

READING HOSPITAL
SCHOOL OF HEALTH SCIENCES
MEDICAL IMAGING PROGRAM
MI133: CLINICAL SEMINAR II - FALL 2021

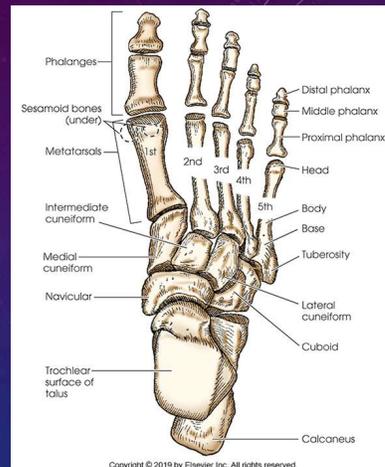


TOE/FOREFOOT, FOOT, HEEL
MERRILL'S 14TH ED. VOL 1, CHAPTER 7

1

Bones of the Foot

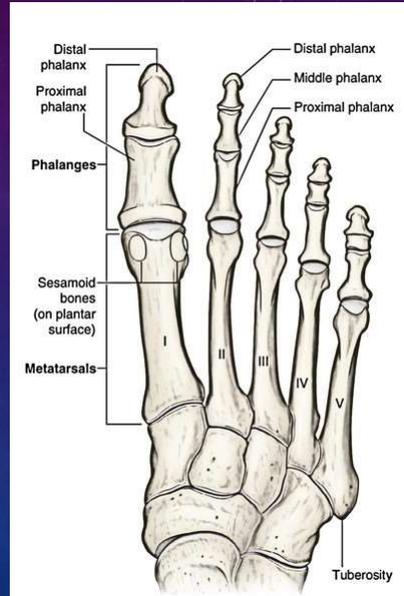
- 14 - Phalanges
- 5 - Metatarsals
- 7 - Tarsals



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Phalanges

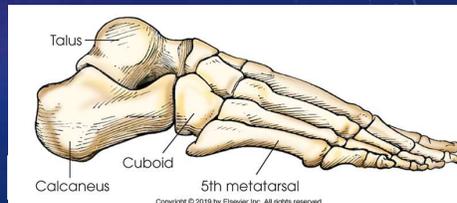
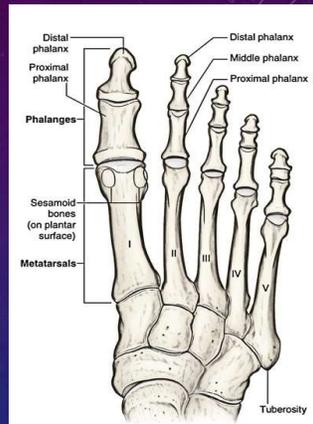
- Long Bones
- 1st digit = "Great Toe"
- 1st toe - 2 phalanges
- 2nd through 5th toes - 3 phalanges



3

Metatarsals

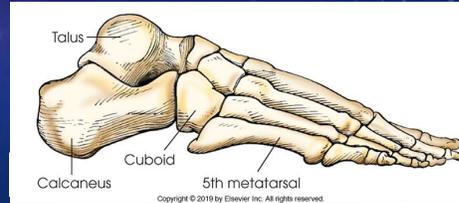
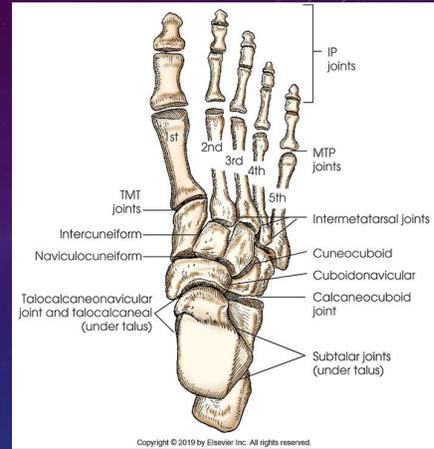
- Long Bones
 - Head
 - Body
 - Base
 - Base of the 5th (tuberosity)



4

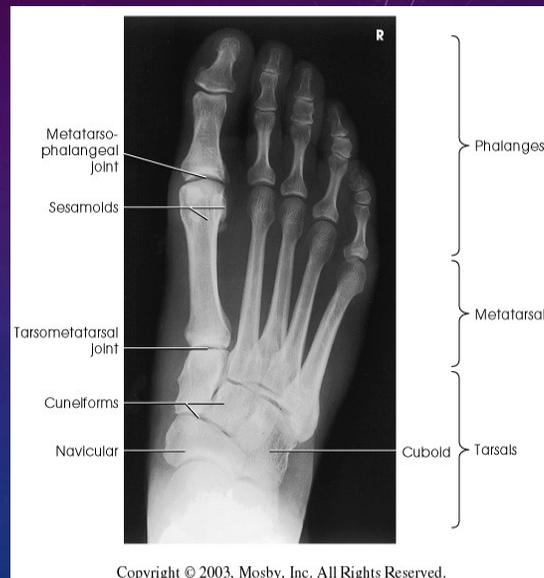
Phalanges/ Metatarsal - Joints

- Interphalangeal
 - Distal
 - Proximal
- Metatarsophalangeal
- Tarsometatarsal
- Intermetatarsal



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- 14 Phalanges
- 5 Metatarsals

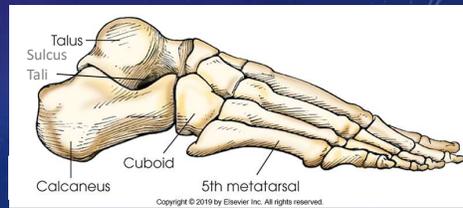
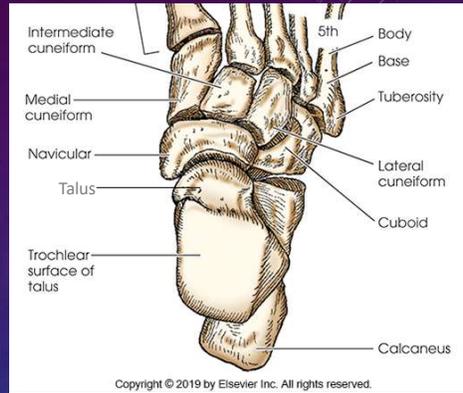


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Tarsals

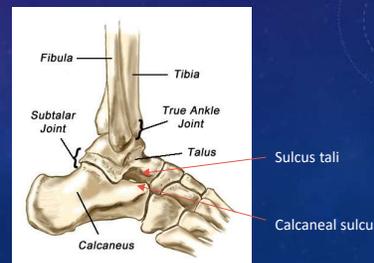
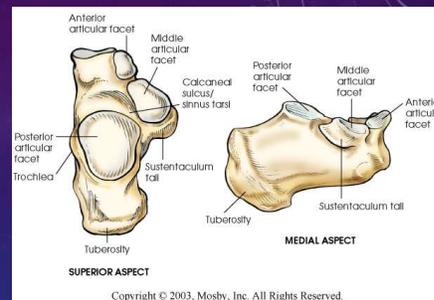
- Short Bones
- Cuneiforms
 - Medial
 - Intermediate
 - Lateral
- Cuboid
- Navicular
- Talus
- Calcaneus



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Tarsals - Calcaneus (Heel; Os Calcis)

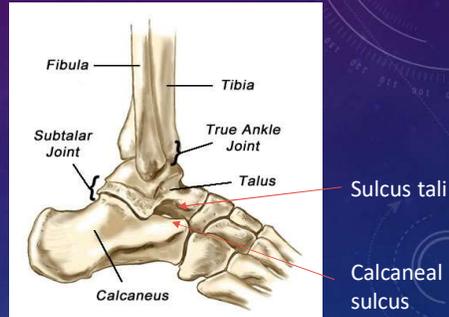
- Largest & Strongest Tarsal
- Posterior Tuberosity
- 3 Articular Facets
 - Anterior
 - Middle
 - Posterior
- Calcaneal Sulcus



8

Tarsals – Talus

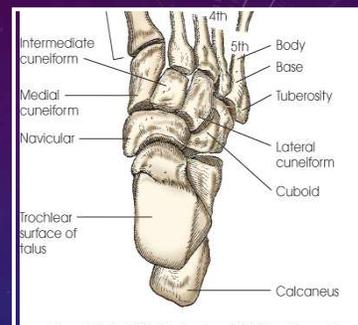
- Superior most tarsal
- Articulates with:
 - Tibia
 - Fibula
 - Calcaneus
 - Navicular
- Superior Surface
 - Trochlear Surface
- Inferior Surface
 - Sulcus Tali



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Tarsals Mnemonic

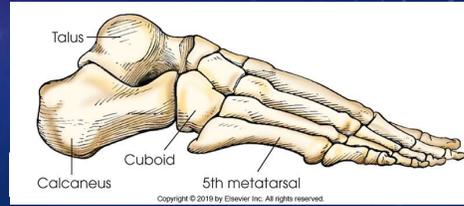
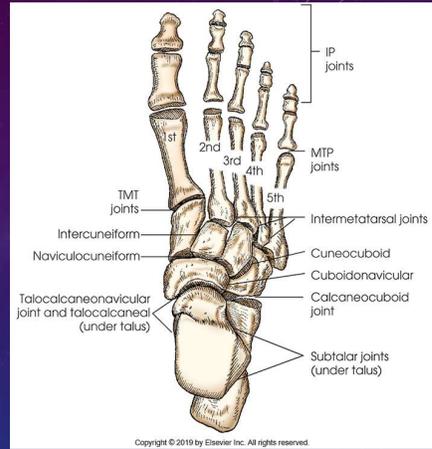
- | | |
|---------|--------------------------|
| Chubby | (Calcaneus) |
| Twisted | (Talus) |
| Never | (Navicular) |
| Could | (Cuboid) |
| Cha | (Cuneiform- medial) |
| Cha | (Cuneiform-intermediate) |
| Cha | (Cuneiform - lateral) |



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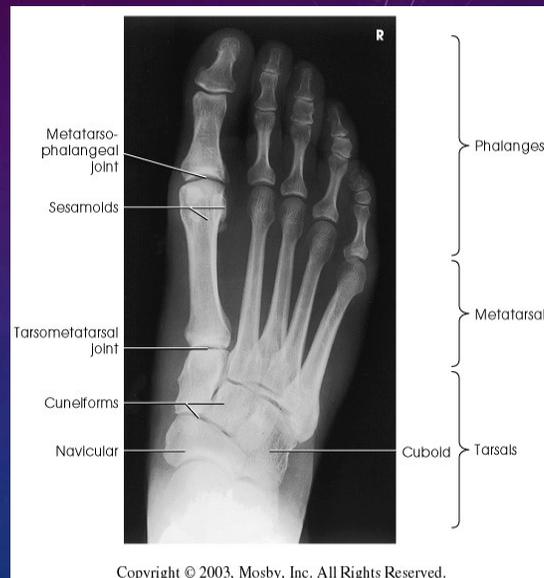
Tarsal- Joints

- Calcaneocuboid
- Cuneocuboid
- Intercuneiform
- Cuboidonavicular
- Naviculocuneiform
- Subtalar
 - Talocalcaneal
 - Talocalcaneonavicular



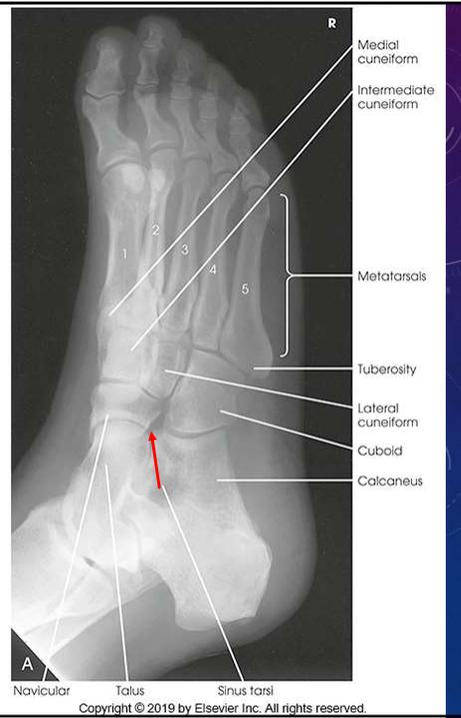
11

- 7 – Tarsals



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• 7 - Tarsals



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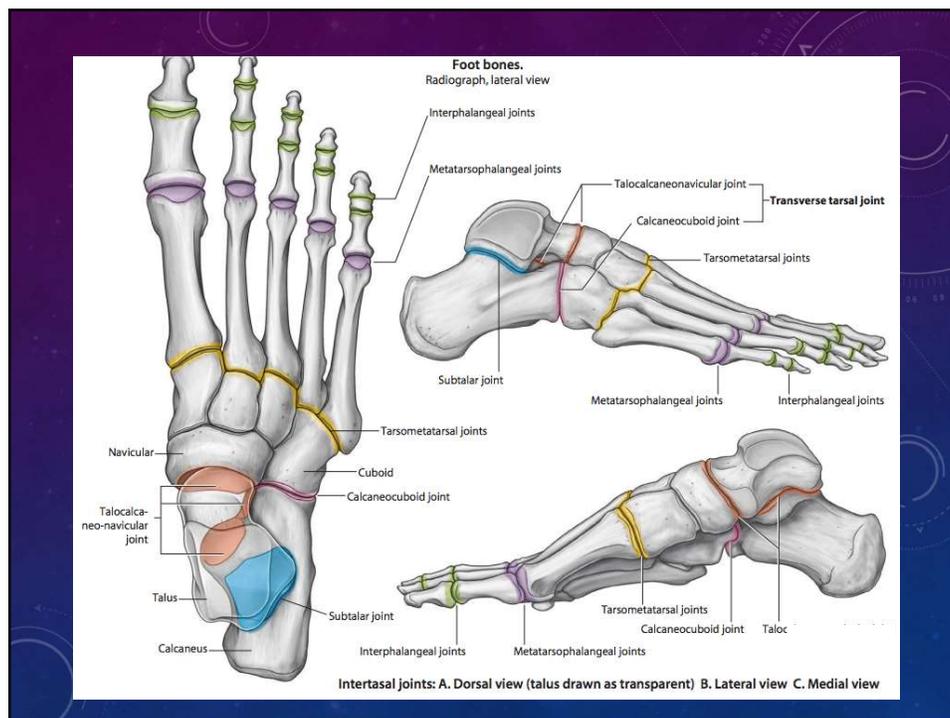


14

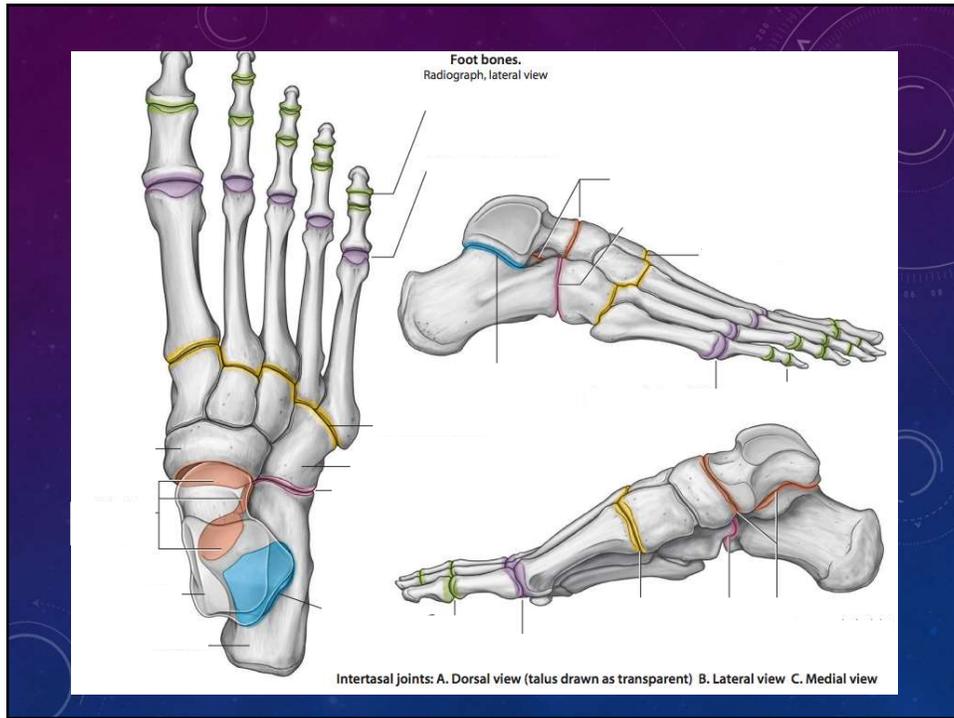
Joints/Articulations

Joint	Tissue	Type	Movement
Interphalangeal (IP)	Synovial	Hinge	Freely movable
Metatarsophalangeal (MTP)	Synovial	Ellipsoidal	Freely movable
Intermetatarsal	Synovial	Gliding	Freely movable
Tarsometatarsal	Synovial	Gliding	Freely movable
Calcaneocuboid	Synovial	Gliding	Freely movable
Cuneocuboid	Synovial	Gliding	Freely movable
Intercuneiform	Synovial	Gliding	Freely movable
Cuboidaonavicular	Fibrous	Syndesmosis	Slightly movable
Naviculocuneiform	Synovial	Gliding	Freely movable
Subtalar			
• Talocalcaneal	Synovial	Gliding	Freely movable
• Talocalcaneonavicular	Synovial	Ball and socket	Freely movable

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Sesamoid Bones

- 2 small, round bones
- Beneath the head of the 1st metatarsal

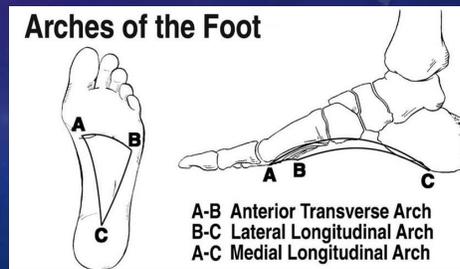
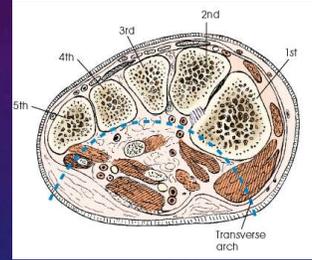
The complex block contains two images. On the left is a line drawing of the foot showing the location of the sesamoid bone beneath the head of the first metatarsal. On the right is a radiograph of the foot bones, with a red arrow pointing to the sesamoid bone. The text 'Study D' and 'Stu' are visible in the top right corner of the radiograph area.

Sesamoid bone

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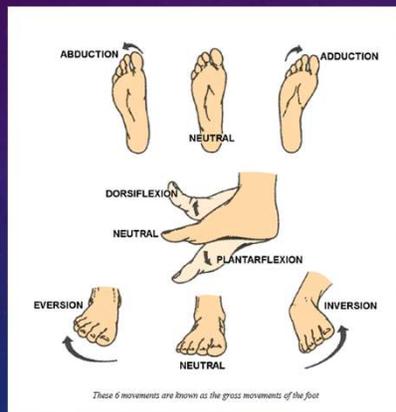
Arches of the Foot

- Medial Longitudinal
- Lateral Longitudinal
- Transverse (anterior)



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MOVEMENTS of the Foot



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