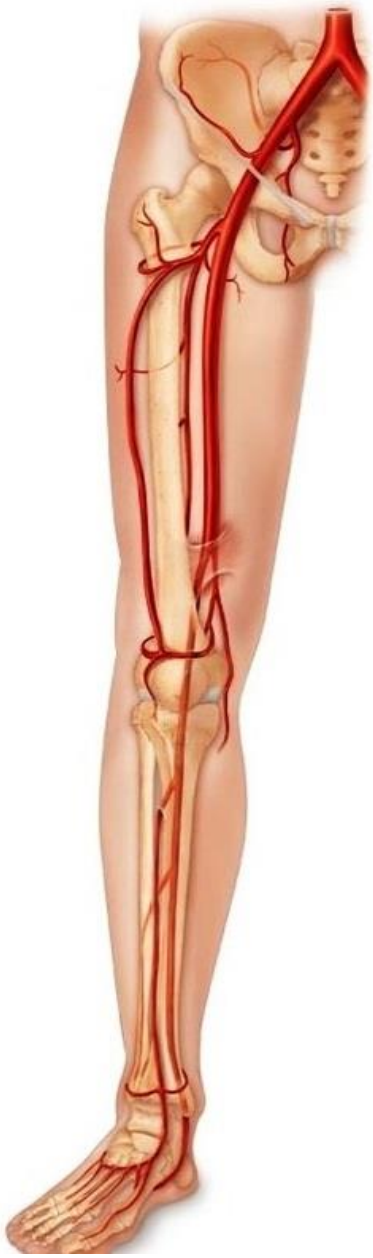
VESSELS OF LOWER LIMB



BY

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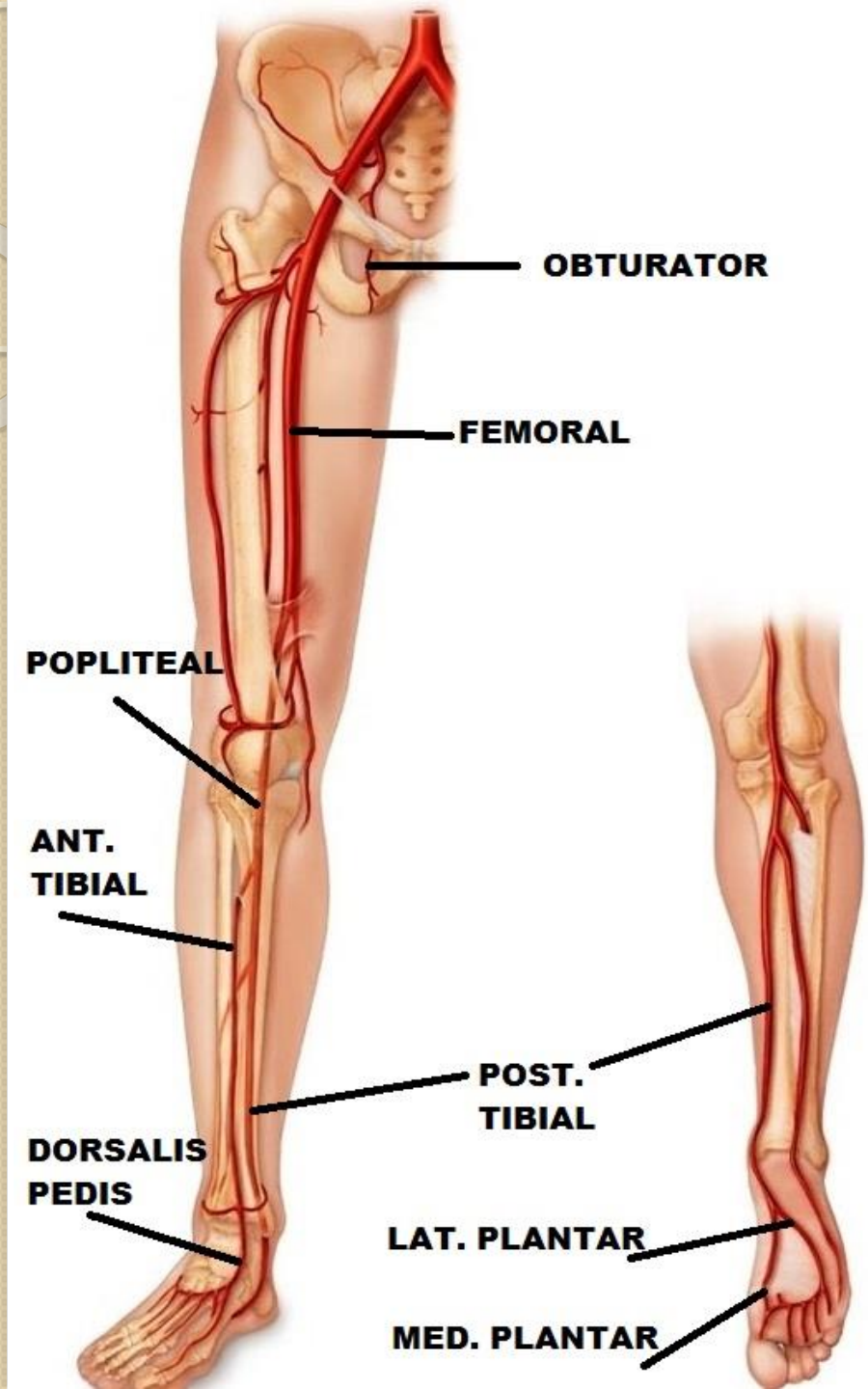
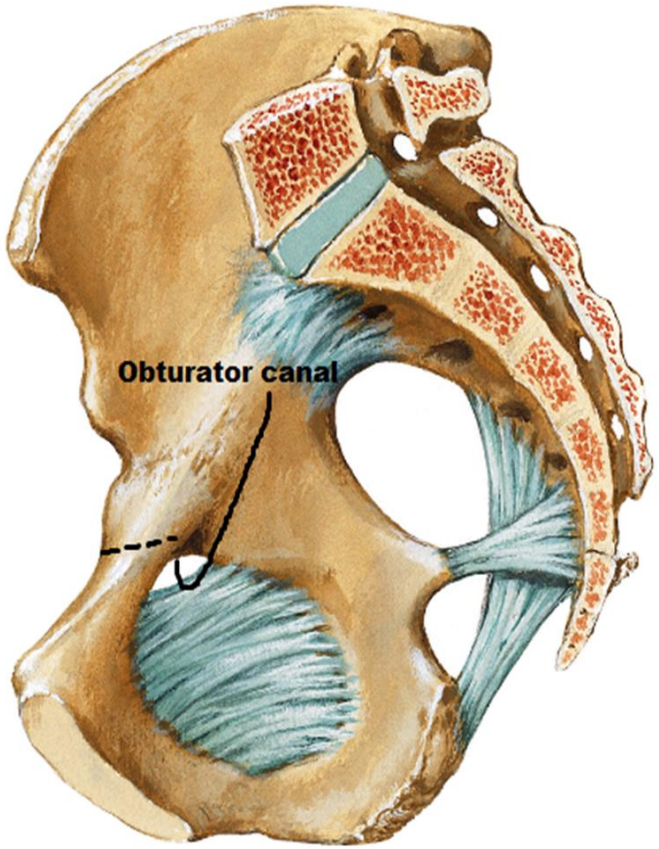

OBTURATOR
FEMORAL
POPLITEAL
ANT.
TIBIAL
POST.
TIBIAL
DORSALIS
PEDIS
LAT. PLANTAR
MED. PLANTAR


Obturator canal

OBTURATOR ARTERY

O. :- br. from ant. division of int. iliac art.
Inside the pelvis

C. & r. :

-enters the thigh through obturator canal

-at ant. end of canal →

medial & lateral divisions

that from arterial circle

at margins of obturator membrane

branches :

-acetabular br.:-

pass through acetabular notch

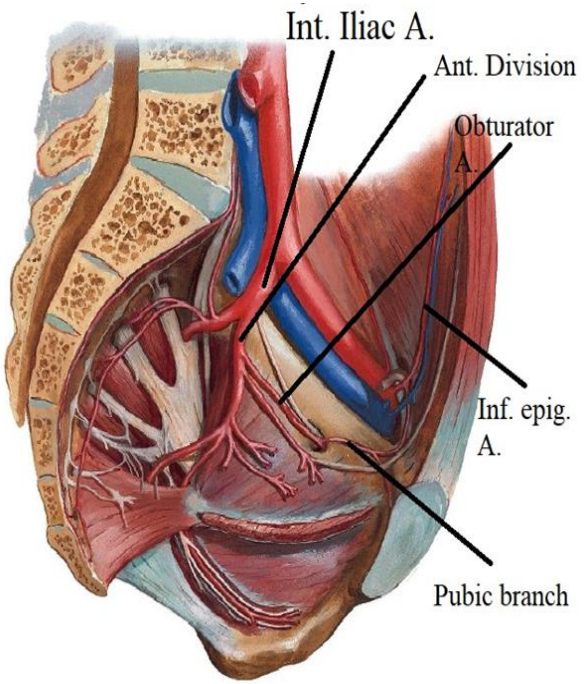
to supply head of femur

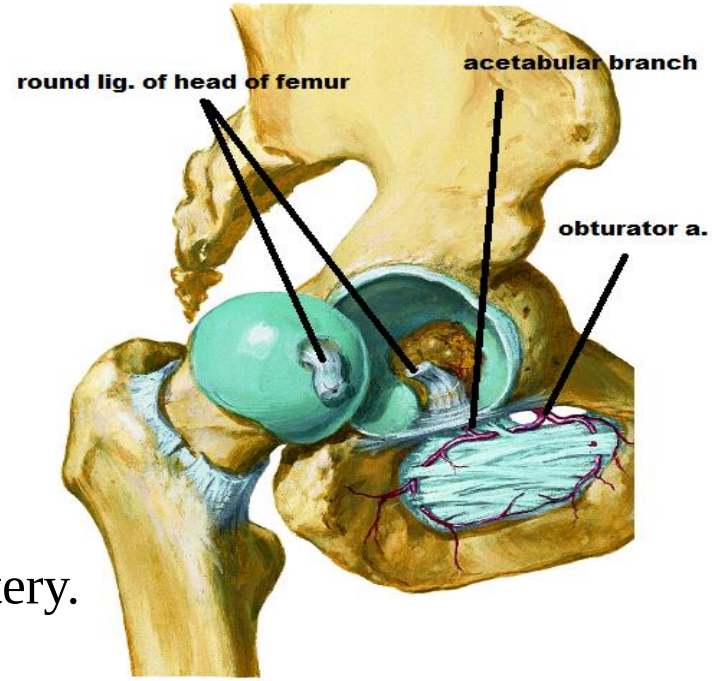
-muscular branches:-

to medial compartment of thigh

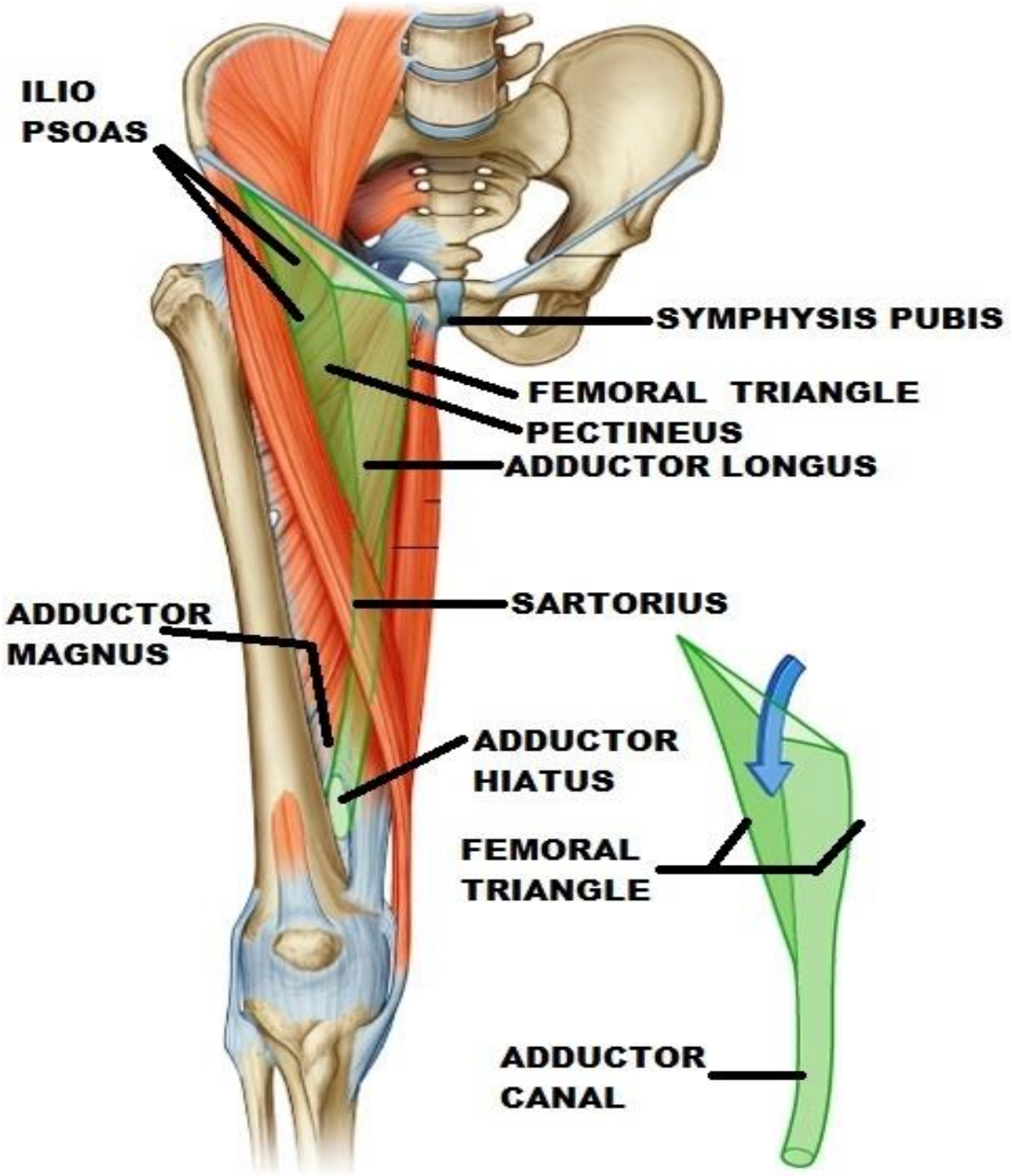
-pubic branch:-

-It ascends on the pelvic surface of the pubis
to anastomose with
the pubic branch of the inferior epigastric artery.





REV.


ILIO
PSOAS
SYMPHYSIS PUBIS
FEMORAL TRIANGLE
PECTINEUS
ADDUCTOR LONGUS
SARTORIUS
ADDUCTOR
MAGNUS
ADDUCTOR
HIATUS
FEMORAL
TRIANGLE
ADDUCTOR
CANAL

FEMORAL ARTERY

Origin:-

continuation of ext. iliac art. deep to inguinal lig

at midinguinal point(midway between ASIS & symphysis pubis)

Course:

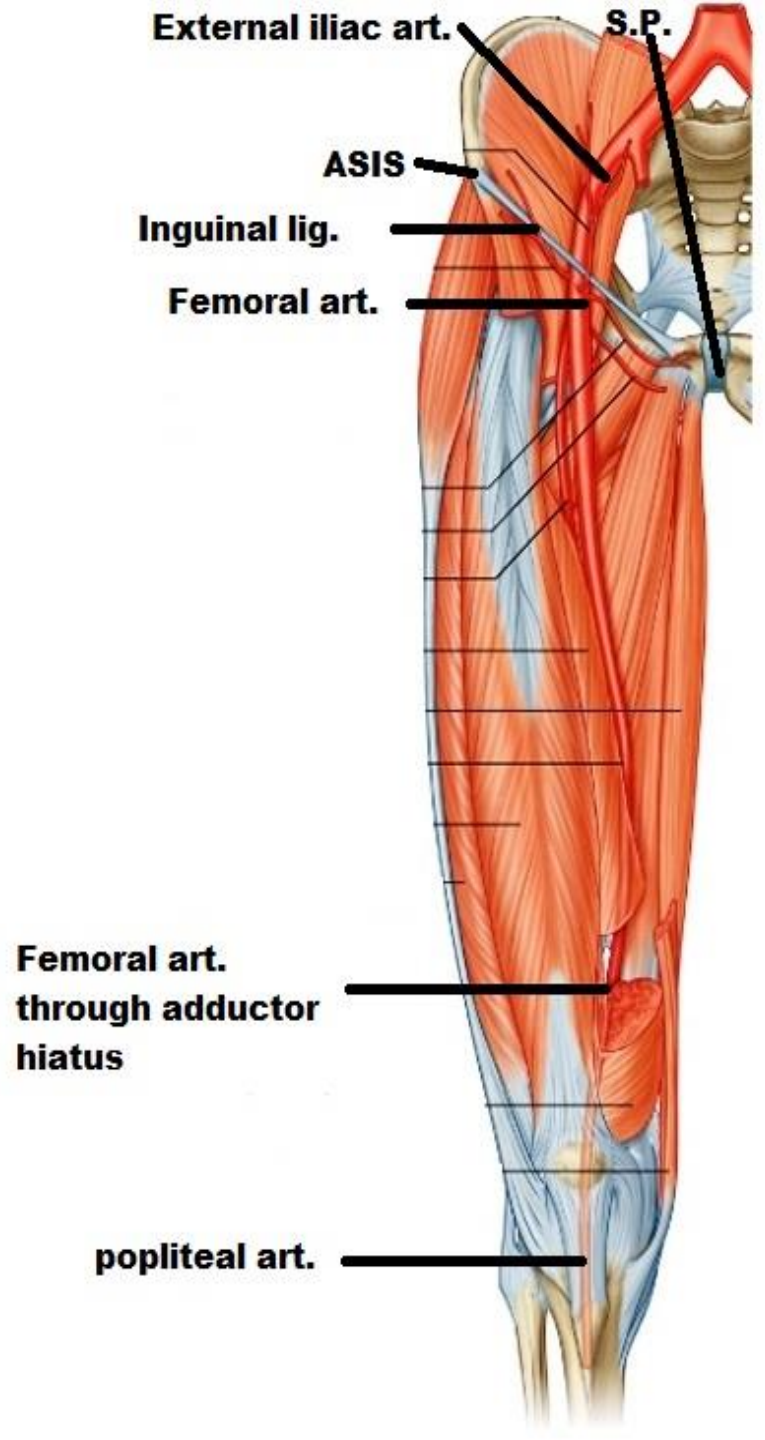
descend vertically

-upper part (superficial) in femoral Δ from base to apex

-lower part (deep) in adductor canal From upper end to lower end

End: -

at adductor opening (hiatus) to continue as popliteal art.



FEMORAL ARTERY

Relations:

medial: Femoral V.

Lateral:- Femoral n.

-saphenous

then cross it from lateral to medial

-nerve to vastus medialis

superficial (ant.) -skin

-superficial fascia

-deep fascia

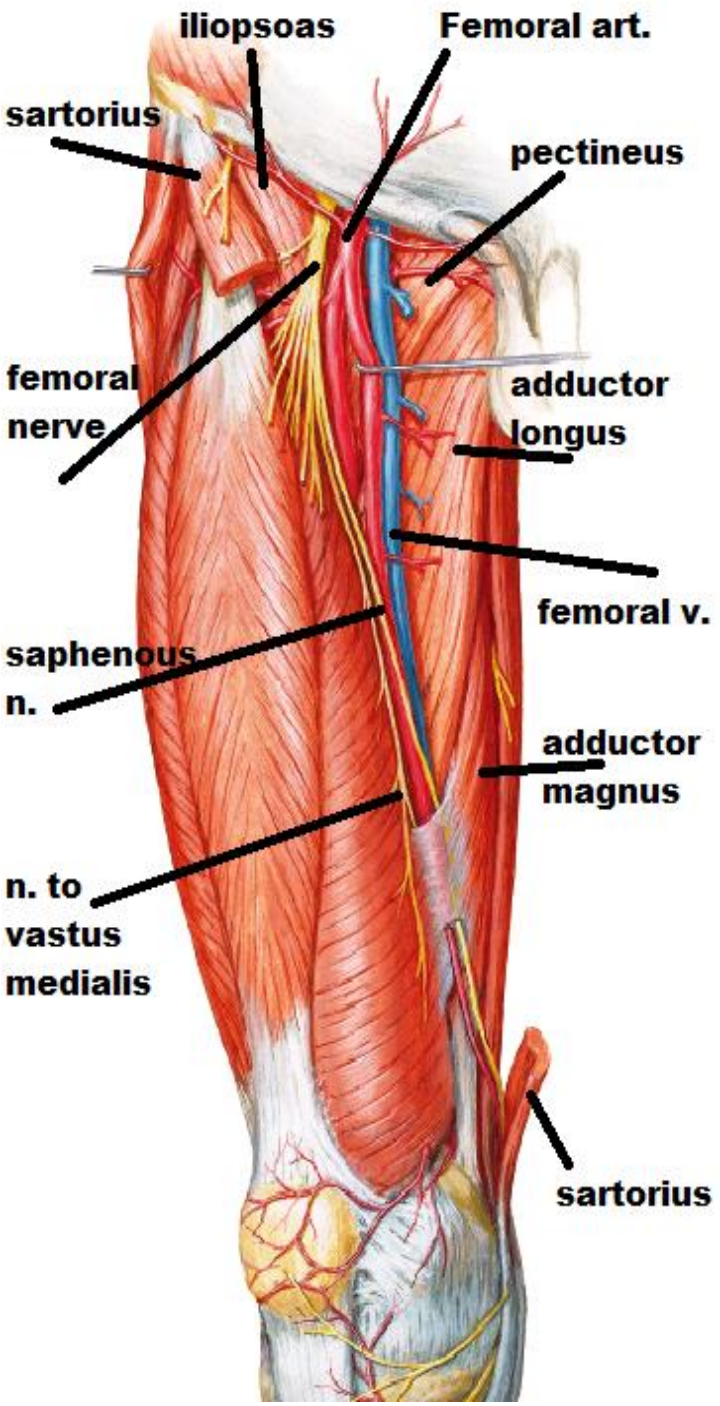
-Sartorius

deep (post.)

-iliopsoas

-pectineus: with profunda femoris in between

-adductor longus -Adductor magnus



FEMORAL ARTERY

Branches :

Superficial branches:
(Superficial inguinal arteries)

1-superficial circumflex iliac :

to anastomose around ASIS

2-superficial epigastric :

cross the inguinal ligament to enter the ant. abd. Wall till umbilicus

3-superficial ext. pudendal :

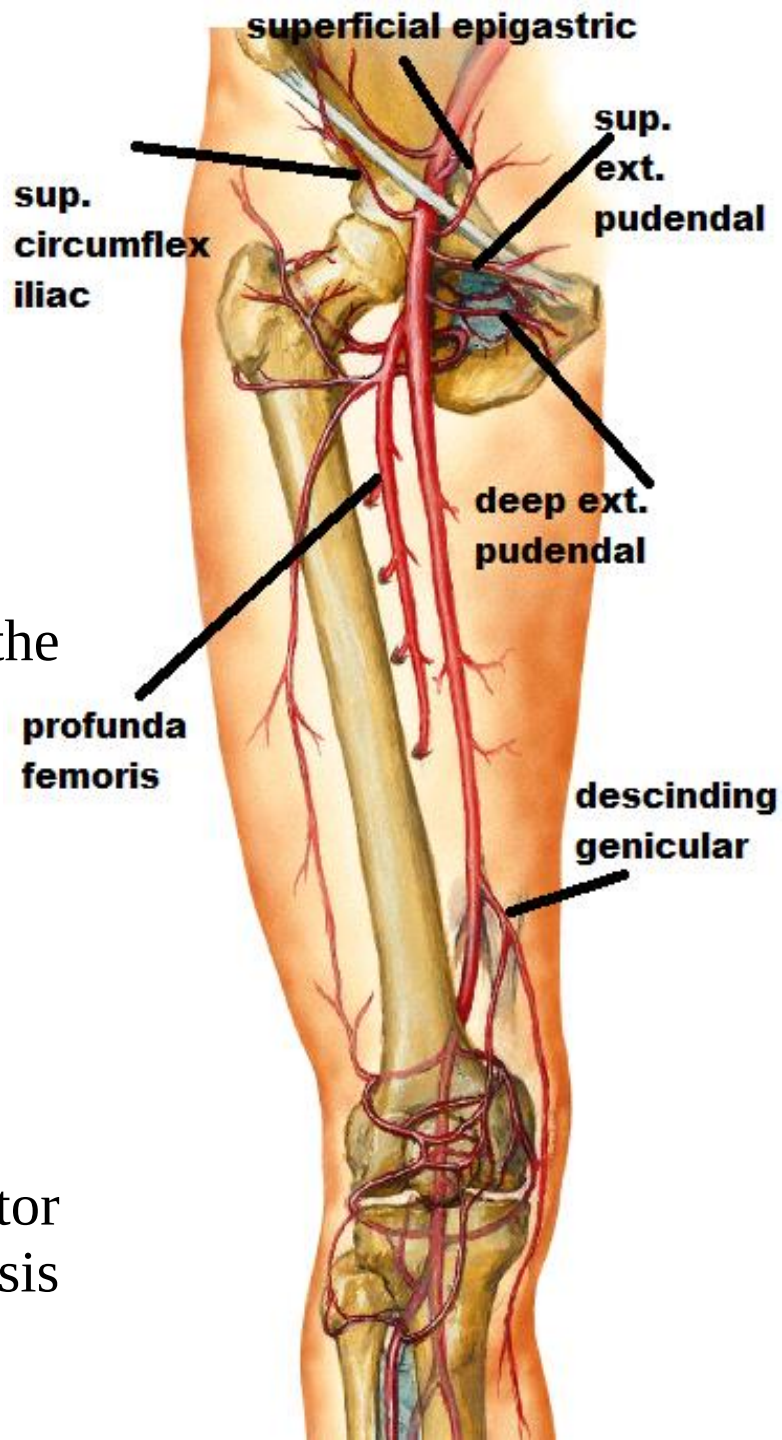
to ext. genitalia

Deep branches:

4-deep ext. pudendal : To ext. genitalia

5-descending genicular :

Only br. of femoral art. Inside adductor canal.it ends by sharing in anastomosis around knee



FEMORAL ARTERY

Branches :

Deep branches:

6-Profunda femoris art (the art. To thigh)

O.:- lateral side of femoral art
4 cm below ing. lig.

C & R:- descend downward & medially
deep to femoral vessels

E: perforate adductor magnus near its insertion as the 4th perforating art.

Branches :

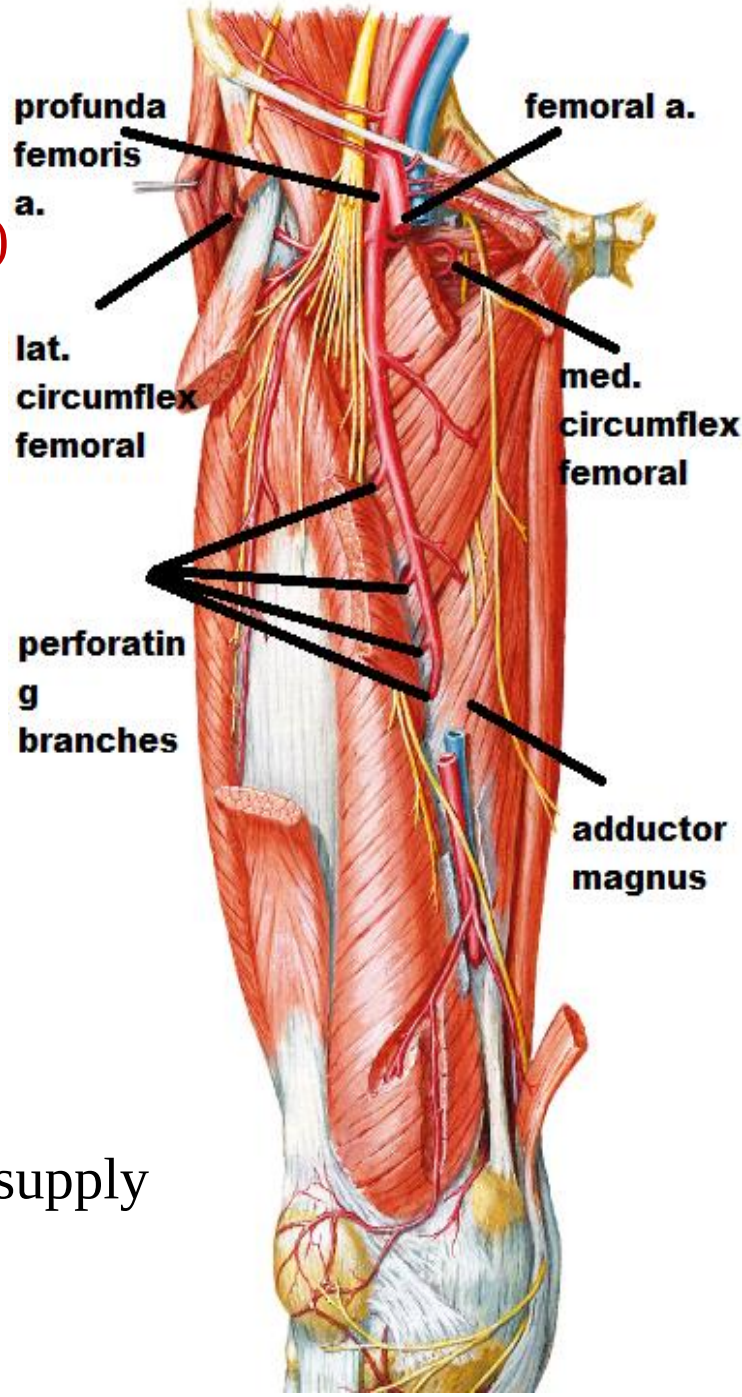
<u>lateral circumflex femoral:-</u> at the origin

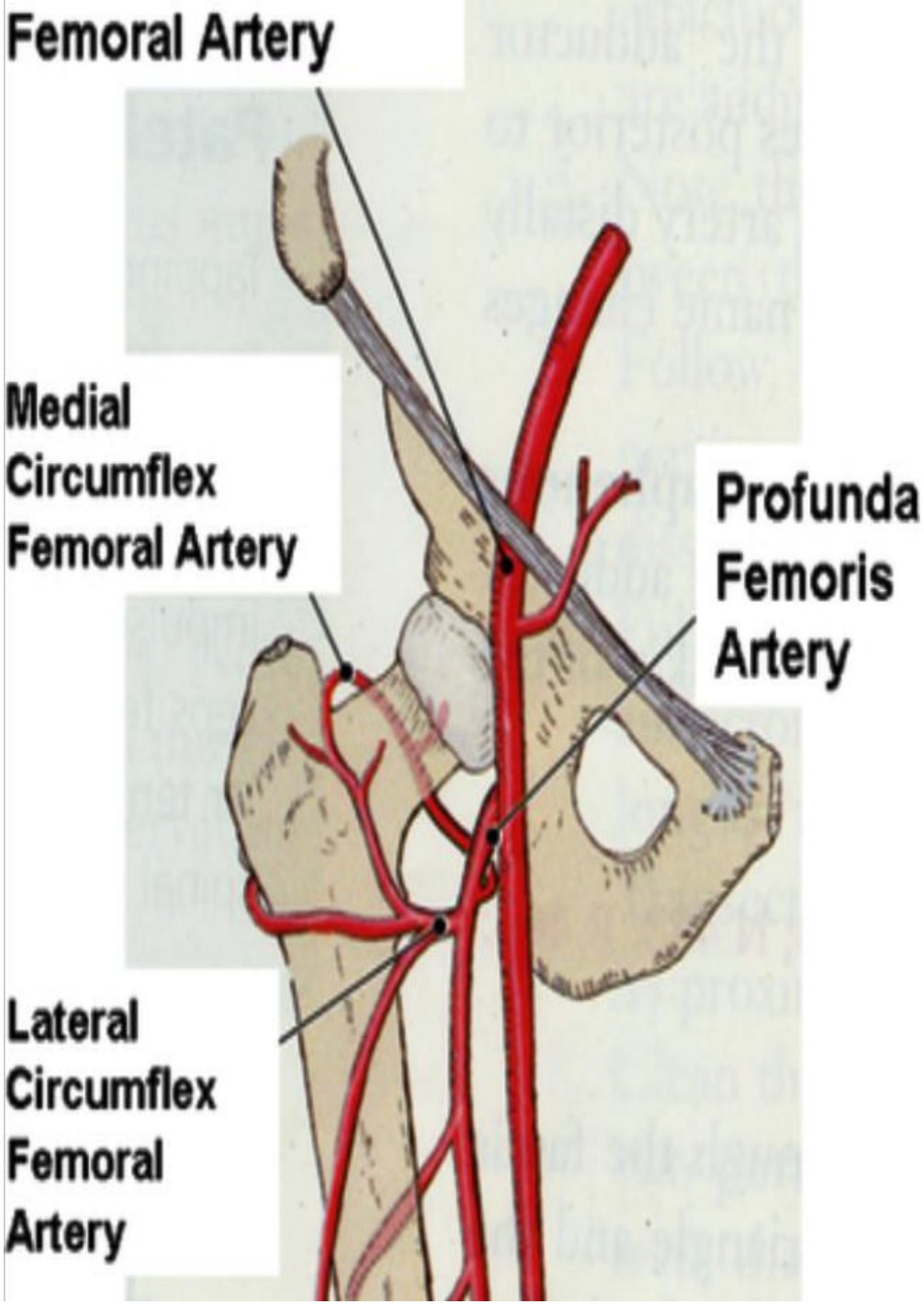
<u>medial circumflex femoral:-</u>at the origin

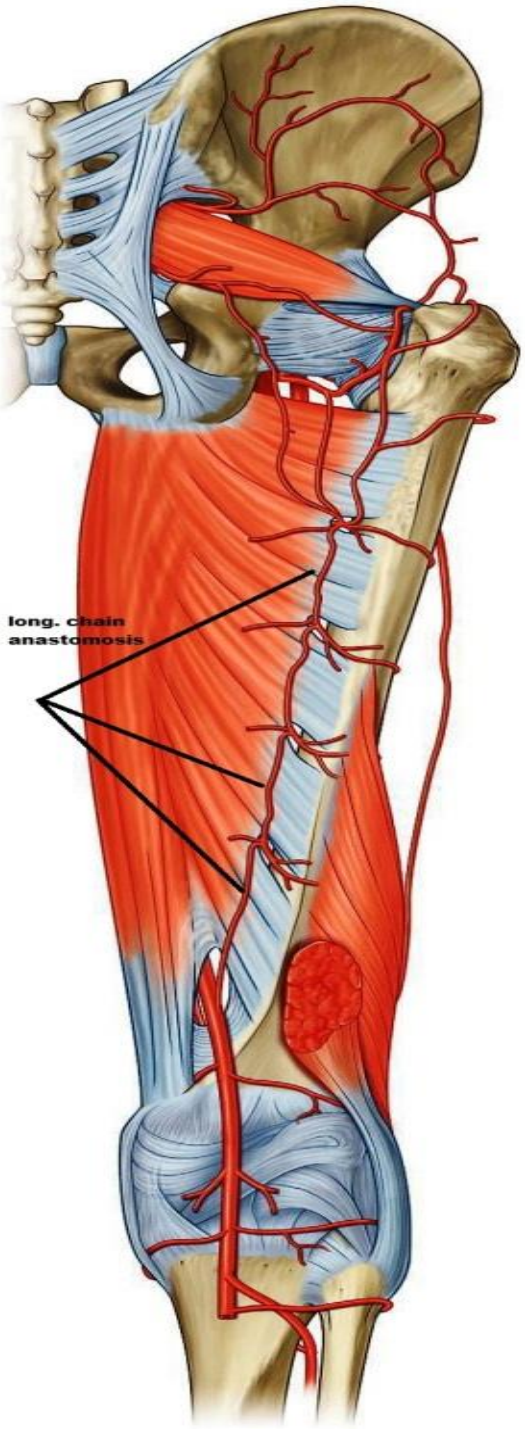
<u>3perforating branches:</u>

Perforate insertion of adductor magnus

The perforating arteries
form longitudinal chain anastomosis to supply back of thigh




Femoral Artery
Medial Circumflex Femoral Artery
Profunda Femoris Artery
Lateral Circumflex Femoral Artery


long. chain anastomosis

FEMORAL ARTERY

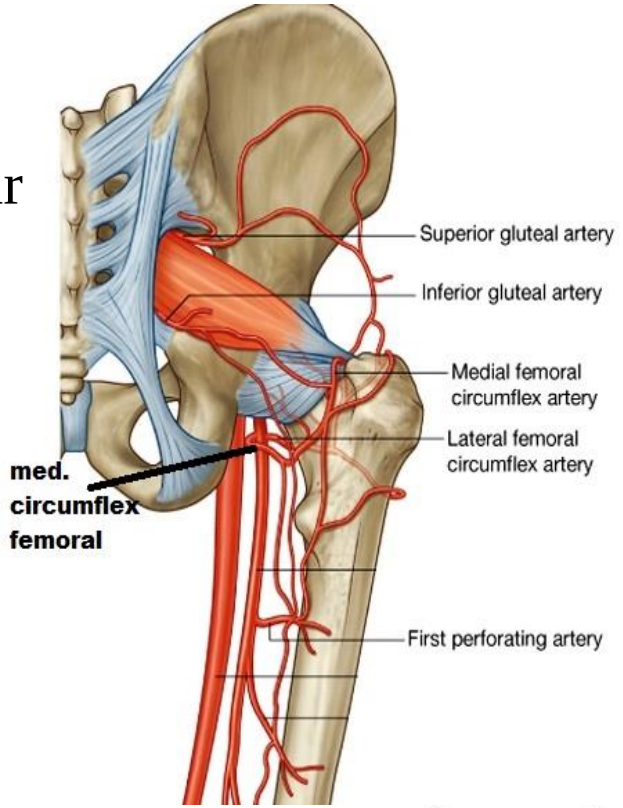
Trochanteric anastomosis

-It is the main blood supply to head of femur

-formed by

Superior, inferior gluteal arteries &

Medial, lateral circumflex femoral arteries



cruciate anastomosis

-Between internal iliac & femoral

-formed by

1-1st perforator of profunda

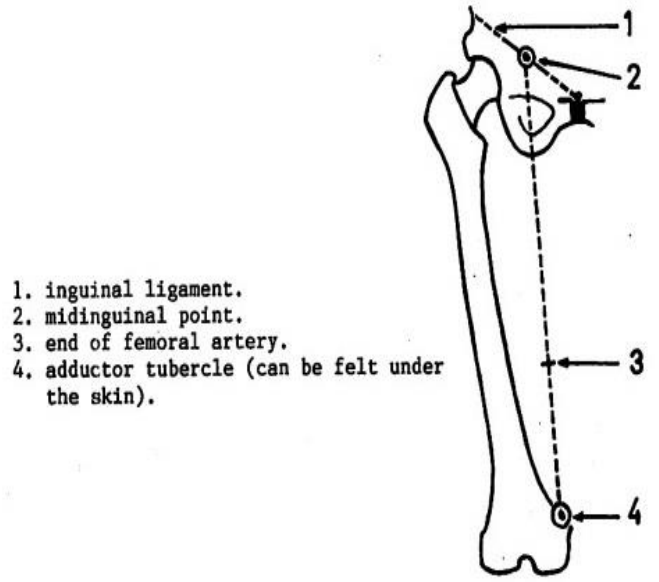
2-inferior gluteal

3-Medial circumflex femoral

4-lateral circumflex femoral

Surface anatomy

It corresponds to the upper 2/3 of a line drawn from the midinguinal point to the adductor tubercle



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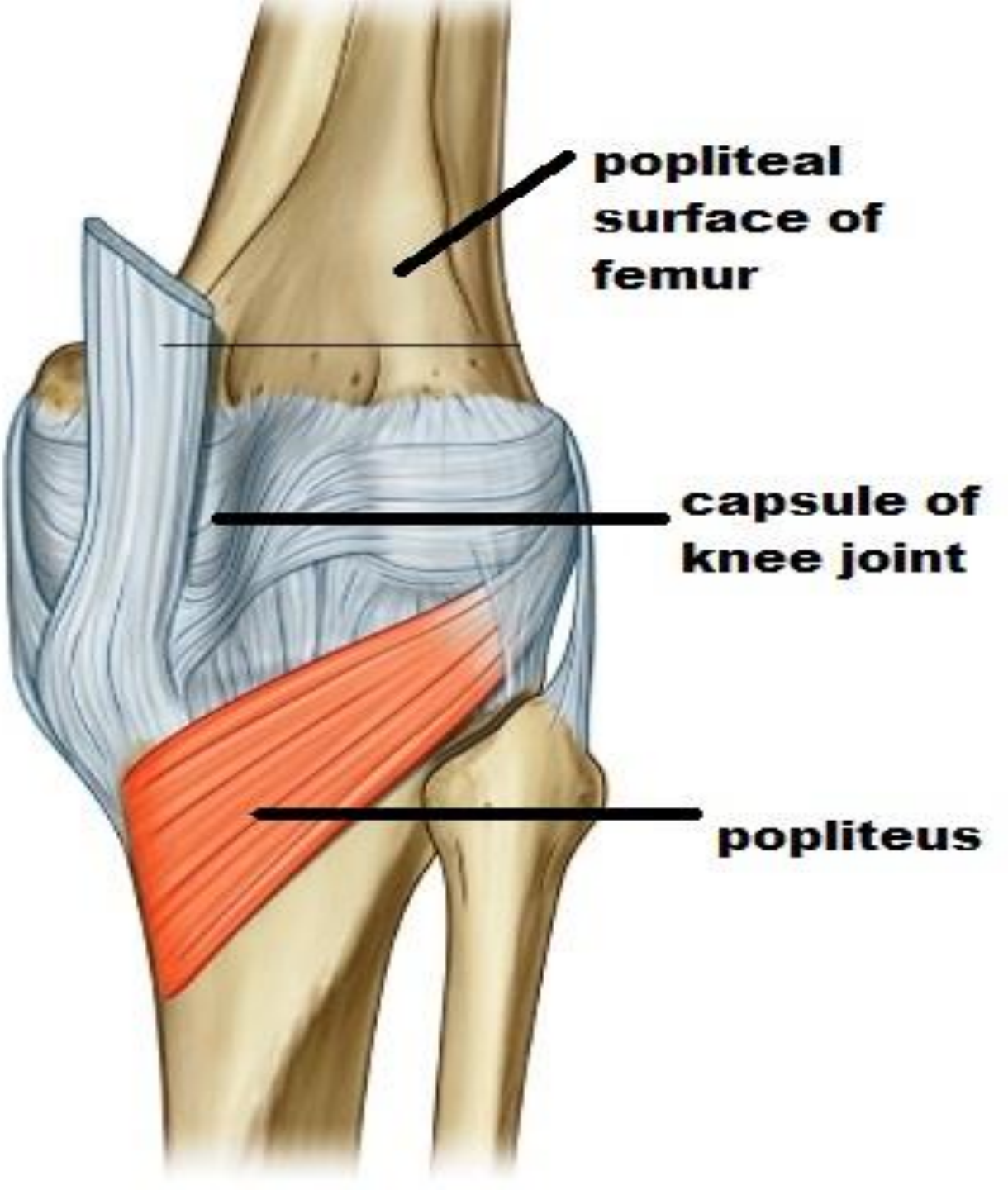

popliteal surface of femur
capsule of knee joint
popliteus

POPLITEAL ARTERY

O : -continuation of femoral art

-at adductor opening

C. : descends in popliteal fossa

as deepest structure

E. : -at lower border of popliteus

-give ant. &post tibial arteries

Surface Anatomy

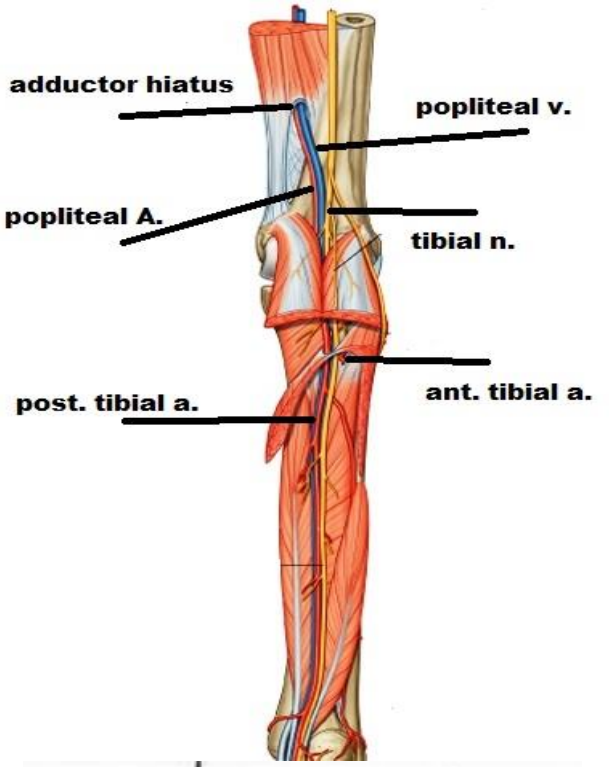
represented by a line ( ) 2 points

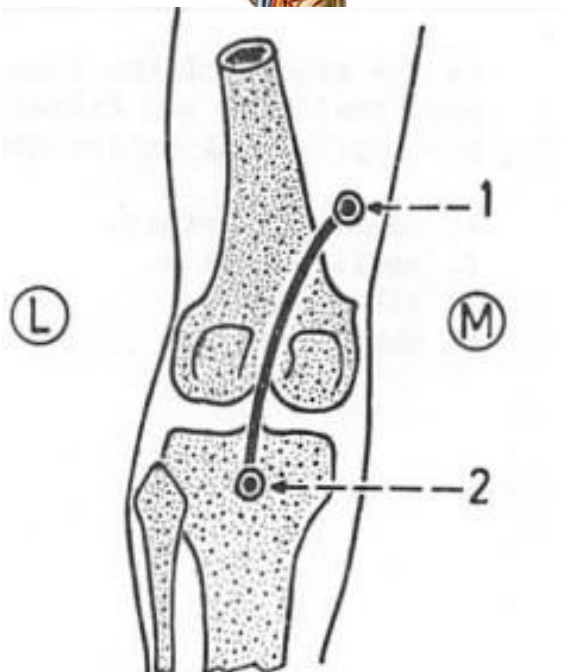
point 1 :- at medial side of the thigh

at junction of its upper 2 /3 with its lower 1 /3

point 2:- at the middle of upper part

of back of leg at the level of head of fibula





POPLITEAL ARTERY

branches :

A-muscular brs : to near muscles

B-genicular brs : 5

superomedial , superolateral

inferomedial , inferolateral

Middle genicular

they share in anastomosis

around knee joint

anastomosis around knee

descending genicular (femoral)

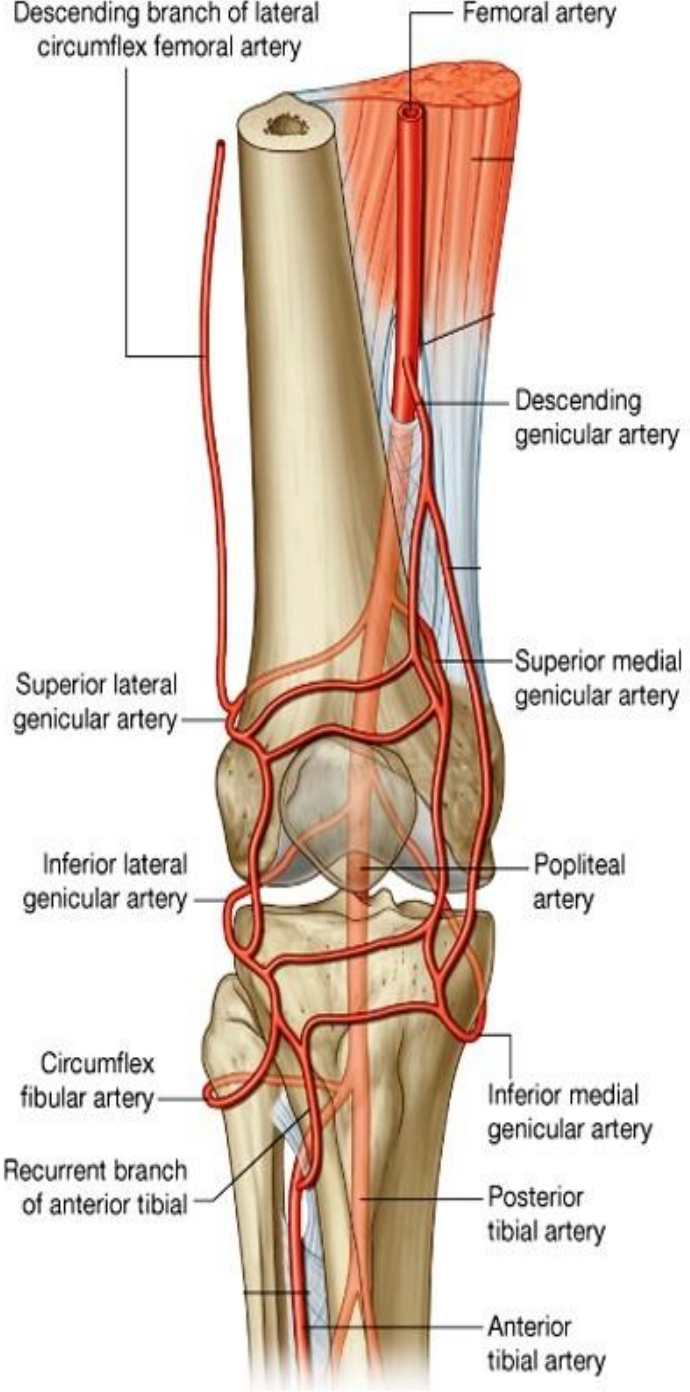
br of lateral cir femoral (profunda)

5 genicular branches (popliteal)

ant. & post. tibial recurrent

(ant. tibial)

circumflex fibular (post. tibial)



ANT. TIBIAL ARTERY

O : - smaller terminal br. of popliteal art.

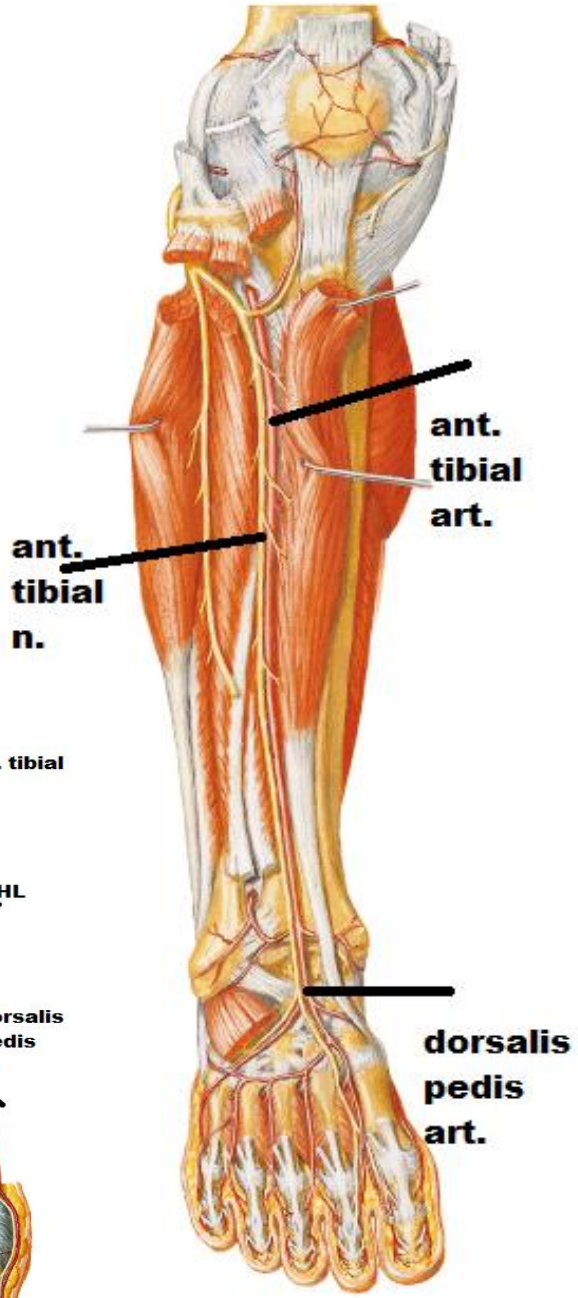
- at lower border of popliteus

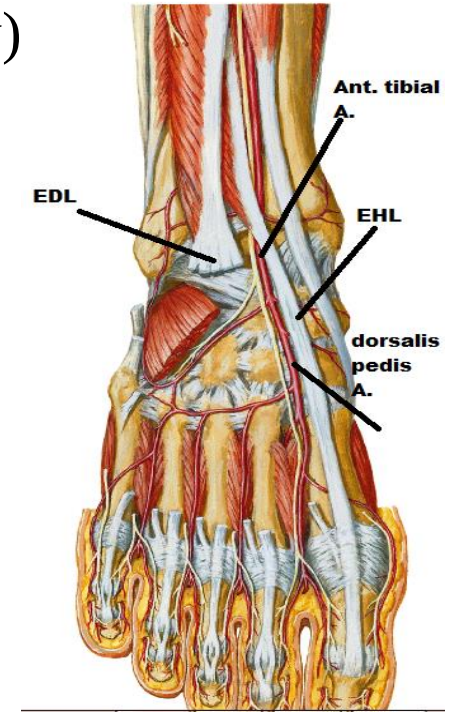
C & R:

-descends in front of interosseous membrane with ant. tibial n.

-at the ankle; it lies between tendons of ext. hallucis longus(medially) & ext. digit. Longus (laterally) where pulsations are felt

E: -midway ( ) 2 malleoli, to be dorsalis pedis art.





ANT. TIBIAL ARTERY

branches :

-muscular :

to muscles of ant. compartment

- post. tibial recurrent:

-ant. tibial recurrent:

both brs share in

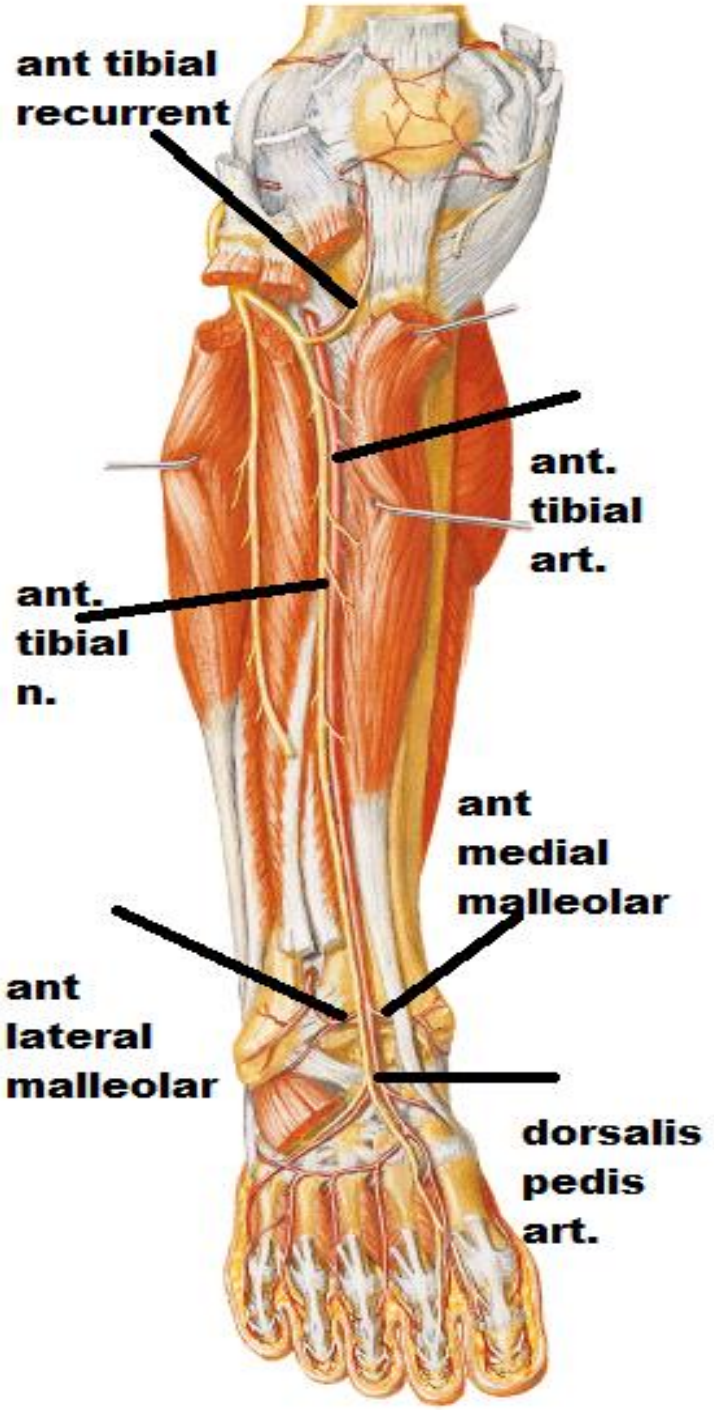
anastomosis around knee

-ant. medial malleolar

-ant. lateral malleolar

both share in

anastomosis around ankle



DORSALIS PEDIS ARTERY

O : -midway ( ) 2 malleoli

-as continuation of ant. tibial art

C: -run forward on dorsum of foot in line with 1st interdigital cleft

- downward ( ) 2 heads of 1st dorsal interosseous to enter sole

E. : - in sole

- anastomose with plantar arch

surface anatomy:- line ( ) 2 points

point 1 :- in front of ankle midway ( ) the 2 malleoli

point 2:- proximal end of 1st metatarsal space

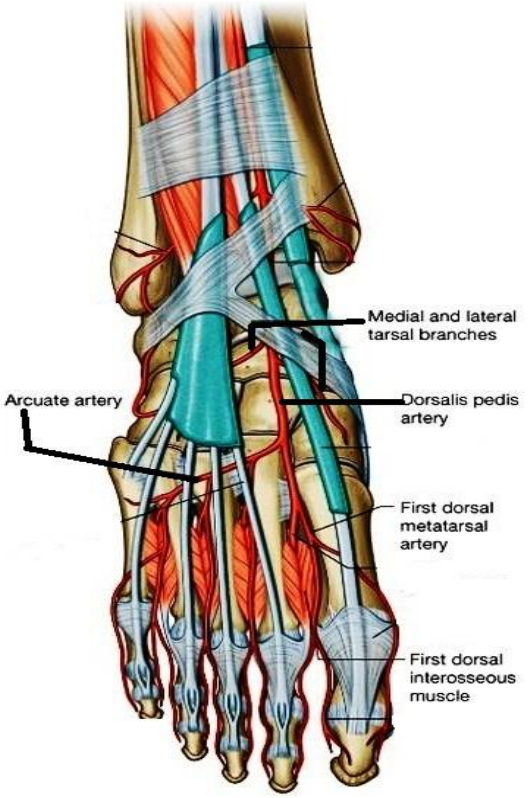
brs :

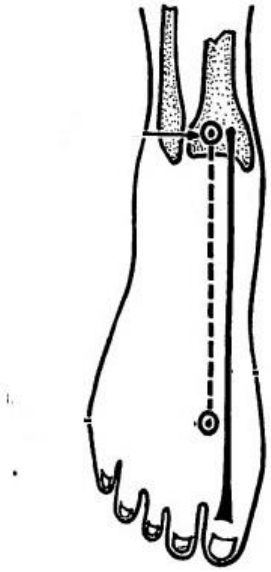
1- medial & lateral tarsal :

2- 1st dorsal metatarsal

3- Arcuate →
2nd, 3rd, 4th dorsal metatarsal

4- 1st plantar metatarsal.





POSTERIOR TIBIAL ARTERY

O : -larger terminal br of popliteal art
-at lower border of popliteus.
-It supplies post.
&lateral compartments of leg

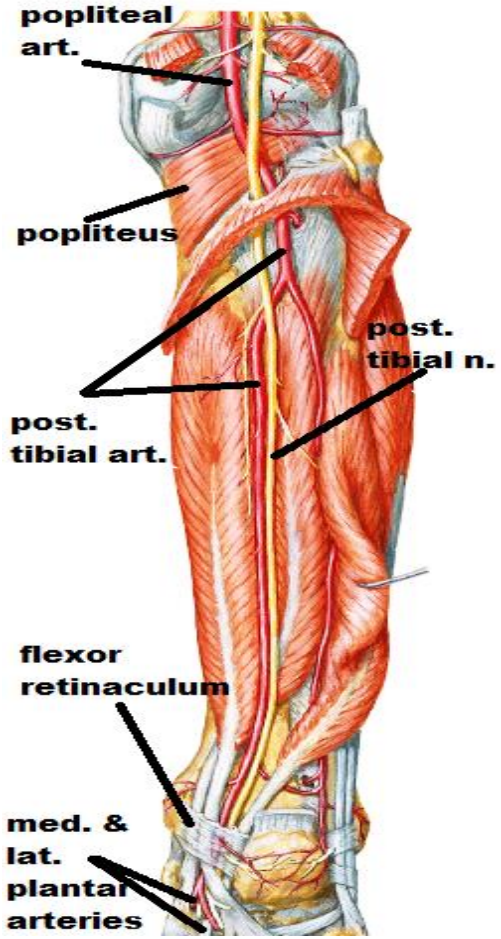
C: descends in posterior compartment of the leg accompanied by posterior tibial nerve

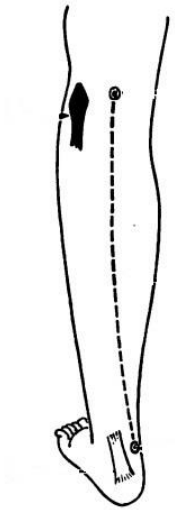
E : -deep to flexor retinaculum (behind medial malleolus)(pulsation felt)
-give medial & lateral plantar arteries

surface anatomy

point 1:- at the middle of upper part of back of leg at the level of head of fibula

point 2:- midway ( ) medial malleolus and the heel





POSTERIOR TIBIAL ARTERY

branches :

1-circumflex fibular:-

share in anastomosis around knee

2-peroneal art. :

The largest & longest br

that supply lateral compartment

3-terminal brs :

medial & lateral plantar arteries

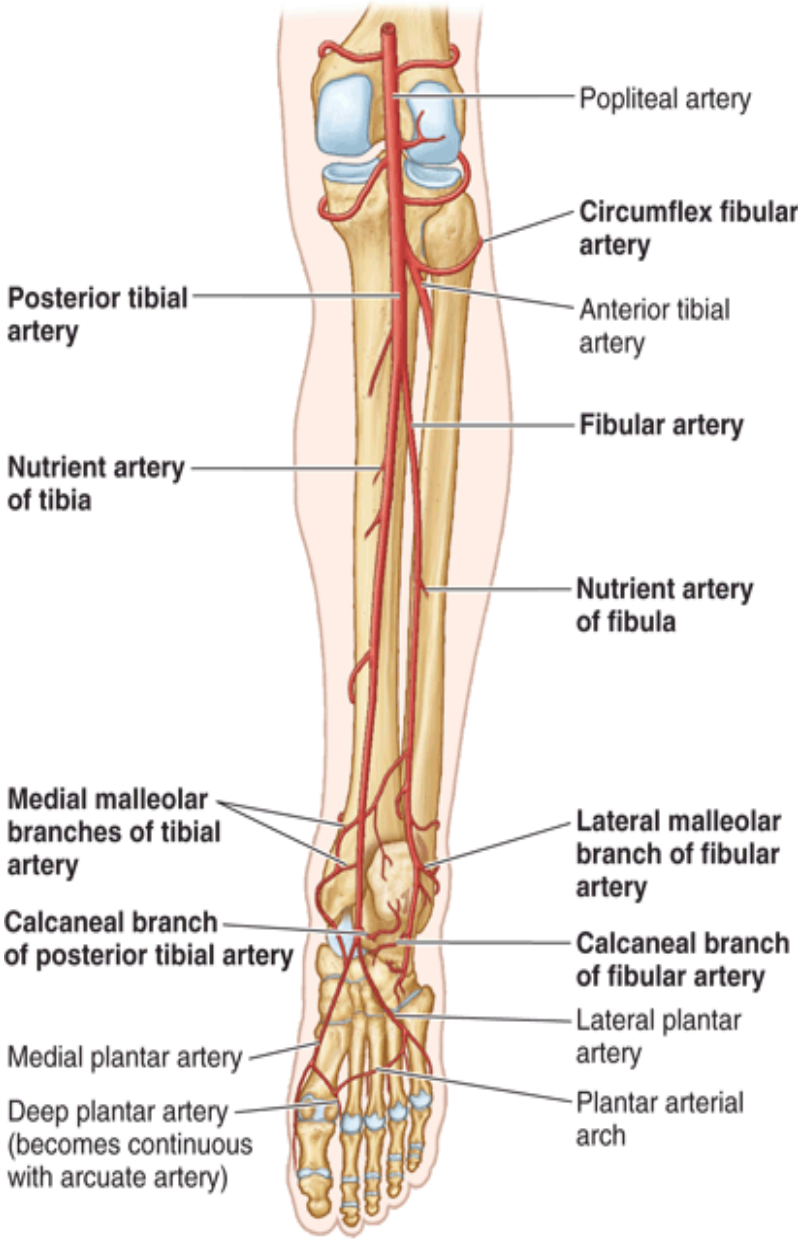
4-muscular brs :

to muscles of post. compartment

5-nutrient br: to tibia

6-medial calcanian & malleolar brs :

anastomosis around ankle



Posterior view with foot plantar flexed

POSTERIOR TIBIAL ARTERY

Peroneal (fibular) art.:

O : - near to origin of post. tibial art

C : -descend vertically

behind the fibula

close to flexor hallucis longus

brs :

1-perforating br.:

pierce interosseous membrane

to reach ant. Compartment of leg

2-muscular brs :

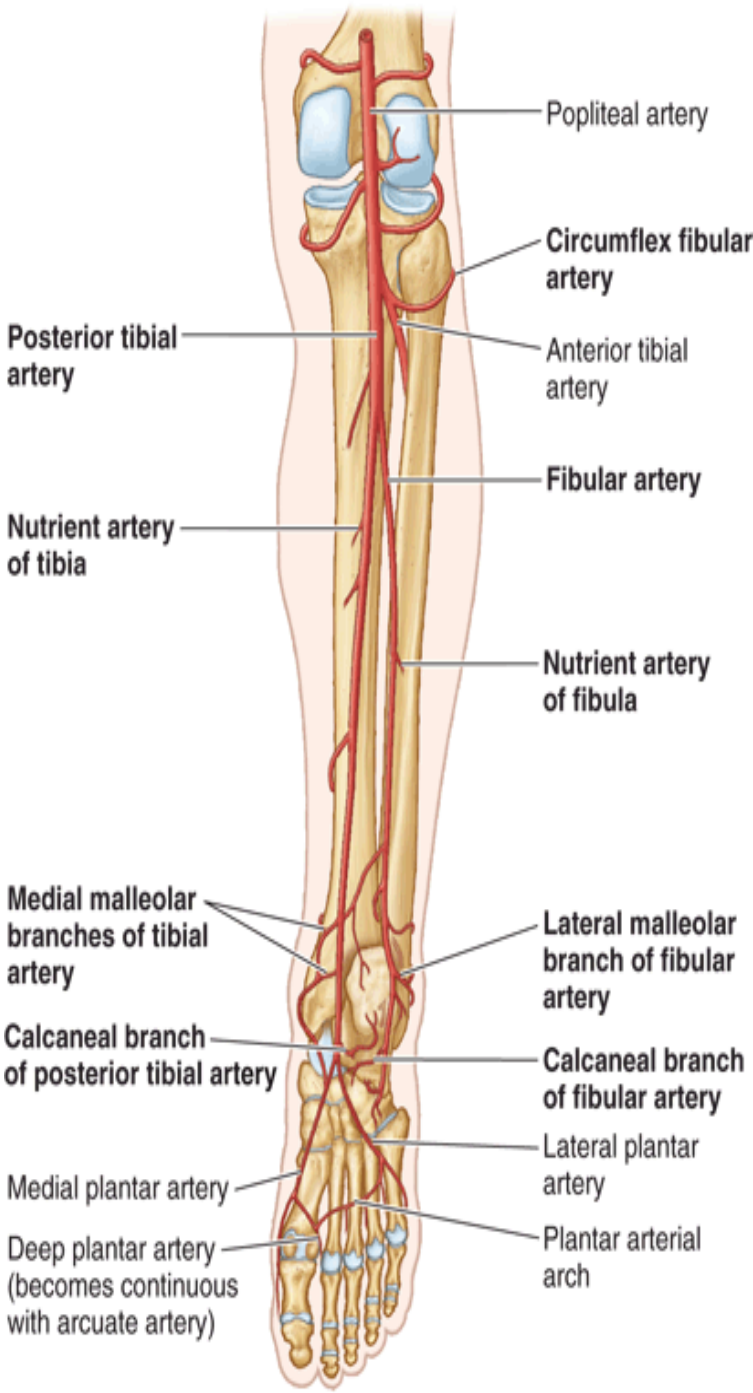
to muscles of

lateral compartment of leg

3-nutrient br. to fibula

4- lateral calcanean &malleolar brs :

to anastomosis around ankle



Posterior view with foot plantar flexed

MEDIAL PLANTAR ARTERY

O: - small terminal br.

of post. tibial art.

C & r: with medial plantar n.

on medial border of the foot

E.: by supplying medial side

of big toe

surface anatomy :-

line ( ) 2 points

point 1:- midway ( ) medial malleolus and the heel

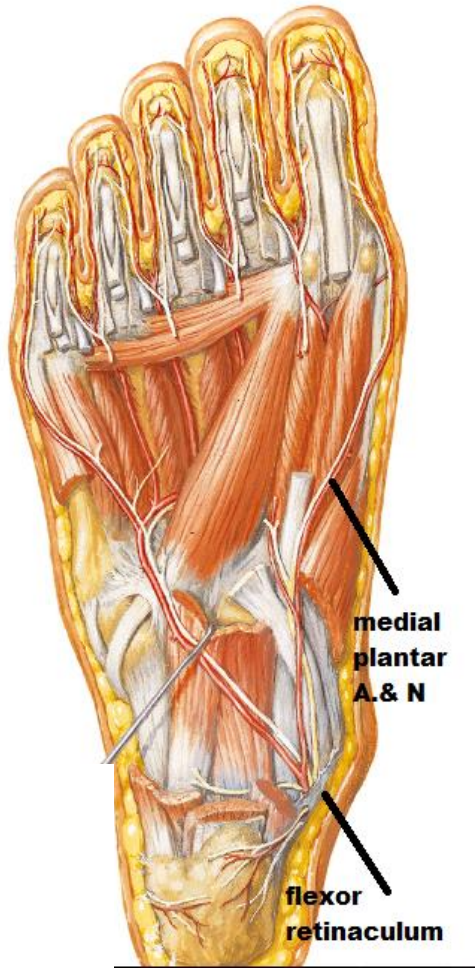
point 2:- at the level of navicular bone

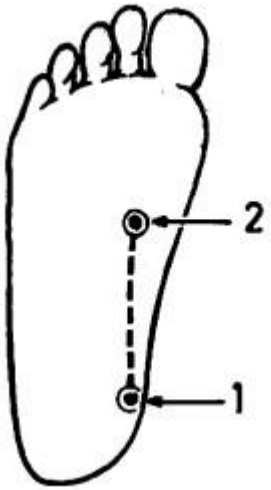
Brs:

Cutaneous &

Muscular &

Articular branches:





LATERAL PLANTAR ARTERY

O: - large terminal br
of post. tibial art.

C & r:

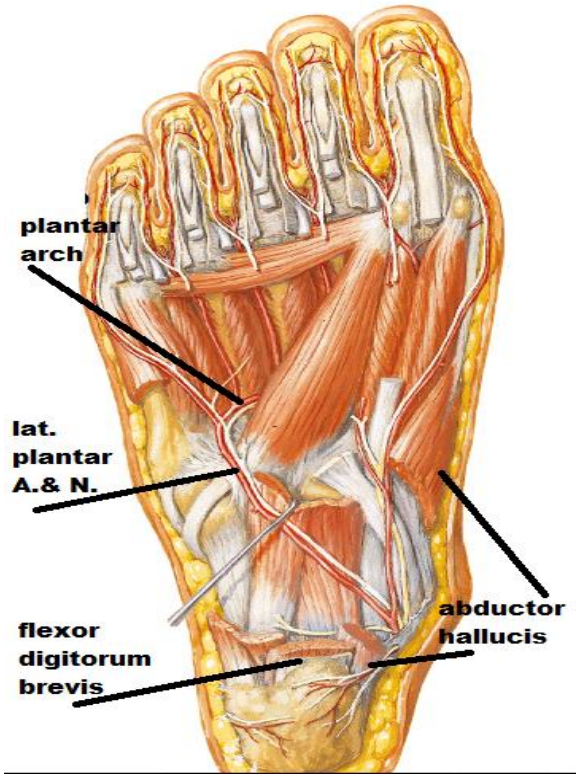
-with lateral plantar n.

to reach base of 5th metatarsal bone

where it curve medially

to form plantar arch

E.: -anastomose with
the end of dorsalis pedis art.



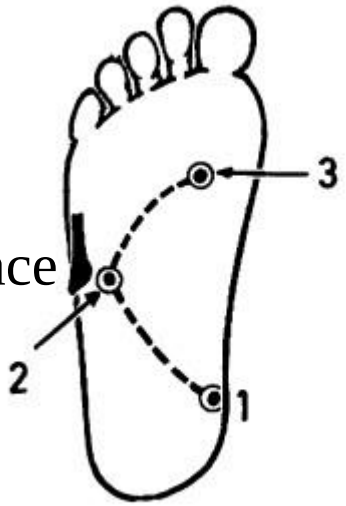
Surface anatomy:-

line ( ) 3 points

point 1:- midway ( ) medial malleolus
and the heel

point 2:- 1 inch medial to base of 5th metatarsal

point 3:- at the proximal end of 1st intermetatarsal space



brs:

1-cutaneous & muscular & articular branches

2-The plantar arch give: plantar digital arteries to toes.

GREAT SAPHENOUS VEIN

O.: - medial end of the dorsal venous arch

C & r:-

-ascend in font of medial malleolus,
on medial side of leg & knee
on medial side of thigh
then deviates forwards

E:-pass through saphenous opening
to join the femoral vein.

Tributaries:

1-superficial veins.-

A-below the knee:-

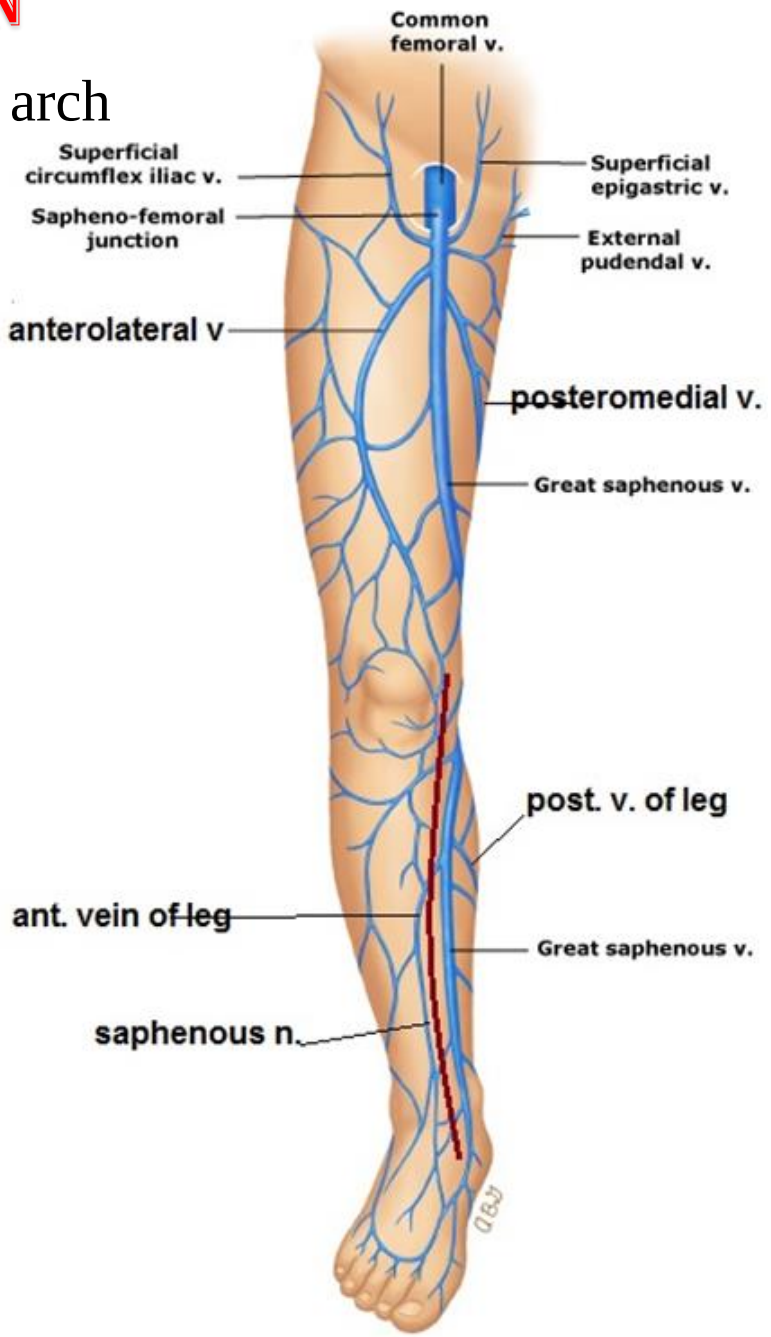
1-anterior vein of the leg

2-posterior vein of the leg

B-above the knee:-

3-anterolateral vein of thigh

4-posteromedial vein of thigh



GREAT SAPHENOUS VEIN

Tributaries:

1-superficial veins.-

C-at the inguinal region:-

5-superficial epigastric vein

6-superficial circumflex iliac vein

7-superficial external pudendal vein

2- Perforating veins:-

A-Above medial malleolus:-

Connect it with deep veins in post compartment of the leg

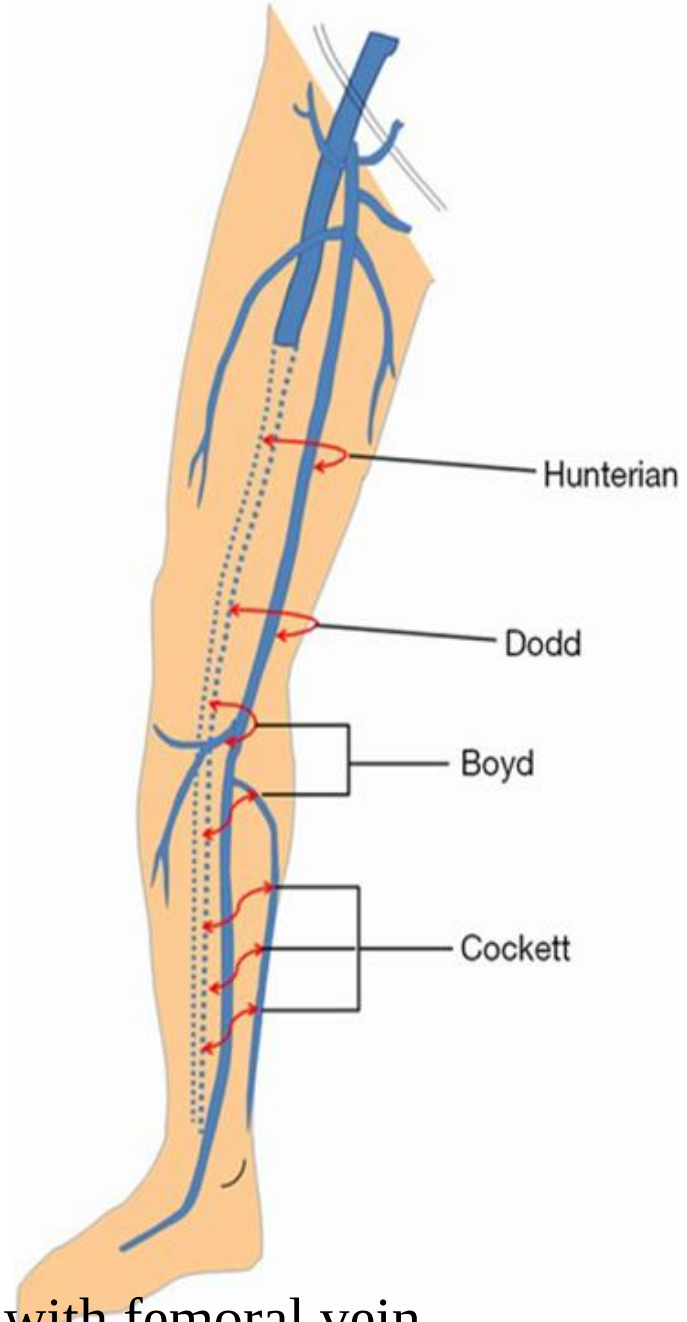
B-At tibial tuberosity:-

Connect it with veins in the calf

C-at the knee:-

connect it with popliteal vein

D-At level of adductor canal:- connect it with femoral vein



THANQ