIES

ORTHOPEDICS

ORTHOPEDIC SURGEON

ORTHOPEDIC SURGERY

ORTHOPEDIST

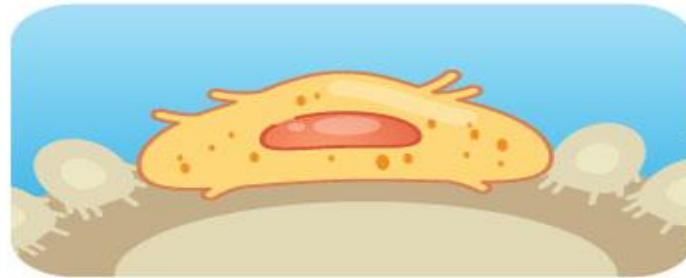
Term	Definition
Orthopedics	<ul style="list-style-type: none">▪ Ortho- means normal, straight or to correct.▪ Pedic, -pedal means feet▪ A medical specialty that treats disorders involving the musculoskeletal system.
Orthopedist	<ul style="list-style-type: none">▪ Ortho- means normal, straight or to correct.▪ A physician that specializes in the treatment of the musculoskeletal system.
Orthopedic Surgery	<ul style="list-style-type: none">▪ Ortho- means normal, straight or to correct.▪ Surgery means to treat an illness or deformity.▪ A branch of medicine that specializes in the treatment of the musculoskeletal system and operative procedures.
Orthopedic Surgeon	<ul style="list-style-type: none">▪ Ortho- means normal, straight or to correct.▪ Surgeon is a physician who treats disease and injuries using operative procedures.▪ A physician that specializes in the musculoskeletal system and performs operative procedures.

The Structure and Functions of the Skeletal System

7



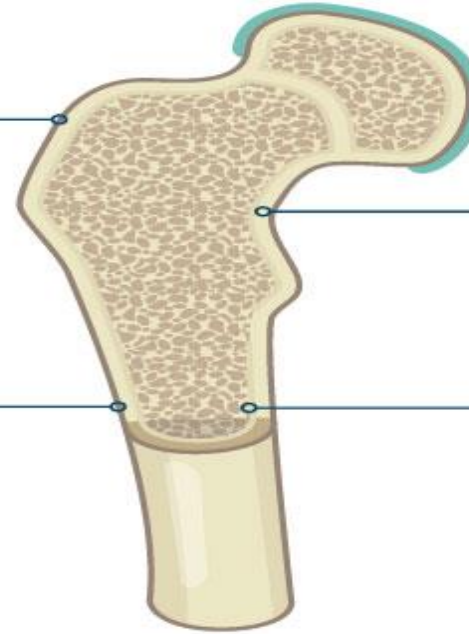
Bone Cell Types



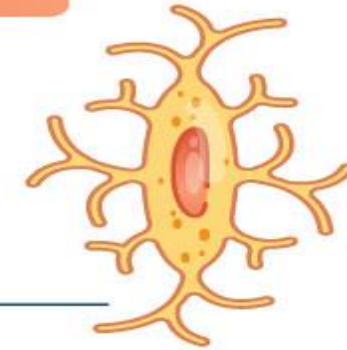
Osteogenic Cell
Stem Cells - Develops into an Osteoblast



Osteoblast
Forms Bone Tissue



BONE



Osteocyte
Maintains Bone Tissue



Osteoclast
Functions in Resorption, the Destruction of Bone Matrix



Osteogenic Cell



Osteoblast



Osteocyte

Term	Definition/Meaning
Axial skeleton	<ul style="list-style-type: none">○ Axi- means axis.○ Axis is a line that passes through the center of the body.○ Axial refers to the axis of the body.○ The axial skeleton includes the skull, vertebrae, ribs and sternum. These bones form the axis of the skeleton.
Osteogenesis	<ul style="list-style-type: none">○ Osteo-, oste- means bone.○ -gene means that which generates.○ Osteogenesis is the development of bone tissue.
Fibrous joint	<ul style="list-style-type: none">○ -fibrous means composed of fibrous tissue.○ Fibrous joints are slightly movable joints in which a fibrous tissue connects the bones. Fibrous joints are found in the skull.
Osteoblast	<ul style="list-style-type: none">○ Osteo-, oste- means bone.○ A blast is a cell capable of building tissue.○ -blast means embryonic state of development.○ Osteoblasts are the cells that lay down and secrete new bone cells for the formation of the bone.
Osteoclast	<ul style="list-style-type: none">○ -clast means something that breaks, causing disintegration.○ Osteoclasts are the major bone cells that dissolve, digest and reabsorb bone.
Osteocytes	<ul style="list-style-type: none">○ Cyt- means cell.○ The osteocytes are bone cells responsible for the maintenance of the bone matrix. Osteocytes include the osteoblast and osteoclast.

Procedures of the Musculoskeletal System

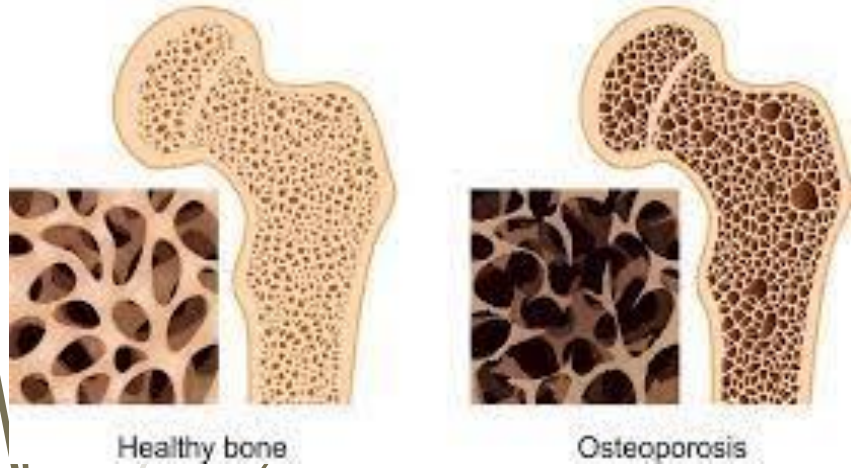


Term	Definition/Meaning
Arthrocentesis	<ul style="list-style-type: none">○ Arthro- means joints or articulation.○ -centesis means surgical puncture as to aspirate or remove fluid.○ An arthrocentesis uses a needle to puncture a joint to withdraw fluid. This procedure is used to obtain samples of the synovial fluid to diagnose a condition.
Arthrography	<ul style="list-style-type: none">○ Arthro- means joints or articulation.○ -graphy means the process of recording.○ Arthrography is a method that uses radiography to visualize inside a joint. Also this method uses radiopaque contrast medium.
Arthroplasty	<ul style="list-style-type: none">○ Arthro- means joints or articulation.○ -plasty means surgical repair.○ The use of surgery to restore mobility to a painful joint or one with degenerative disease by reconstruction or replacement.
Arthroscopy	<ul style="list-style-type: none">○ Arthro- means joints or articulation.○ -scopy means visual examination with a lighted instrument.○ The use of an endoscope inserted into a small incision to visualize and examine the inside of a joint.

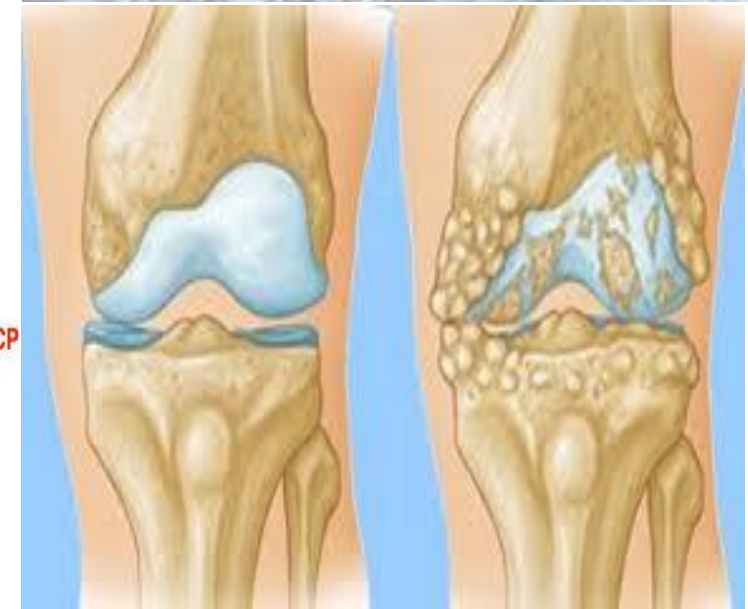
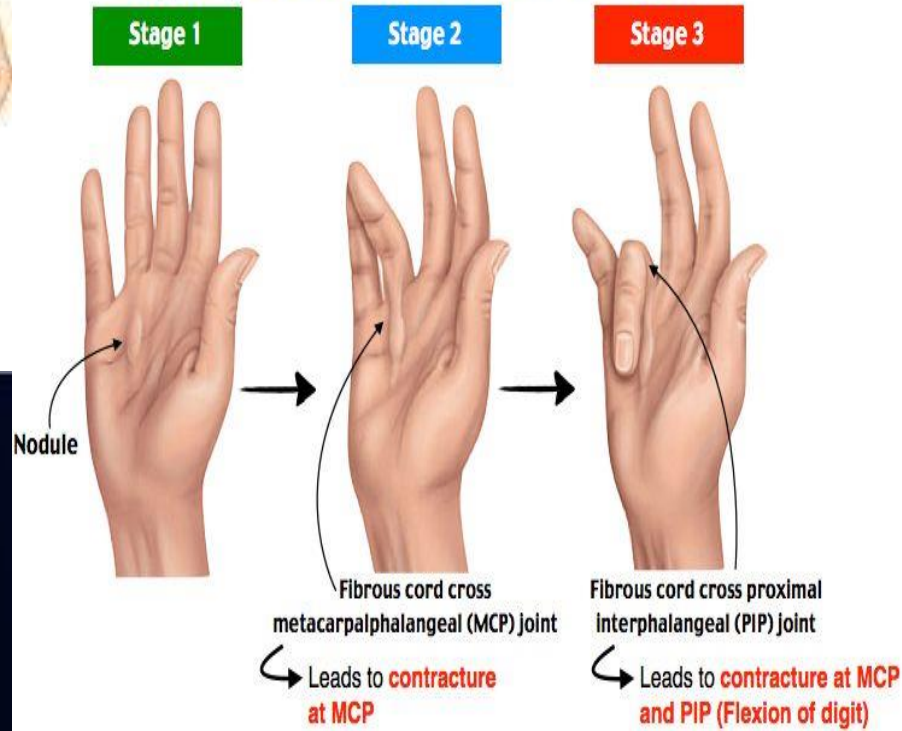
Term	Definition/Meaning
Electromyography (EMG)	<ul style="list-style-type: none">○ Electro- refers to electrical○ Myo- refers to muscle○ -graphy is the process of recording.○ An electromyography is method used to measure the action potential of muscle.
Bone densitometry or Dual-energy absorptiometry (DEXA)	<ul style="list-style-type: none">○ Bone is a connective tissue that is dense, hard and makes up the framework of the human skeleton.○ Densitometry is a method of measuring bone density.○ A bone densitometry is a method of determining the mass of the bone by measuring the absorption of radiation by the skeleton.

Diseases and Conditions of the Musculoskeletal System

Osteoporosis



Dupuytren's Contracture



Term	Definition/Meaning
Atonic	<ul style="list-style-type: none">○ A- refers to no, not, without, away.○ -tonic refers to the quality of the muscle tone or muscle contraction.○ Atonic refers to lacking normal tone as in a muscle that is flaccid.
Atrophy	<ul style="list-style-type: none">○ A- refers to no, not, without, away.○ -trophy refers to having an affinity for.○ Atrophy in a muscle is a decrease in the size or activity as a result of a lack of physical exercise or some type of neurological or musculoskeletal disease.
Dislocation	<ul style="list-style-type: none">○ Dislocation is the displacement of a part of the body from its original position.
Flaccid	<ul style="list-style-type: none">○ Flaccid means limp and without tone such as a muscle that is weak, flabby and lacking normal tone.
Myalgia	<ul style="list-style-type: none">○ My- refers to muscle.○ -algia refers to pain.○ Myalgia is muscle pain.
Osteoarthritis	<ul style="list-style-type: none">○ Oste(o) refers to bone.○ Arthritis refers to inflammation of the joints.○ Osteoarthritis is a form of arthritis in which one or several joints undergo degenerative changes.

Term	Definition/Meaning
Fibromyalgia	<ul style="list-style-type: none">○ Fibr(o) refers to fiber.○ My- refers to muscle.○ -algia refers to pain.○ Fibromyalgia is a form of rheumatism characterized by musculoskeletal pain, spasms, stiffness, fatigue, and sleep disturbance.
Fracture	<ul style="list-style-type: none">○ A fracture is a traumatic injury to the bone in which the normal continuity of the bone has been disrupted.
Lordosis	<ul style="list-style-type: none">○ Lord(o)- refers to bent forward○ -osis refers to condition○ Lordosis is an abnormal condition of the vertebral column in which there is an increase in concavity in the lumbar spine.
Scoliosis	<ul style="list-style-type: none">○ Scolio- refers to twisted or crooked.○ -osis refers to a condition.○ Scoliosis is an abnormal condition of the vertebral column in which there is a lateral curvature of the spine.

Thank You & Good Luck

