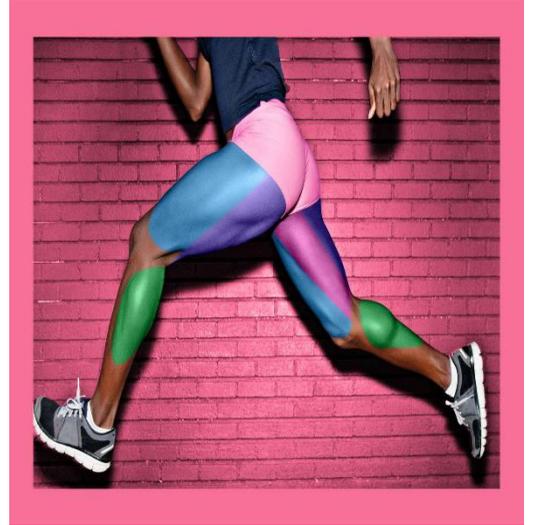


# LEG ANATOMY

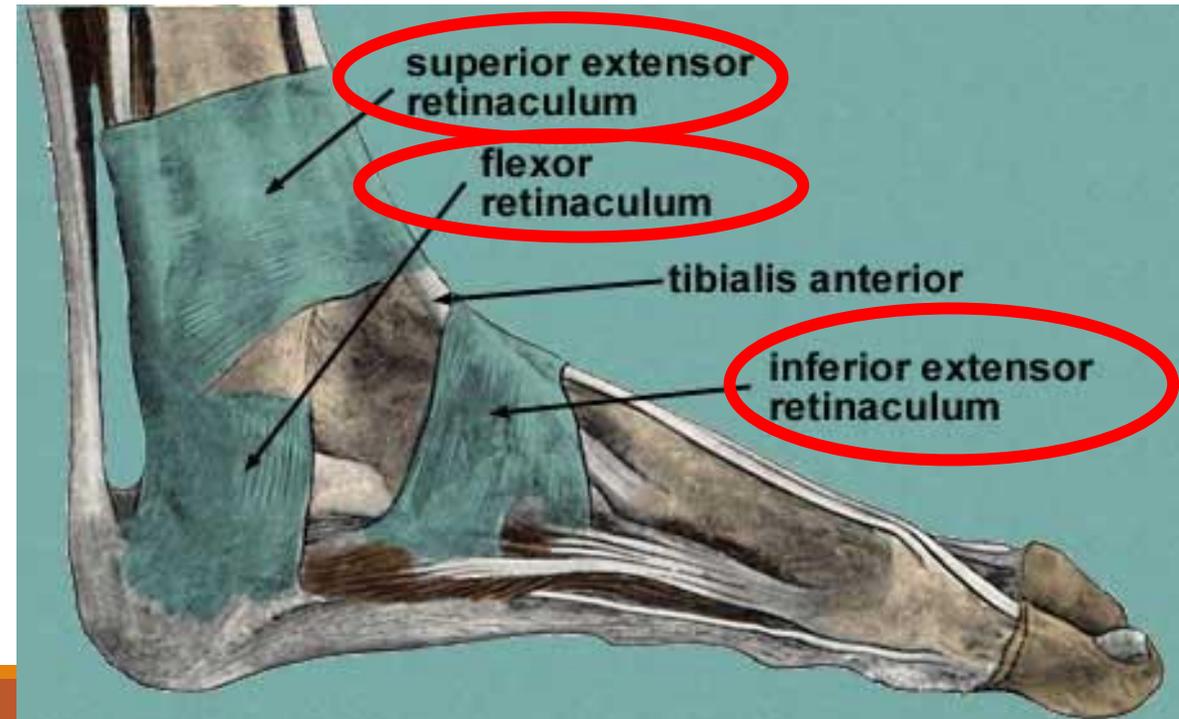
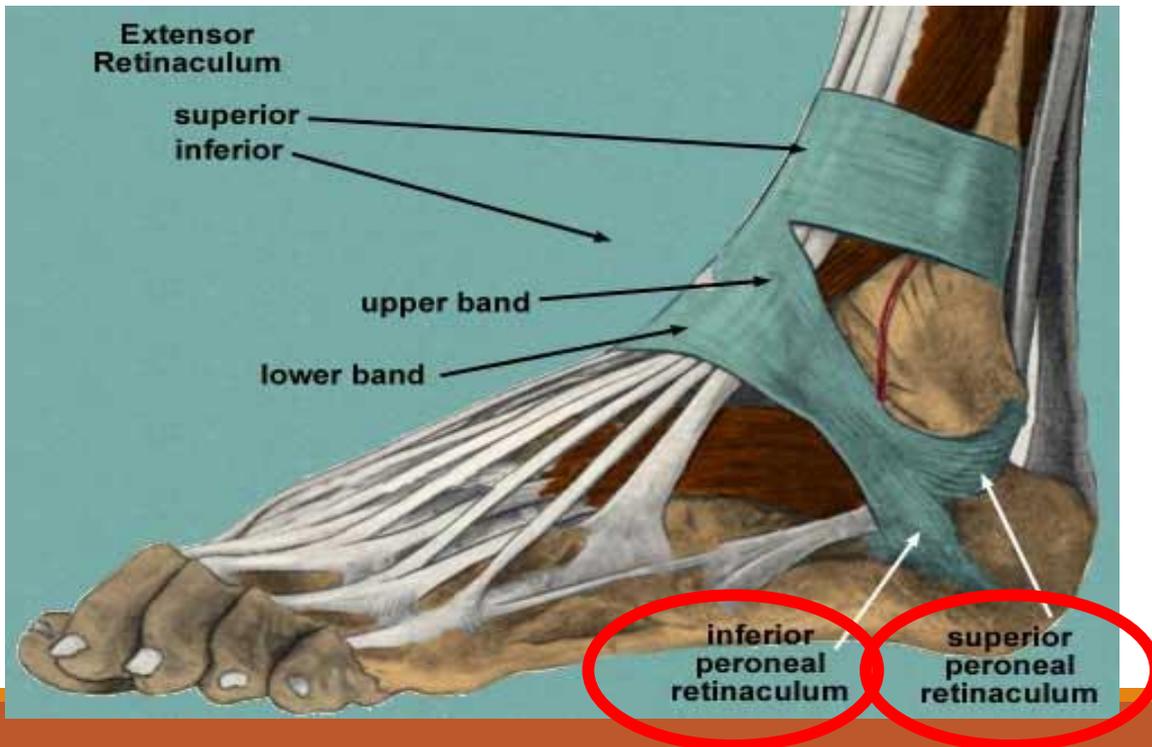


**Dr. Maha ELBeltagy**  
Associate professor of Anatomy and Histology  
The University of Jordan



# The Deep Fascia of the Leg

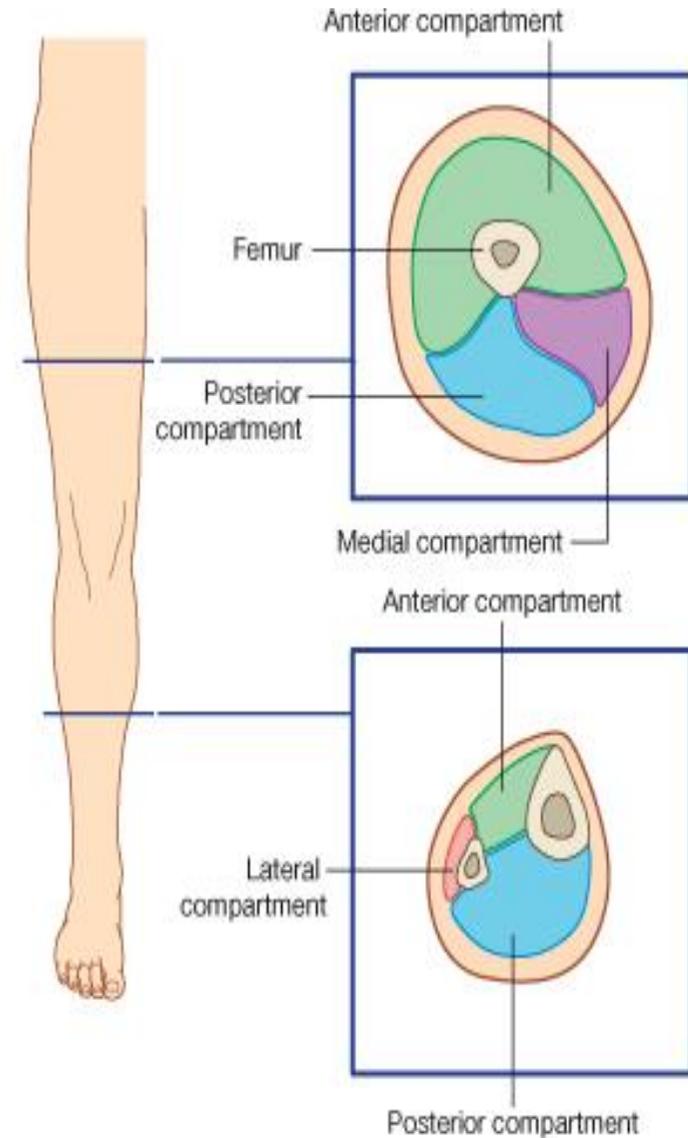
1. It is very strong and surrounds the leg
2. It is thickened to form 5 retinaculae:
  - Two extensor retinaculae (superior and inferior)
  - Two peroneal (Fibular) retinacula (superior and inferior)
  - One flexor retinaculum.



## The Deep Fascia of the Leg

1-The deep fascia of the leg sends anterior and posterior intermuscular septa attached to the anterior and posterior borders of the fibula.

2- It is divide leg into 3 anatomical compartments (**Anterior ,posterior and lateral**)



Sciatic nerve

Tibial nerve

Posterior group of the leg

Common peroneal

Medial Planter

- ✓ Abductor hallucis
- ✓ Flexor digitorum brevis
- ✓ Flexor hallucis brevis
- ✓ 1st Lumbricalis

Superficial peroneal

Lateral group of the leg

Deep peroneal

Anterior group of the leg

Lateral Planter

Supply all muscles of the foot **Except** muscles supplied by medial planter

**Hallucis** : Big Toe

**Digitorum** : Lateral four toes (medial four fingers)

**Digiti Minimi**: Little toe or finger

**Pollicis** : Thumb

**Extensor** : Muscles for toes of fingers inserted into extensor expansion

**Flexor** : Muscles are inserted into terminal phalanx of big toe and  
Lateral four toes

# The leg is divided into

## Anterior

Dorsiflexion  
And  
Toes Extension

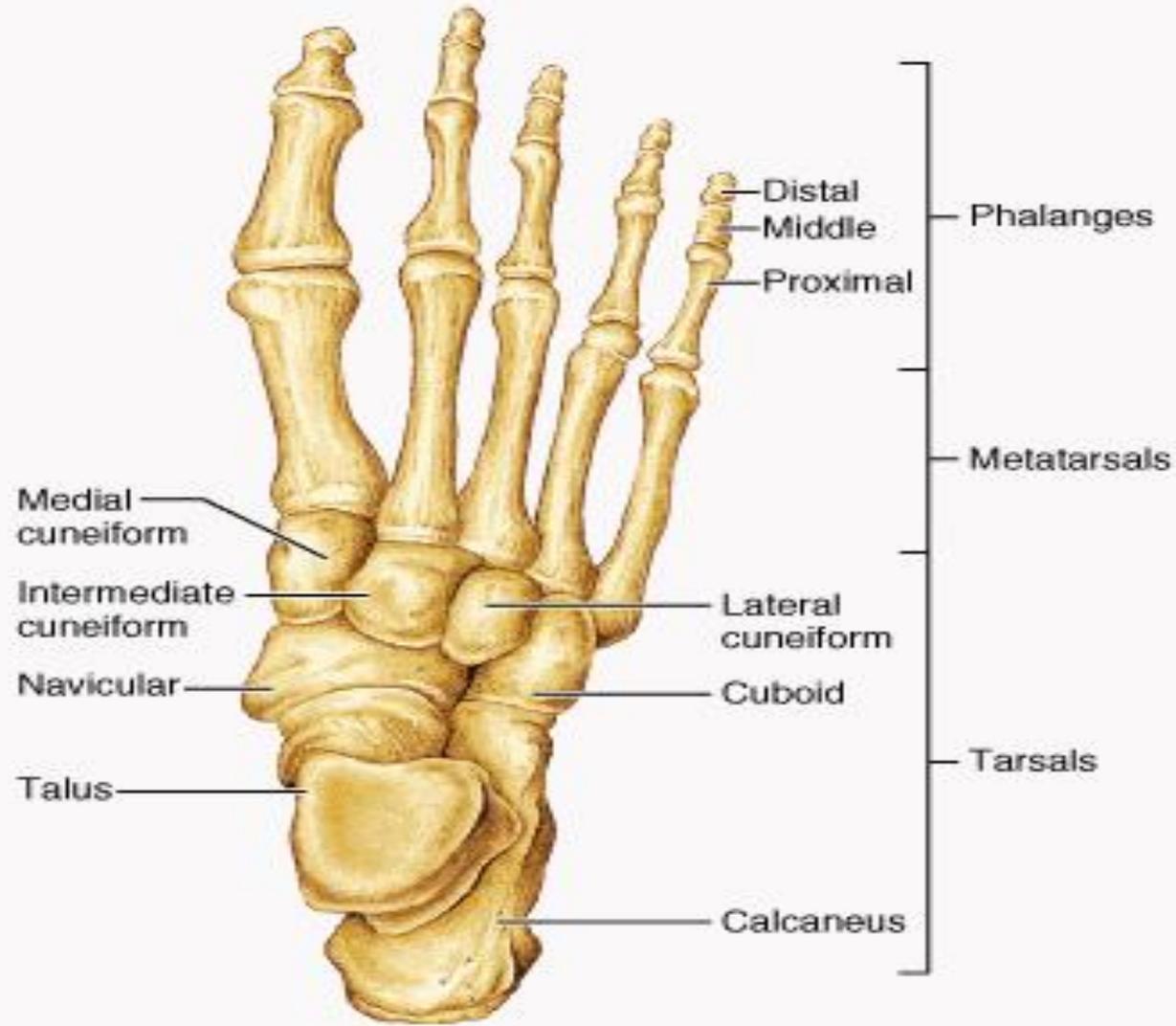
## Lateral

Eversion of the  
foot  
And  
Planter flexion

## Posterior

Mainly Planter  
flexion  
And  
Toes flexion

**Peroneus : Eversion**  
**Tibialis : Inversion**



نیفہ

کباب و

3 کیلو

کل

طارق

Navicular

Cuboid

Cuneiform

Calcaneus

Talus

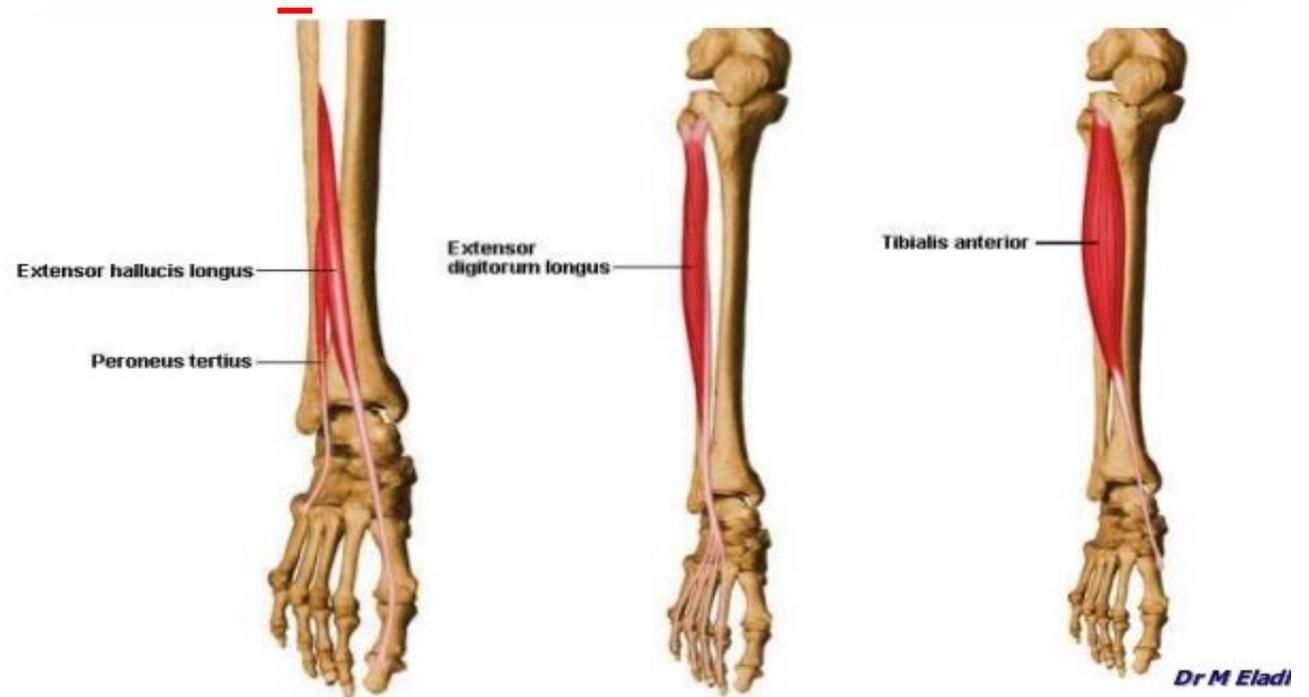


# Muscles of Anterior Compartment

---

- Tibialis anterior ❖
- Extensor hallucis longus ❖
- Extensor digitorum longus ❖
- Peroneus tertius ❖

All are innervated by  
Deep fibular nerve



# Muscles of Anterior Compartment

## Origin

All from Anterior surface of fibula **EXCEPT** Tibialis anterior from lateral surface of the Tibia.

## Insertion :

### *Tibialis anterior*

Medial cuneiform and 1<sup>st</sup> metatarsal bone

### *Extensor hallucis longus*

Distal Phalanx big toe

### *Extensor digitorum longus*

Extensor expansion of lateral four toes

### *Peroneus tertius*

Base of 5th metatarsal bone.

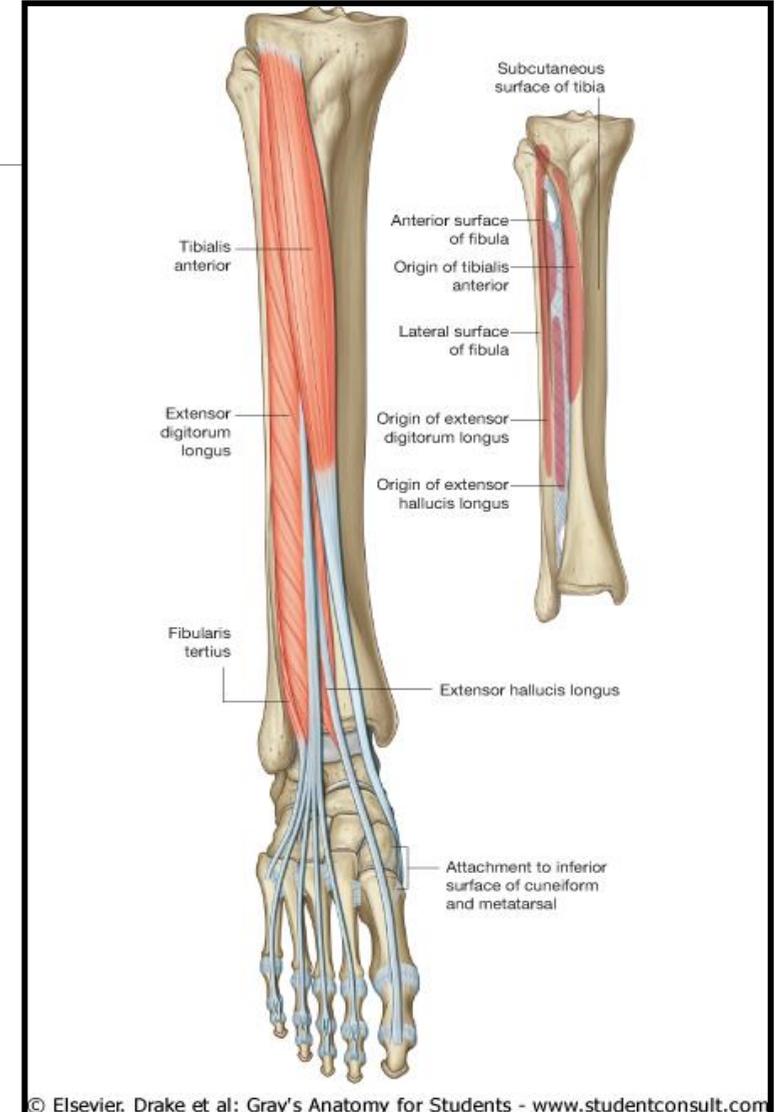
**Action:** All dorsiflexion of the foot Plus

**Hallucis :** Extends big toe

**Dgitorum :** Extends four toes

**Tibialis :** inversion of the foot

**Peroneus :** eversion of the foot



## **Extensor digitorum brevis**

**Location** : Dorsum of The foot

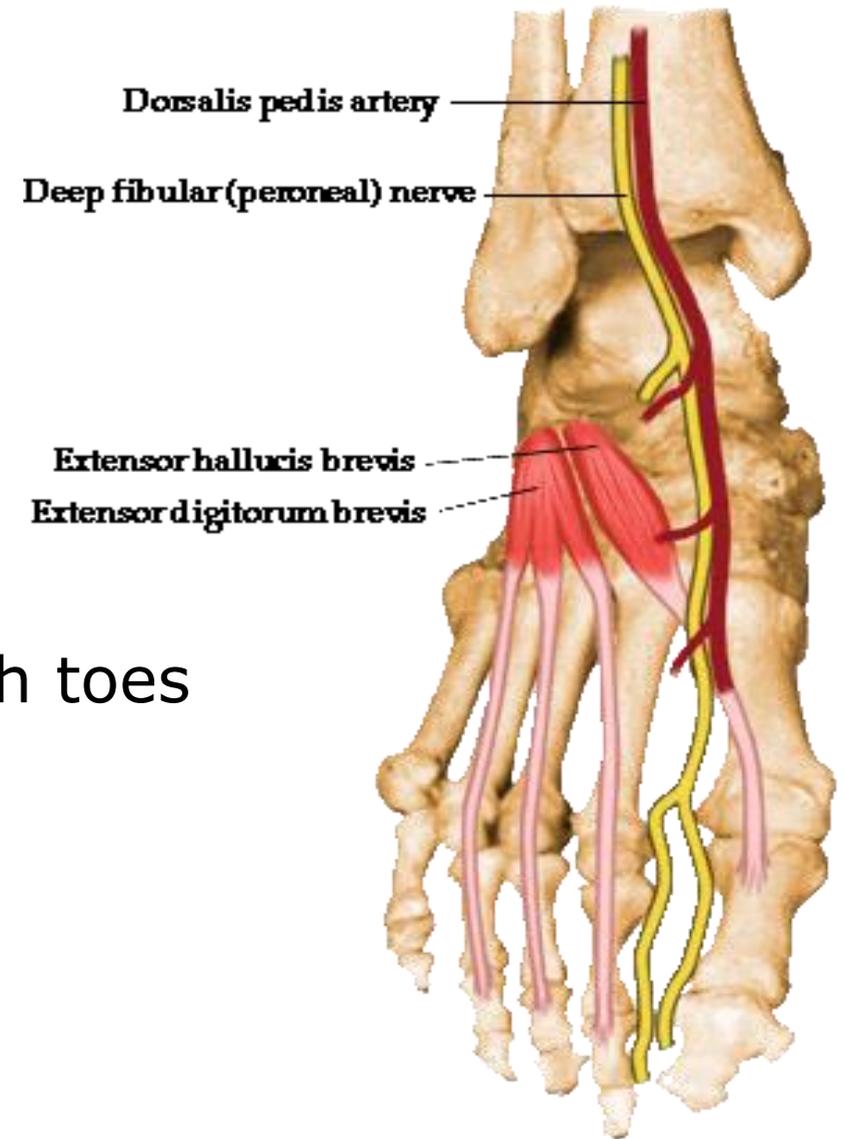
**Origin** : Calcaneus

**Insertion** : Four Tendon into :

- ❖ Proximal Phalanx of big toe
- ❖ Long Extensor tendon of 2nd ,3rd and 4th toes

**Nerve Supply** : Deep Peroneal nerve

**Action** : Extends Medial four toes



# Extensor retinaculum

It is thickened deep fascia of the leg in front of the ankle

**Structures passes below Extensor retinaculum from medial to lateral**

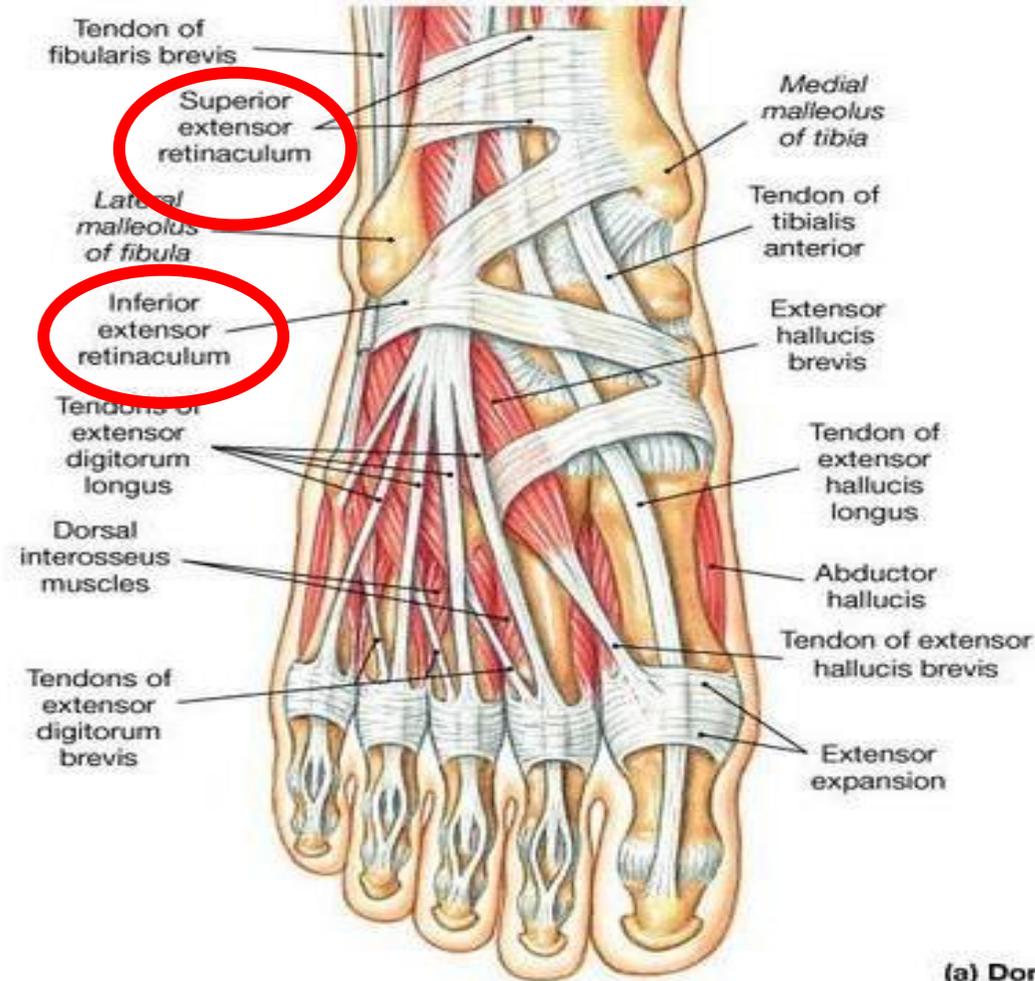
**Tom** Tibialis Anterior

**Has** Extensor hallucis

**AVery** Vessels (Anterior tibial)

**Nice** Nerve (Deep peroneal )

**Dog** Extensor Digitorum

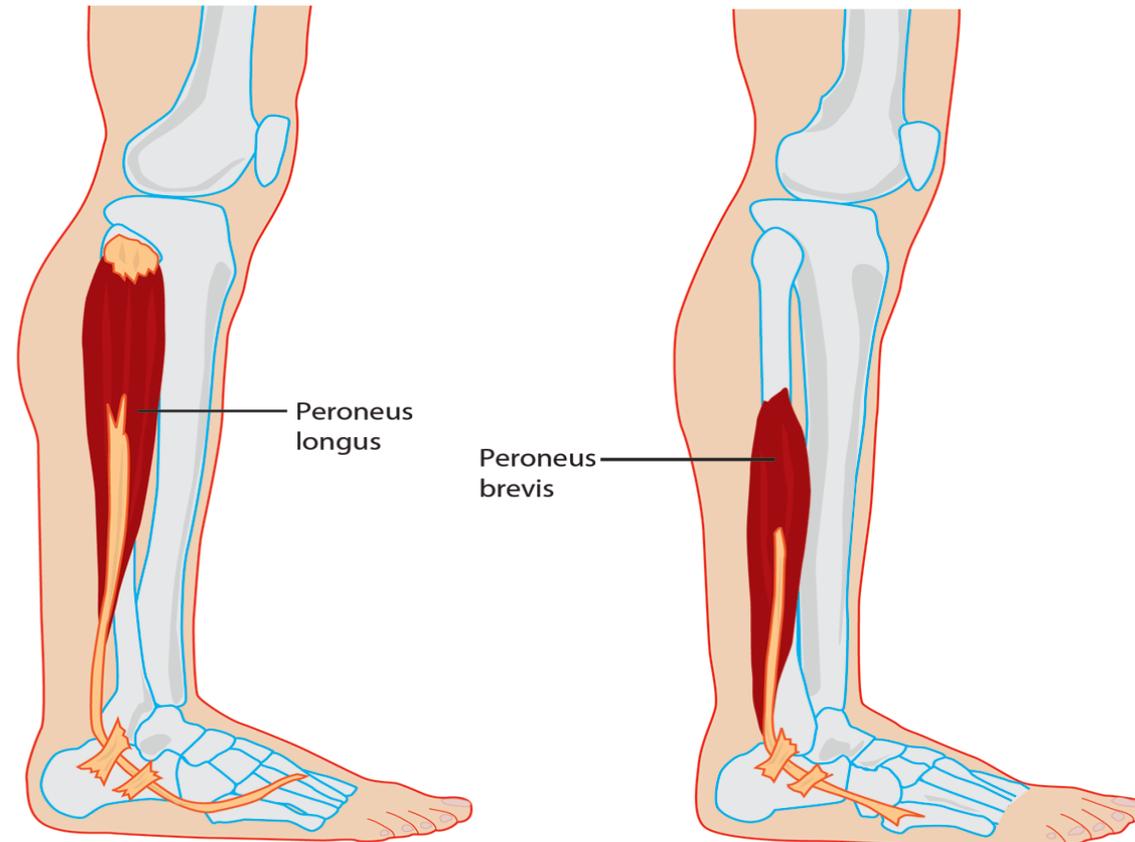


# Lateral Compartment

Fibularis (peroneus) longus ❖

Fibularis (peroneus) brevis ❖

All are innervated by  
the Superficial fibular nerve



# Lateral Compartment

**Origin :** lateral surface of the fibula

**Insertion :**

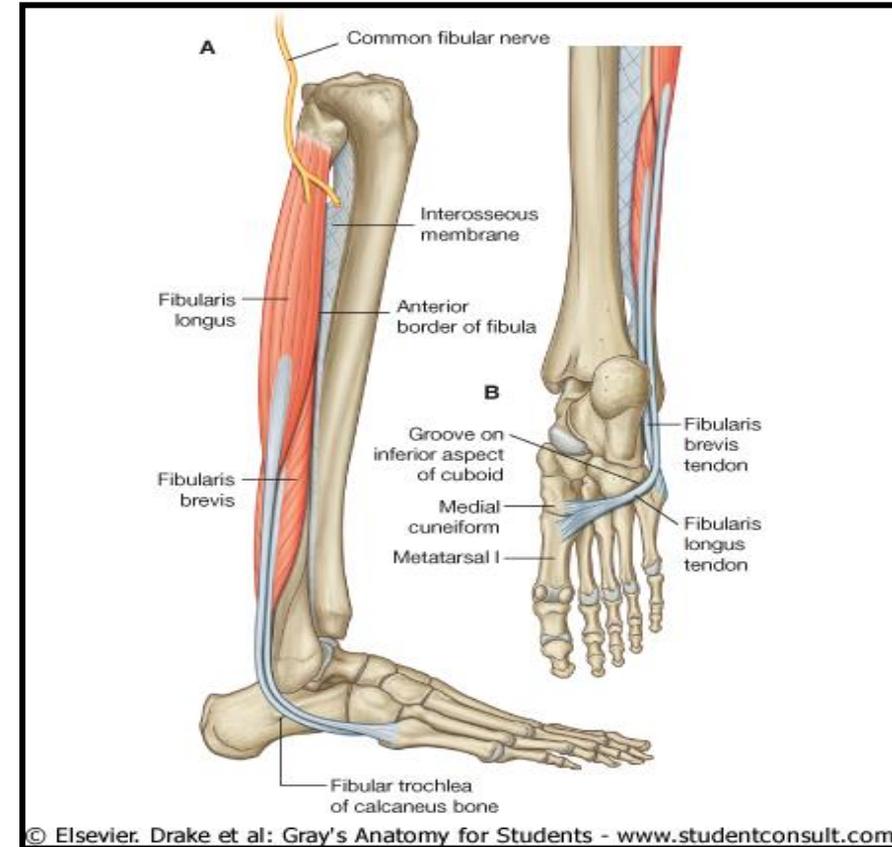
***Fibularis (peroneus) longus***

1<sup>th</sup> metatarsal

***Fibularis (peroneus) brevis***

5<sup>th</sup> metatarsal

Action : plantarflexion and eversion of foot



# Posterior Compartment

```
graph TD; PC[Posterior Compartment] --- S[Superficial]; PC --- D[Deep]; S --- S1[1. Gastrocnemius]; S --- S2[2. Soleus]; S --- S3[3. Plantaris]; D --- D1[1. Popliteus]; D --- D2[2. Tibialis Posterior]; D --- D3[3. Flexor digitorum longus]; D --- D4[4. Flexor hallucis longus];
```

## Superficial

1. Gastrocnemius
2. Soleus
3. Plantaris

## Deep

1. Popliteus
2. Tibialis Posterior
3. Flexor digitorum longus
4. Flexor hallucis longus

All are innervated by the tibial nerve

## Superficial group

### Origin :

#### *Gastrocnemius (2 heads)*

Medial and lateral condyles of femur

#### *Soleus*

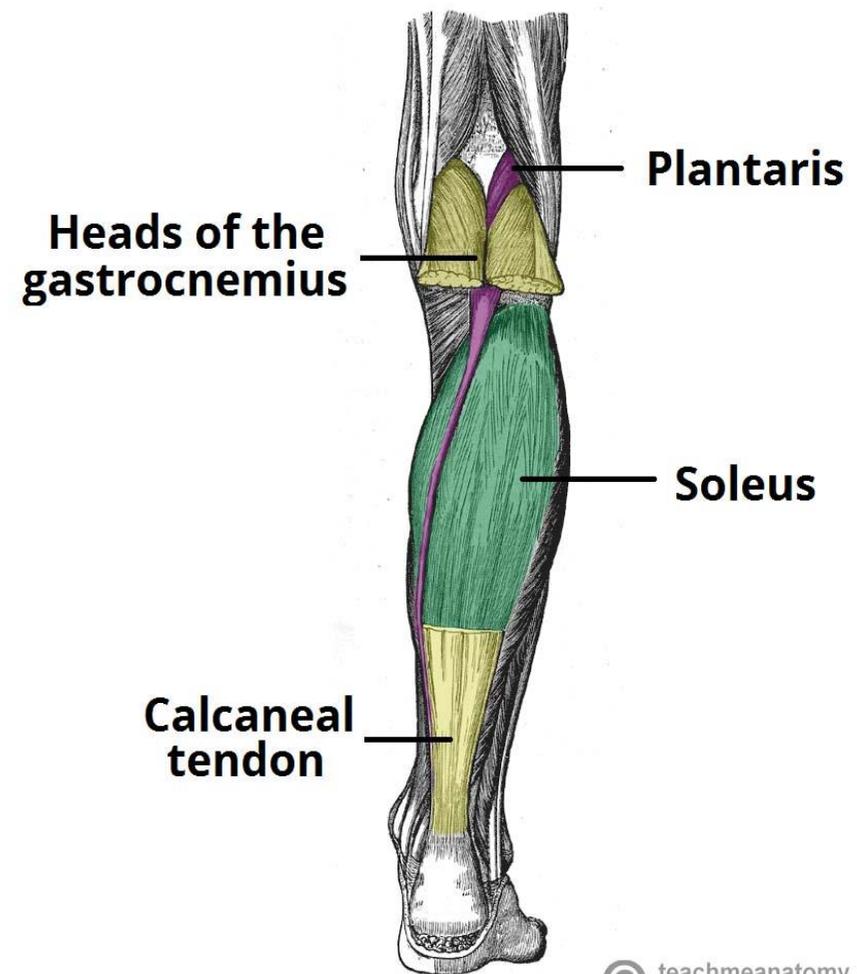
Shaft of Tibia and fibula

#### *Plantaris*

lateral supracondyle ridge  
of femur

**Insertion :** tendo calcaneus  
into of Calcaneus bone of the foot





**Action :** Plantarflex foot, weak knee flexion

- Propulsive force in walking and running
- Soleus is antigravity muscle
- Soleus is the heart of lower limb

# Deep Group

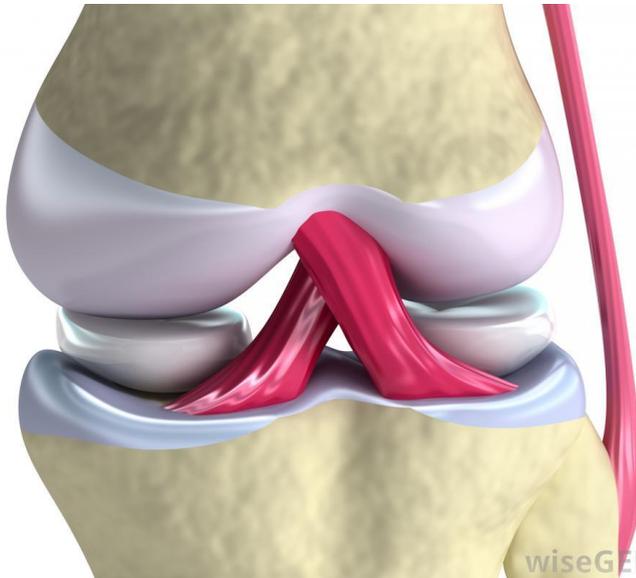
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## Popliteus

**Origin :** Lateral surface of lateral condyle of femur

**Insertion:** Posterior surface of tibia above soleal line

**Action :** Flex and unlock the knee.



# Locking of the knee joint

Occurs at terminal stage of full extension of the knee joint.

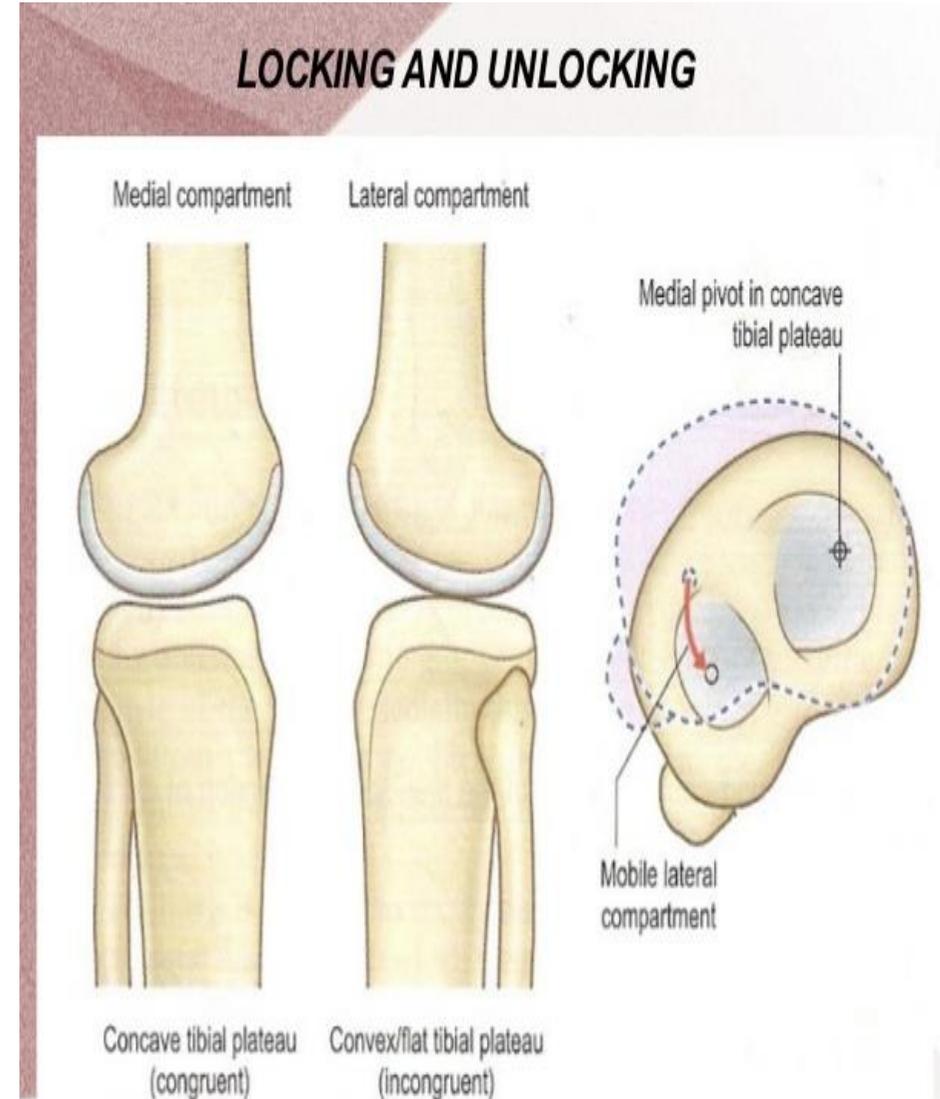
Responsible muscle (**Biceps femoris**)

## **MECHANISM:**

The (tibia) is laterally rotated **OR** the (femur) is medially rotated.

This rotatory movement locks the knee joint (the joint can not be flexed unless it is unlocked by the reverse muscle

**(popliteus).**



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## Unlocking means

Lateral rotation of the femur

Or Medial rotation of the tibia

## Locking means

..... rotation of the femur

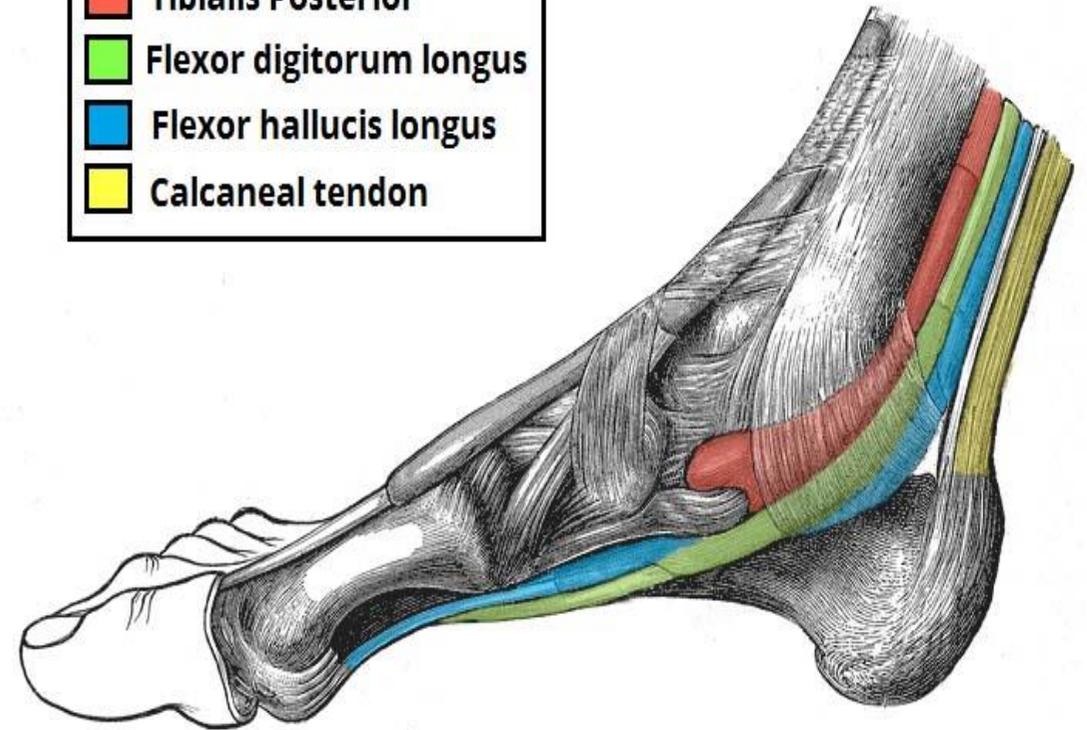
Or .....rotation of the tibia

# Deep group

**Flexor digitorum longus**

**Flexor hallucis longus**

**Tibialis posterior**



# Deep group

## Flexor digitorum longus

**Origin :** Posterior surface of Tibia

**Insertion :** distal phalanges of lateral four toe

## Flexor hallucis longus

**Origin :** Posterior surface of fibula

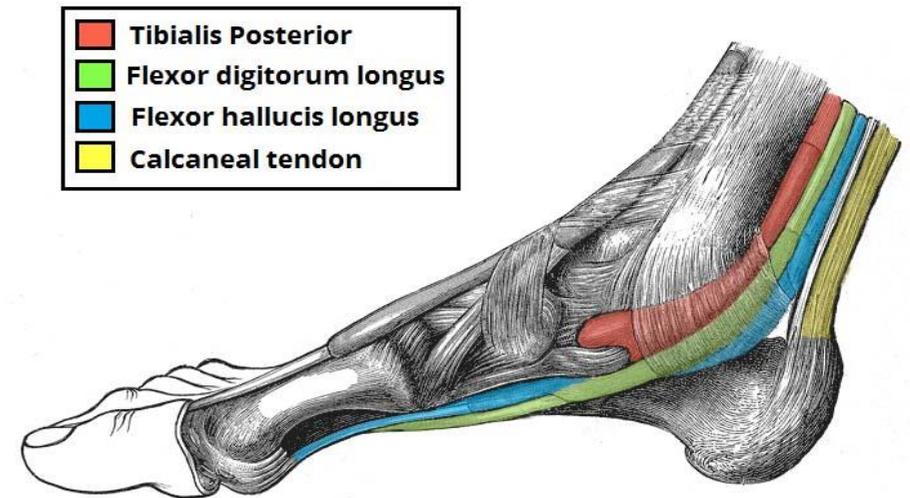
**Insertion** distal phalanx of big toe

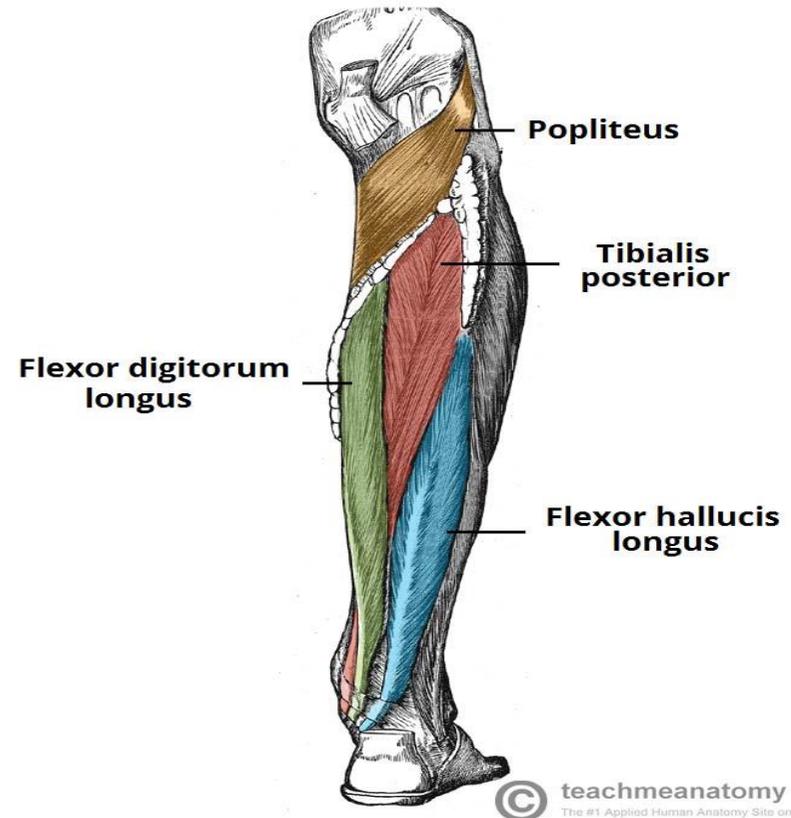
## Tibialis posterior

**Origin :** Posterior surface of tibia and fibula

**Insertion** – All tarsals

bones **EXCEPT** talus





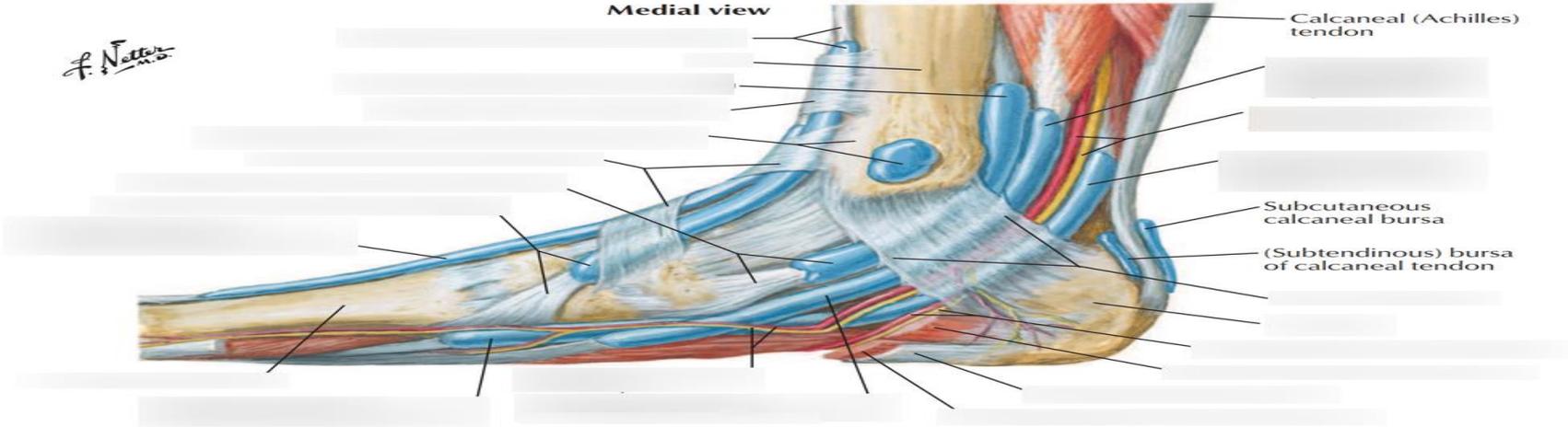
**Action :** All Plantarflexion of the foot **plus**

- **Flexor digitorum longus** : flexes the toes
- **Flexor hallucis longus** : flexes big toe
- **Tibialis posterior** : inversion of foot

# Flexor Retinaculum

Structures passing below it  
from medial to lateral

- Tom Tibialis Posterior
- Does Flexor Digitorum
- AVery Vessels (Posterior tibial)
- Nice Nerve (Posterior tibial)
- Homework Flexor hallucis



THANK YOU

The image features the words "THANK YOU" in a bold, bubbly, 3D font. The word "THANK" is rendered in a bright pink color with a yellow-to-orange gradient on its sides, while "YOU" is primarily yellow with a pink-to-red gradient on its sides. Both words have thick black outlines and a slight drop shadow. The text is set against a white background with several decorative elements: small yellow and pink stars, and black motion lines (two short parallel lines) scattered around the letters, giving the impression of energy and excitement. The overall style is reminiscent of classic comic book lettering.