

Bones: Mnemonics, Facts to Remember

Mnemonics (Lower Limb Bones)

1. Tarsal Bones (7)

Mnemonic: ? “Tiger Cubs Need MILC”

? **T**alus, **C**alcaneus, **N**avicular, **M**edial cuneiform, **I**ntermediate cuneiform, **L**ateral cuneiform, **C**uboid.

2. Tarsal Bones – Order of Ossification

Mnemonic: ? “Come To Life Next Month In College”

? **C**alcaneus (6th month IU), **T**alus (7th month IU), **L**ateral cuneiform (1st year), **N**avicular (3–4 years), **M**edial cuneiform (2 years), **I**ntermediate cuneiform (3 years), **C**uboid (9th month IU).
(Remember: Cuboid is first after birth, Navicular last.)

3. Muscles Inserting on Greater Trochanter (Femur)

Mnemonic: “P-GOGO-Q”

? **P**iriformis, **G**luteus medius, **O**bturator internus, **G**emelli (superior and inferior), **Q**uadratus femoris (nearby crest).

4. Muscles Originating from Ischial Tuberosity

Mnemonic: “BASS”

? **B**iceps femoris (long head), **A**dductor magnus, **S**emimembranosus, **S**emitendinosus.

5. Attachments on Iliac Crest

Mnemonic: “EIO-TL”

(From outer to inner lip)

? External oblique, Internal oblique, O Transversus abdominis (inner lip), Tensor fasciae latae (outer lip anteriorly), Latissimus dorsi (posteriorly).

6. Boundaries of Greater Sciatic Foramen

Mnemonic: "PIS S"

? Piriformis passes through, bounded by Ischial spine, Sacrospinous ligament, and Sacrum.

7. Muscles Inserting into Medial Surface of Tibia (Pes Anserinus)

Mnemonic: "SGT" (like the rank Sergeant)

? Sartorius, Gracilis, Tendinosus (Semitendinosus).

(All inserted on upper medial tibia, forming goose's foot.)

8. Arteries Supplying the Talus

Mnemonic: "PDT — Poor Dorsal Talar supply"**

? Posterior tibial artery, Dorsalis pedis artery, Tarsal canal and sinus arteries.

(Poor blood supply ? risk of avascular necrosis in fracture.)

9. Muscles Supporting Medial Longitudinal Arch

Mnemonic: "T, D, H, and A Big Toe"

? Tibialis posterior, Flexor digitorum longus, Flexor hallucis longus, and Abductor hallucis.

10. Muscles Inserting on the Base of 1st Metatarsal

Mnemonic: "TA + PL"

? Tibialis Anterior (medially), Peroneus Longus (laterally).

(They maintain the transverse arch of the foot.)

11. Nerve Injury Mnemonics (Lower Limb Bones Area)

- Around neck of fibula ? Common peroneal nerve ? Foot drop

- **Near head of femur ?** Medial circumflex femoral artery injury ? *Avascular necrosis of femoral head*
 - **At ischial spine ?** Pudendal nerve (may be injured in childbirth)
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Facts to Remember

General Bone Facts

- **Femur:** Longest and strongest bone in the body.
 - **Patella:** Largest sesamoid bone.
 - **Tibia:** Second longest bone; main weight-bearing bone of leg.
 - **Fibula:** Non-weight-bearing bone, used for grafts.
 - **Calcaneus:** Largest tarsal bone, forms heel.
 - **Navicular:** Last tarsal to ossify.
 - **Cuboid:** First tarsal to ossify after birth.
 - **Cuneiforms:** Wedge-shaped bones forming the arch.
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Angles & Measurements

- **Angle of inclination (neck-shaft of femur):** 125–130°.
 - ? angle ? *Coxa vara*; ? angle ? *Coxa valga*.

- **Böhler's angle (calcaneus):** Normally 20°–40°.

- ? angle ? *Calcaneal fracture*.

Landmarks and Palpable Points

- **ASIS:** Locates inguinal ligament and McBurney's point.
- **Iliac crest:** Level of L4 vertebra.
- **Tibial tuberosity:** Attachment for patellar ligament.
- **Medial malleolus:** Subcutaneous; level of ankle joint.
- **Lateral malleolus:** Lower and posterior to medial malleolus.
- **Navicular tuberosity:** Palpable medially below ankle.
- **Head of fibula:** Landmark for common peroneal nerve.

Important Ossification Highlights

BONE	CENTRE APPEARS	FULLY FUSED
Femur (shaft)	7th week IU	20 yrs
Patella	3–5 yrs	14–16 yrs
Tibia (shaft)	7th week IU	22 yrs
Fibula (shaft)	8th week IU	25 yrs

BONE	CENTRE APPEARS	FULLY FUSED
Talus	7th month IU	20 yrs
Calcaneus	6th month IU	16 yrs
Cuboid	9th month IU	12 yrs
Navicular	3–4 yrs	12–14 yrs

Accessory Bones

- **Os trigonum** ? posterior to talus (secondary ossification centre not fused).
- **Accessory navicular** ? extra ossicle near navicular tuberosity.
- **Os peroneum** ? in peroneus longus tendon near cuboid.

Functional Highlights

- **Femur head blood supply:** Mainly from *medial circumflex femoral artery*.
- **Tibia:** Common site for *open fractures* and *Osgood–Schlatter disease*.
- **Fibula:** Common graft donor; fracture causes *foot drop*.
- **Talus:** No muscle attachments; prone to *avascular necrosis*.
- **Calcaneus:** Bears heel weight; insertion for *Achilles tendon*.
- **Navicular & Cuneiforms:** Key bones in *medial longitudinal arch*.

- **Cuboid:** Key bone in *lateral longitudinal arch*.
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Arches of Foot – Quick Recap

- **Medial longitudinal arch:** Talus (keystone), calcaneus, navicular, cuneiforms, 1st–3rd metatarsals.
 - **Lateral longitudinal arch:** Calcaneus, cuboid, 4th–5th metatarsals.
 - **Transverse arch:** Cuneiforms, cuboid, bases of metatarsals.
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Vascular & Nerve Highlights

- **Femoral artery:** Main arterial supply to lower limb.
- **Posterior tibial artery:** Supplies plantar arch and talus.
- **Common peroneal nerve:** Injury ? *foot drop*.
- **Saphenous nerve:** Longest cutaneous branch of femoral nerve.