

وسهلا



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

الأستاذ الدكتور يوسف حسين

رئيس قسم التشريخ والأنسجة والأجنة

كلية الطب - جامعة مؤتة - الأردن

دكتورة من جامعة كولونيا المانيا

Prof. Dr. Youssef Hussein Anatomy - YouTube

الواتس 00201224904207

Dorsal aspect

Distal phalanx
Proximal phalanx

Distal phalanx
Middle phalanx
Proximal phalanx

14 Phalanges

1
2
3
4
5

Metatarsal

5 Metatarsal

Medial cuneiform
Intermediate cuneiform
Navicular

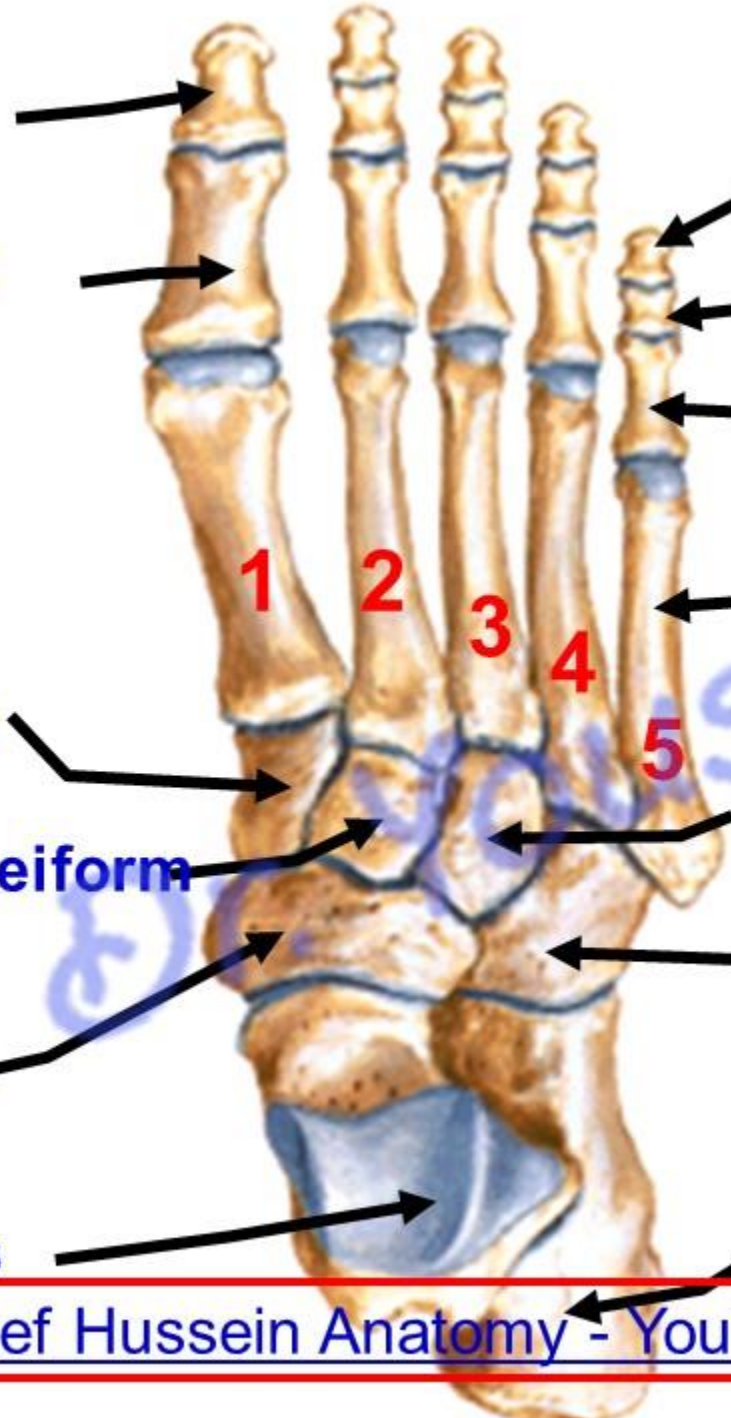
Lateral cuneiform
Cuboid

7 Tarsal

Talus

Calcaneus

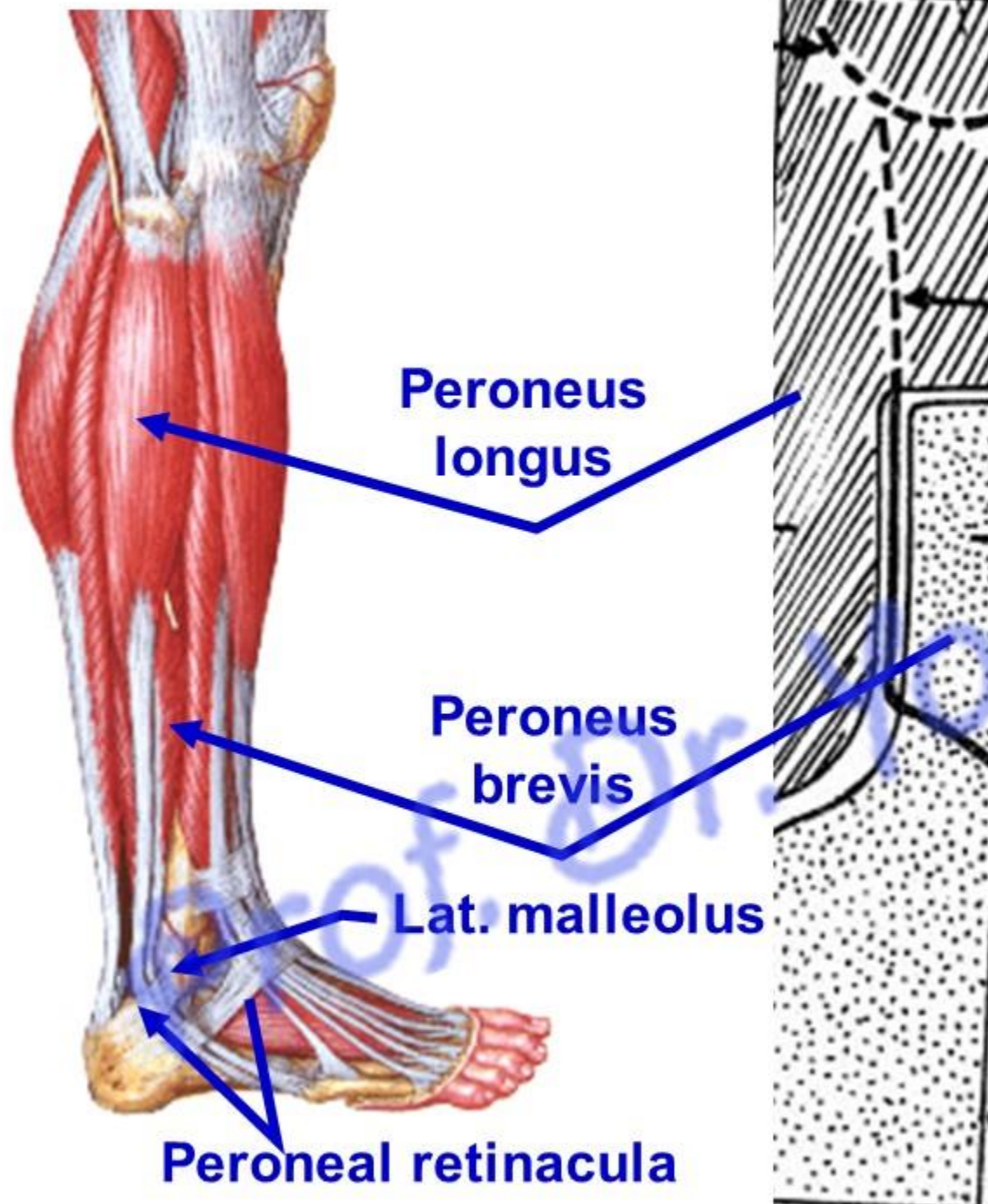
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Lateral compartment of the leg

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د. يـوسـفـ حـسـيـن

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- **Peroneus Longus**

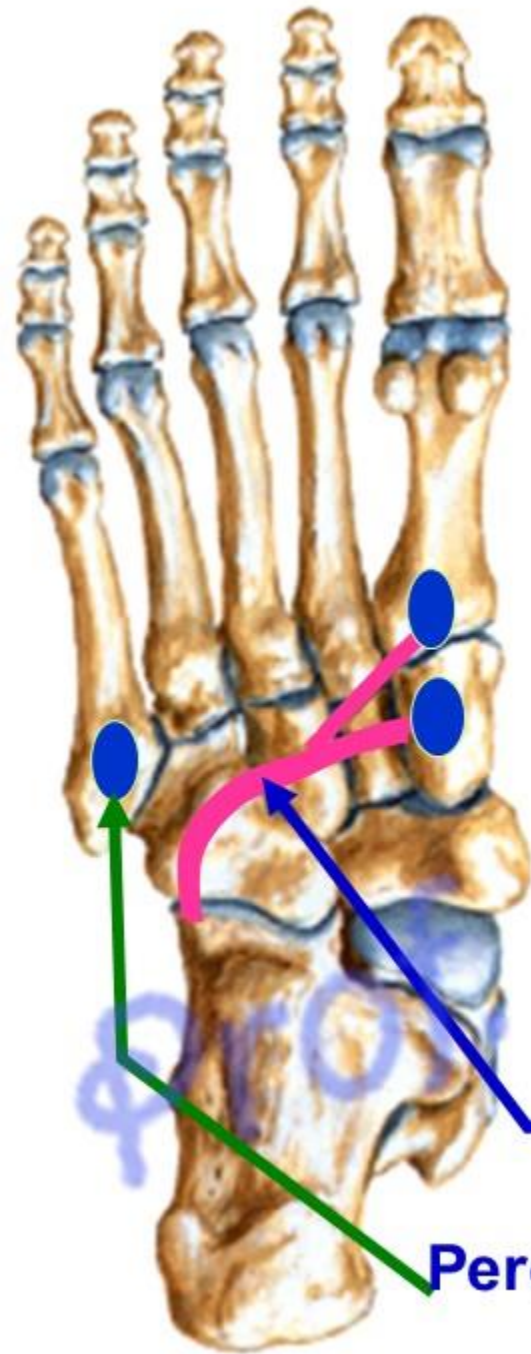
** **Origin:** From upper 2/3 of lateral surface of fibula.

- **Peroneus Brevis**

** **Origin:** From lower 2/3 of lateral surface of fibula.

** Peroneus **longus** passes superficial to peroneus **brevis** **behind** lateral malleolus then **deep** to **peroneal retinacula** inside synovial sheath

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- **Insertion of Peroneus Longus, crosses sole** of foot from lateral to medial to base of the plantar surface of the first metatarsal bone and medial cuneiform bone.
- **Insertion of Peroneus Brevis into** base of plantar surface of the 5th metatarsal bone.
- **Nerve supply:** Superficial peroneal nerve.

**** Actions:**

- 1- Plantar flexion of the foot.
- 2- Eversion of the foot.
- 3- **Peroneus longus** Plays an important role in supporting **transverse** arch of foot.

Peroneus longus

Peroneus Brevis

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Muscles of Anterior compartment of leg

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Tibialis anterior

Extensor hallucis longus

Extensor digitorum longus

Peroneus tertius

- All muscles of anterior group arise from the anterior surface of fibula except tibialis anterior from lateral surface of tibia.

- Nerve supply: deep peroneal Nerve (anterior tibial Nerve)

- Actions: Dorsiflexion of the foot (ankle joint)

- Blood supply: Anterior tibial vessels.

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**** Origin of muscles of anterior compartment**

1- Tibialis Anterior

- From the upper 2/3 of the lateral surface of the **tibia**.

2- Extensor Digitorum Longus

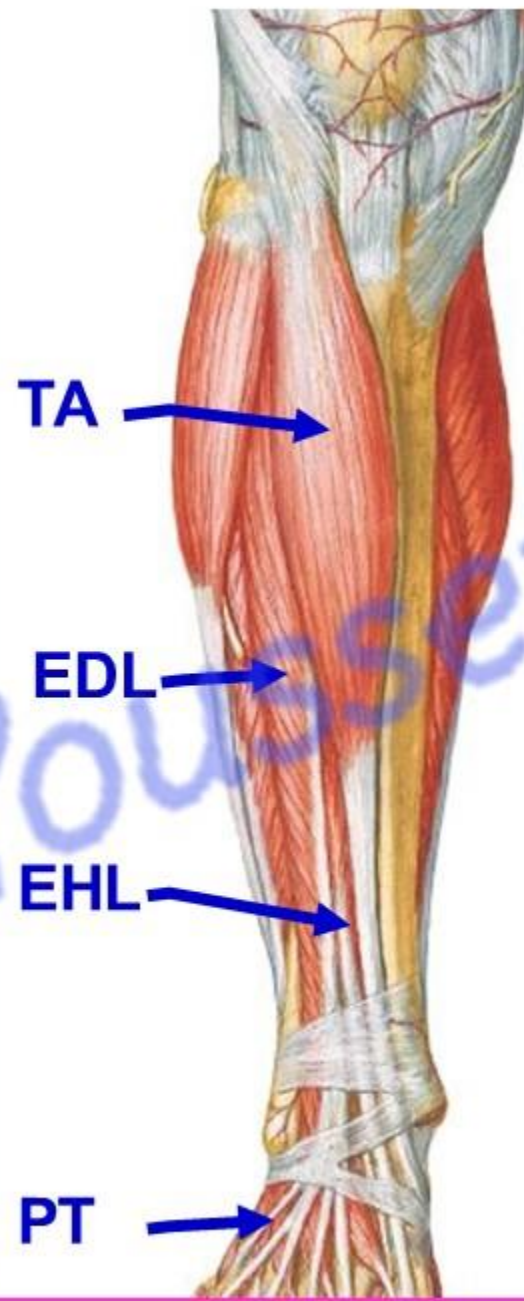
- from the upper 3/4 of the anterior surface of the **fibula**.

3- Extensor Hallucis Longus

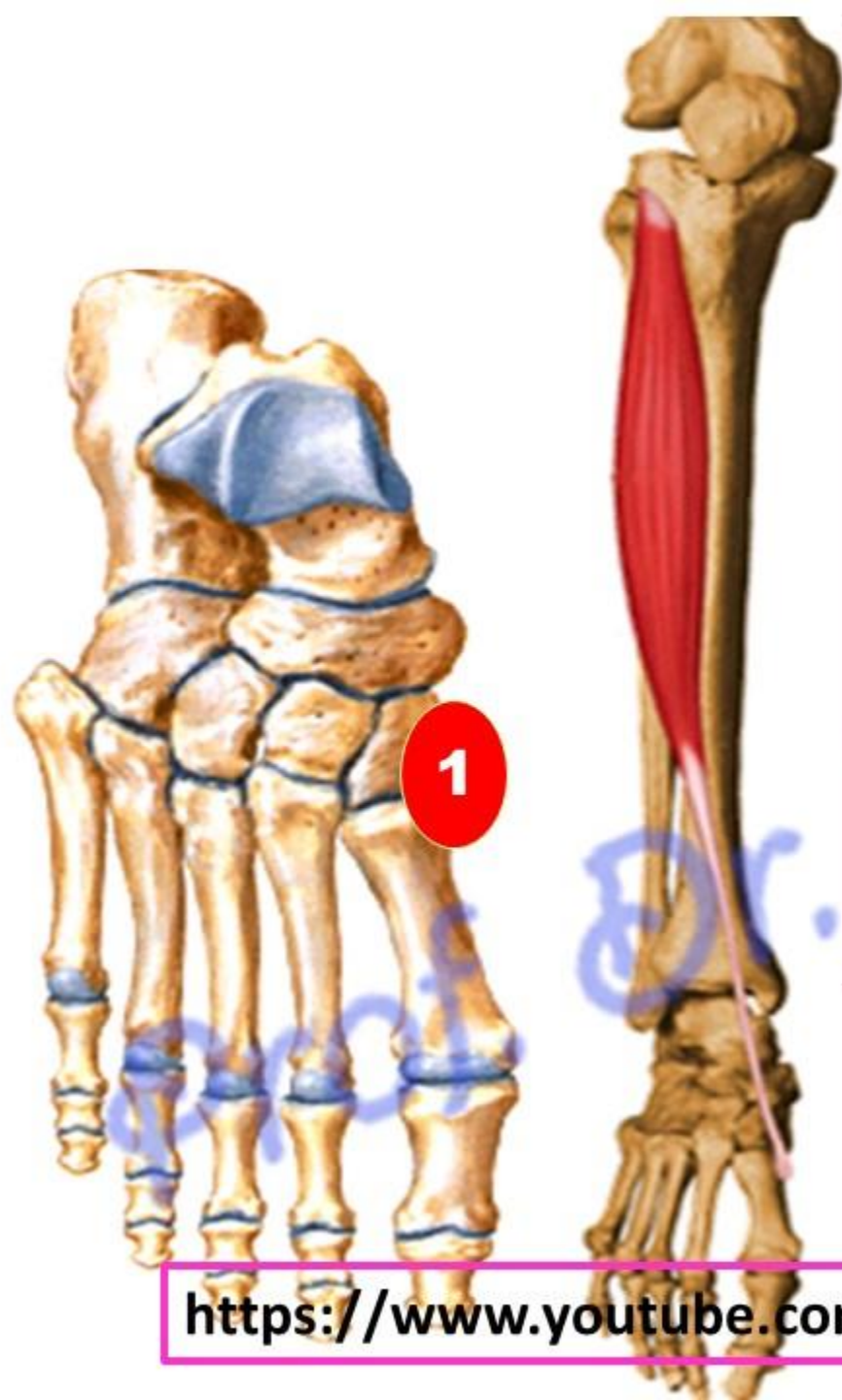
- From the middle 2/4 of the anterior surface of the **fibula**.

4- Peroneus Tertius

- From the lower 1/4 of the anterior surface of the **fibula**.



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1- Tibialis Anterior

**** Origin:** 1- From the upper 2/3 of the lateral surface of the tibia and interosseous membrane.

**** Insertion:** medial surface of medial cuneiform bone and Adjacent part of base of the first metatarsal bone.

**** Nerve supply:** anterior tibial nerve (deep peroneal nerve).

**** Actions:** 1- Dorsiflexion of the foot (ankle joint).

2- Inversion of the foot.

3- Support and maintain the medial longitudinal arch of the foot.

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2- Extensor Digitorum Longus

**** Origin:** from the upper 3/4 of the anterior surface of the fibula and interosseous membrane.

**** Insertion :**

- They join the **extensor expansions** on the proximal phalanges of the **lateral 4 toes**, Then divided into

a- Middle slip into the dorsal aspect of the middle phalanges.

b- 2 collateral slips into the bases of the distal phalanges.

**** Nerve supply:** anterior tibial nerve (deep peroneal nerve).

**** Actions:**

1- Dorsiflexion of the foot.

2- Extension of the all joints of the lateral 4 toes.

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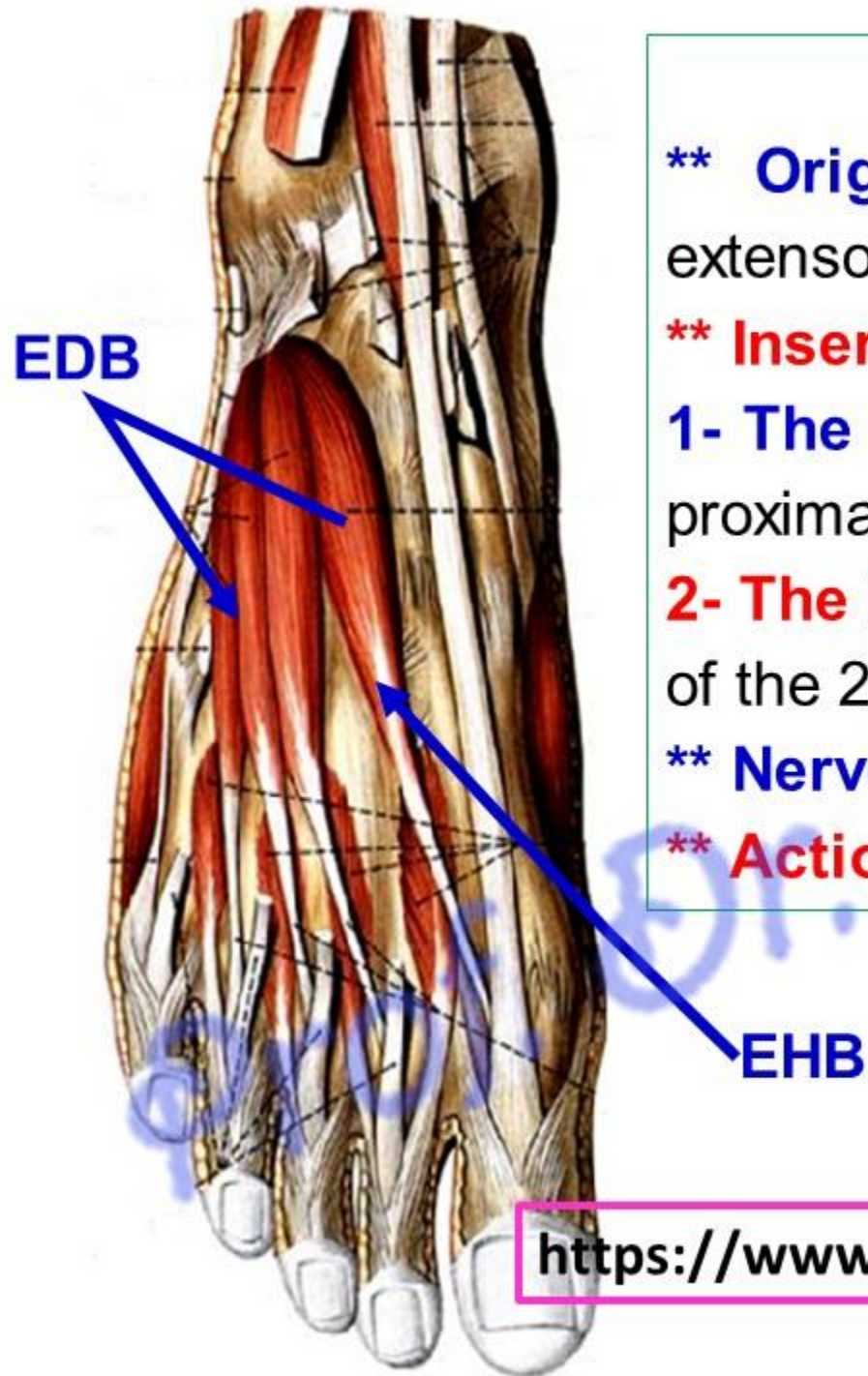
3- Extensor Hallucis Longus

- ** **Origin:** From the middle 2/4 of the anterior surface of the fibula and interosseous membrane.
- ** **Insertion:** dorsum of the base of the distal phalanx of the big toe.
- ** **Nerve supply:** anterior tibial nerve (deep peroneal nerve).
- ** **Actions:** 1- Dorsiflexion of the foot.
2- Extension of all joints of the big toe.

4- Peroneus Tertius

- ** **Origin:** From the lower 1/4 of the anterior surface of the fibula and interosseous membrane.
- ** **Insertion:** dorsum of base of the 5th metatarsal bone.
- ** **Nerve supply:** deep peroneal nerve.
- ** **Actions:** 1- Dorsiflexion of the foot.
2- Eversion of the foot.

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• Extensor Digitorum Brevis

** **Origin;** anterior surface of the calcaneus and inferior extensor retinaculum.

** **Insertion:** It divides into 4 slips for the **medial 4 toes**.

1- The medial slip is inserted into dorsum of the base of the proximal phalanx of the **big toe** (**extensor hallucis brevis**).

2- The lateral 3 slips are inserted into the extensor expansion of the 2nd, 3rd and 4th toes.

** **Nerve supply;** **lateral branch** of the deep peroneal nerve

** **Actions,** Extension of the medial 4 toes.

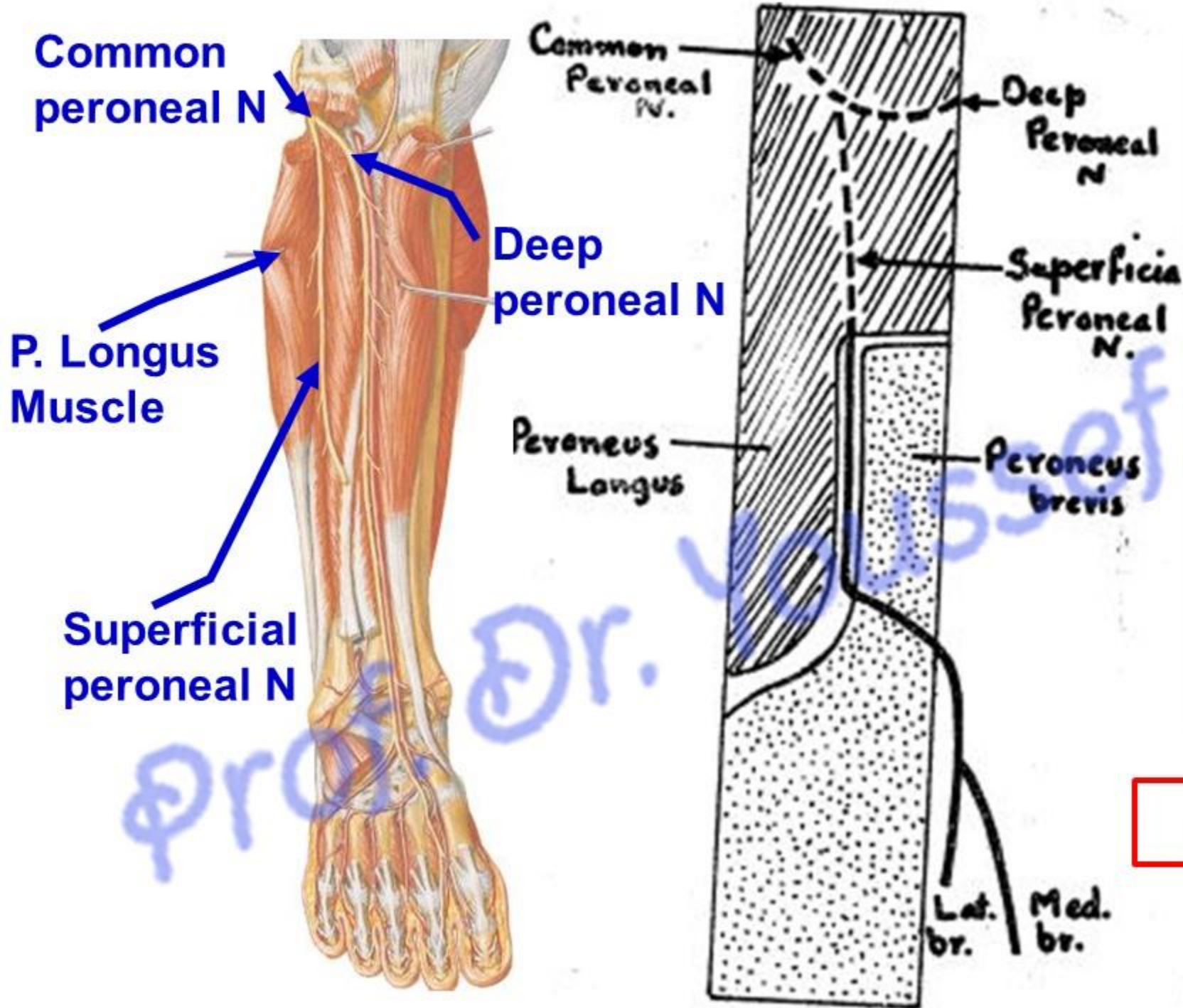
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Superficial Peroneal nerve

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• **Superficial Peroneal Nerve (musculocutaneous)**

- ** It is the smaller of two terminal branches of common peroneal nerve within substance of peroneus longus.
- It descends through substance of peroneus longus.
 - Then between peroneus longus and brevis.
 - Then, it pierces deep fascia where it becomes subcutaneous.

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- **Superficial Peroneal Nerve (musculocutaneous)**

****** It divides into medial and lateral terminal branches, descend superficial to extensor retinacula to dorsum of foot.

**** Branches**

A- Muscular branches: two 2 peronei longus and brevis.

B- Cutaneous branches

- 1) The lower part of the lateral side and front of the leg.
- 2) Intermediate part of the dorsum of the foot.

C- Medial terminal division: divides into 2 dorsal digital branches

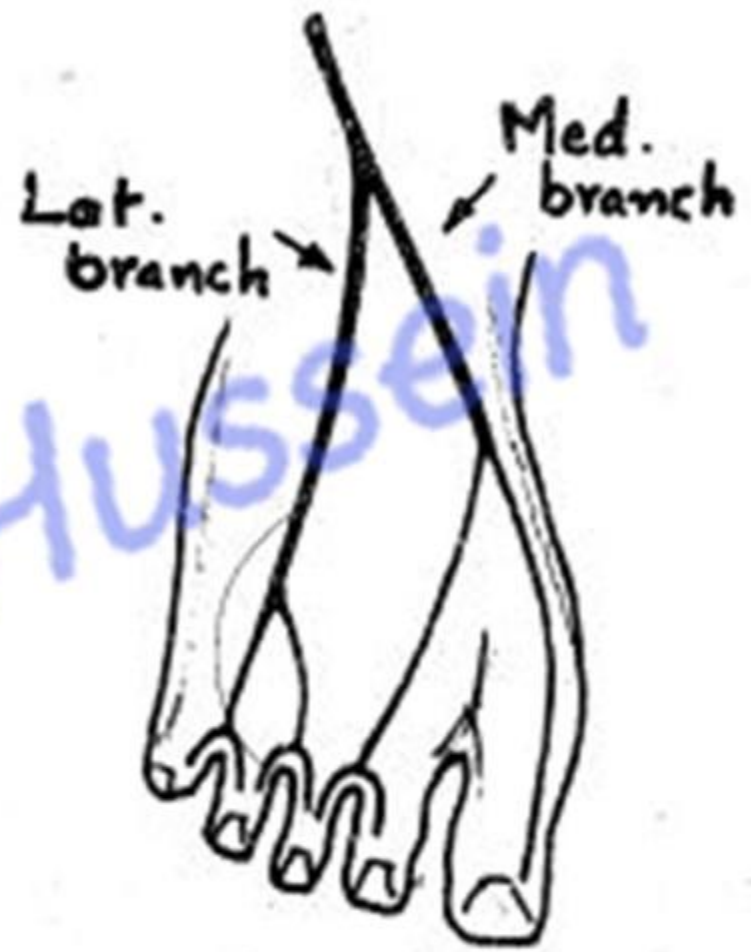
1- Medial branch to the medial side of the big toe.

2- Lateral branch for adjacent sides of 2nd and 3rd toes.

D- Lateral terminal division divides into 2 dorsal digital branches:

1- Medial branch for adjacent sides of 3rd and 4th toes.

2- Lateral branch for adjacent sides of 4th and little toes.



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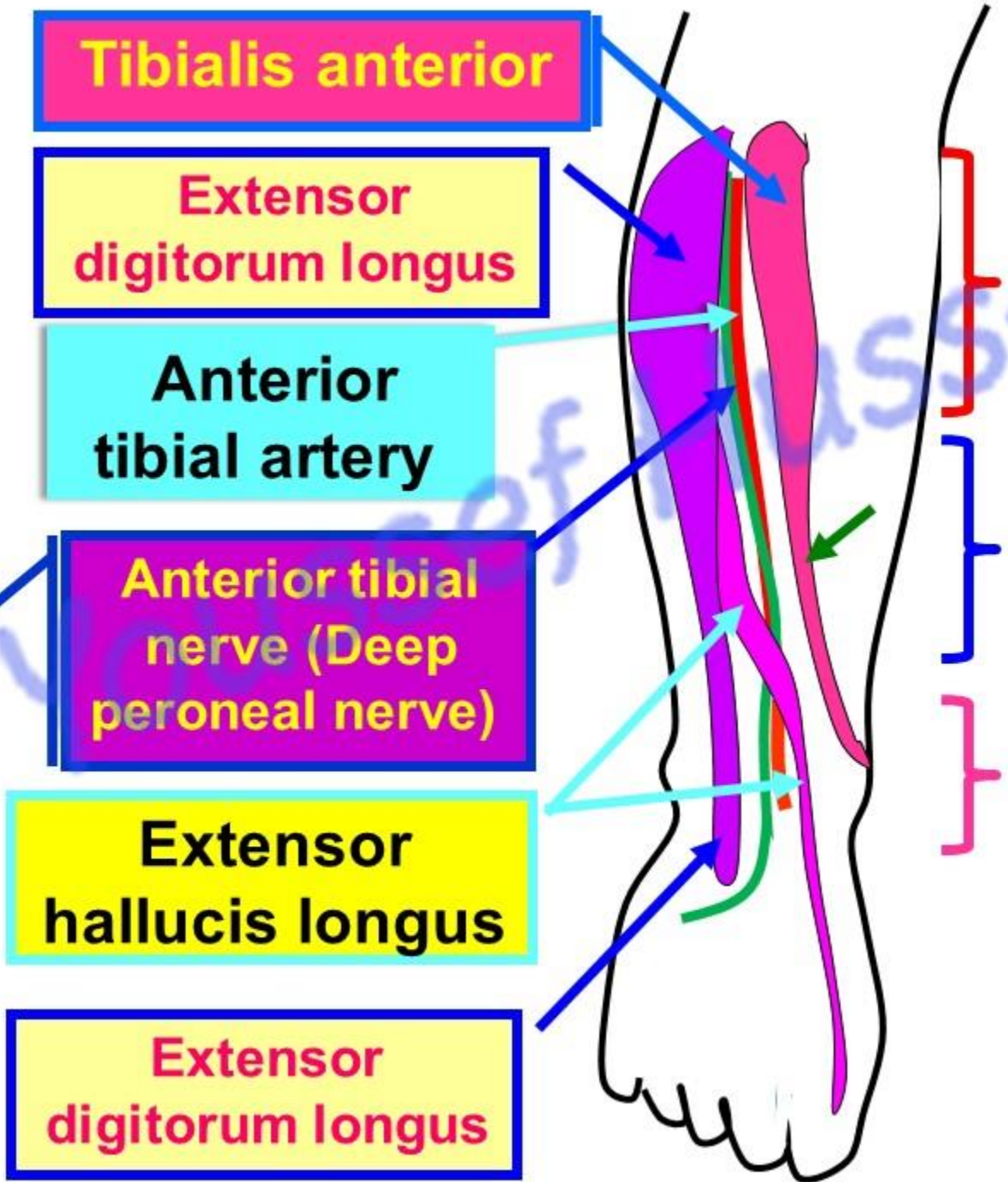
Deep peroneal (Anterior Tibial) Nerve

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Deep peroneal nerve

Common peroneal N



Medial

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- **Anterior tibial (Deep Peroneal) Nerve**

**** Origin:** one of the two terminal branches of the common peroneal nerve, at the lateral side of the neck of the fibula.

**** Course and relations in the leg:**

1- It passes through the extensor digitorum longus.

2- Upper part, between Tibialis anterior (**Medial**) and extensor digitorum longus.

3- Middle part, between Tibialis anterior (**Medial**) and extensor hallucis longus.

4- It is crossed by extensor hallucis longus from lateral to medial

5- Lower part, between Extensor hallucis longus (**Medial**) & extensor digitorum longus.

6- Relation of the anterior tibial artery to the nerve,

a- Upper part of the leg, the nerve is **lateral** to the artery.

b- Middle part of the leg, the nerve becomes **anterior** to the artery.

c- Lower part of the leg, the nerve returns **lateral** to the artery.

**** Termination;** by dividing into medial and lateral terminal branches.

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**** Branches of deep peroneal nerve**

- 1- Muscular branches** to muscles of the anterior compartment
 - Tibialis anterior, Extensor digitorum longus, Extensor hallucis longus and Peroneus tertius muscles

2- Articular branches: to the ankle joint.

3- Terminal branches in the foot

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I- Medial terminal branch:

- **Cutaneous** to the adjacent sides of the big and 2nd toes.
- **Articular branches** to the joints of the foot.

II- Lateral terminal branch: ends by **ganglia** and gives

- 1- Muscular** to the **extensor digitorum brevis**.
- 2- Articular** to the joints of the foot.

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**Saphenous
Nerve**



Sural Nerve



**Superficial
peroneal Nerve**



Sural Nerve



**Deep peroneal
Nerve**



❖ Cutaneous Nerve Supply of Dorsum of Foot

A- Dorsum of the foot.

- 1- **Intermediate** part by superficial peroneal nerve.
- 2- **Medial** by Saphenous nerve from femoral nerve.
- 3- **Lateral** part by sural nerve from tibial nerve.

B- Dorsum of the toes;

- All the dorsum of the toes supplied by the superficial peroneal nerve **except** 2 areas;
- 1- The **adjacent sides** between big toe and 2nd toe by the deep peroneal nerve.
- 2- **Lateral side of the little toe** by the sural nerve.

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** Injury of the common peroneal nerve

** **Causes:** Fracture of the neck of the fibula (The **commonest site & dangerous position**).

** **Effect of injury:**

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1- Motor; Paralysis of muscles of the leg

- Anterior compartment (deep peroneal N)
- Lateral compartment (superficial peroneal)

-Deformity: Foot drops

(manifested by plantar flexion and Inversion).

2- Sensory; Decreased sensation, numbness, or tingling and pain on

1) Anterolateral part of the leg.

2) Dorsum of the foot **except** medial side supplied by saphenous nerve (femoral nerve) and **lateral side by sural nerve (tibial nerve)**

3) Dorsum of toes **except** lateral side of little toe (sural nerve).



- **Injury of the deep peroneal nerve**

**** Causes, Fracture neck of the fibula. Stab wound.**

**** Results of injury**

1. Motor affects; paralysis of muscles of anterior compartment leading to

- Loss of dorsiflexion and extension of toes.
- Weakness of inversion of the foot.

**** Deformity, Foot drop**

- **Gait:** high steppage gait.

2- Sensory affects; Loss of sensation of adjacent sides of the big and 2nd toe.

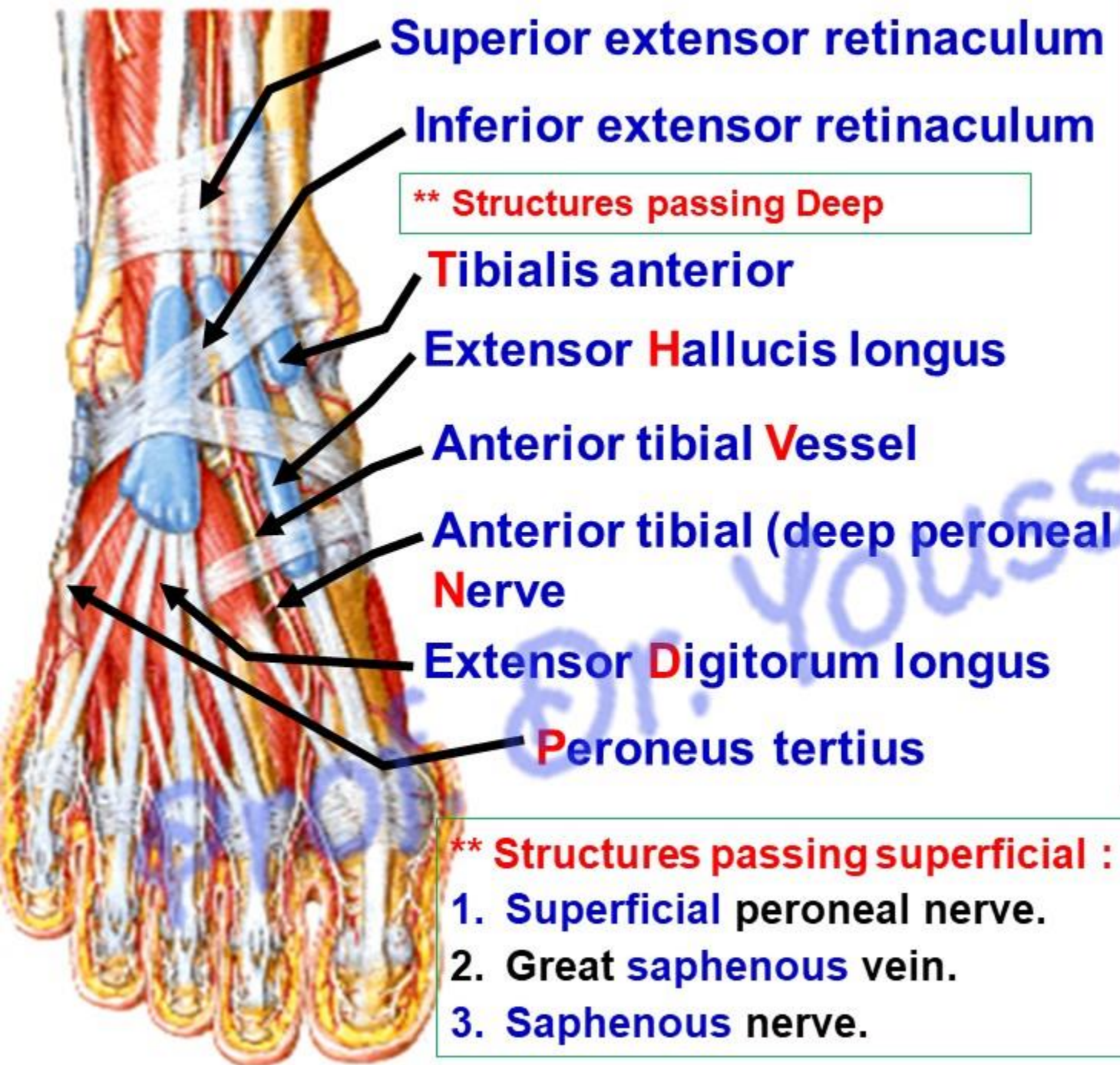


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Extensor retinaculum of foot

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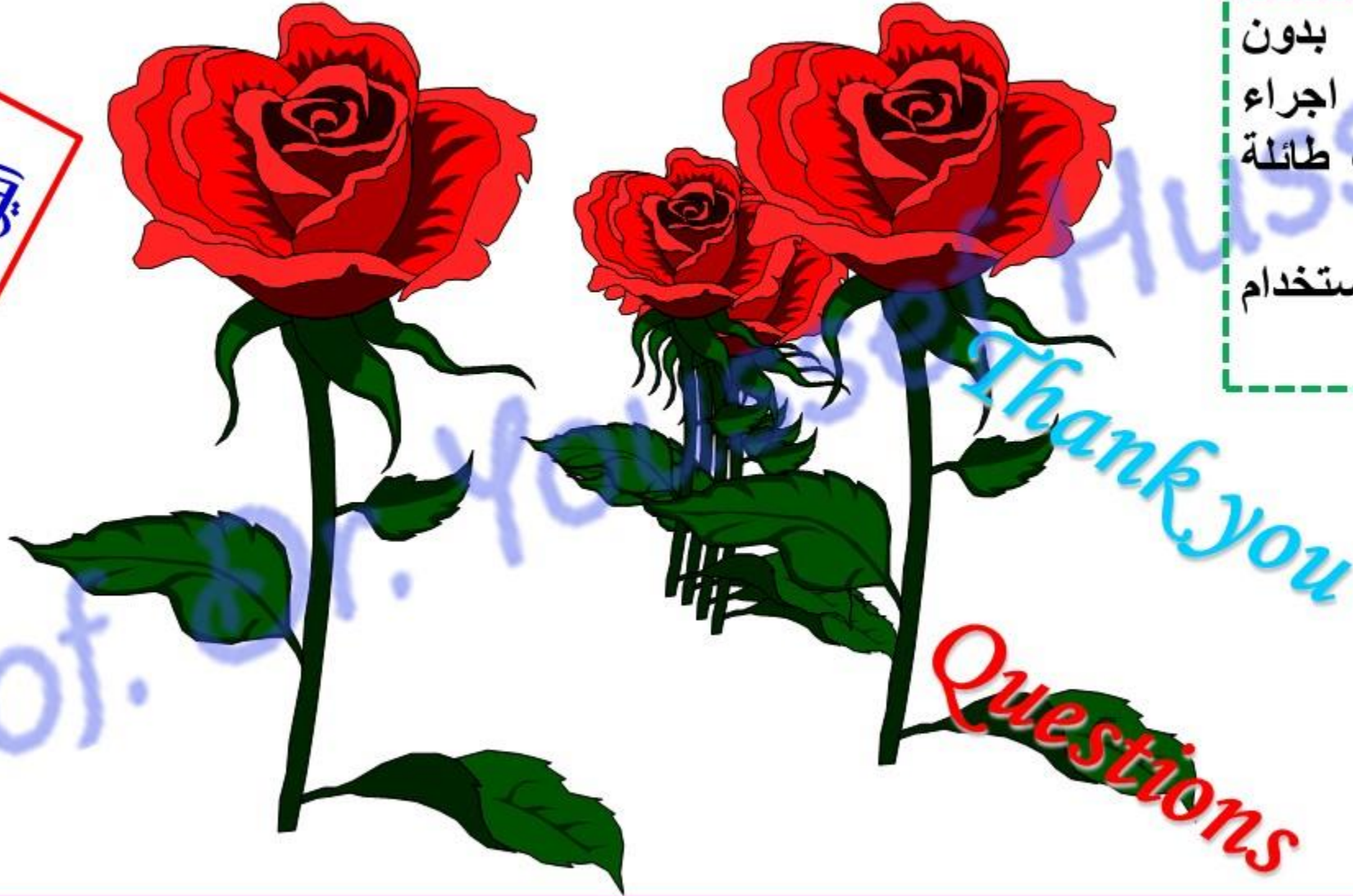
- **Extensor Retinaculum**
Thickened band of the deep fascia
- 1- **Superior Extensor Retinaculum,**
** Attachment; lower part of anterior border of fibula (**Lateral**) to lower part of anterior border of the tibia (**Medial**) .
 - 2- **Inferior,** Y shaped band
** Attachment;
- **Laterally, Stem** attached to superior surface of the calcaneus.
- **Medially,**
a- Upper band medial malleolus.
b- Lower band fuses with deep fascia of foot.

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