

Anatomy of the Lower Leg

Athletic Training Masters Program



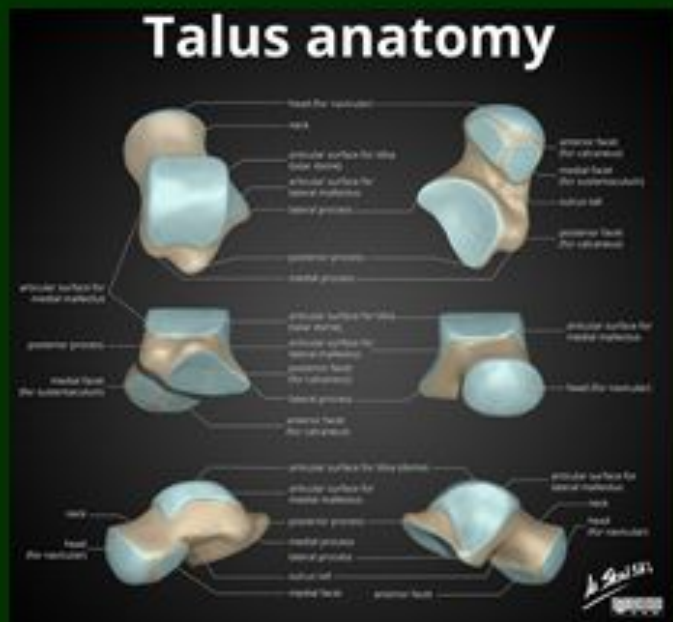




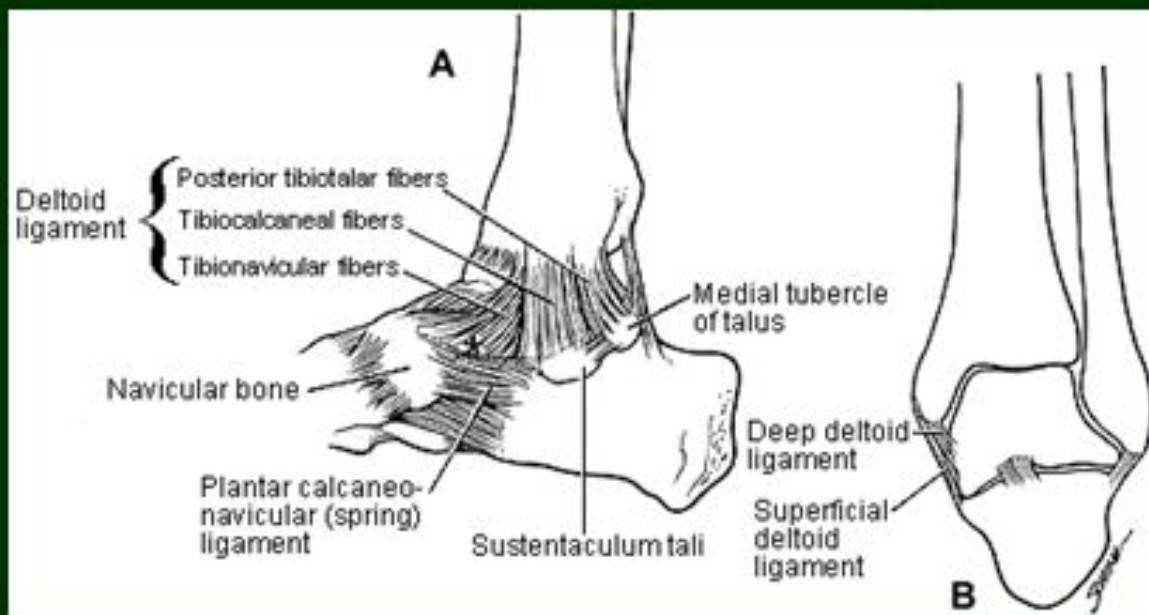
What's the diagnosis?

- Fractured? (Broken?)
- Sprain?

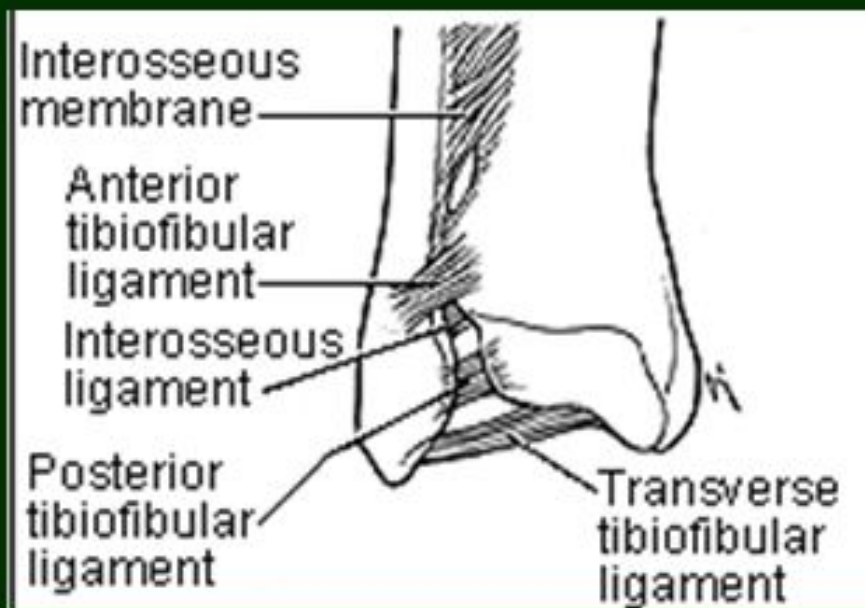
Talus loosens with plantarflexion



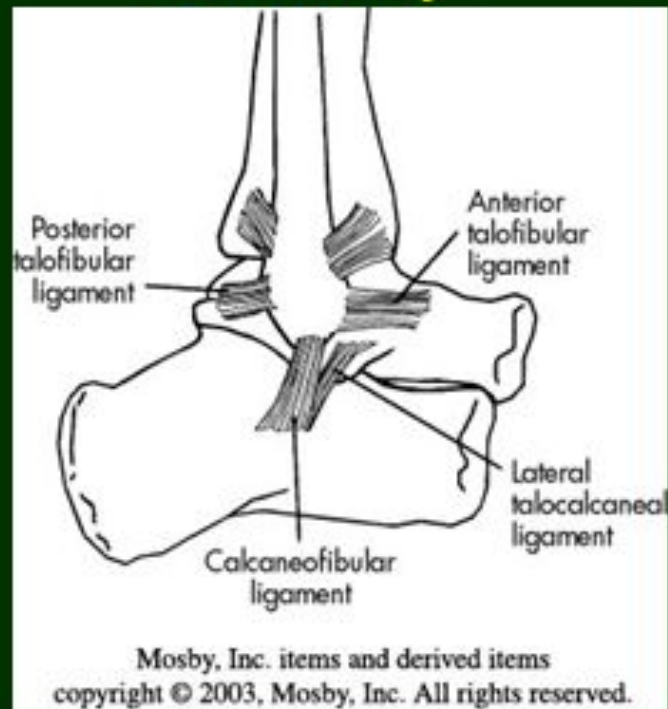
Ankle Anatomy Review



Syndesmosis

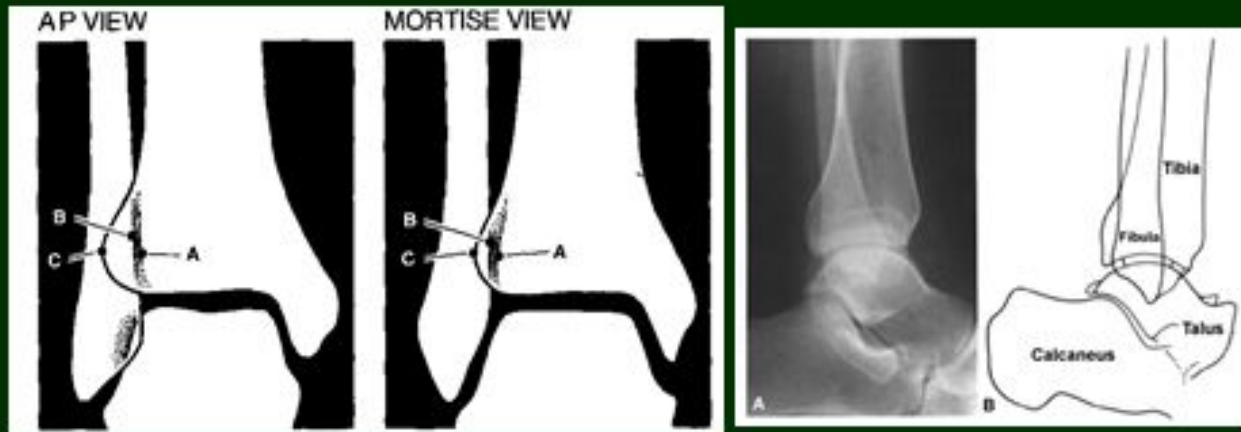


Anatomy

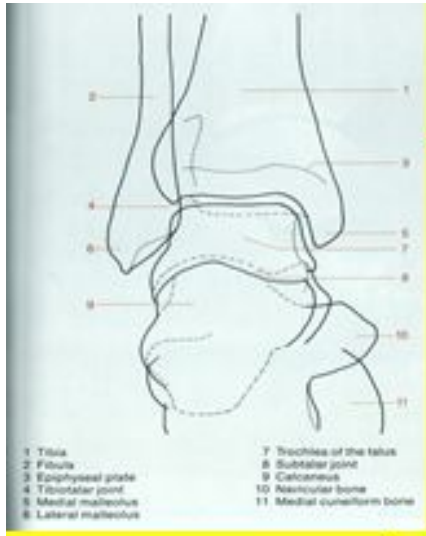


Radiographic Assessment

- AP, Lateral, Oblique (Mortise View)



Ankle



Ankle



Inversion Stress Test

- AP radiograph with inversion stress on plantar flexed ankle
- If lateral ligaments are torn, the talus will tilt



Mosby, Inc. items and derived items
copyright © 2003, Mosby, Inc. All rights reserved.

MRI

- Saggital
 - Achilles, Talus, Plantar Fascia, Tendons
- Coronal
 - Deltoid, Calcaneofibular ligament, Subtalar joint, Talus
- Axial
 - Syndesmosis, ATFL, FHL

GARGIULO JUSTIN
PP24618
12-JAN-1986
15:20
19-OCT-2002
IMAGE 139
SER 1-9

NORTH FORK RADIOLOG
MAGNETOM Harmon
F-SP VA1:
+ : F A

AL

0.30mm, 40

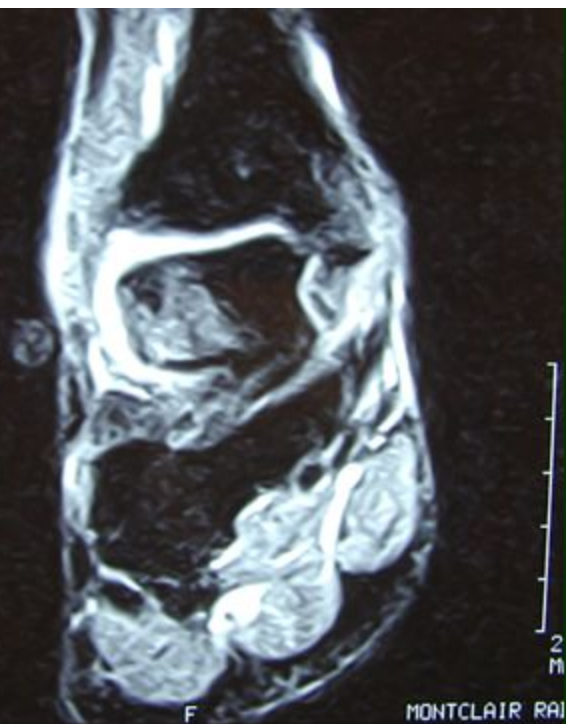
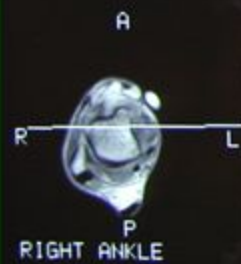
TR 25.0
TE 9.0/1
TA 04:51
AC 1

SP 48.4
SL 2.3
FoV 160*160
161 *2560
Sag-Cor 11

W 302
C 132

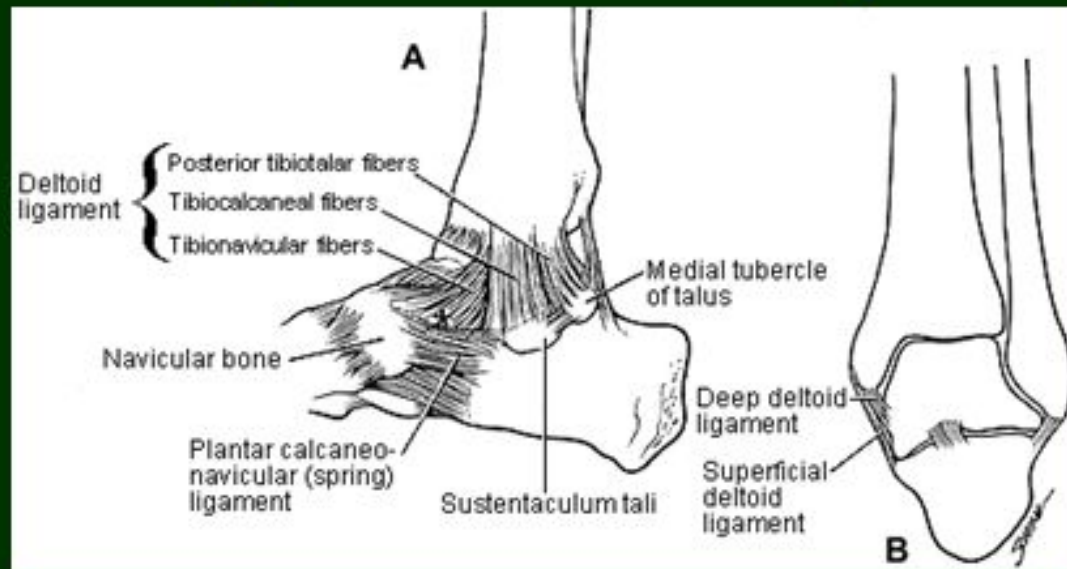
LT ANKLE

IR 5.0 COR
S# 7/17
E# 1/1
TR 2300
TE 25
TI 80
FF/S
H 180
P +0.5
A +1T,+0S
NSA 2
PRJ 160H
SML 448 R





High vs. Low Ankle Sprain



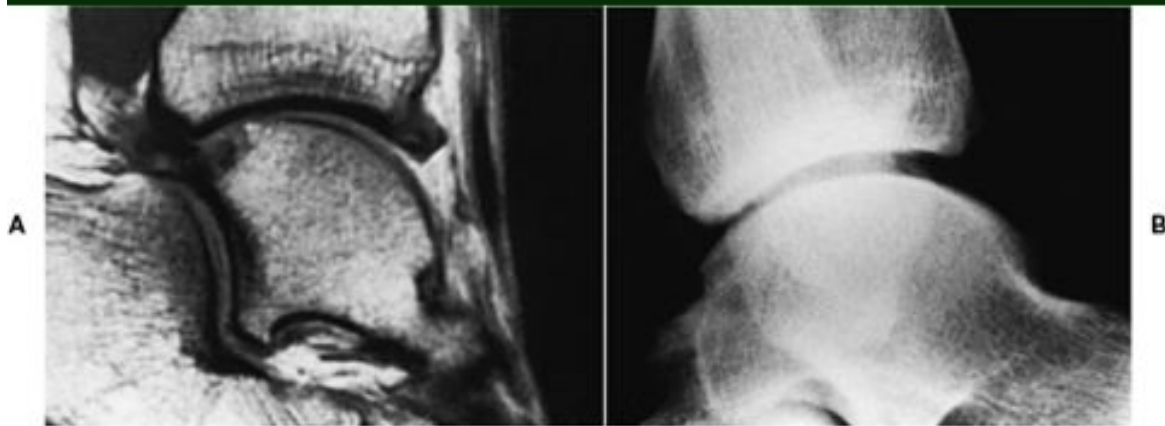
Based on presence or absence of syndesmotic injury ²⁵

Anterior Osseous Impingement

- Osteochondral ridges form on anterior aspect of distal tibia or dorsum of talar neck
- Common in athletes involved in repetitive dorsiflexion and jumping activities
- Traction osteophytes form adjacent to capsular attachments
- Respond favorably to arthroscopic resection
(Ogilvie-Harris et al, JBJS 1993)

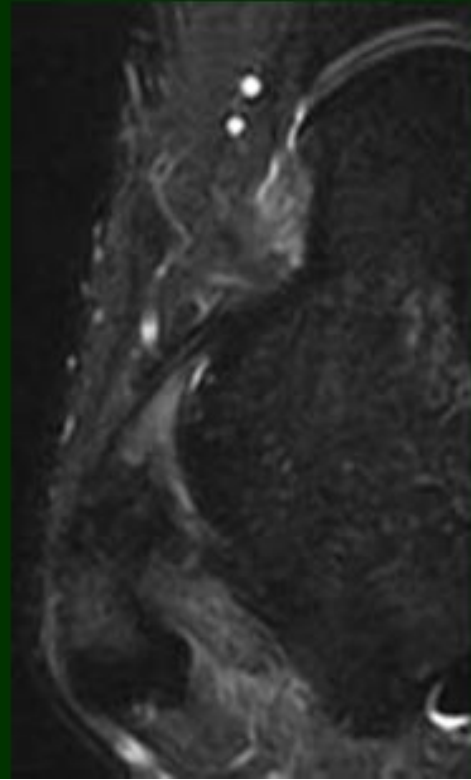
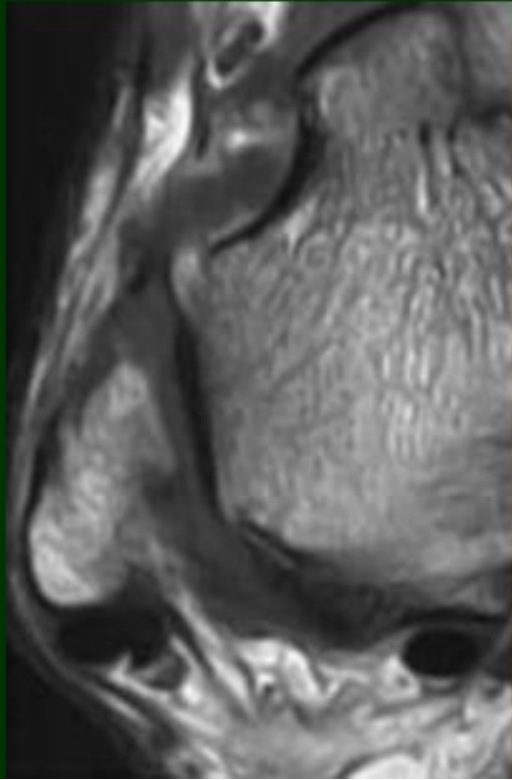


Impingement lesion is typically bigger than the bone spur alone



Mosby, Inc. items and derived items copyright © 2003, Mosby, Inc. All rights reserved.

Lateral Gutter Pain



“Meniscoid” Lesion

- Initially described by Wolin in 1950 (Wolin et al, Surg Gyn Obs, 1950)
- Hyalinized inflammatory infiltrate found within the lateral gutter
- Seen during arthroscopy as white, fibrous material similar to meniscal tissue

Treatment

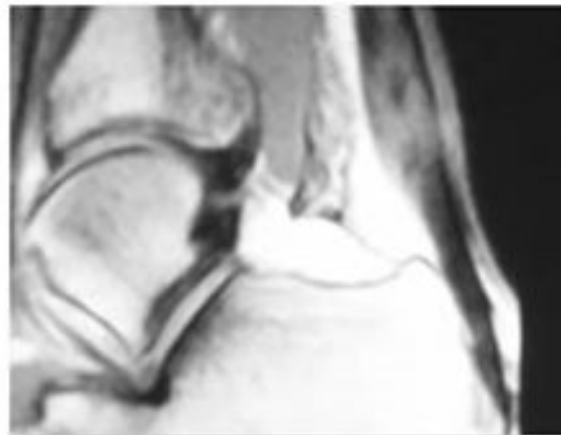
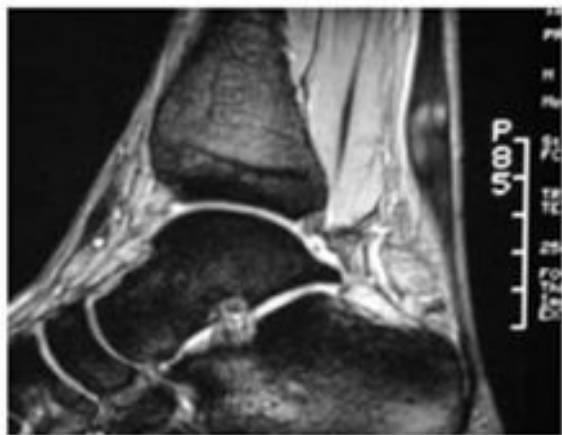
- Conservative management
- Physical Therapy
- NSAID's
- Cortisone injections
- Failure of conservative treatment require ankle arthroscopy and debridement of lesion

“Meniscoid” Lesion



[Video of resection](#)

Achilles





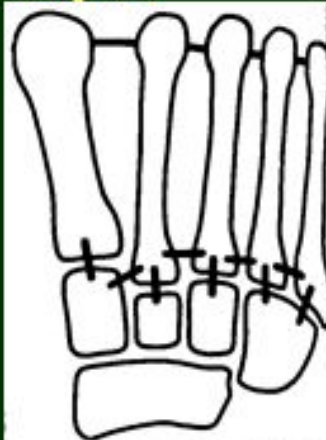


Lisfranc Injuries

- Lisfranc Ligament
 - Fibrous band between Medial cuneiform and proximal portion of 2nd metatarsal
- Lisfranc Joint
 - Any Tarsal-Metatarsal joint
- Originally described as a forceful flexion of the forefoot on the midfoot caused by getting caught in a saddle stirrup



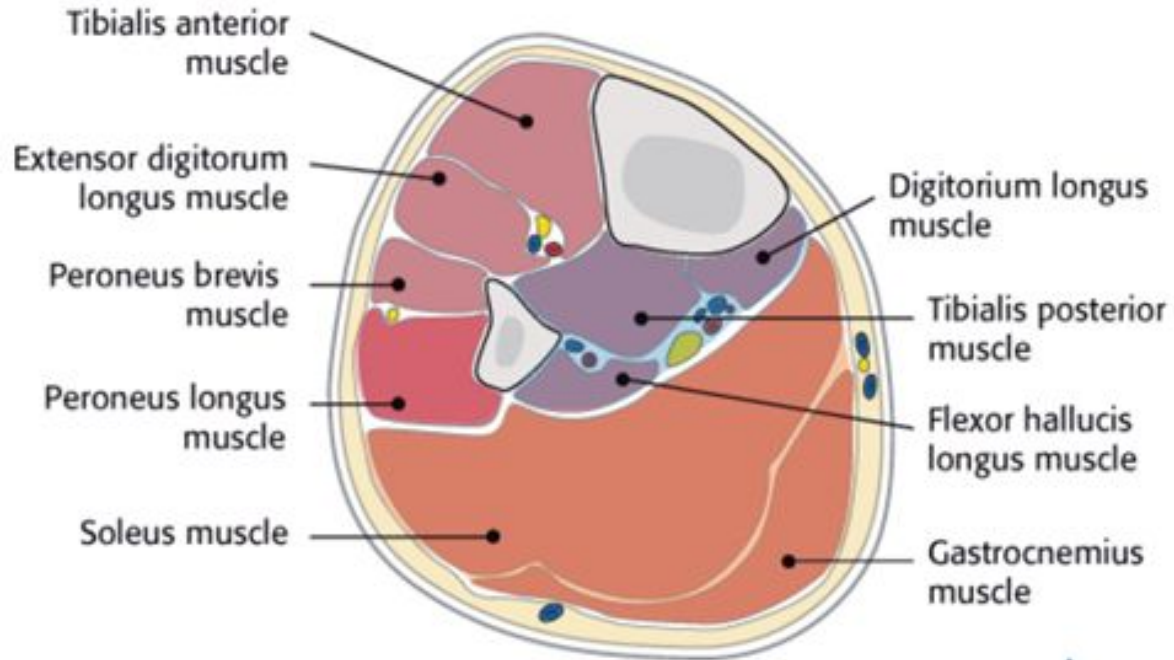
Normal Alignment





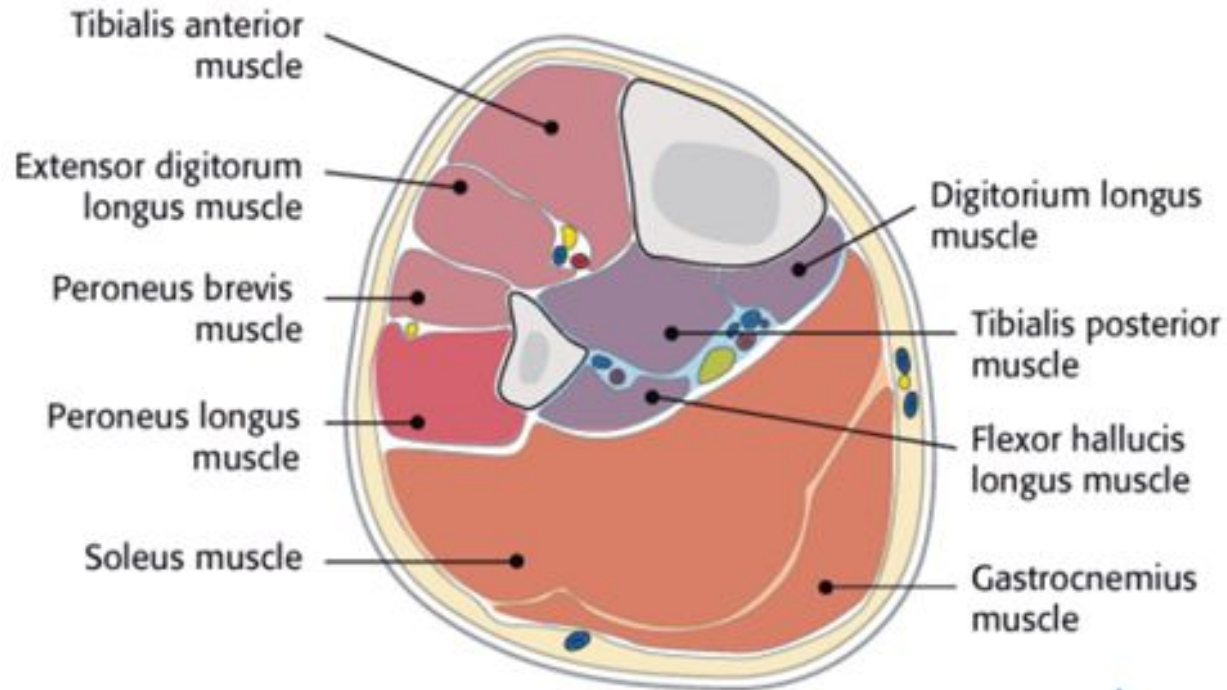






Two-Incision Leg Fasciotomy Technique





Thank you