



# **SNS COLLEGE OF NURSING SARAVANAMPATTI ,COIMBATORE.**

**DEPARTMENT OF NURSING**

**COURSE NAME : BSC (NURSING) I YEAR**

**SUBJECT : ANATOMY AND PHYSIOLOGY**

**UNIT: MUSCULOSKETELAL SYSTEM**

**TOPIC : APPENDICULAR SKELETON**



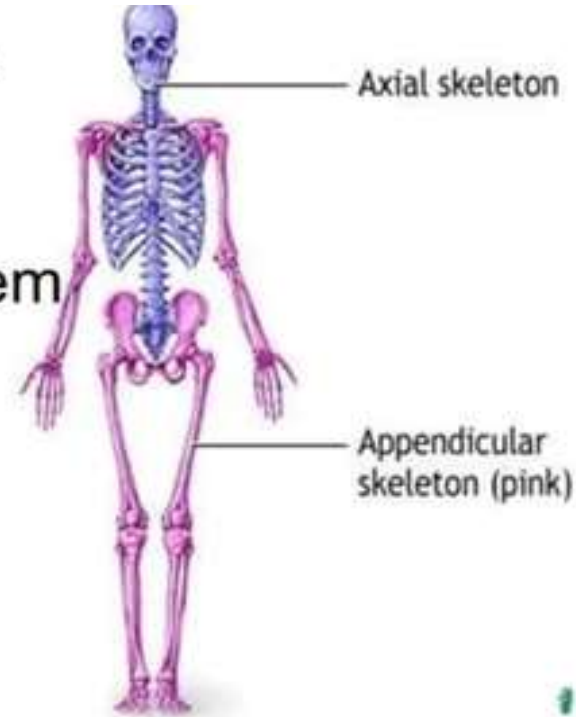
# INTRODUCTION



- The Skeletal system is an important component of the human body.
- The bones and muscles give the shape, size and outlook of the person.
- The bones have their own type of cells, function and remodelling nature.
- Various types of bones are present throughout the body.

# THE SKELETAL SYSTEM

- ❑ Divided into two divisions
  - Axial skeleton
  - Appendicular skeleton
- ❑ Parts of the skeletal system
  - Bones (skeleton)
  - Joints
  - Cartilages
  - Ligaments





# APPENDICULAR SKELETON



- Limbs (appendages)
- Pectoral girdle
- Pelvic girdle

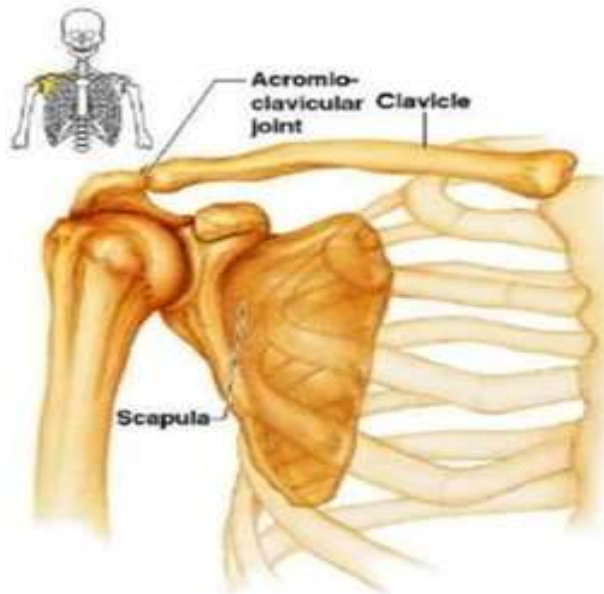


# SHOULDER GRIDLE

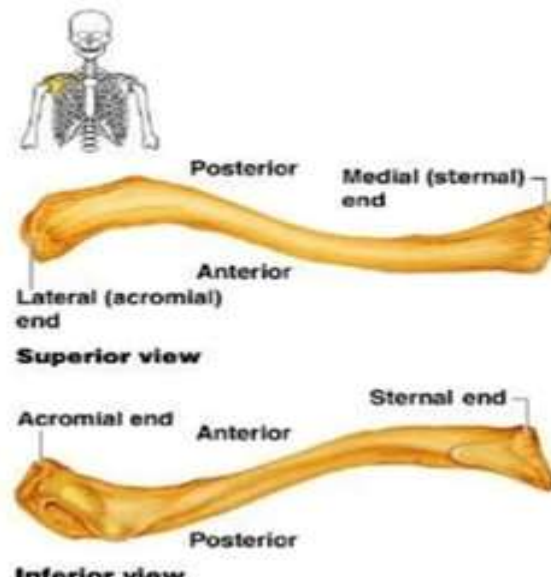


- Composed of two bones
  - Clavicle – collarbone
  - Scapula – shoulder blade
- These bones allow the upper limb to have exceptionally free movement

# SHOULDER GRIDLE



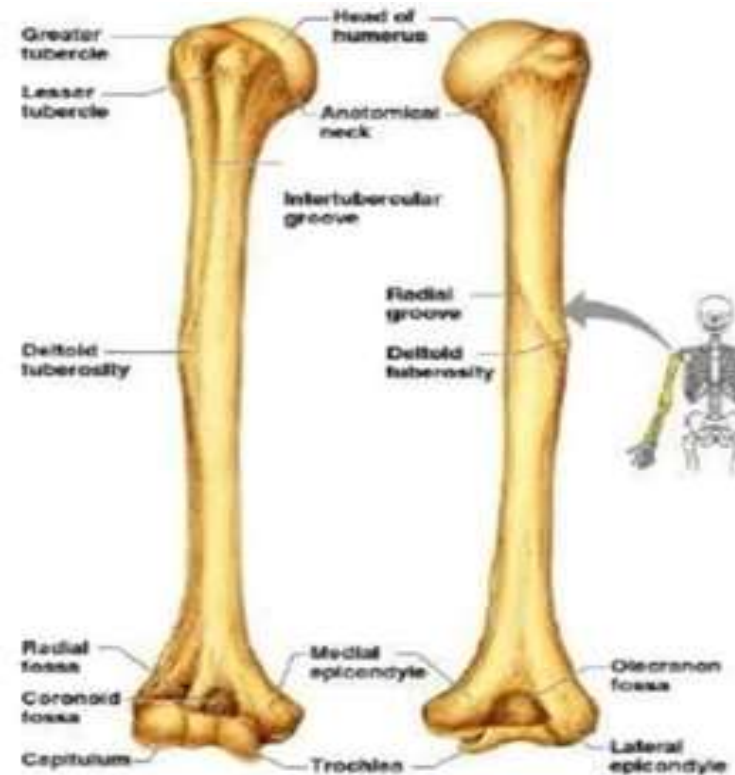
**(a) Articulated pectoral girdle**



**(b) Right clavicle**

# BONES OF UPPER LIMB

- The arm is formed by a single bone
- Humerus





# BONES OF UPPER LIMB



- ❑ Short bones
  - Generally cube-shape
  - Contain mostly spongy bone
    - Examples: Carpals, tarsals





# BONES OF UPPER LIMB

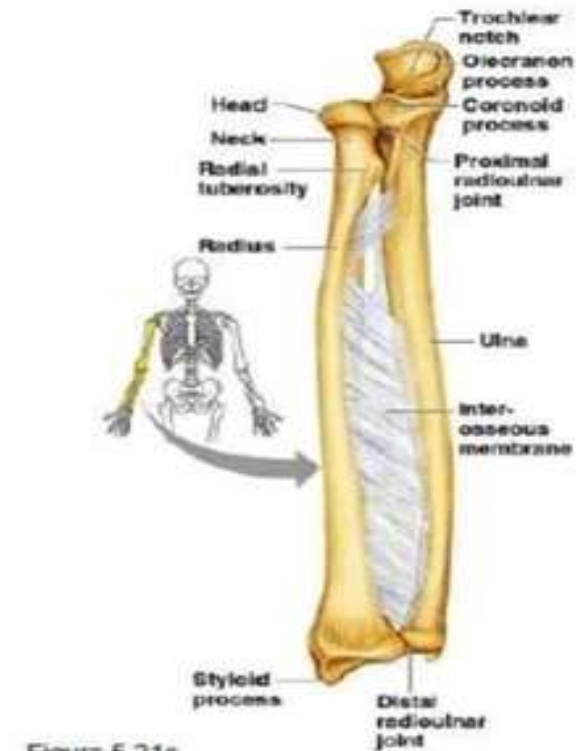


## □ Flat bones

- Thin and flattened
- Usually curved
- Thin layers of compact bone around a layer of spongy bone
  - Examples: Skull, ribs, sternum

# BONES OF UPPER LIMB

- The forearm has two bones
  - Ulna
  - Radius



# BONES OF UPPER LIMB

- The hand
  - Carpals – wrist
  - Metacarpals – palm
  - Phalanges – fingers



Figure 5.22



# BONES OF THE PELVIC GRIDLE

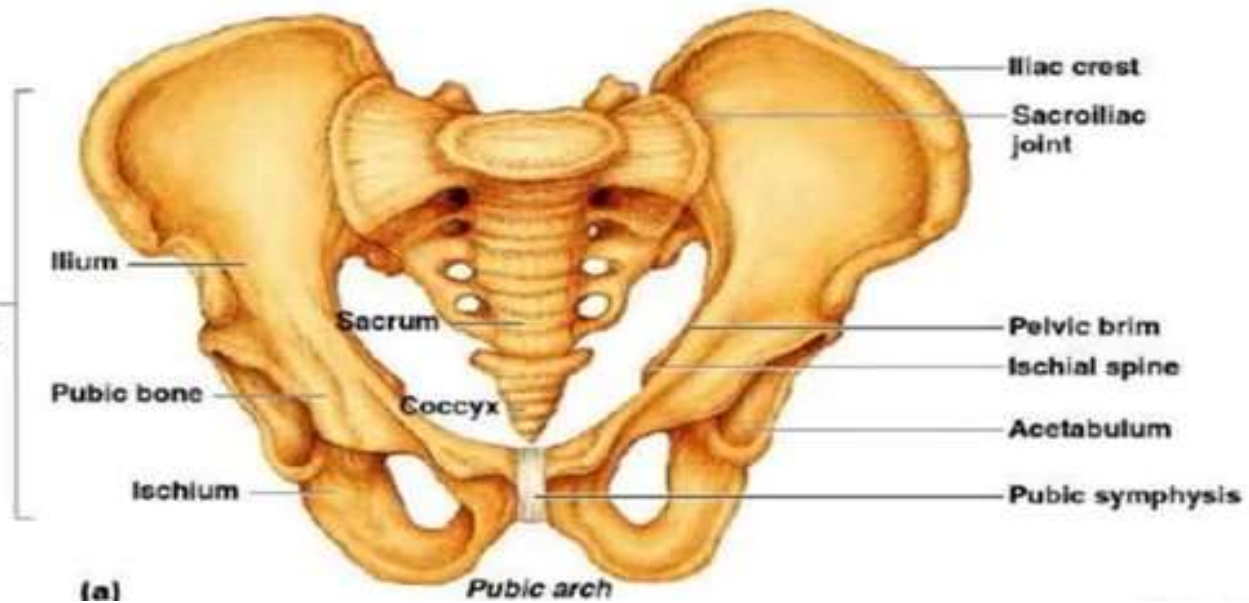


- Hip bones
- Composed of three pair of fused bones
  - Ilium
  - Ischium
  - Pubic bone
- The total weight of the upper body rests on the pelvis
- Protects several organs
  - Reproductive organs
  - Urinary bladder
  - Part of the large intestine

# PELVIC GRIDLE



Coxal bone  
(or hip bone)



# GENDER DIFFERENCES OF PELVIS

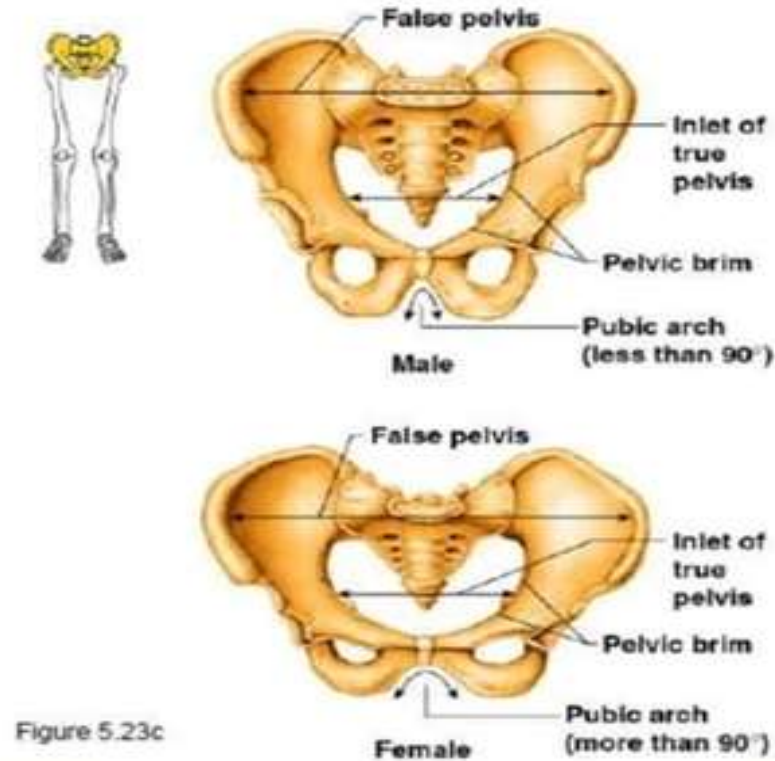


Figure 5.23c

# BONES OF LOWER LIMB

- The thigh has one bone
- Femur – thigh bone

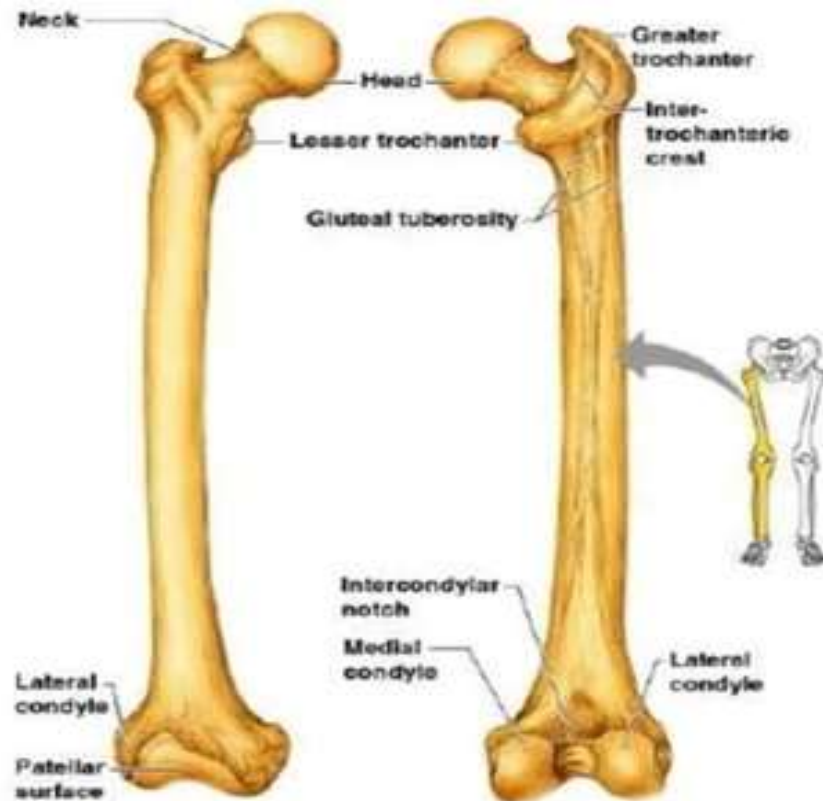


Figure 5.35a, b

# BONES OF LOWER LIMB

- The leg has two bones
  - Tibia
  - Fibula

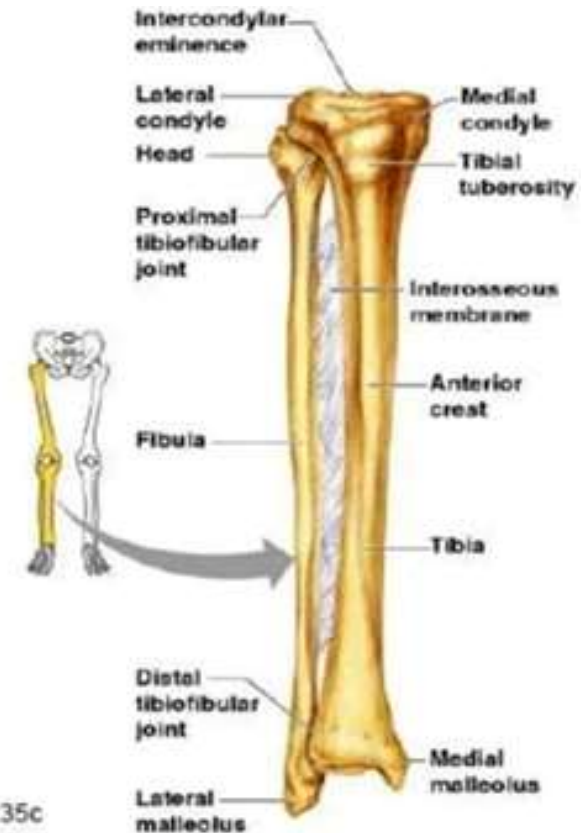


Figure 5.35c



# BONES OF LOWER LIMB

- The foot
  - Tarsus – ankle
  - Metatarsals – sole
  - Phalanges – toes





# JOINTS



- Articulations of bones
- Functions of joints
  - Hold bones together
  - Allow for mobility
- Ways joints are classified
  - Functionally
  - Structurally



# FUNCTIONAL CLASSIFICATION



- Synarthroses – immovable joints
- Amphiarthroses – slightly moveable joints
- Diarthroses – freely moveable joints



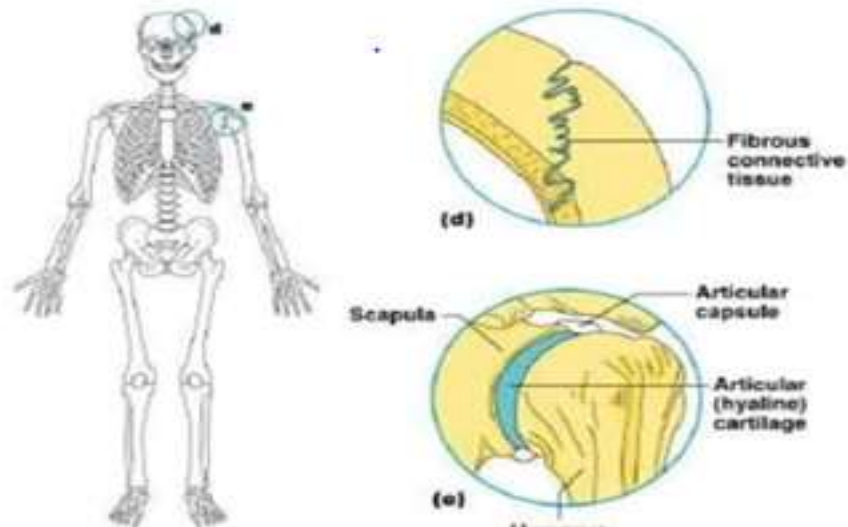
# STRUCTURAL CLASSIFICATION OF JOINTS



- Fibrous joints
  - Generally immovable
- Cartilaginous joints
  - Immovable or slightly moveable
- Synovial joints
  - Freely moveable

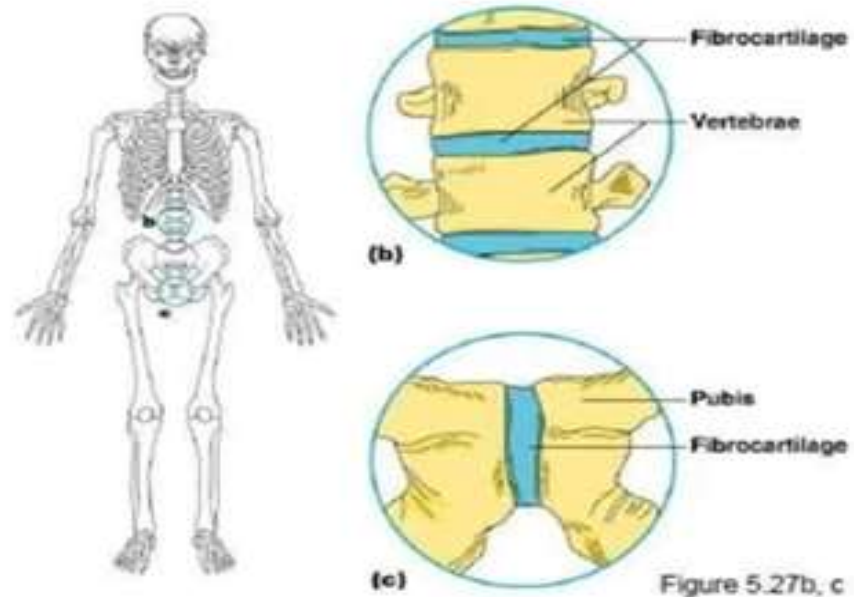
# AXIAL SKELETON

- Bones united by fibrous tissue – synarthrosis or largely immovable.



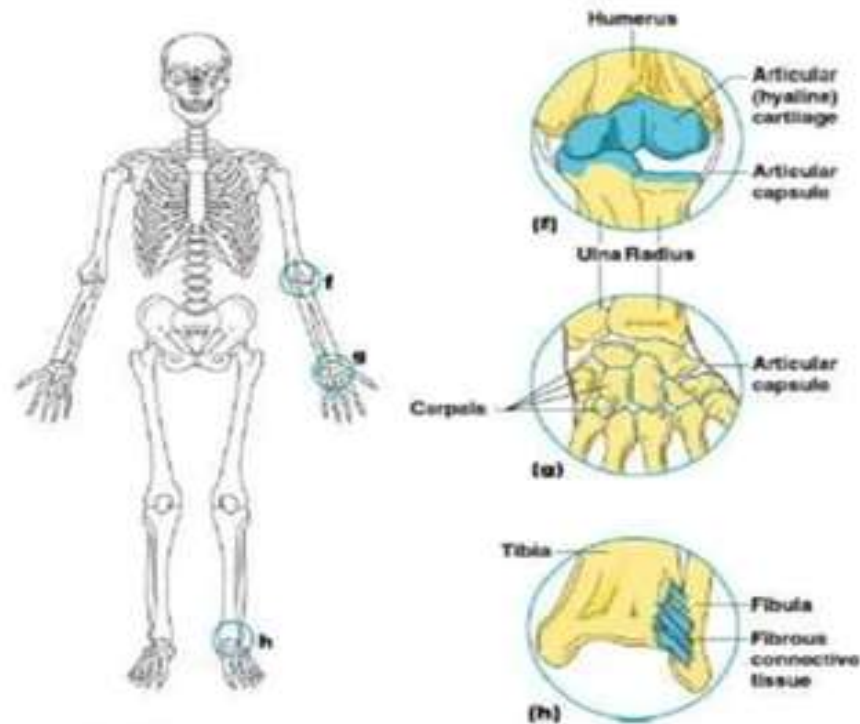
# THE SKULL

- Bones connected by cartilage
- Examples
  - Pubic symphysis
  - Intervertebral joints



# SYNOVIAL JOINT

- Articulating bones are separated by a joint cavity
- Synovial fluid is found in the joint cavity





# CRANIUM







# CRANIUM





# SKULL BONE





# PARANASAL SINUSES





# PARANASAL SINUSES





# HYOID BONE





# STRUCTURE OF VERTERBRA





# RIB CAGE



