

وسهلا



أهلا

يُمنع أخذ السلايدات بدون  
إذن المحرر واي اجراء  
يخالف ذلك يقع تحت طائلة  
المسؤولية القانونية  
جميع المعلومات للاستخدام  
التعليمي فقط

الأستاذ الدكتور يوسف حسين

كلية الطب - جامعة مؤتة - الأردن

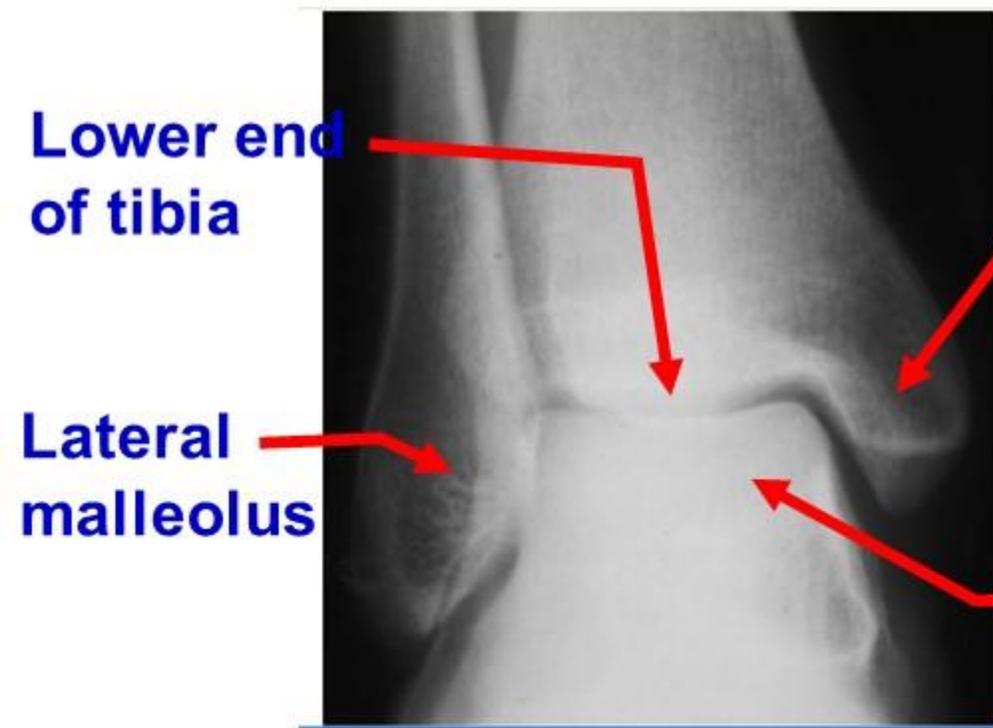
دكتورة من جامعة كولونيا المانيا

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الواتس (أي استفسار)  
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# Ankle joint

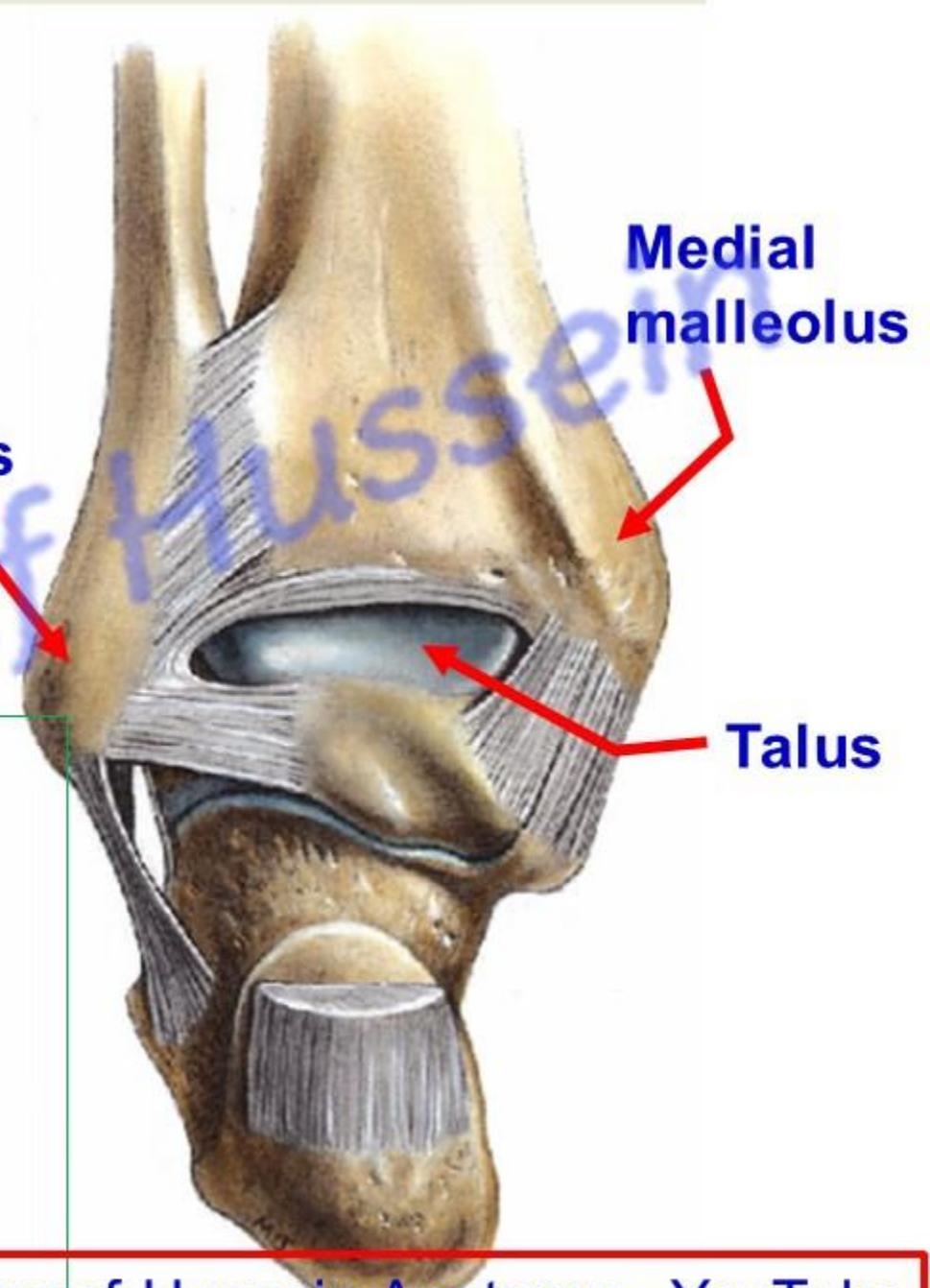
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Medial malleolus

Lateral malleolus

Talus



Medial malleolus

Talus

• **Ankle Joint**

**I- Type;** Synovial joint, hinge variety.

**II- Articular surfaces**

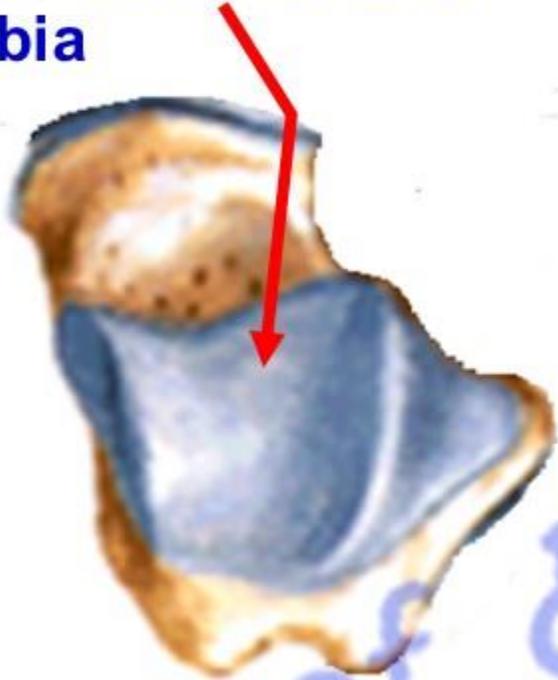
**A- Superior articular surface:**

- 1) Lower end of the tibia.
- 2) Lateral surface of the medial malleolus.
- 3) Medial surface of the lateral malleolus.

**B- Inferior articular surface;** talus.

## Articular surface of Talus

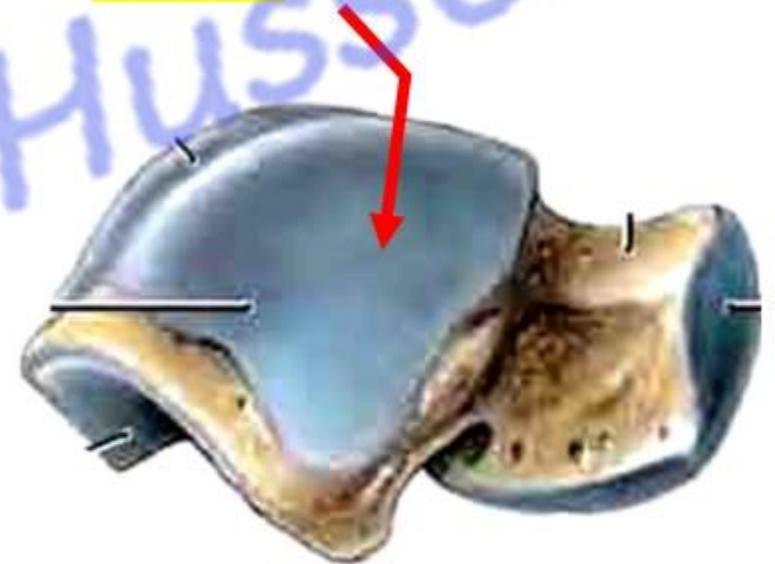
Superior trochlear surface articulates with lower end of tibia



Coma shape articulates with medial malleolus



Triangle shape articulates with lateral malleolus



- **Capsule:** surrounds the articular surfaces.
- **Synovial membrane:** lines the capsule.

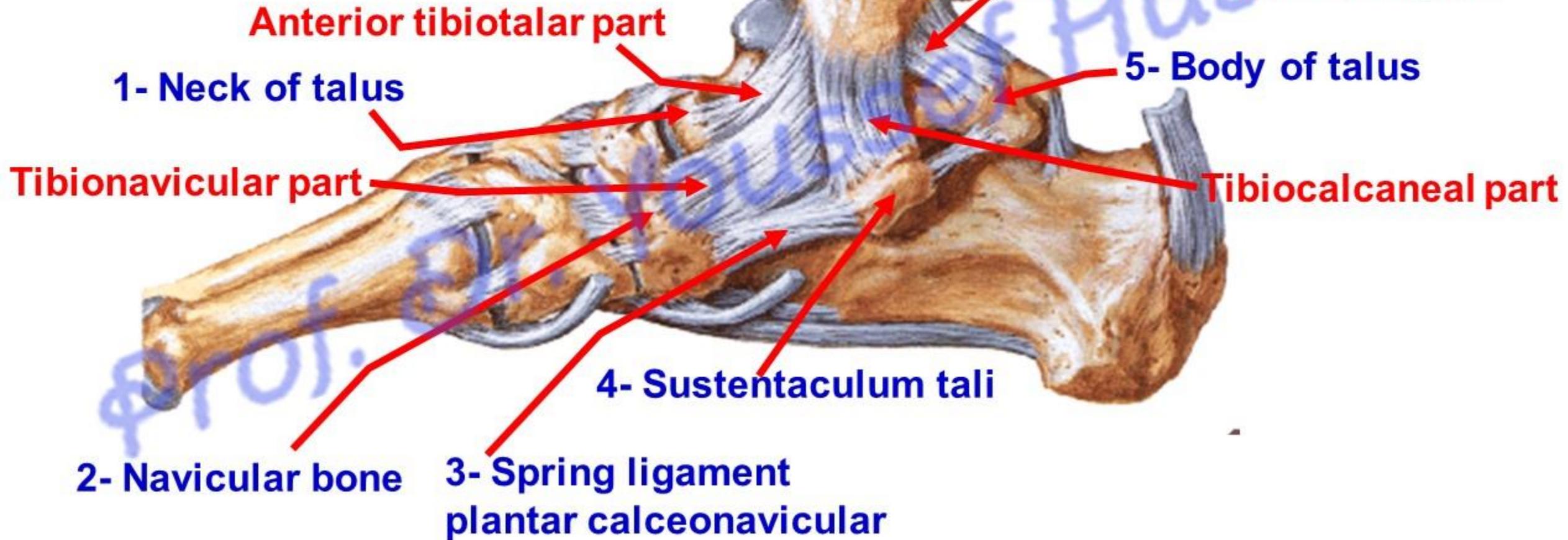
# Ligaments of Ankle joint

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## ❖ Deltoid (medial) ligament

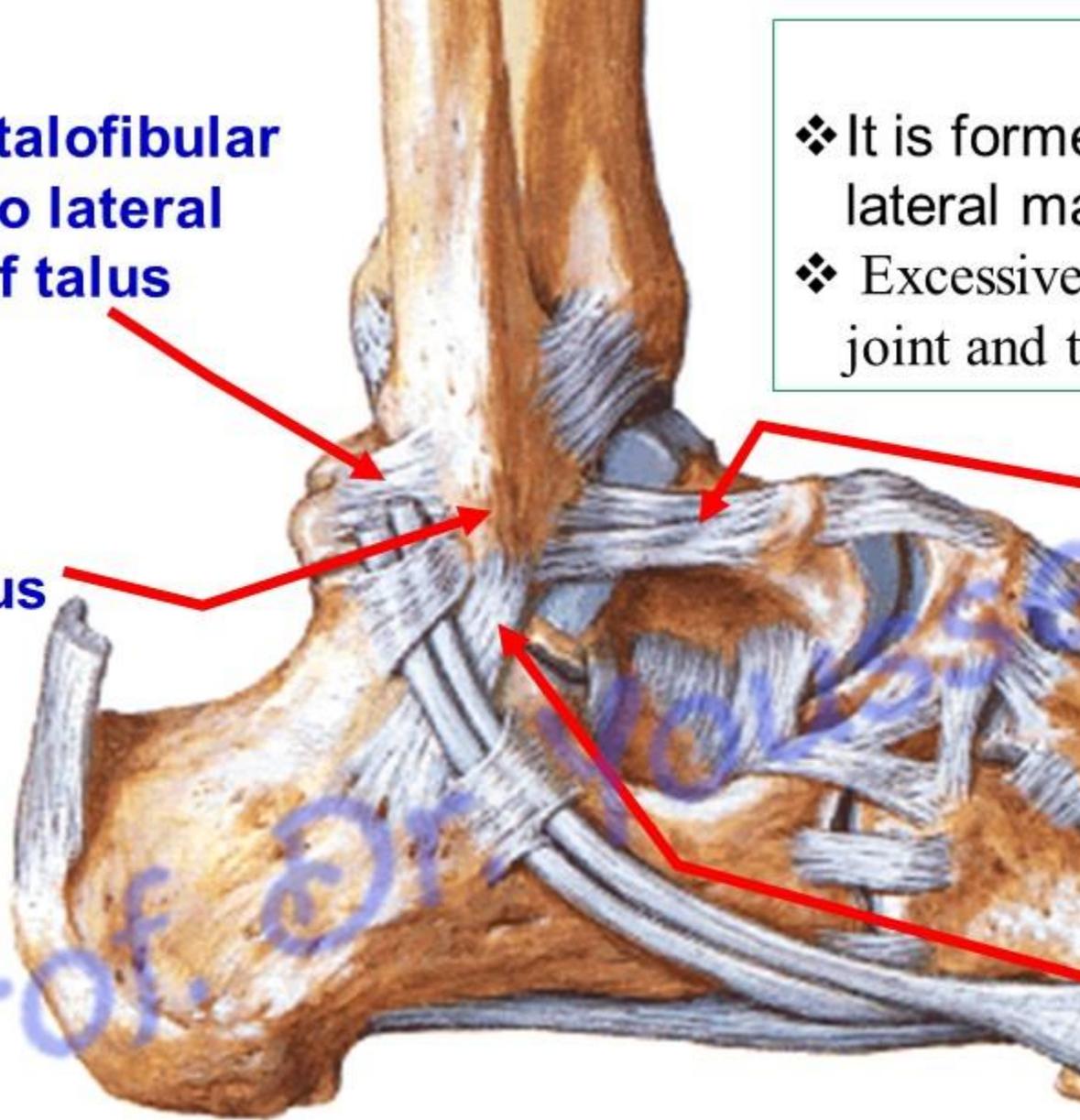
triangular in shape and a very strong ligament

Excessive **eversion** leading to sprain of the joint and tear off the medial (deltoid) ligament



**Posterior talofibular ligament to lateral tubercle of talus**

**Lateral malleolus**



### ❖ **Lateral ligament**

- ❖ It is formed of three bands attached to the lateral malleolus of fibula
- ❖ Excessive **inversion** leading to sprain of the joint and tear off the lateral ligament

**Anterior talofibular ligament to neck of talus is (the most common to injury)**

**Calcaneofibular ligament to the lateral surface of calcaneus**



# Relations of Ankle joint

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## Anterior relations

**Tibialis anterior**

**Extensor Hallucis longus**

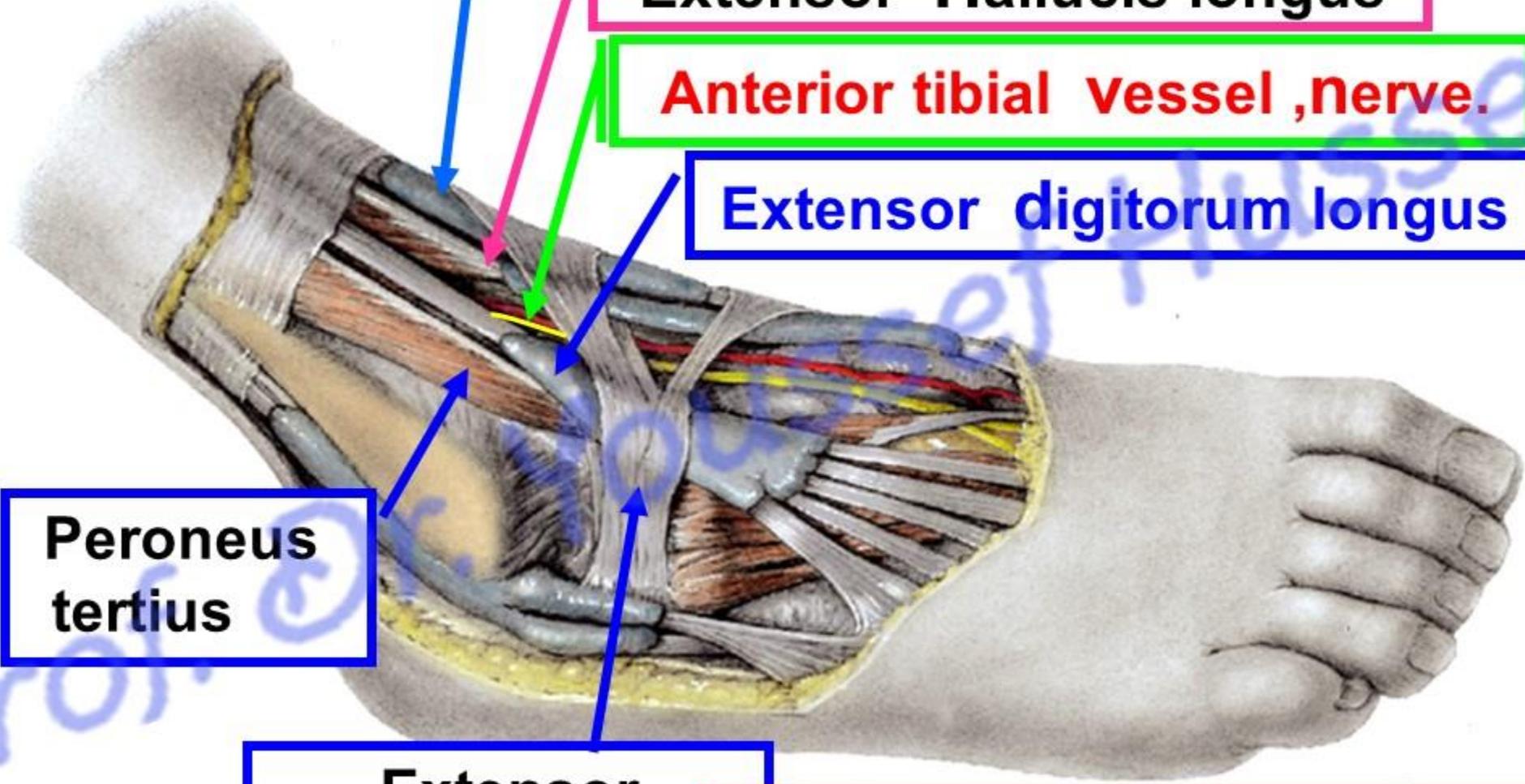
**Anterior tibial vessel, nerve.**

**Extensor digitorum longus**

**Peroneus tertius**

**Extensor retinacula**

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**Posterior relations**

**Lateral relations**

**tendon of Peroneus longus within its synovial sheath**

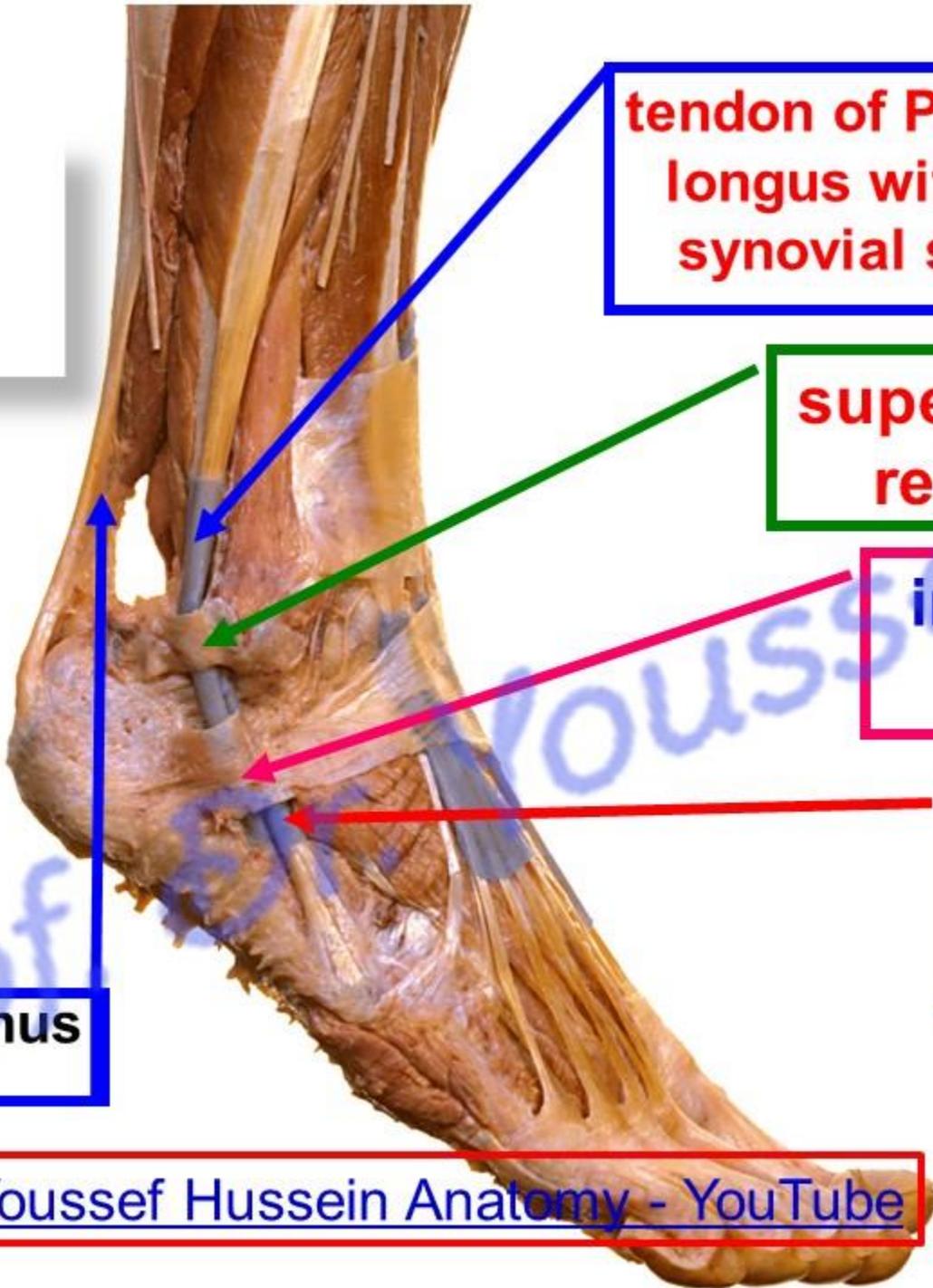
**superior peroneal retinaculum**

**inferior peroneal retinaculum**

**tendon of Peroneus brevis within its synovial sheath**

**Tendocalcaenus**

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- **Movements of the ankle joint**

**A- Dorsiflexion:** by the muscles of the anterior compartment of the leg  
1- Tibialis anterior, 2- **Extensor** hallucis longus., 3- **Extensor** digitorum longus.,4- Peroneus tertius)

**B- Plantar flexion by** muscles of posterior and lateral compartments of leg (1- Tendocalcaneus Mainly. 2- Tibialis posterior. 3- **Flexor** Digitorum longus. 4- **Flexor** Hallucis longus) (Peroneus longus and Brevis)

- **Locking and unlocking of the ankle joint:**

**a- Locking,** during **dorsiflexion**, the **wide anterior** part of the trochlear surface of the talus is lodged into the **narrow posterior part** of the superior articular surface (socket).

**b- Unlocking,** during **plantar flexion**, the **narrow posterior** part of the trochlear surface is lodged in the **wide anterior part** of the superior articular surface. In this position, the foot can be moved slightly from side to side.

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dorsiflexion



Plantar flexion

## ❖ Blood supply

### ❖ Anastomoses around the ankle joint

- **Branches of the anterior tibial artery.**

- **Anterior medial malleolar** artery.
- **Anterior lateral malleolar** artery.

- **Branches of dorsalis pedis artery.**

- Medial **tarsal** artery.
- Lateral **tarsal** artery.

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- **Branches of posterior tibial artery.**

- Posterior medial malleolar branches.
- Medial Calcanean branches

- **Branches of peroneal artery.**

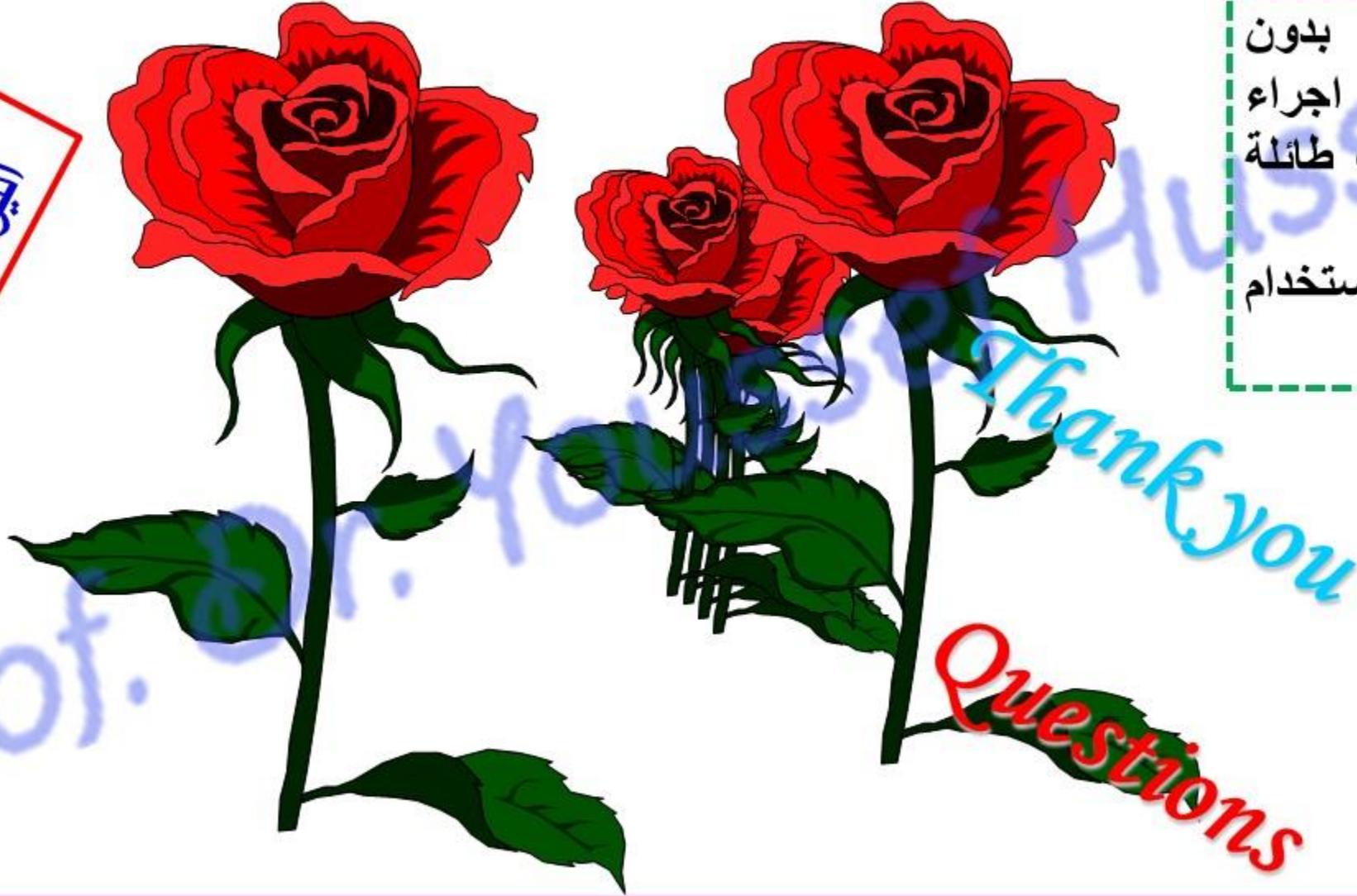
- Perforating branches.
- Lateral Calcanean branches.

❖ **Nerve supply:** from the anterior and posterior tibial nerves.

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