

An **Anatomy In Clay®** Workbook  
*Basic Muscles, Nerves & Blood Vessels  
of the Human Leg*



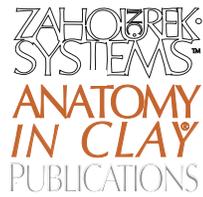
The *StepByStep™* Series

by Jon Zahourek

Anatomy In Clay® Publications  
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# A Workbook on *Basic Muscles, Nerves & Blood Vessels of the Human Leg* *The StepByStep™ Series*

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Author *Jon Zahourek*

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Jon Zahourek is widely known as the author of an innovative and revolutionary approach to the study of anatomy, which features kinesthetic learning through building clay muscles onto the MANIKEN® model and a range of other, comparative vertebrate models. His series of CoreData™ intensive workshops are attended by participants from every continent. He has held posts at the University of Denver, Parsons School of Design, Banks Street College, New School of Social Research, Art Student League, and New York Academy of Art. With Columbia University's Department of Physical Medicine, he was co-investigator of a study in 1982-83 comparing his Anatomy In Clay® System to traditional anatomy study.

Zahourek retired from Zahourek Systems, Inc. in 2009, and now is active as Jon Zahourek, Artist & Anatomist, and as the Chairman of the Board in the not-for-profit Anatomy in Clay® Centers, Denver and also his Formative Haptics Institute, which researches the neuroscience of critical thinking and learning that occurs in the act of forming analyses in the hands.

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## *Author's Notes on the Workbook*

In many presentations of anatomy, the myological, neurological, and angiological body systems are shown isolated, either diagrammatically or schematically. Sometimes these body systems are shown hovering around the skeleton, making it challenging to understand exactly where they lie in the whole body. This workbook and my system, however, are designed to allow users to learn anatomy while mapping these systems three-dimensionally within the appropriate body context. Building each subsystem — layer upon layer — allows users to discover spatial relationships between the body's systems and the whole body.

For the sake of simplicity and clarity in this workbook, I have chosen to use grossly out-of-scale nerves and blood vessels and I have also combined some of the muscles in the human leg and minimized much of the detail in all the body systems — the clay allows users to add more detail. The subject here is confined to one side of my “Classic” Maniken® 11 model version, which was created standing in the Standard Anatomical Position. Most of the anatomy in this workbook is bilaterally symmetrical, so that either or both sides of this model can be used for building.

Maniken models interpret the skeletal system as composed of subsystems. The axial subsystem includes the cranium through the coccyx. The separate branchial subsystem (derived from gill arches) includes facial and pharyngeal components. The pectoral subsystem separates at the sternoclavicular joint and the pelvic subsystem separates at the sacroiliac joint.

This workbook focuses on the limb, omitting most iliofemoral musculature. The only muscles from the axial subsystem of the leg used in the work are the *quadratus lumborum* m. and *piriformis* m., both of which support the lumbar and sacral neural plexes.

This workbook is a companion to other titles in my Human StepByStep™ series, allowing learners to discover similar patterns of bone, muscle, nerve, and blood vessels that exist between our pectoral and pelvic appendages. Following the steps depicted here, everything is built using simple plasticene clay, color-coded in bright hues for emphasis.

## Workbook Procedures

- 1 Form a simple central nervous system.
- 2 Build the deepest layer of muscles.
- 3 Construct the roots, trunks and branches of the peripheral nerves, observing that the branches often follow the edges of muscles.
- 4 Create the major arteries, naming each part of the continuous tubing.
- 5 Develop the layer of superficial muscles.
- 6 Pattern the superficial veins on the top layer of superficial muscles.

*terra cotta-muscle*



*yellow-nerve*



*red-artery*



*blue-vein*



You can look for the first occurrence of any formal term in the contents on pages iv and v. The type of structure is indicated by a letter-form, typical in anatomy work, as listed at the right.

*a. = artery / aa. = arteries (plural)*

*l. = ligament / ll. = ligaments (plural)*

*m. = muscle / mm. = muscles(plural)*

*n. = nerve / n.n. = nerves(plural)*

*o. = osteological (bony) feature*

*v. = vein / vv. = veins(plural)*



# 1

Construct a thick lobe of clay to begin making the *cerebral cortex* n. of the brain—the fore-brain.



# 2

Press the *temporal lobe* n. into temporal fossa of the cranium.



# 3

The second lobe is the *parietal n.*



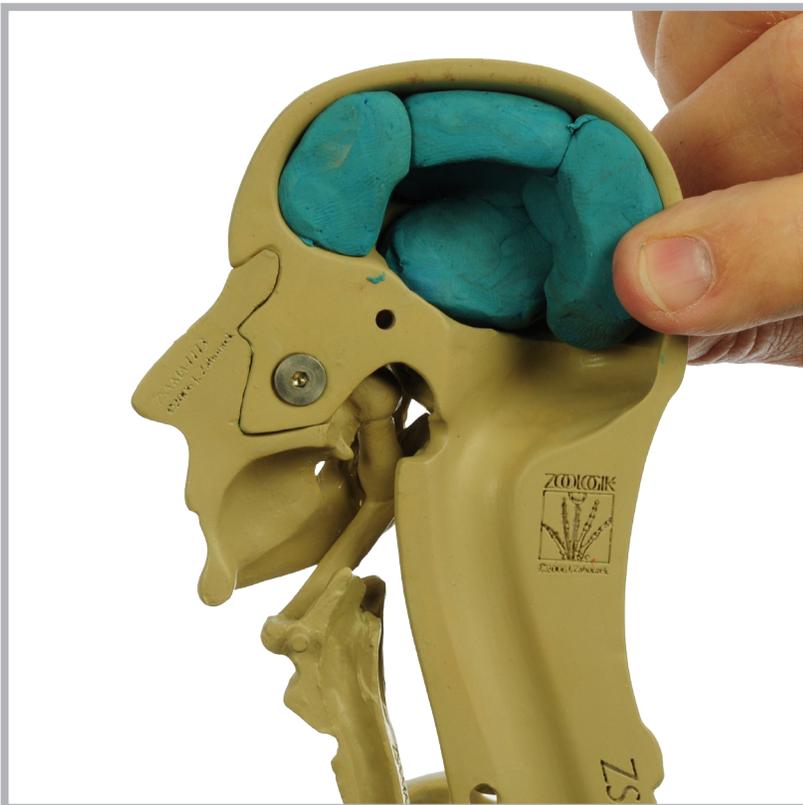
# 4

Press the *parietal n.* into the cranium to fit next to the temporal lobe.



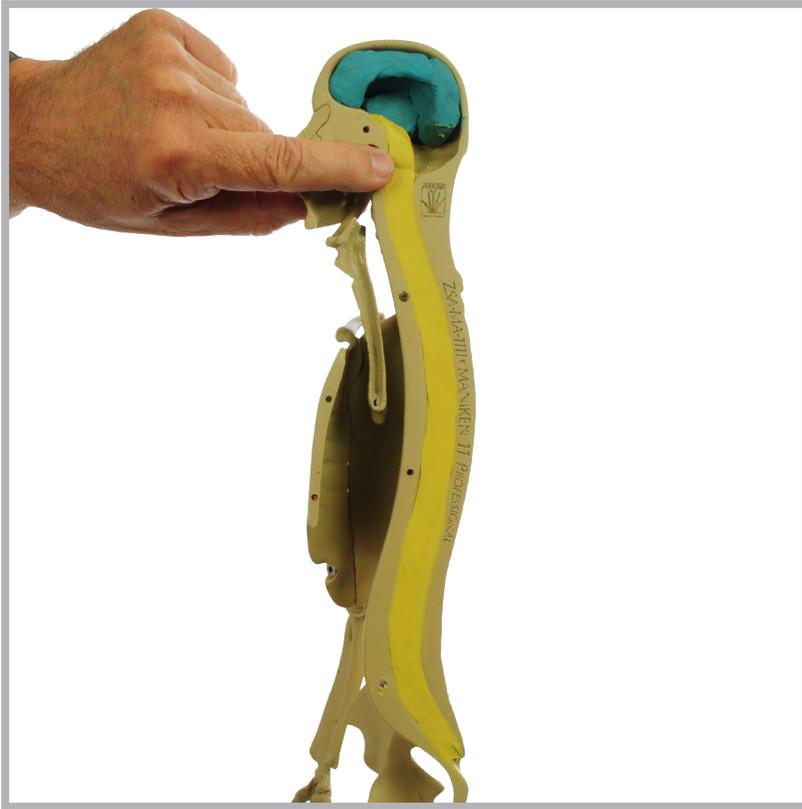
# 5

Add the *frontal lobe n.* into its own fossa above the orbit of the eye.



# 6

Finish the cortex by adding the *occipital lobe n.* into its fossa.



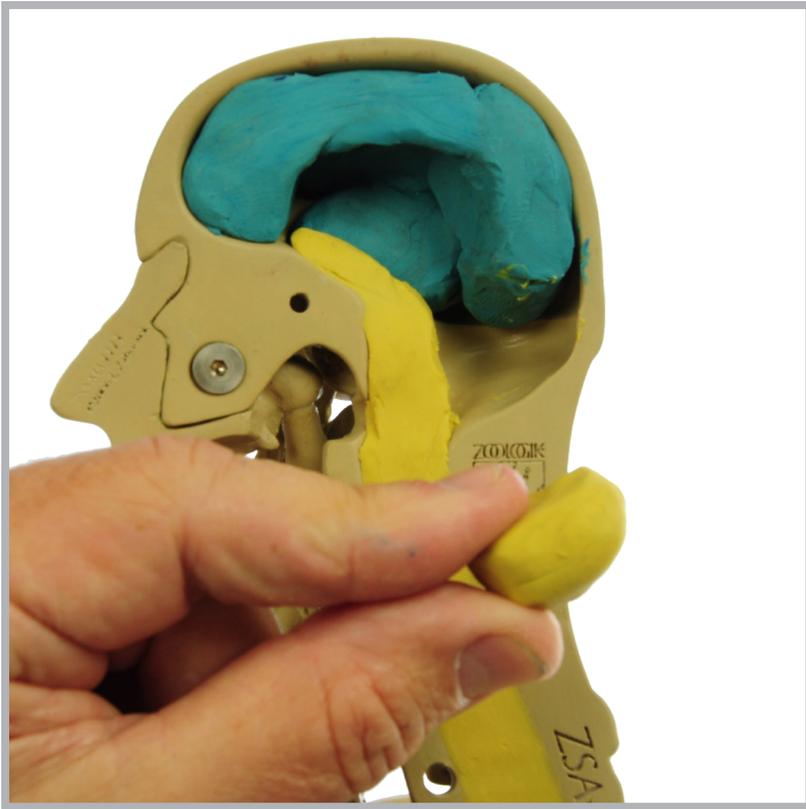
# 7

Add the *spinal cord* n.



# 8

Draw the *cauda equina* n. into the clay beginning at the mid-lumbar area.



# 9

Form the hind-brain, the *cerebellum* n.



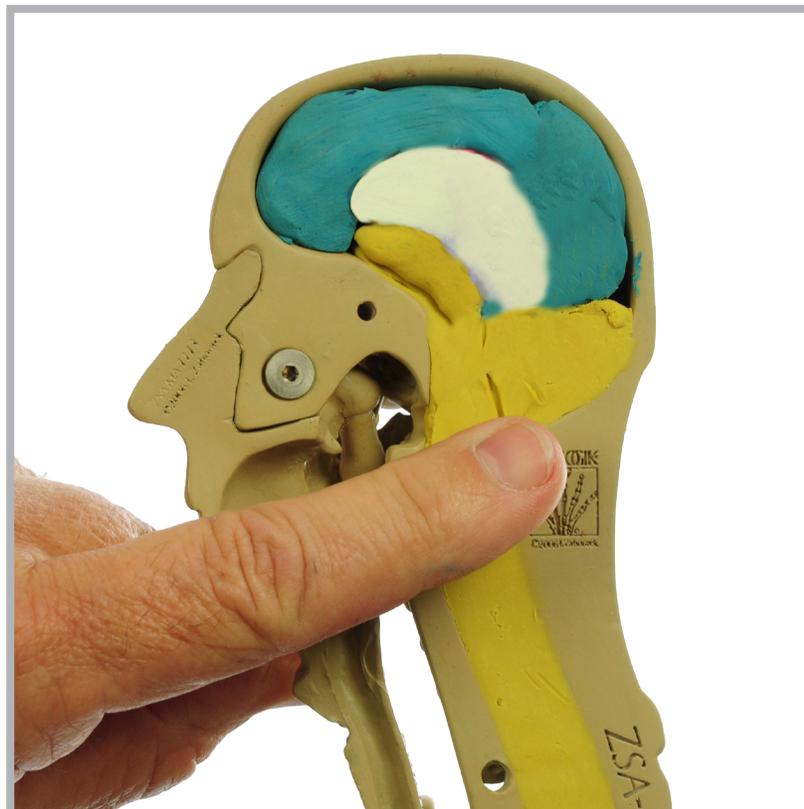
# 10

Place the *cerebellum* n. into the cerebellar fossa and make a bridge between the cerebellum and the brain stem and spinal cord.



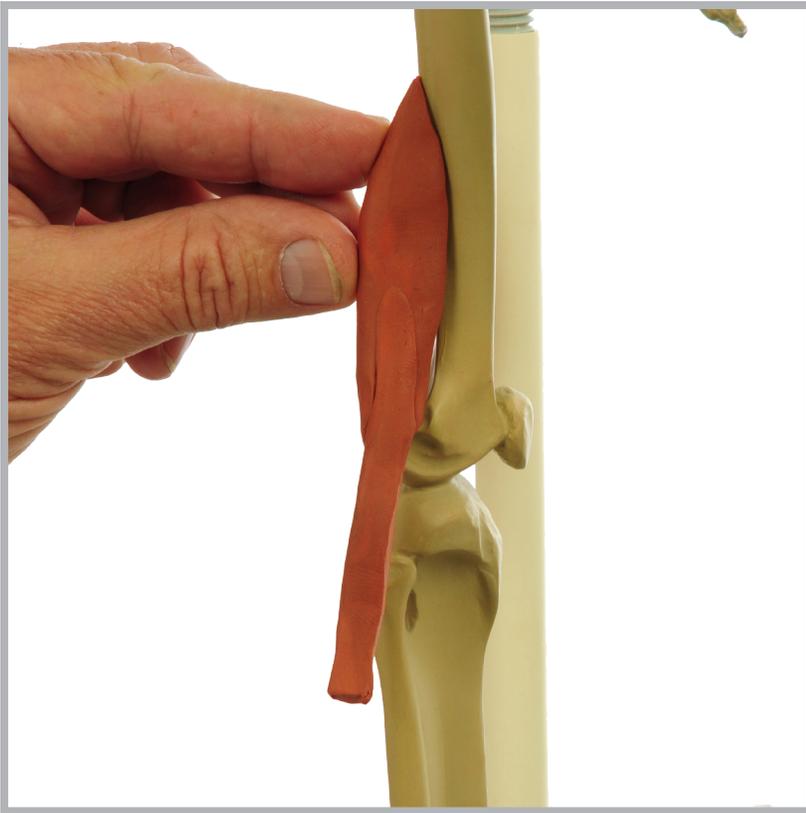
# 11

Add the *mid-brain n.*



# 12

Add the *corpus callosum n.*



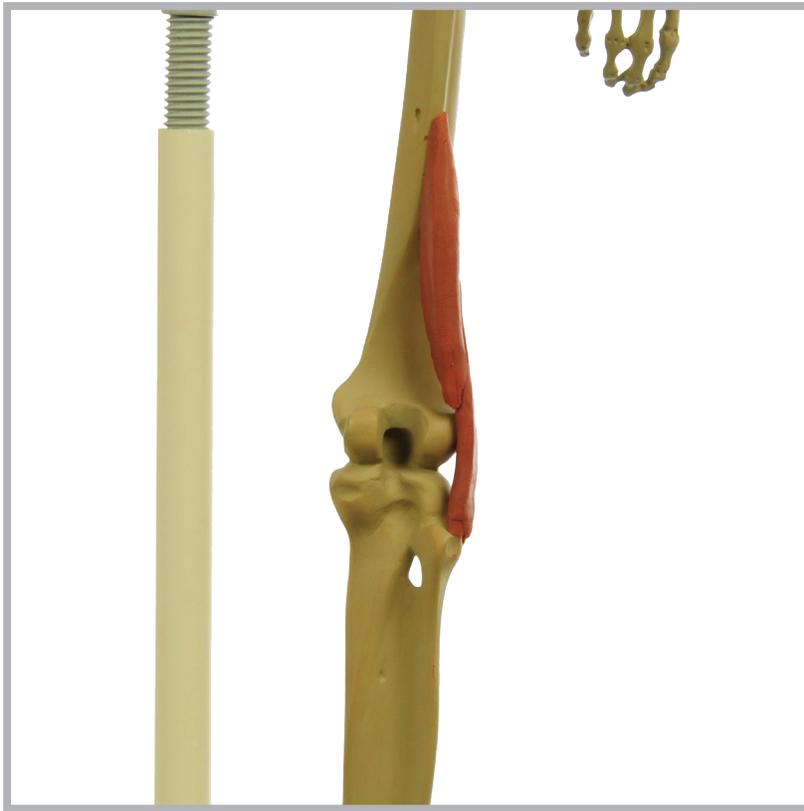
# 13

The one-joint ventral knee muscle is called the *biceps femoris brevis* m. The proximal attachment for this muscle is the distal one-half of the lateral lip of the linea aspera.



# 14

The distal attachment of *biceps femoris brevis* m. is the fibular (or peroneal).



# 15

Keep the *popliteal fossa* o.  
open.



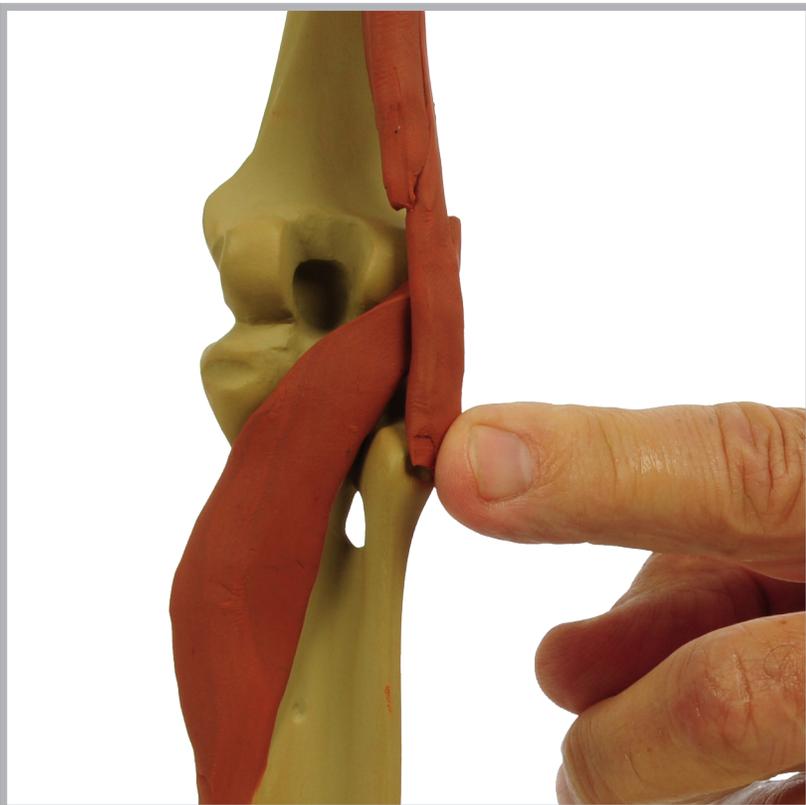
# 16

Lift the *biceps femoris brevis*  
m. tendon away from its fibular  
attachment.



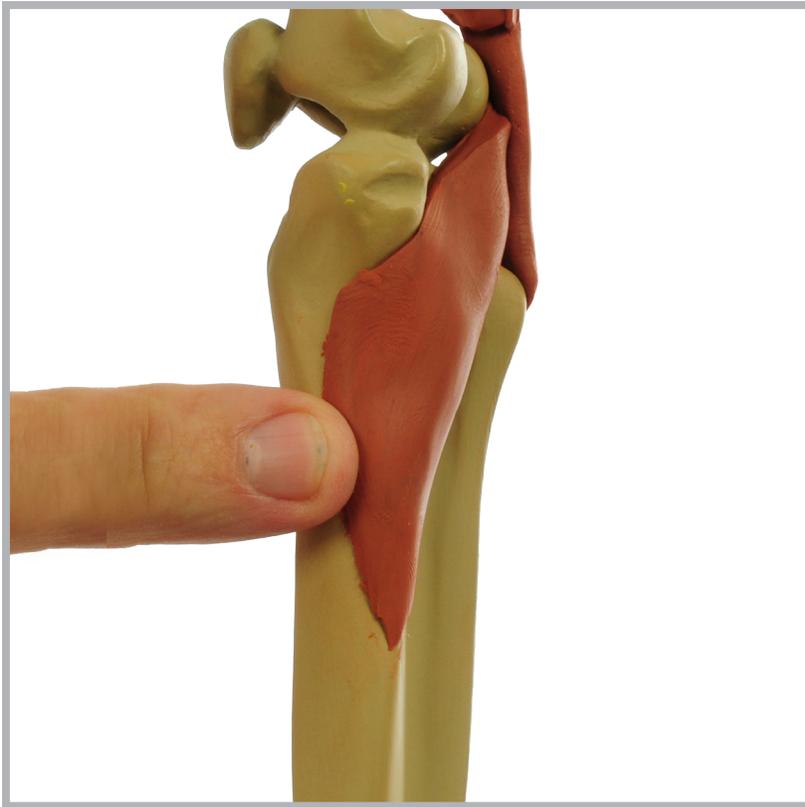
# 17

Slip the proximal attachment of *popliteus* m. under the tendon to attach at the lateral side of the lateral femoral condyle.



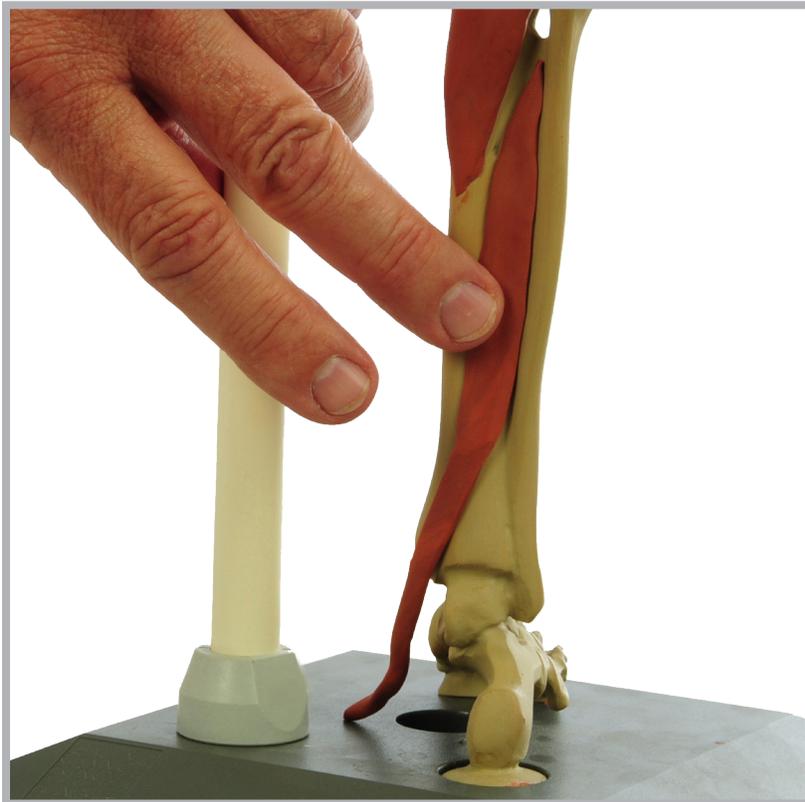
# 18

Reattach the distal tendon of *biceps femoris brevis* m.



# 19

The distal attachment of the *popliteus* m. runs diagonally from the head of the fibula to the medial tibia, referred to as the soleal line.



# 20

Join the *tibialis posterior* m. by a fleshy attachment to the *interosseus membrane* o. as well as the margins of the bones it spans. Its surface is covered by a tough *intermuscular septum* o.



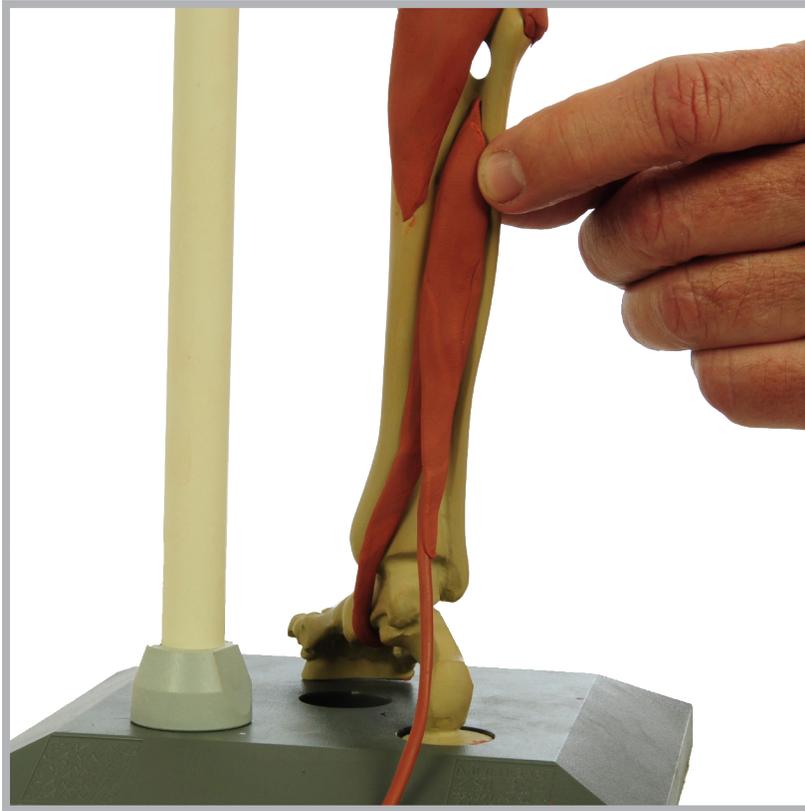
# 21

The tendon of *tibialis posterior* m. runs through the groove at the ventromedial tibia.



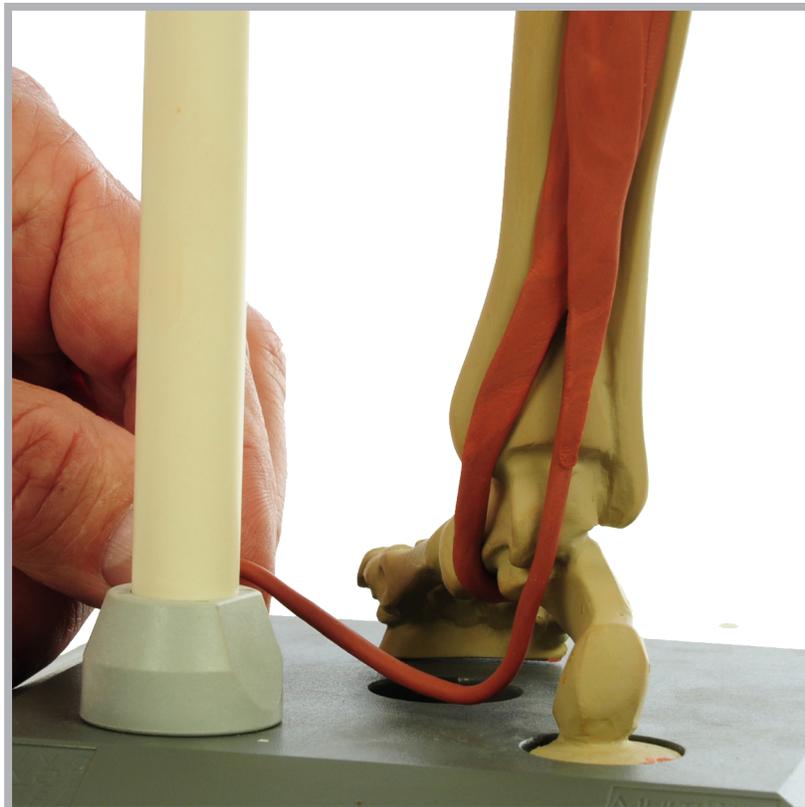
# 22

The distal attachment of *tibialis posterior* m. runs along the medial tarsals and crosses under the foot at the proximal navicular bone.



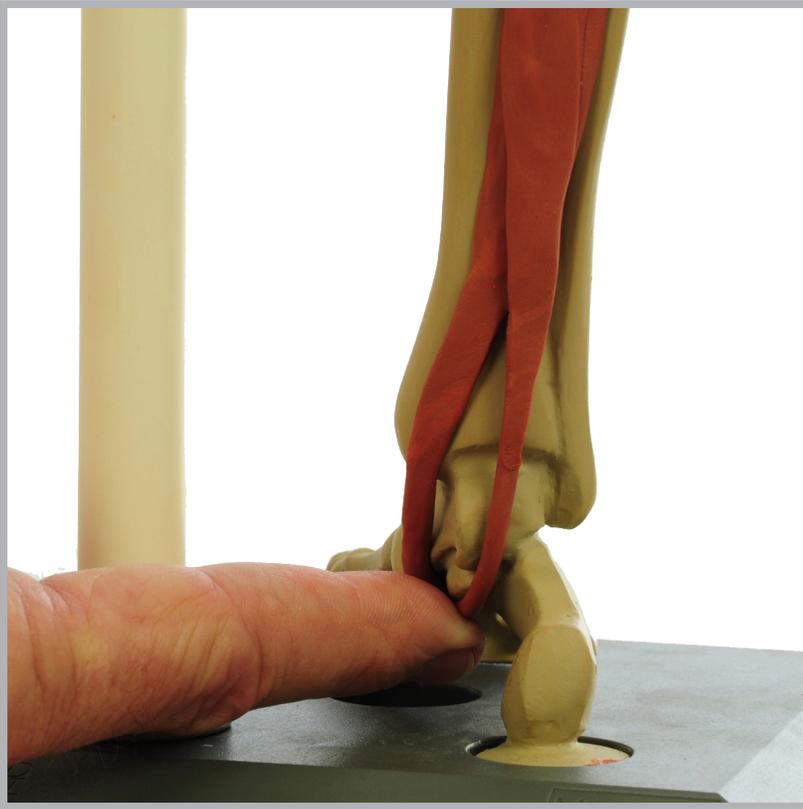
# 23

The proximal attachment of *flexor hallucis longus* m. is the tibialis intermuscular septum and the margin of the fibula.



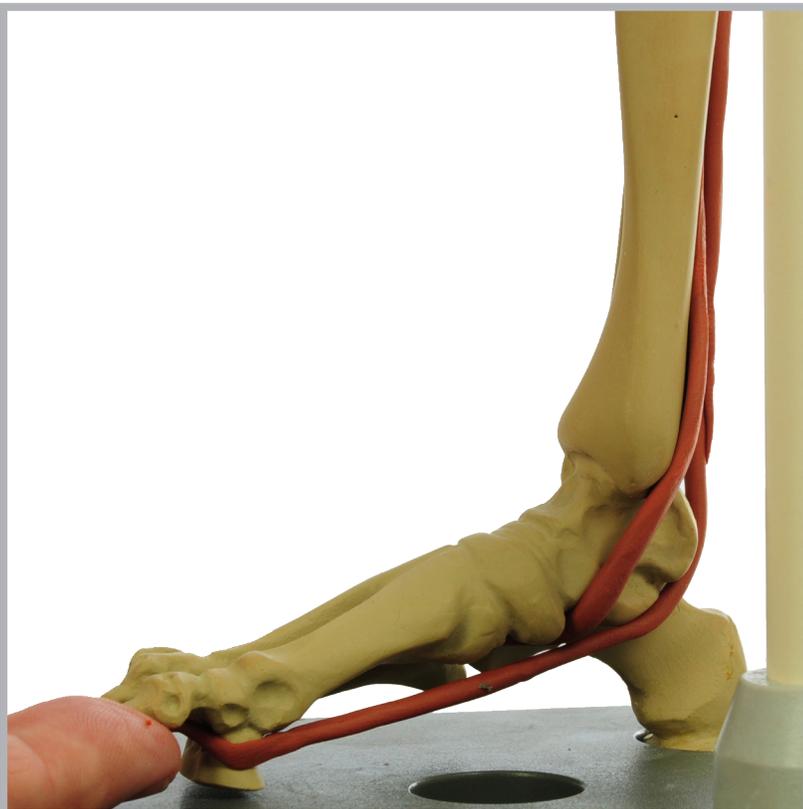
# 24

*Flexor hallucis longus* m. sends a strong tendon around the *talar trochlea* o. within a pronounced groove.



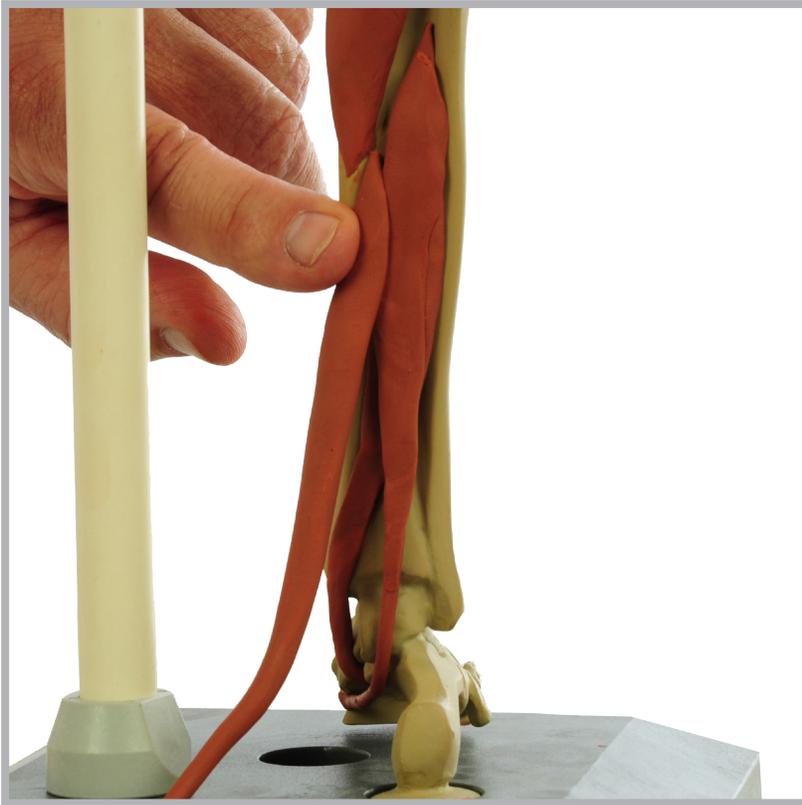
# 25

The tendon of *flexor hallucis longus* m. wraps under the *sustentaculum tali* o. and ...



# 26

... passes between the metatarsophalangeal sesamoids at the metatarsophalangeal joint, where it attaches to the base of the distal phalanx of the first digit (the big toe).



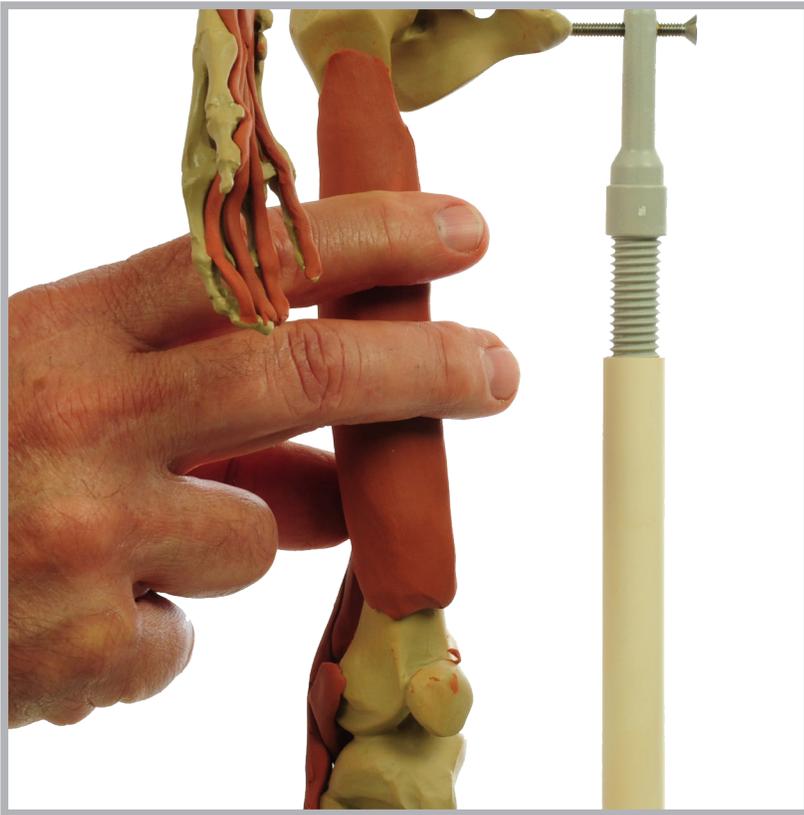
# 27

The proximal attachment of *flexor digitorum longus* m. in the foot is the intermuscular septum and lateral tibial margin.



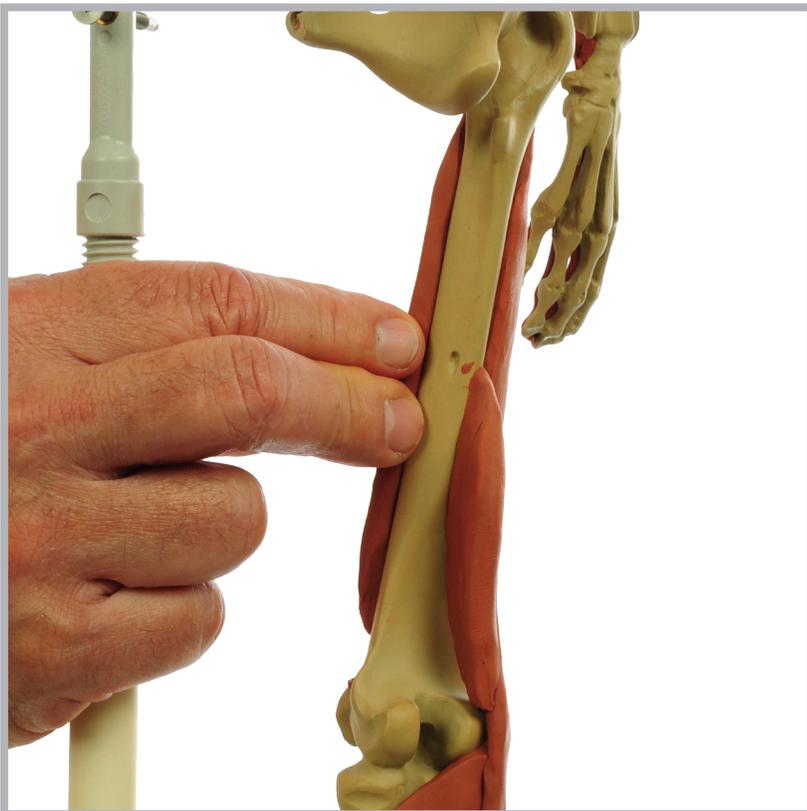
# 28

This is the *flexor digitorum longus* m., which diverges to the four toes, not including the first digit (the big toe).



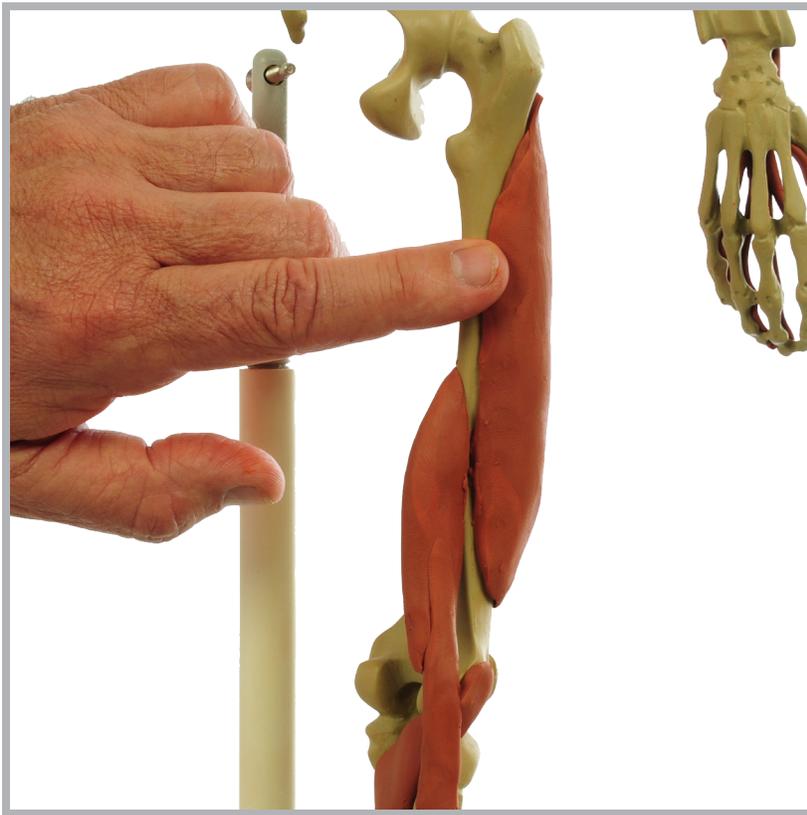
# 29

To make the *vastus intermedius* m., form a one-quarter-inch thick slab of clay that is wider than the femur and position it on the dorsal femur so that it neither reaches the greater trochanter proximally, nor the patella (kneecap) distally.



# 30

Wrap the medial edge of *vastus intermedius* m. around the medial thigh so that it fastens along the edge of a gentle crest on the medial femur.



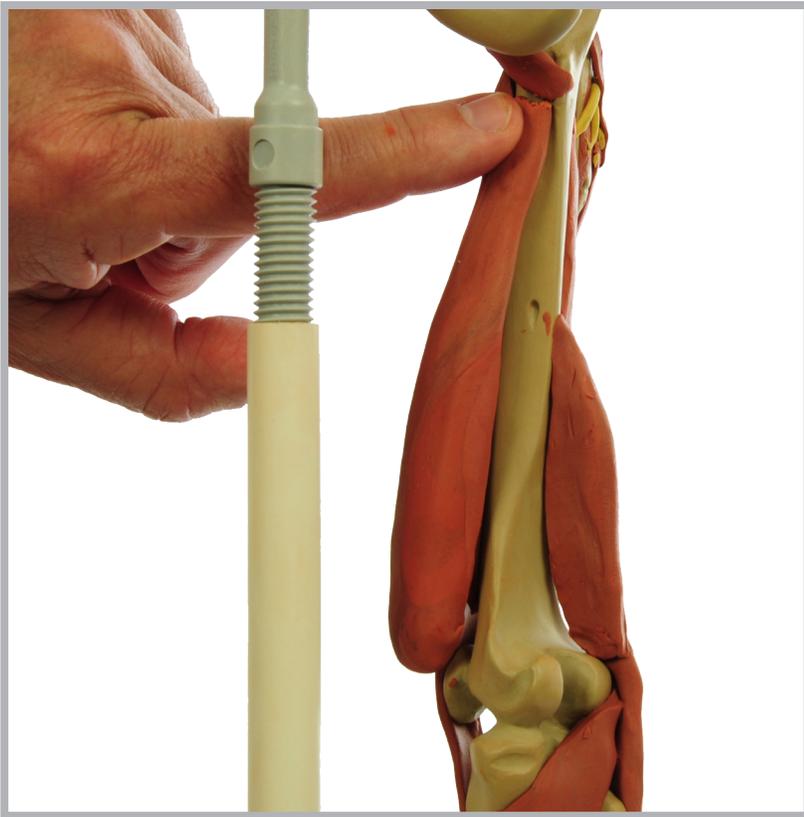
# 31

Wrap the other, lateral edge around the femur so that its margin tapers up to the lateral lip of the *linea aspera*, which runs most of its ventral length.



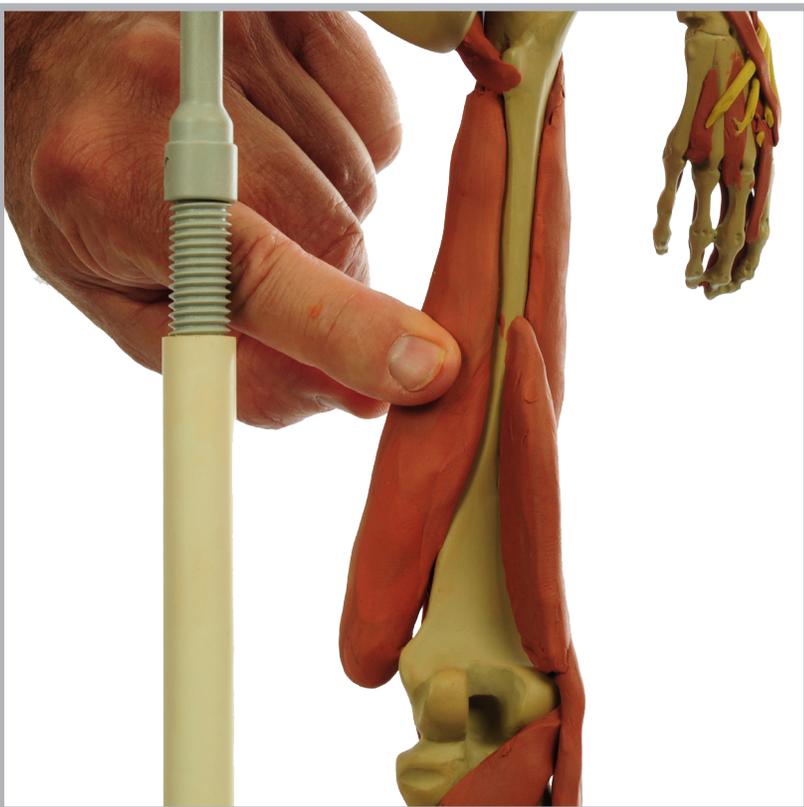
# 32

A tendinous plate covers the dorsal surface of the *intermedius* m. and becomes a strong tendon that crosses the knee to the tibial tuberosity. It encapsulates the great sesamoid bone, also called the patella (the knee cap).



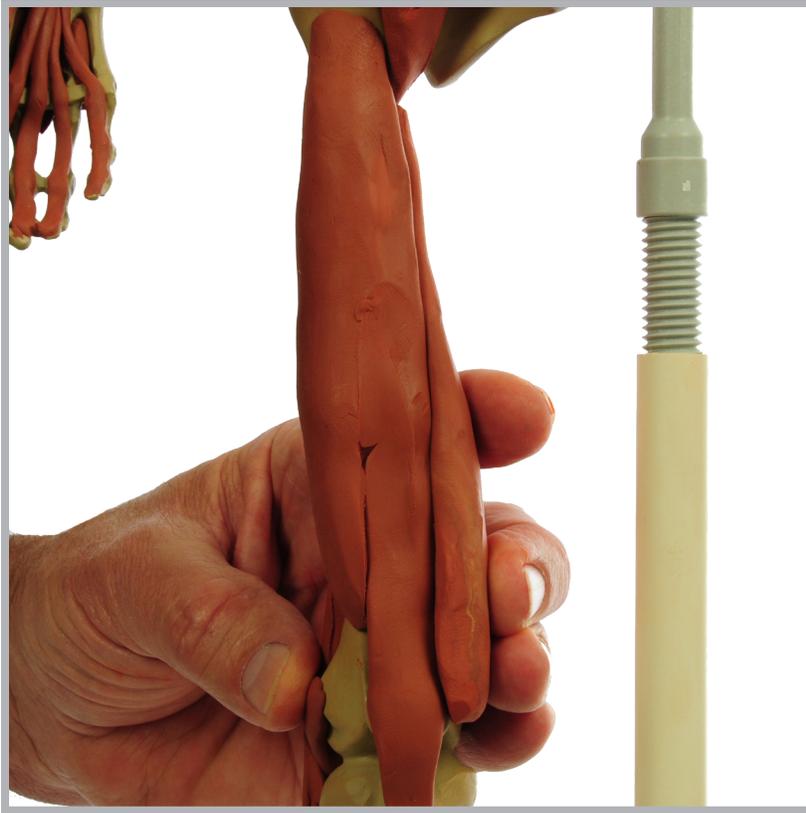
# 33

The *vastus medialis* m. attaches fleshily along the remaining available medial one-third of the femoral surface



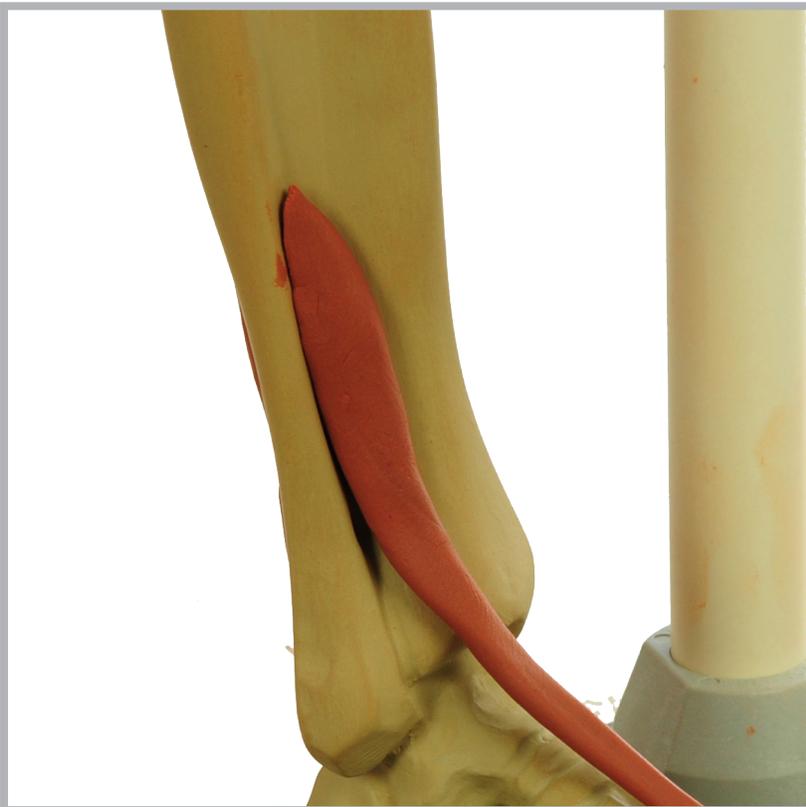
# 34

The *vastus medialis* m. completes the envelopment of the shaft of the femur, leaving only the raised ridge of the *linea aspera* exposed.



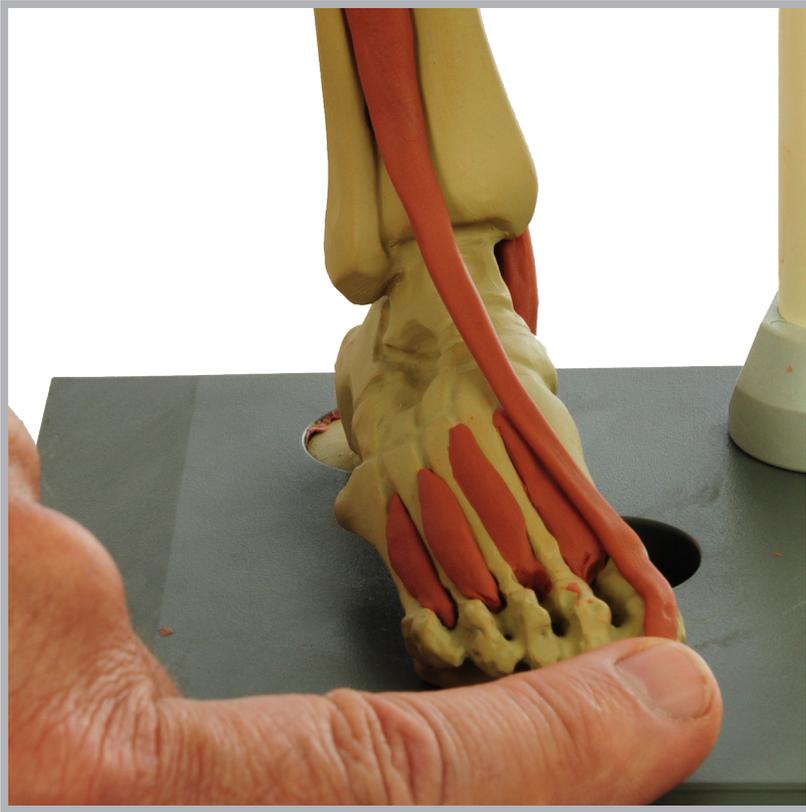
# 35

The belly of *vastus medialis* m. rolls dorsally over the medial edge of *vastus intermedius* m. and shares the common tendon of the *quadriceps* mm., a muscle group that encapsulates the patella and attaches to the tibia.



# 36

This is the *extensor hallucis longus* m. Its attachment point is the interosseus membrane at the margins of the tibia and fibula.



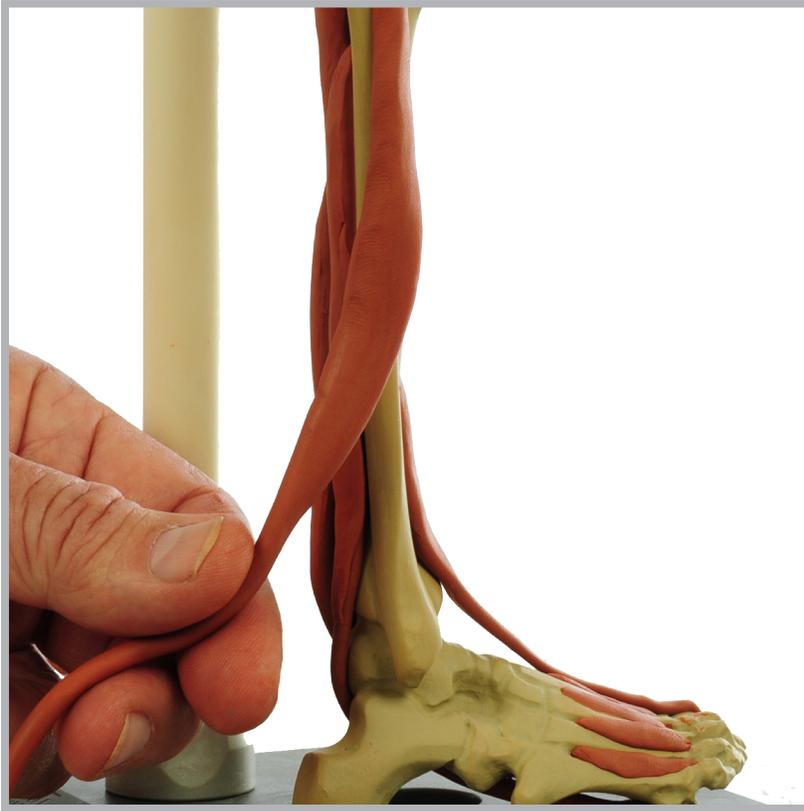
# 37

The *extensor hallucis longus* m. extends to the *hallucis* o.



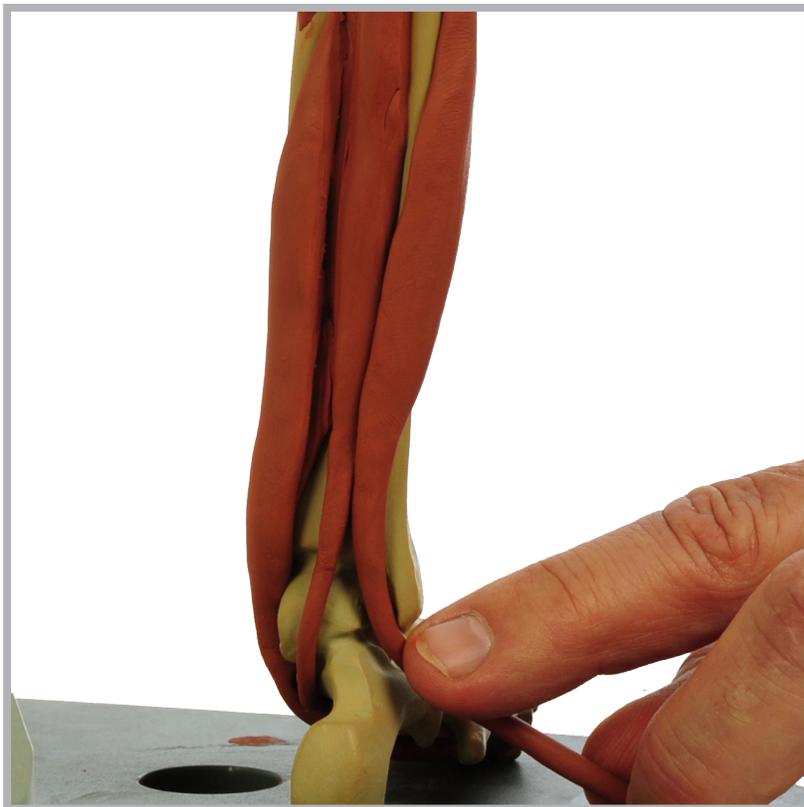
# 38

The *peroneus brevis* m. attaches along the dorsolateral distal one-half of the shaft of the fibula.



# 39

The distal end of this bipennate muscle and its central tendon spiral around the lateral malleolus of the fibula.



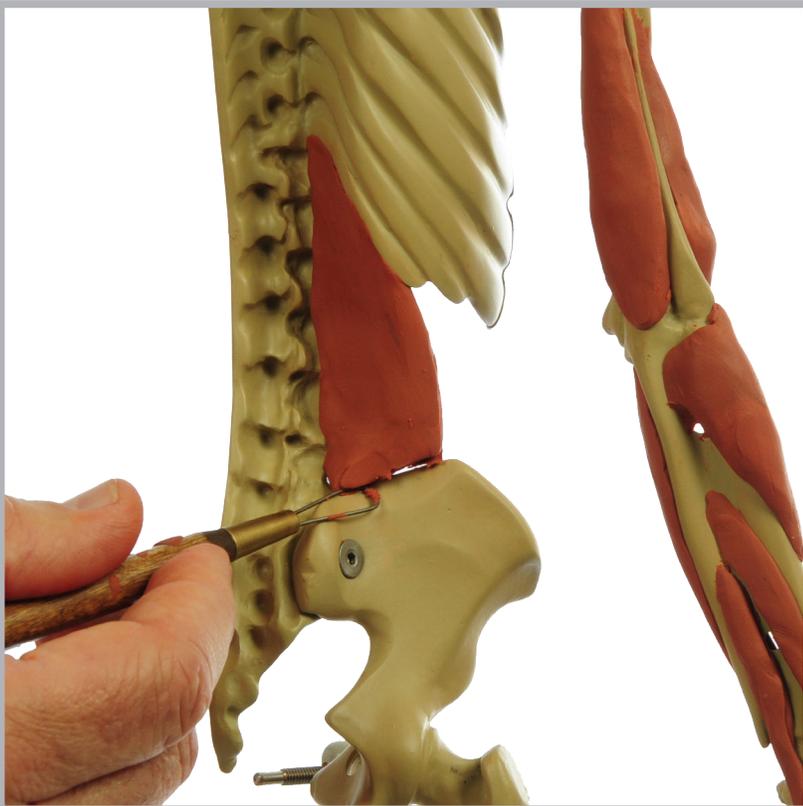
# 40

Having spiralled to the ventral lateral malleolus, the *peroneus brevis* m. wraps around the malleolus in a groove.



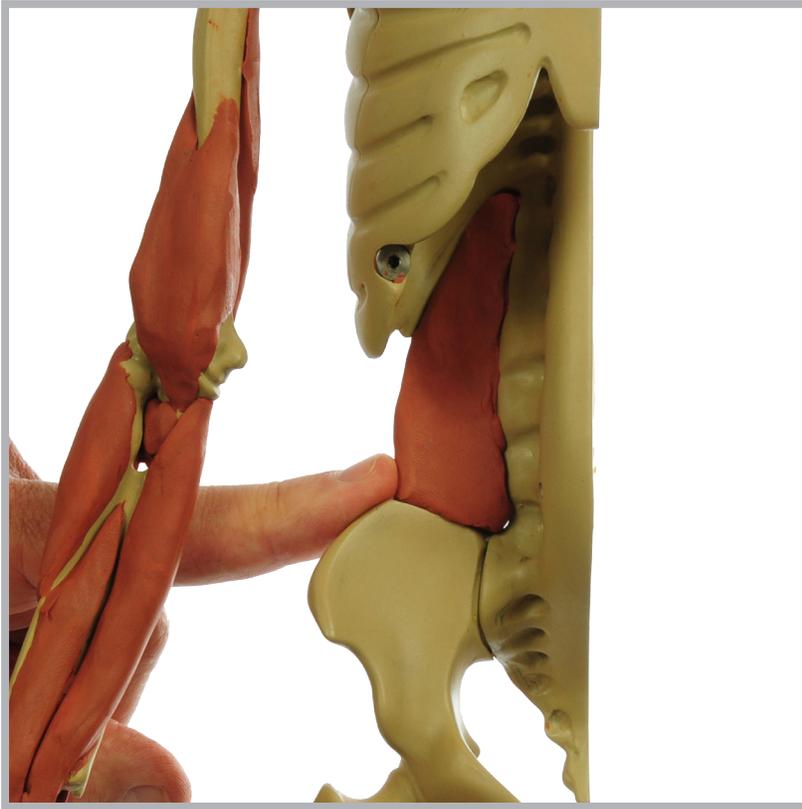
# 41

From the distal fibula, the *peroneus brevis* m. spans to the styloid process of the 5th metatarsal.



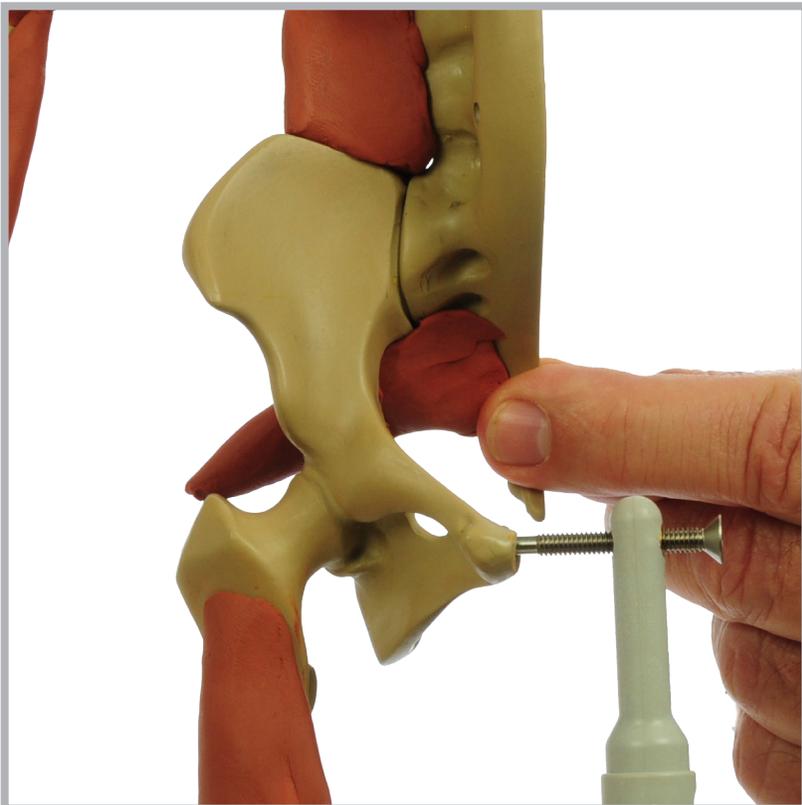
# 42

Construct the *quadratus lumborum* m. to span from the caudal margin of the last rib to the iliac crest. *Quadratus lumborum* m. fibers also attach by diagonal slips to the transverse processes of the lumbar spine.



# 43

The caudal end of the *quadratus lumborum* m. attaches to the peak of the iliac crest. This muscle creates a dorsal “wall” to which the *lumbar plexus* n. is said to be “plastered.”

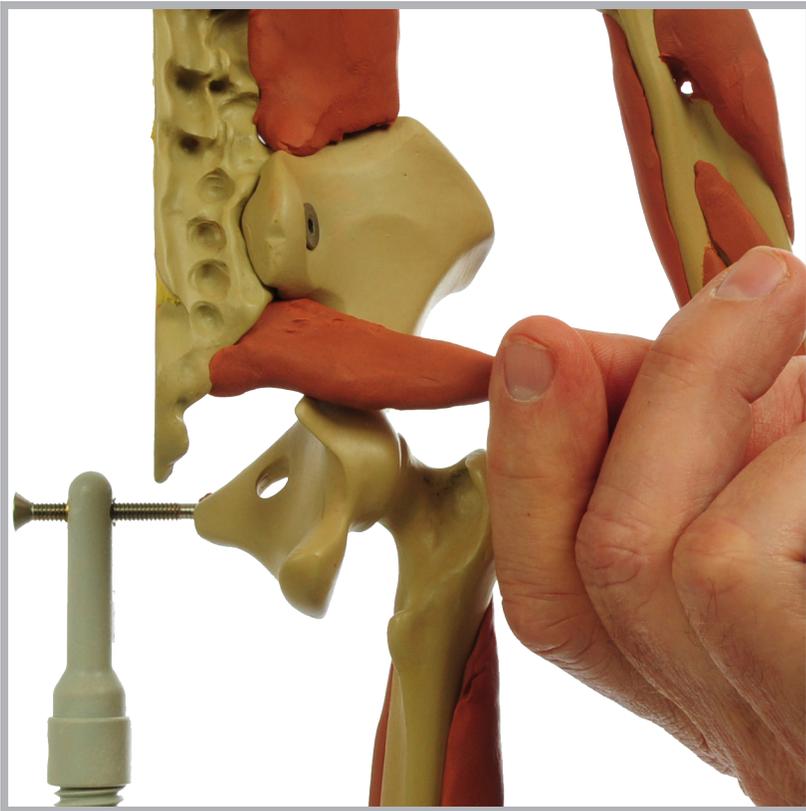


# 44

Form a small fan of clay and press the edge of its base onto the ventral face of the sacrum.

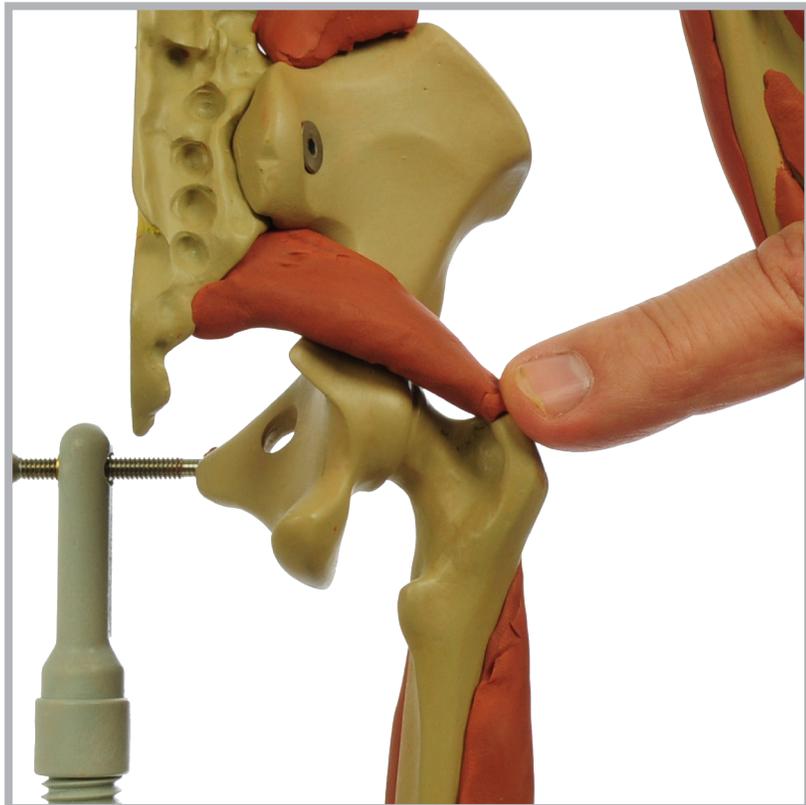
# 45

Make certain that the point of the fan exits the pelvic girdle through the *greater sciatic notch* of the hip.



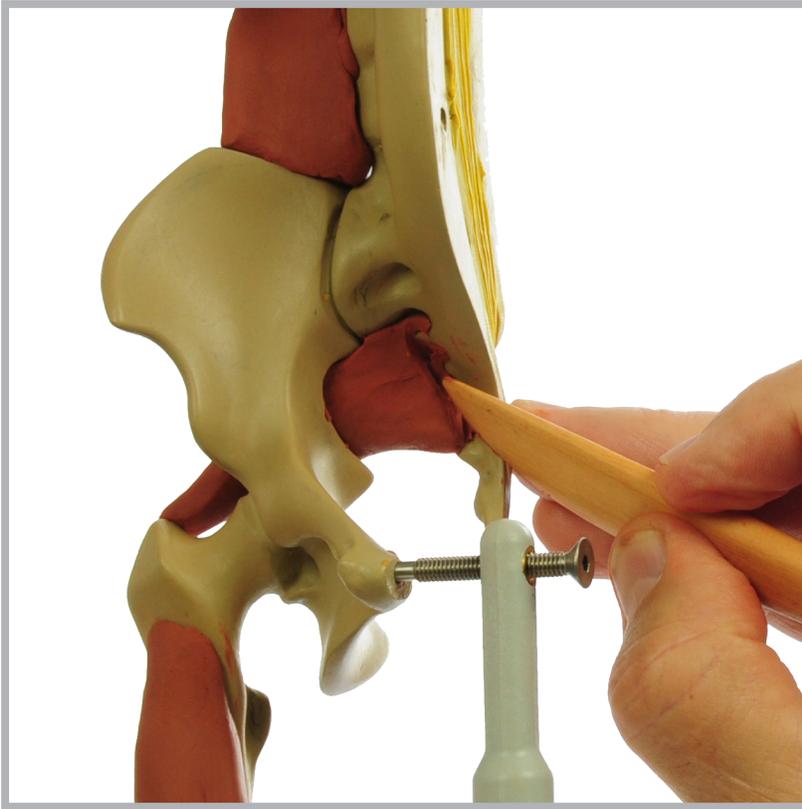
# 46

The tip of the fan is the tendon of *piriformis* m. that attaches to the cranial lip of the *greater trochanter* of the femur.



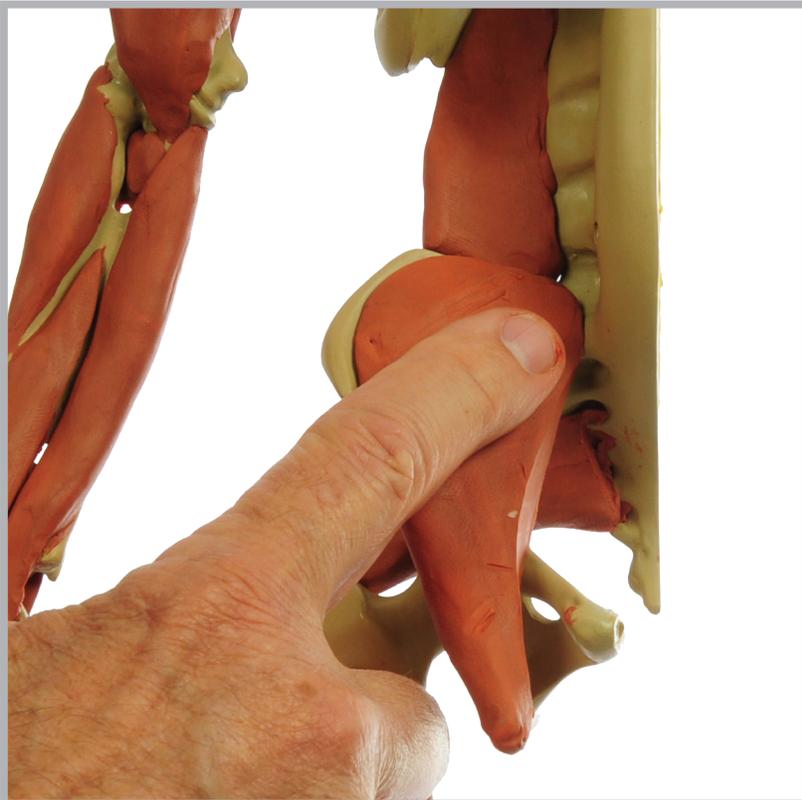
# 47

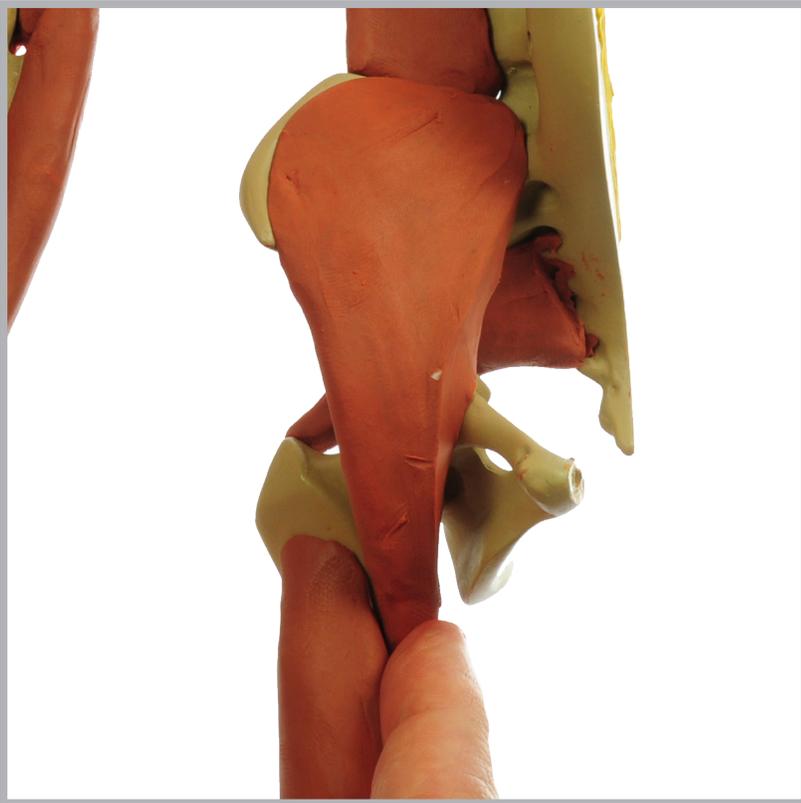
Make certain that the foramina for exiting *segmental spinal nn.* are open.



# 48

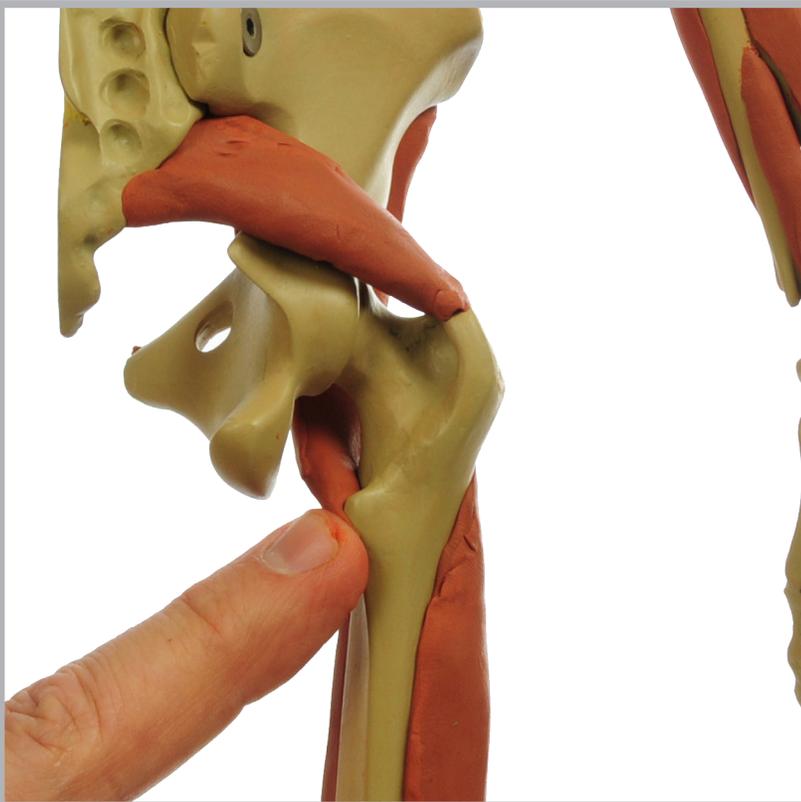
The *iliacus m.* is a large, thick fleshy fan that tapers to a powerful narrow tendon. Its proximal head fills the iliac fossa of the hip.





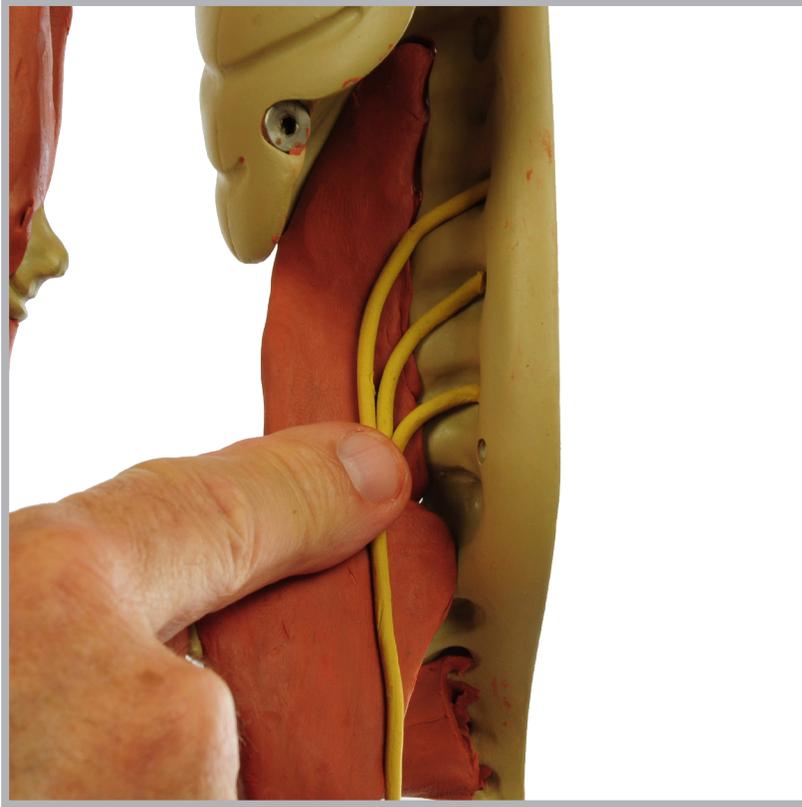
# 49

From its ventral iliac fossa attachment, the *iliacus* m. crosses through the iliopubic notch and under the inguinal ligament to wrap around the neck of the femur to ...



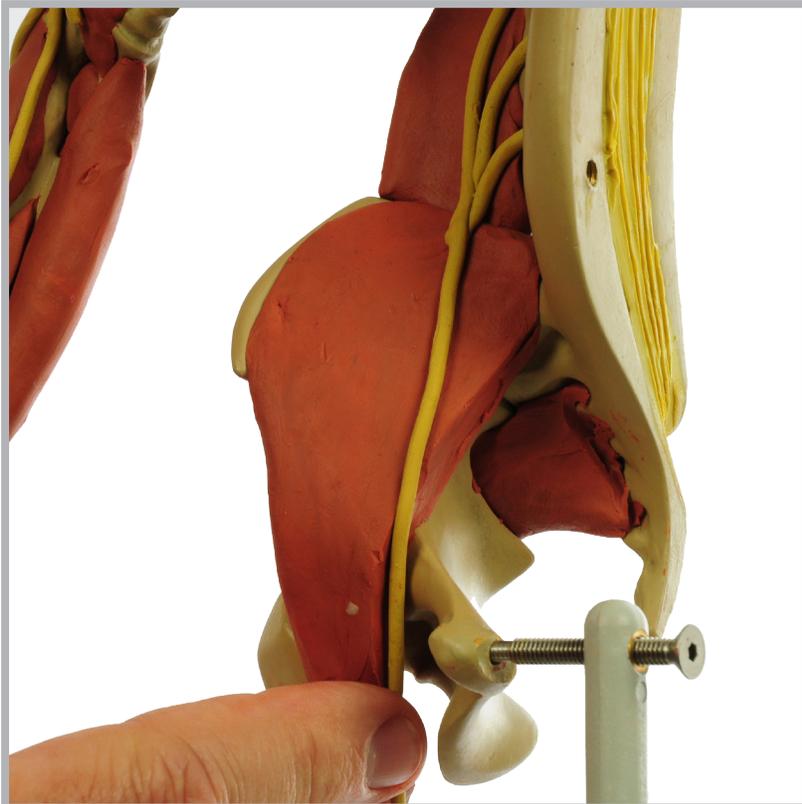
# 50

... the lesser femoral trochanter.



# 51

The nerve roots of the *lumbar plexus n.* combine to form a *plexus trunk n.* Just as a tree trunk divides into major—but smaller—branches, this first complex is the *plexus dorsal division n.*



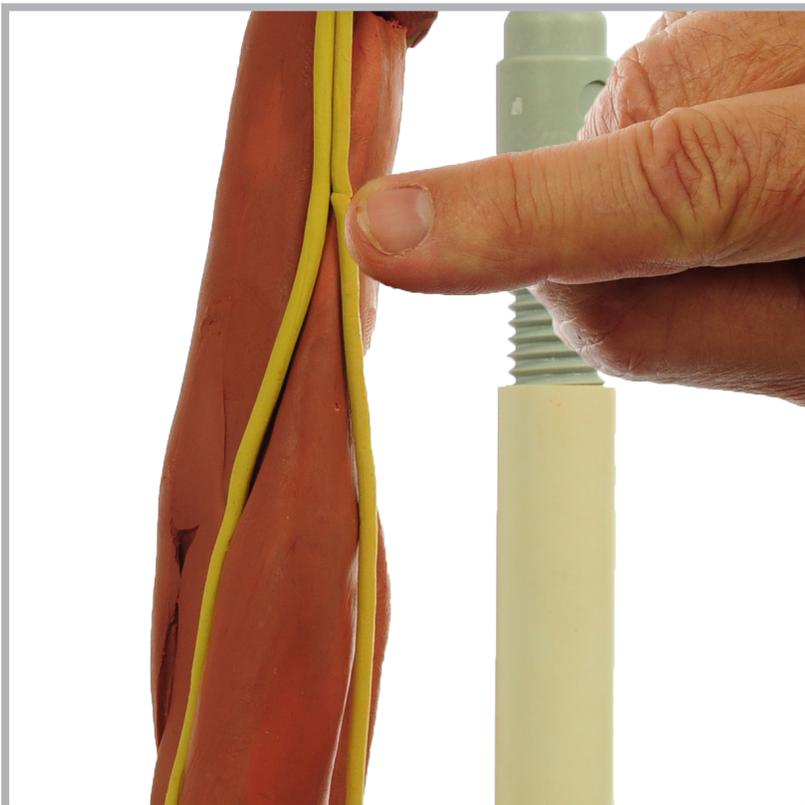
# 52

This largest division of the *lumbar plexus n.* follows along the medial edge of the *iliac m.*



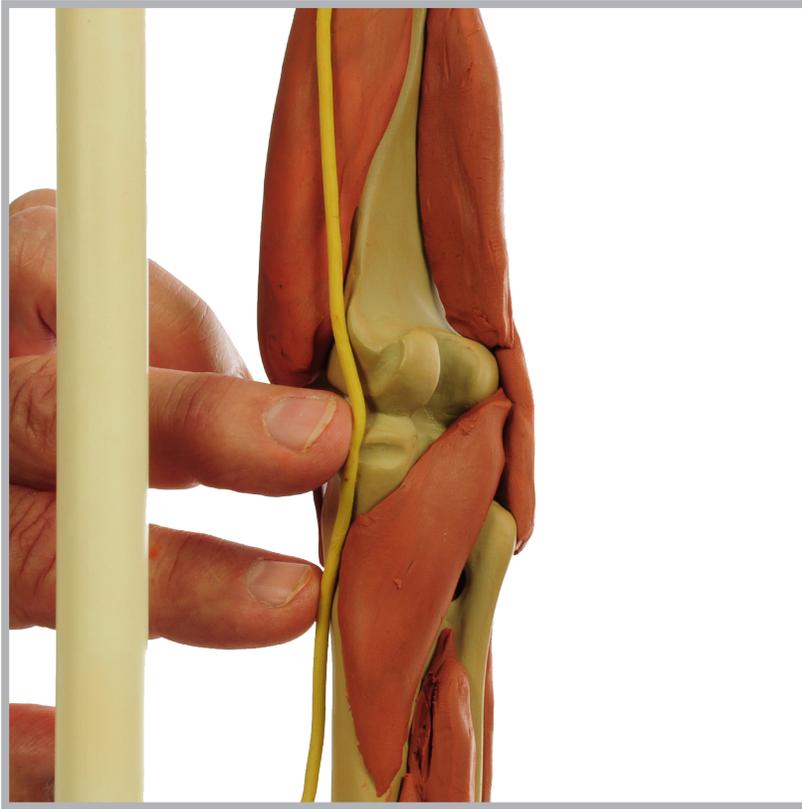
# 53

This division of the *lumbar plexus n.* creates a *plexus cord n.*, which branches into the *femoral n.*, which in turn splits into two additional nerve branches. The more dorsal *muscular n.* branch follows the edge of the *vastus medialis m.* to the knee and ...



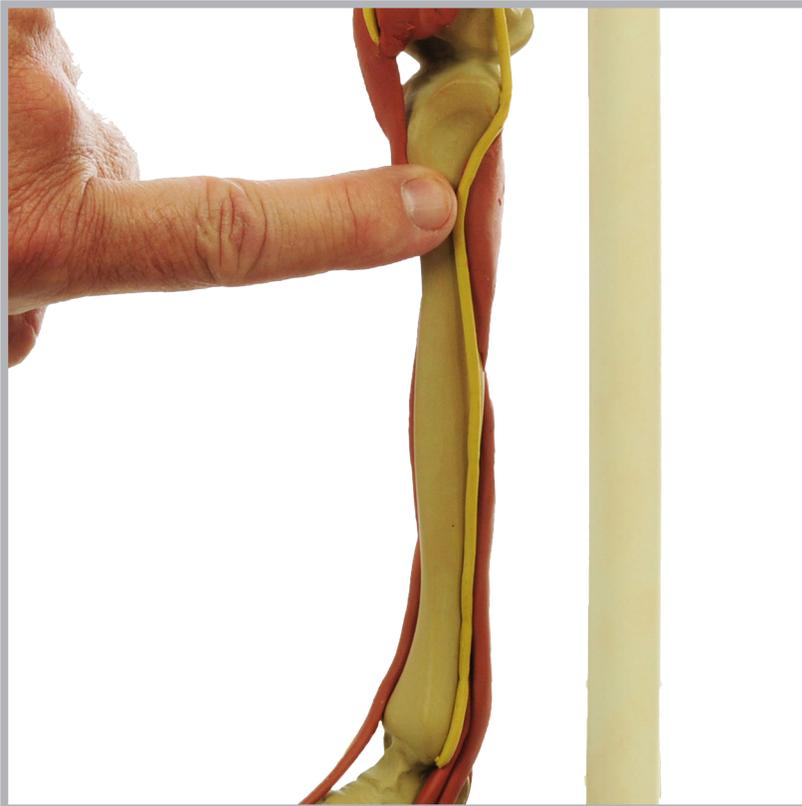
# 54

... the other neural branch of the dorsal division, the *saphenous n.*, runs down the medial leg and wraps around it to the ventral edge of the *vastus medialis m.*



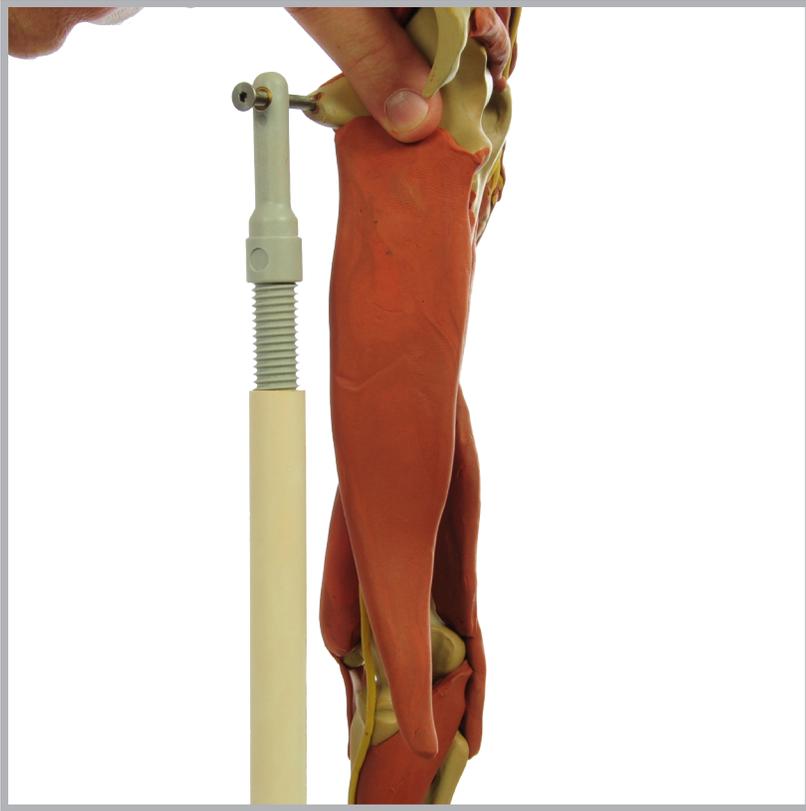
# 55

The *saphenous* n. spirals slightly toward the ventral popliteal fossa, only to turn and spiral back dorsally just below the knee.



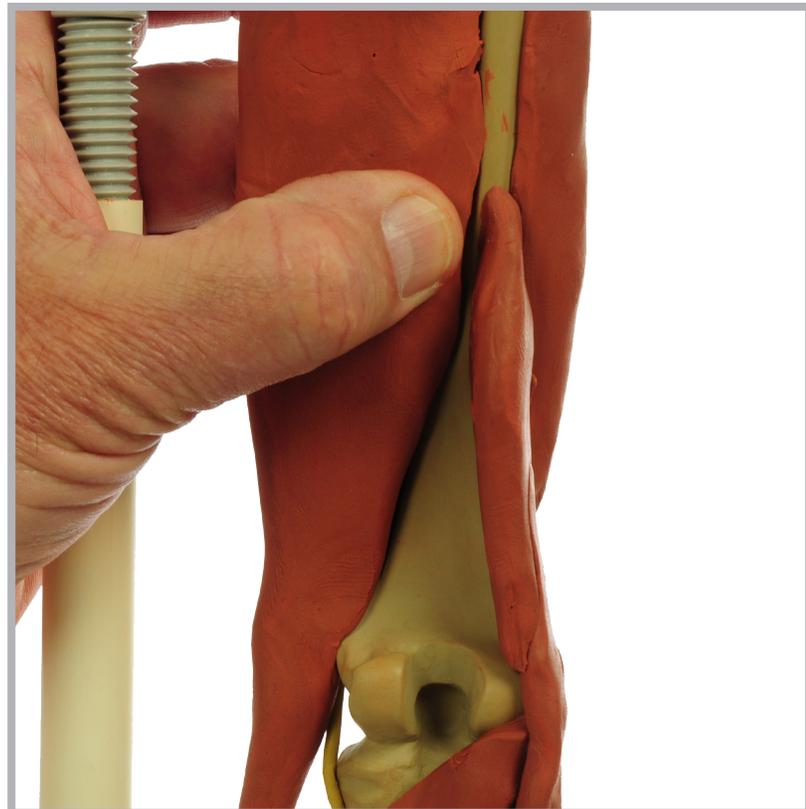
# 56

The *saphenous* n. continues down the medial tibia to the ankle.



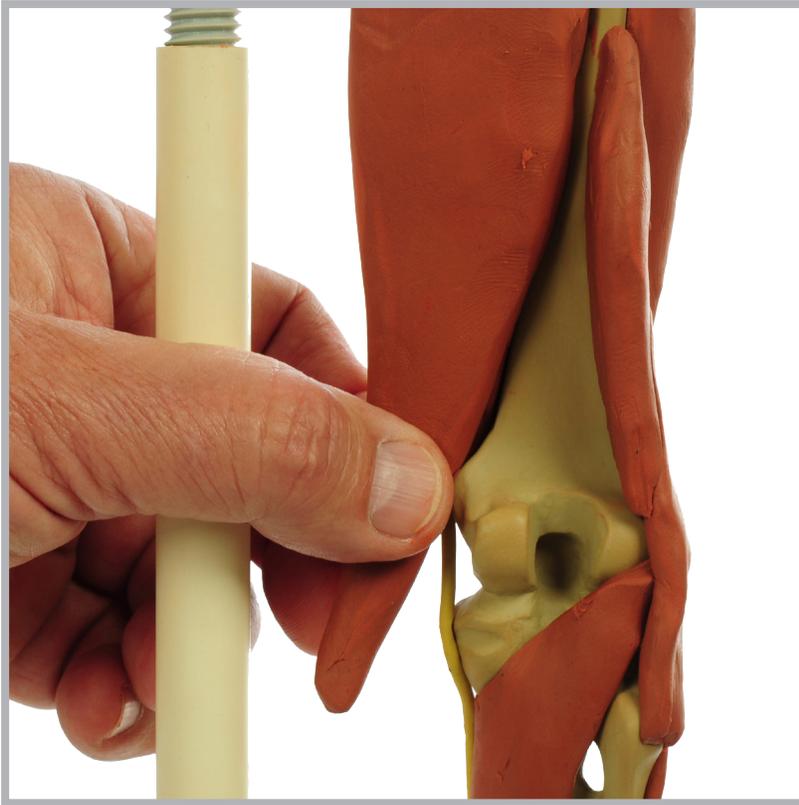
# 57

The *adductor group* of muscles is upside down—much simplified here into a single long, narrowing triangle. Its base of proximal attachment spans from the pubic symphysis to the ischial tuberosity.



# 58

The ischial side of this simplified *adductor* muscles group attaches along the entire length of the medial lip of the linea aspera.



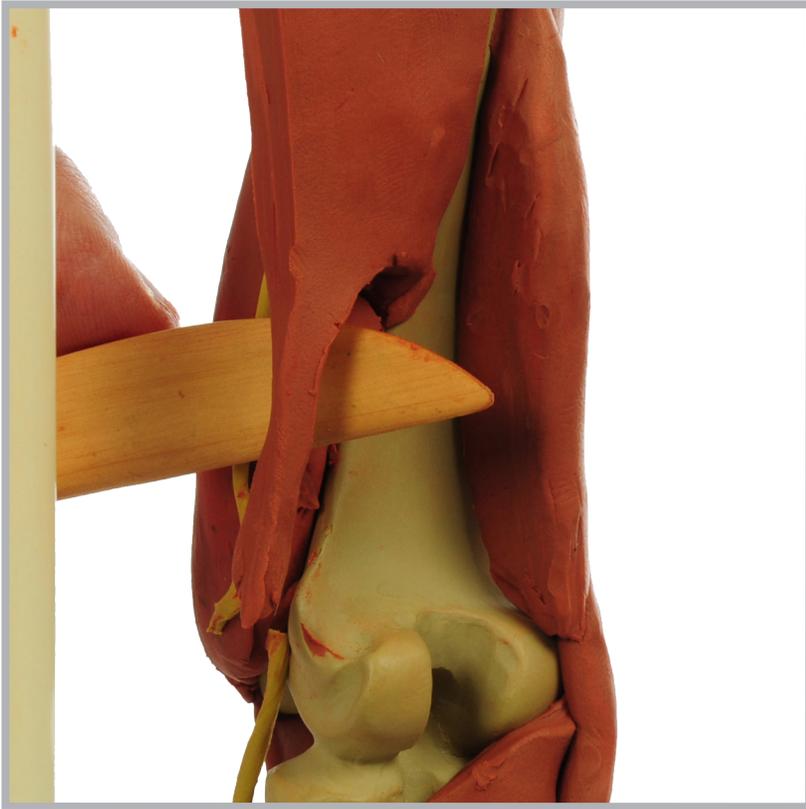
# 59

The long triangle shape of this muscle group spans the length of the femur to attach its apex to the femoral *adductor tubercle o.*



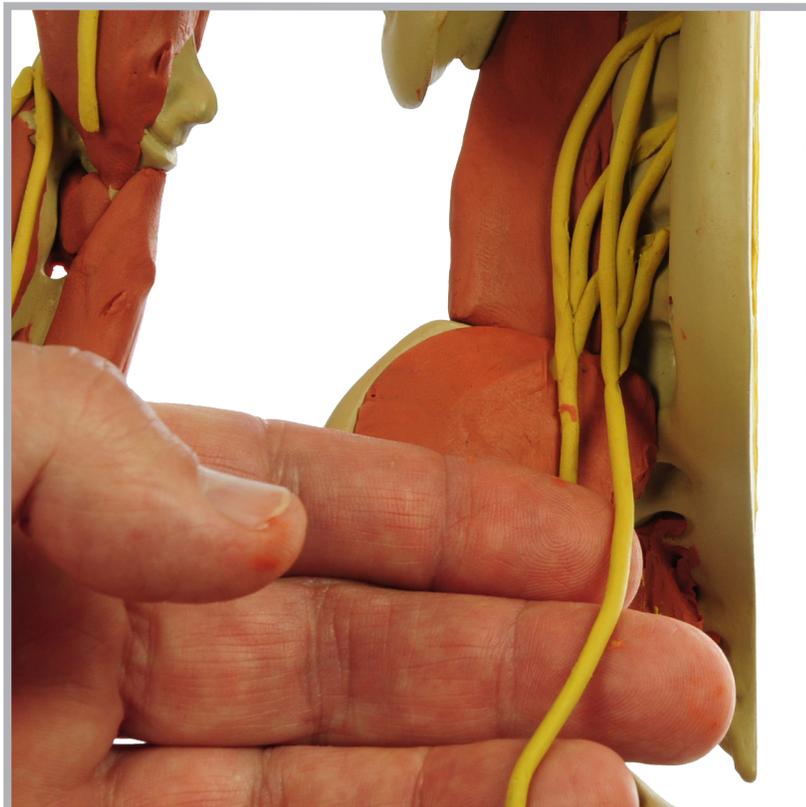
# 60

Trim down the medial edge of the *adductor mm.* so that a *hiatus o.* (or gap) in the tendon is formed.



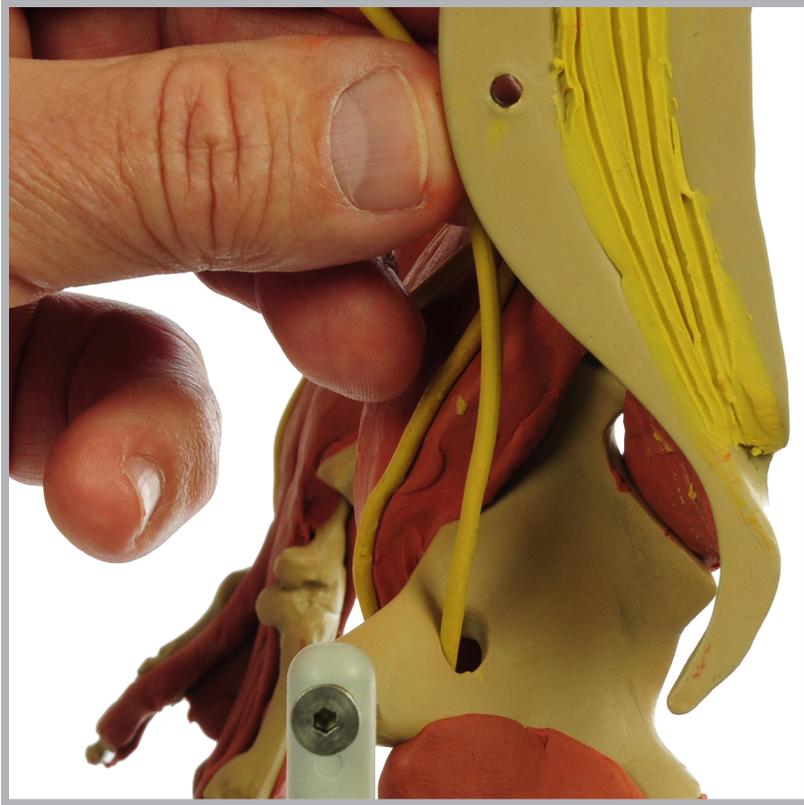
# 61

This hiatus, or hole, will allow for passage of the vascular bundle from the dorsal to the ventral sides of the leg.



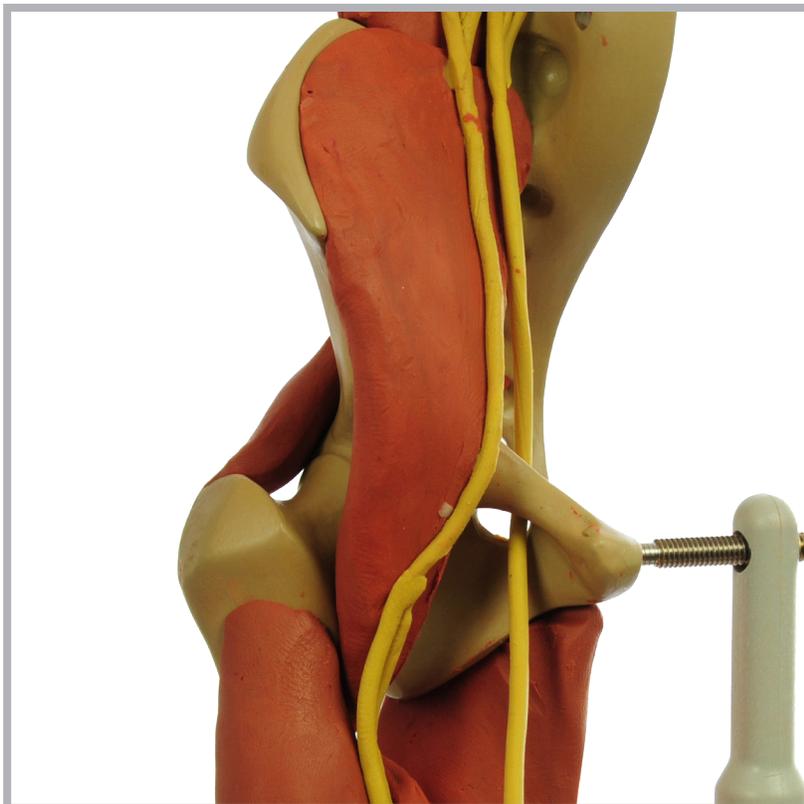
# 62

Return to the *lumbar plexus nn.* to create its ventral division. The trunk of this nerve group shares the same roots as the dorsal division. Like the dorsal division, its three contributors merge into the single *obturator n.*



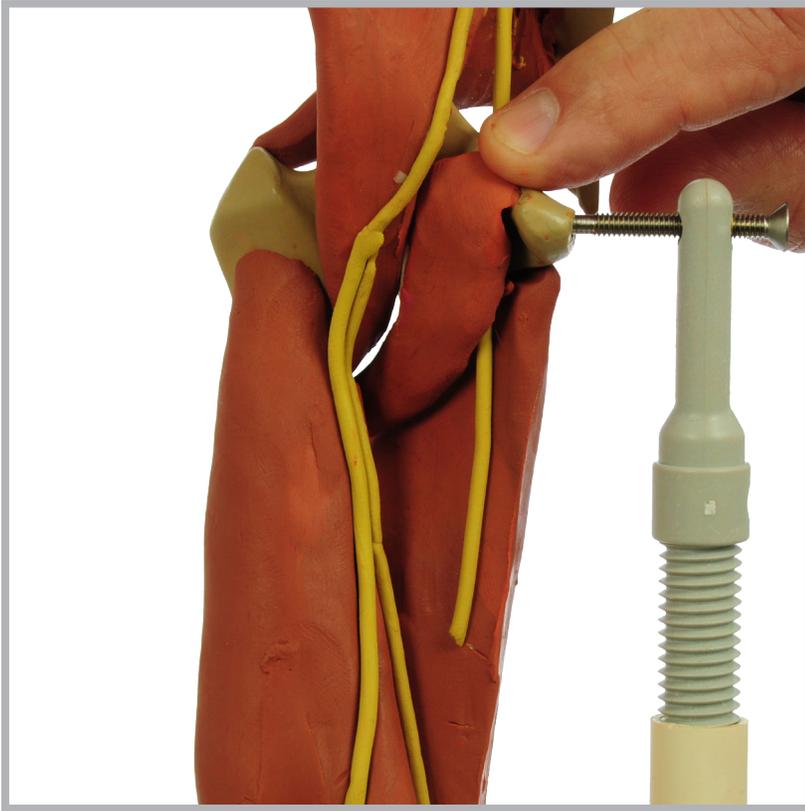
# 63

The *obturator n.* passes along the *iliopsoas* and *obturator m.* (not shown here) to enter the hiatus in the *obturator membrane o.* and stretching across the *obturator foramen o.* in the hip.



# 64

The *obturator n.* passes through the *obturator foramen* to reach the *adductor mm. group.*



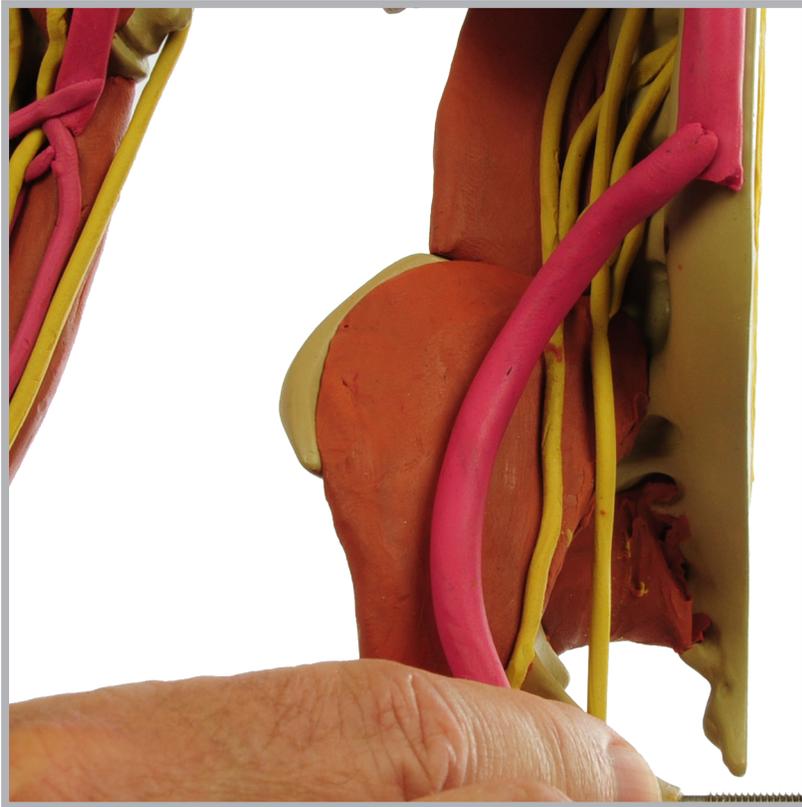
# 65

Another adductor, the *pectineus* m., attaches proximally along the pectineal line on the cranial superior pubic ramus. It passes over the *obturator* n.



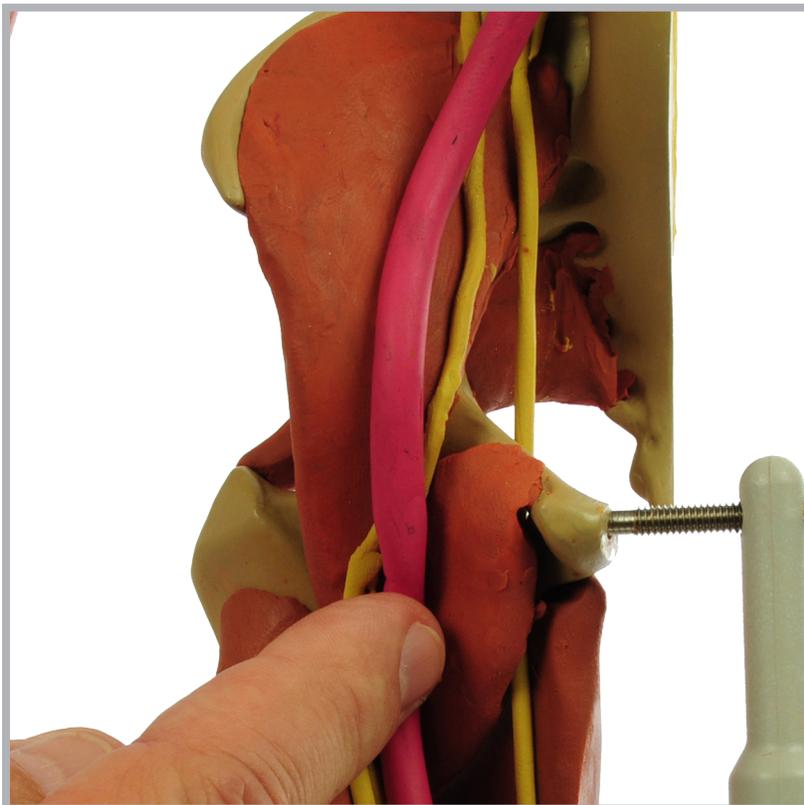
# 66

The *aortic arch* a. curves up and over the left branch of the bronchii of the trachea and then passes down the ventral vertebral column and is now referred to as the *abdominal aorta* a.



# 67

The *abdominal aorta a.* forks into the *common iliac aa.* Shown here is the *right common Iliac a.*



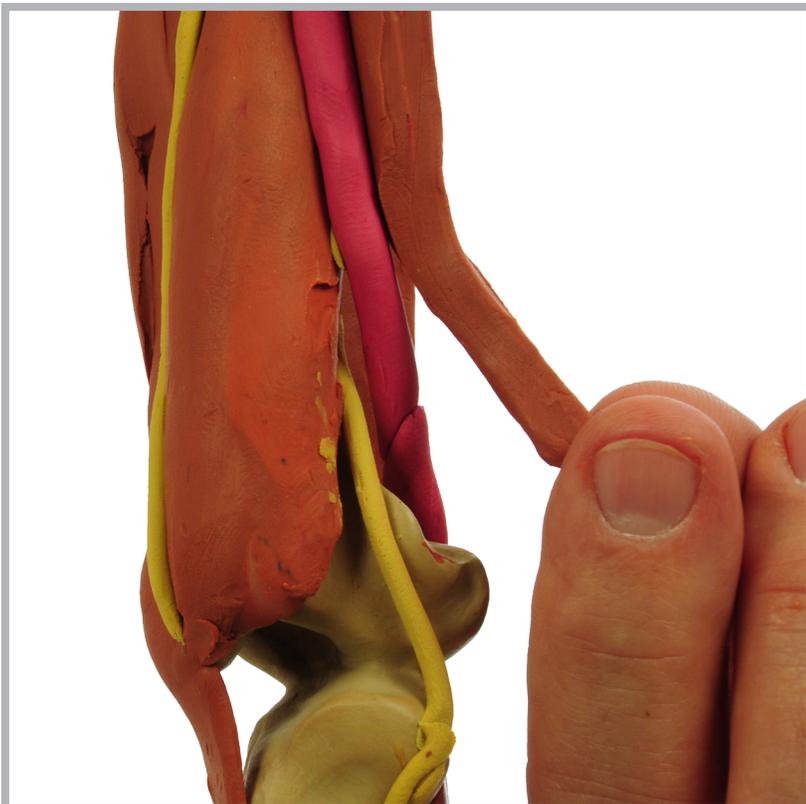
# 68

Under the *inguinal l.*, the *common iliac a.* divides into two. The *external Iliac a.* passes along the *iliacus m.* and crosses under the *inguinal l.* as the *inguinal a.*



# 69

The *inguinal a.* then divides into deep and superficial arteries. The deep branch is the *profunda femoral a.*; the superficial branch is the *femoral a.*



# 70

The deep branch of the inguinal a. is the *profunda femoral a.*, which passes through the hiatus in the *adductor mm. group.*



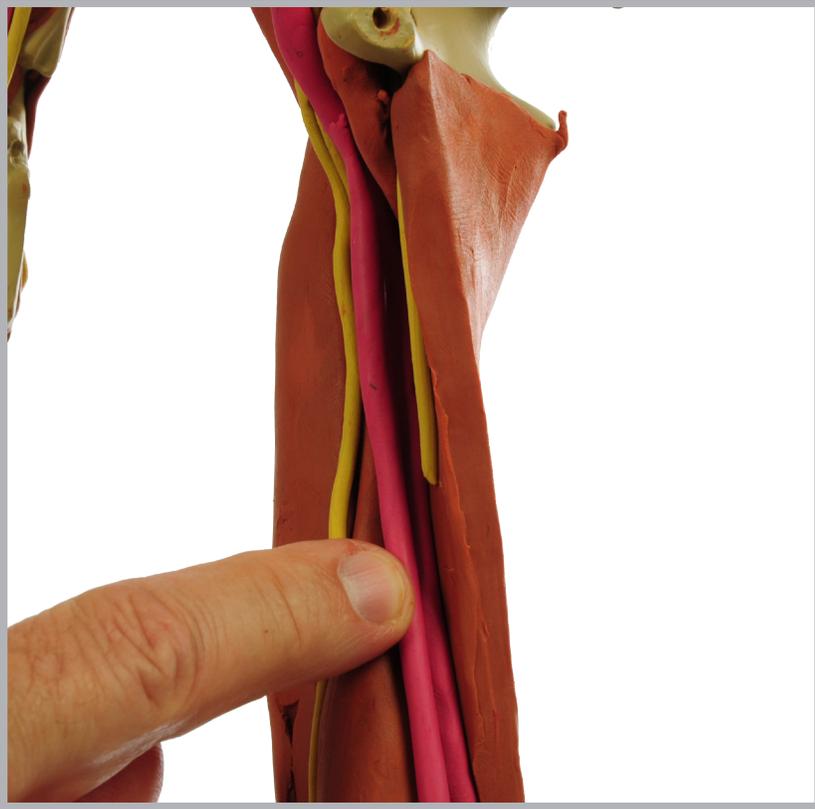
# 71

The *profunda femoris a.* terminates in an anastomosing (connected) network around the knee.



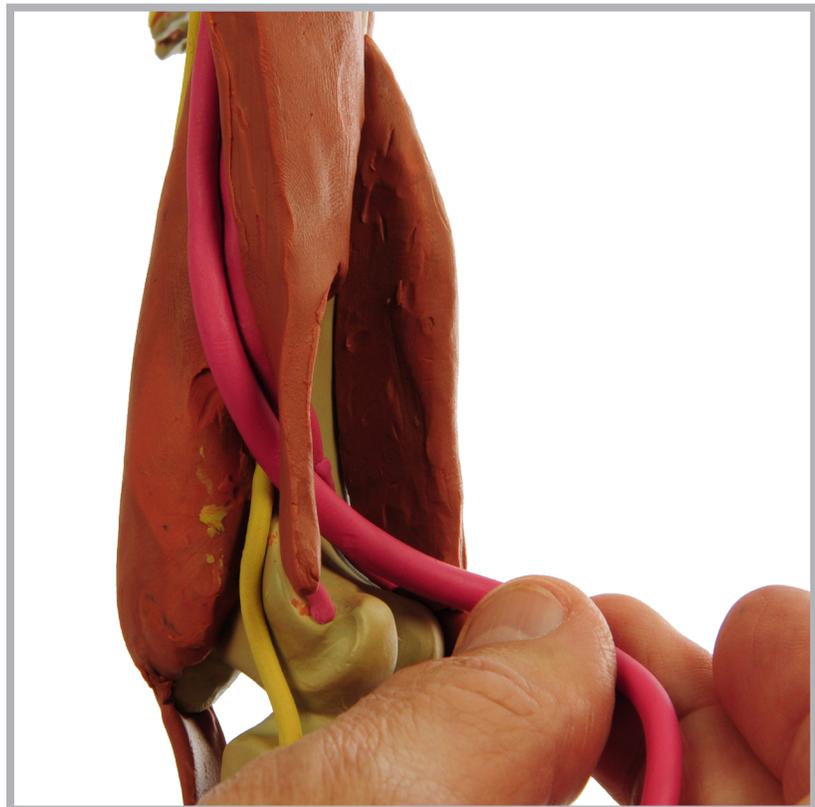
# 72

The superficial branch of the *inguinal a.* becomes the *femoral a.*



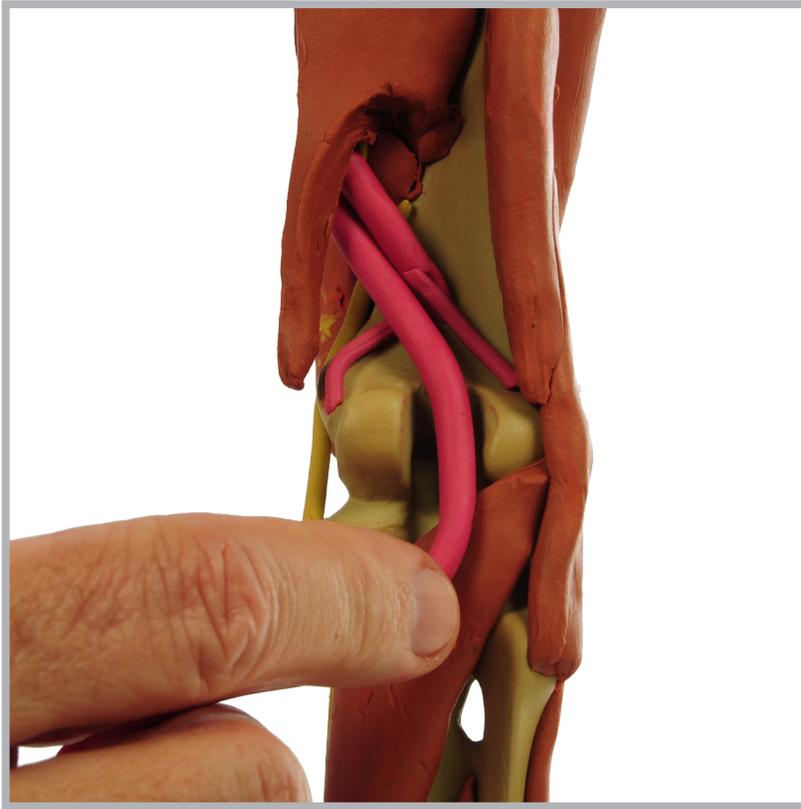
# 73

The *femoral a.* runs superficial to the *profunda a.* and down the leg in the *adductor*, or *subsartorial canal*.



# 74

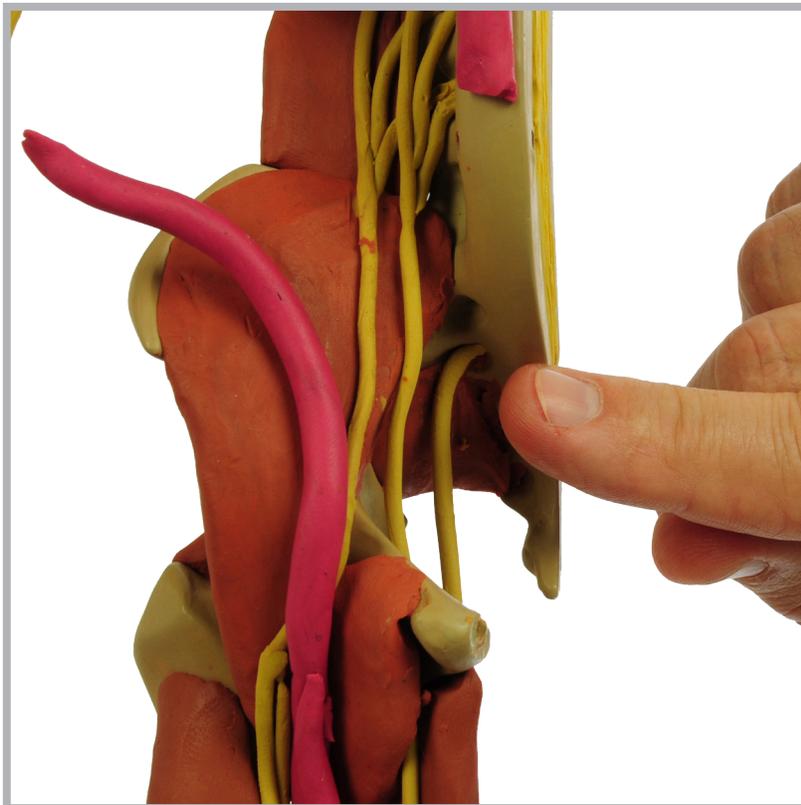
The *femoral a.* also passes through the *adductor mm. group hiatus*.



# 75

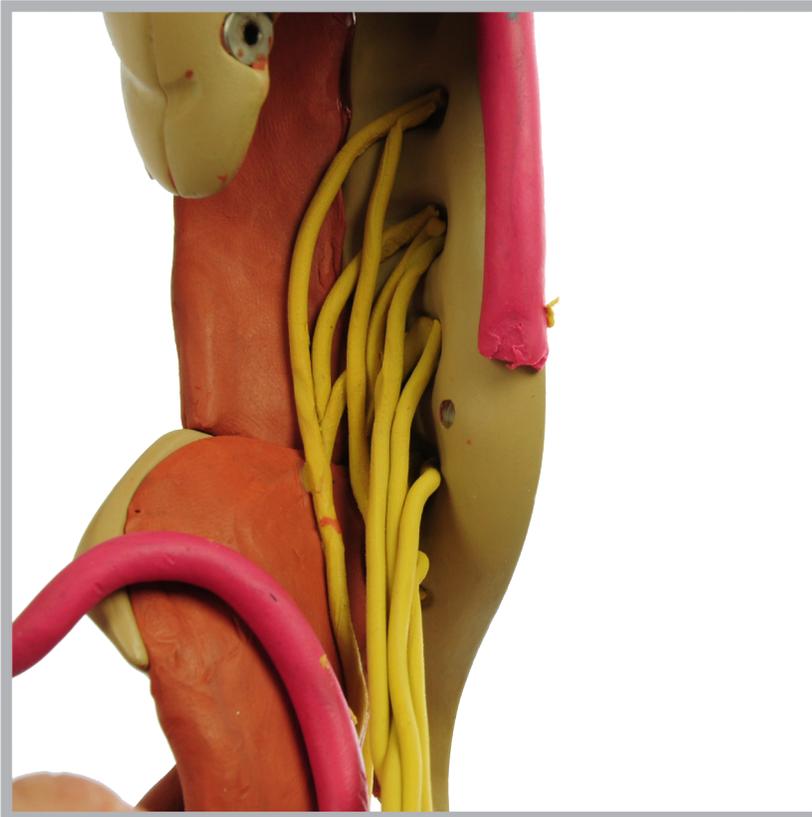
The *femoral a.* also passes the *profunda femoral a.*, crossing between the femoral condyles into the popliteal fossa to become the *popliteal a.*

At this point, we will pause to build the major ventral nerve of the leg.



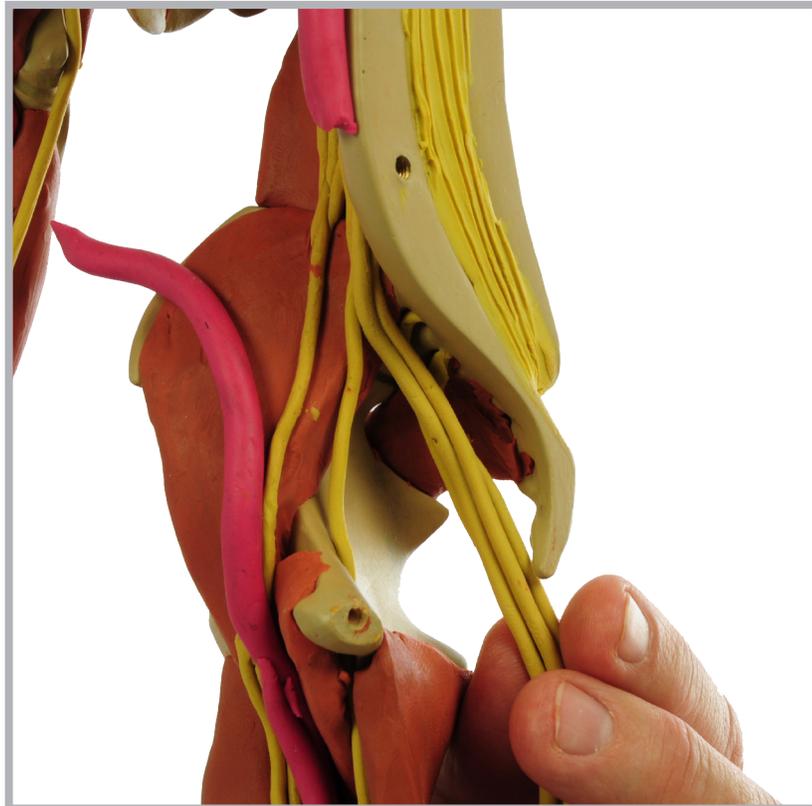
# 76

The lower nerves of the lumbar plexus and those of the upper sacral plexus divide into nearly identical dorsal and ventral divisions. Their two trunks merge, half and half, as the *lumbosacral trunk nn.*



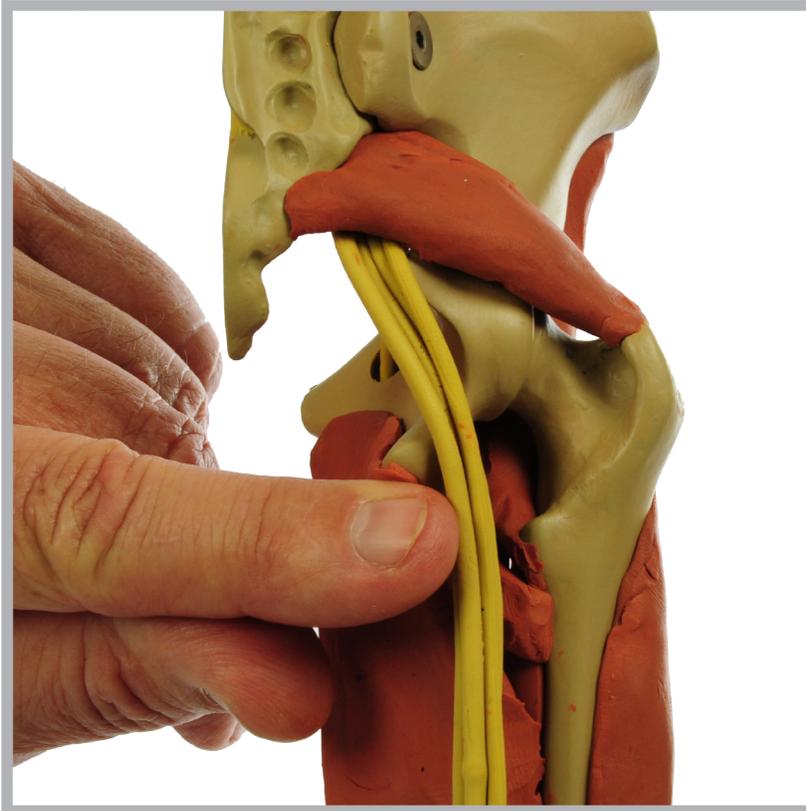
# 77

The dorsal contributors to the lumbosacral trunk merge into the *common peroneal* n. The ventral contributors to that trunk merge into the *tibial* n.



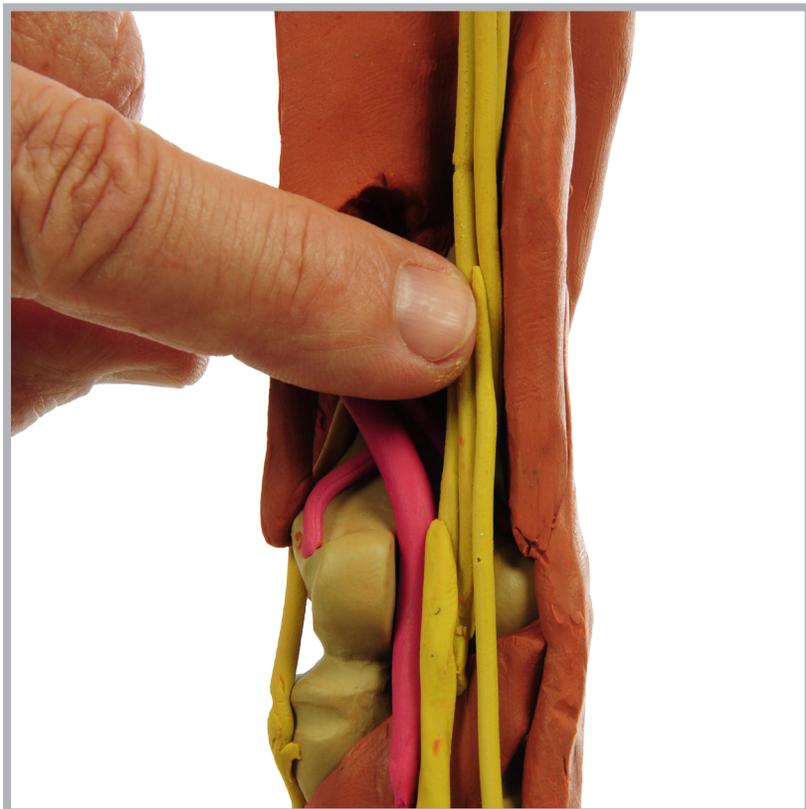
# 78

Both the *tibial* n. and *common peroneal* n. share—also half and half—the biggest nerve in the body, the *sciatic* n. The *sciatic* n. passes down the face of the *piriformis* m. and ...



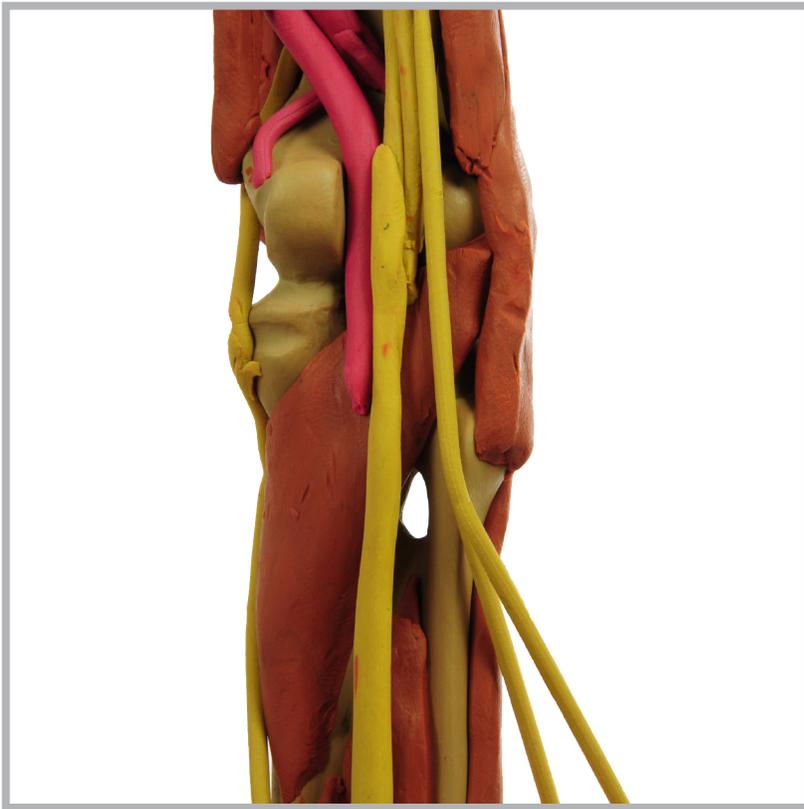
# 79

... exits the pelvis through the same greater sciatic notch as the *piriformis* m.—above, through or below it, though most typically below it as shown.



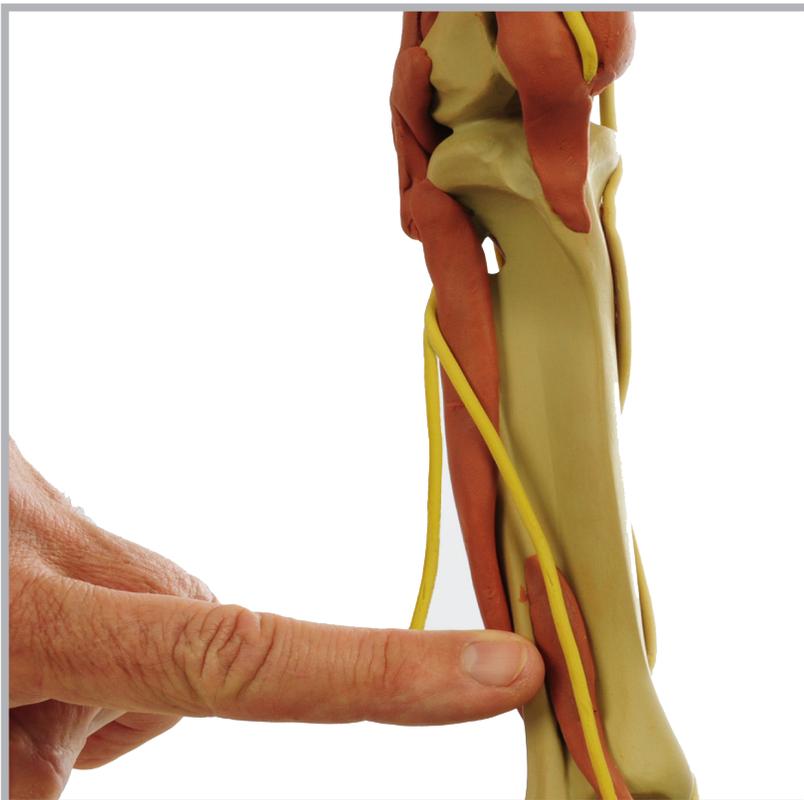
# 80

The *sciatic n.*, combining both the *common peroneal n.* and *tibial n.*, passes straight down the ventral femur to the beginning of its popliteal region, where the two components divide.



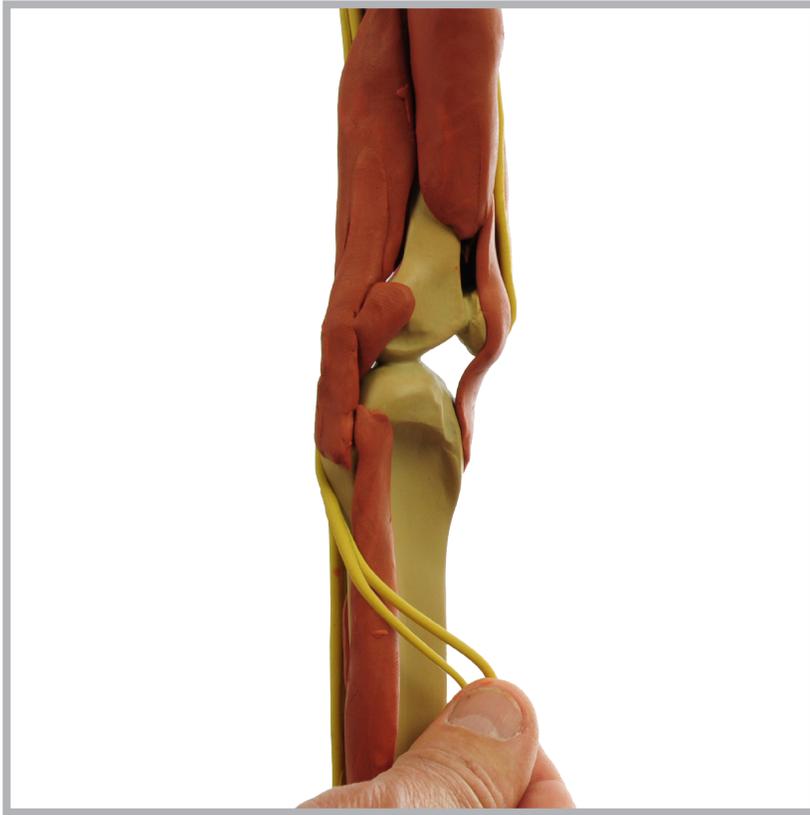
# 81

At the fibular head, the *common peroneal* n. divides into two nerves and ...



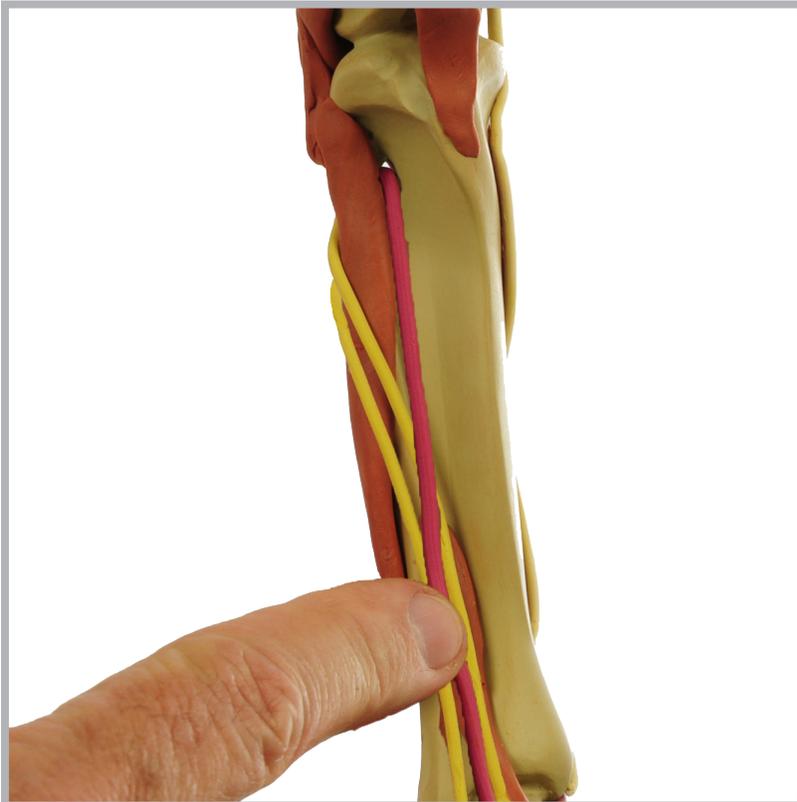
# 82

... both nerves diverge and wrap laterally and dorsally around the neck of the fibula just below the head.



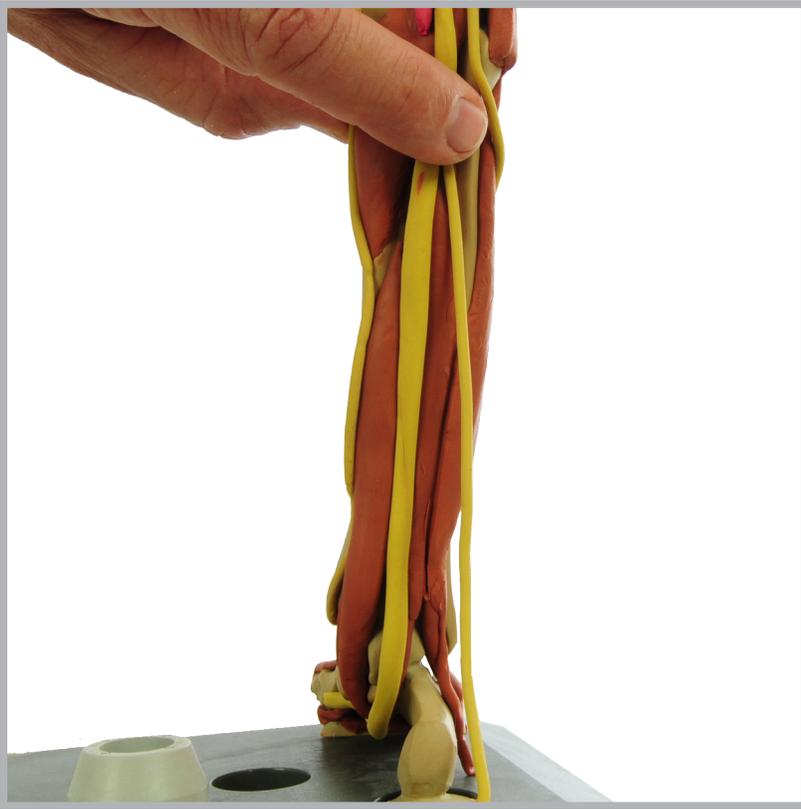
# 83

The more dorsal *deep peroneal* n. (or *anterior tibial* n.) angles down the lower leg to the ankle where it splits into a medial and a lateral branch and reaches to the toes.



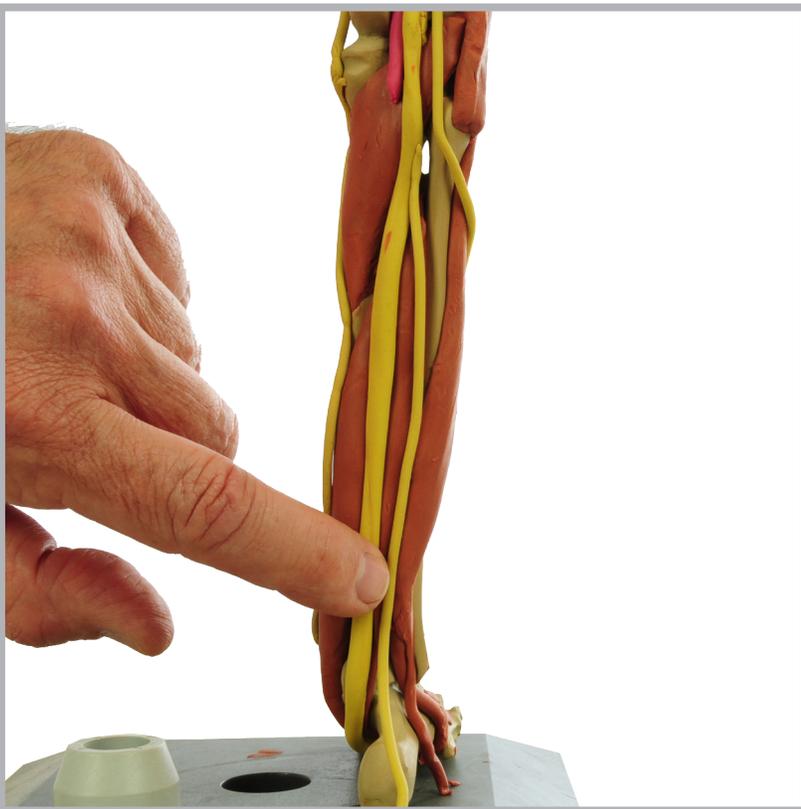
# 84

The *superficial peroneal* n. (or *musculocutaneous* n.) spirals dorsally around the fibula and also terminates in the toes.



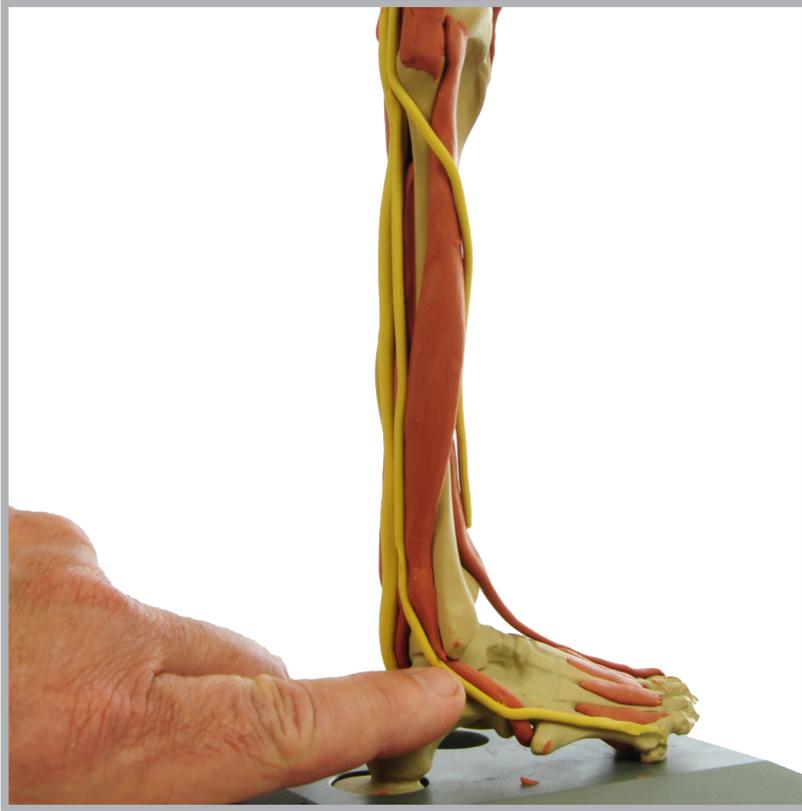
# 85

A third branch of the *common peroneal* n. is the *sural* n. It remains in the ventral leg.



# 86

The *sural* n. runs behind the lateral malleolus.



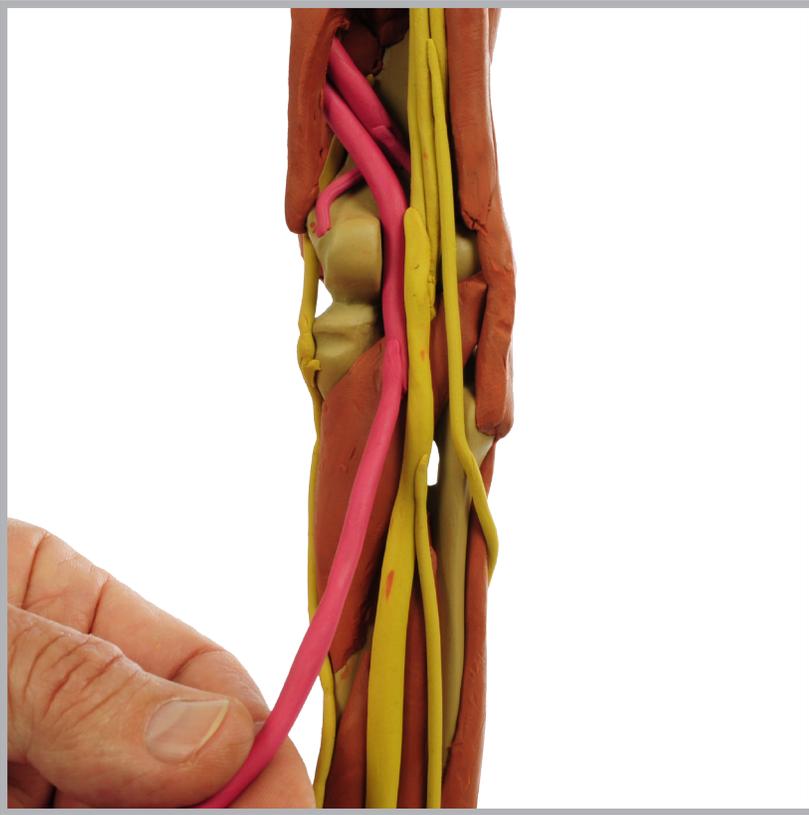
# 87

The *sural* n. then wraps around the lateral malleolus to terminate on the lateral foot and toe.



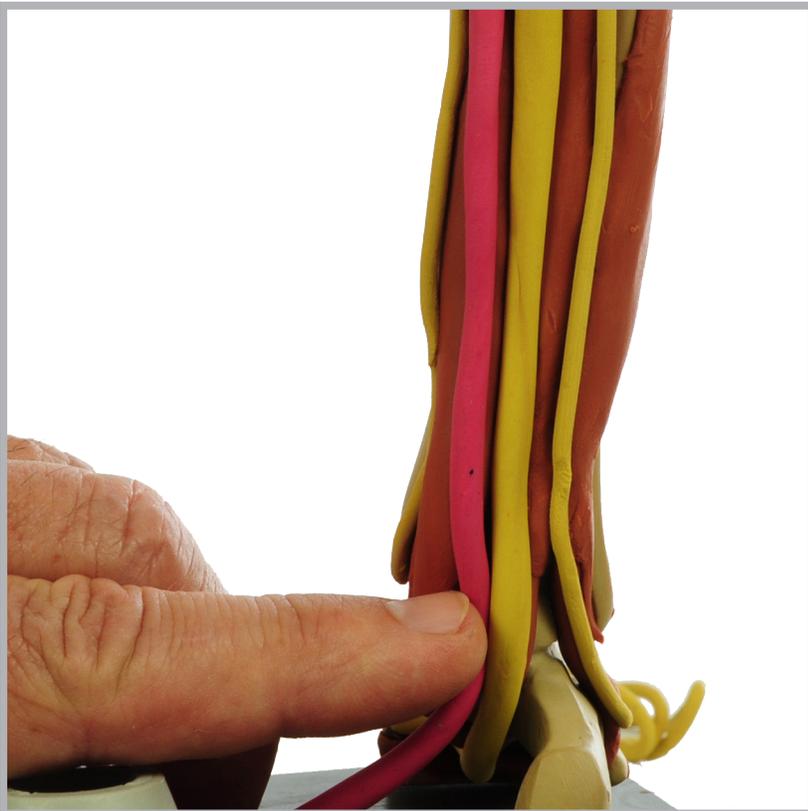
# 88

The larger of the two divisions of the *sciatic* n. is the *tibial* n. It runs down the ventral tibia on top of the deep muscles and wraps around the sustentaculum tali, extending into the plantar foot and toes.



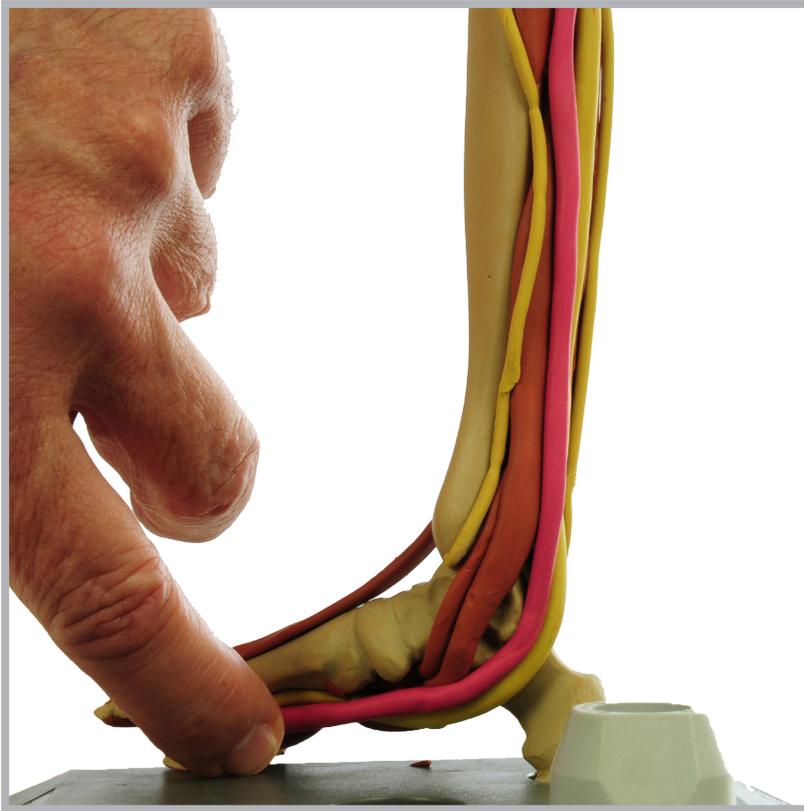
# 89

The *popliteal a.* now resumes its path down the leg on the same deep muscles as the *tibial a.* It is now called the *posterior tibial a.*



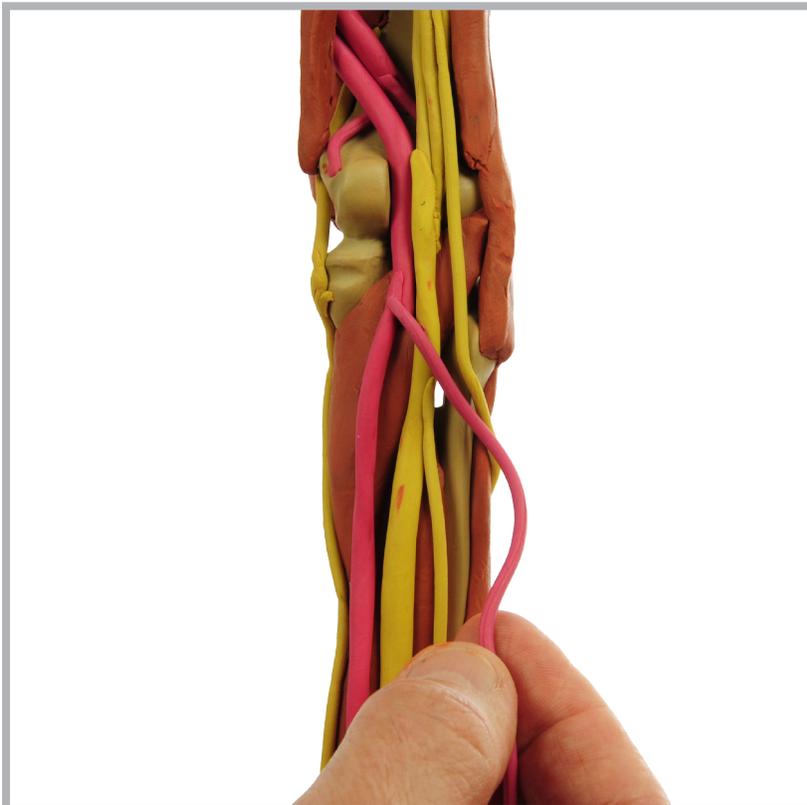
# 90

This is the *posterior tibial a.* which also wraps around the sustentaculum tali.



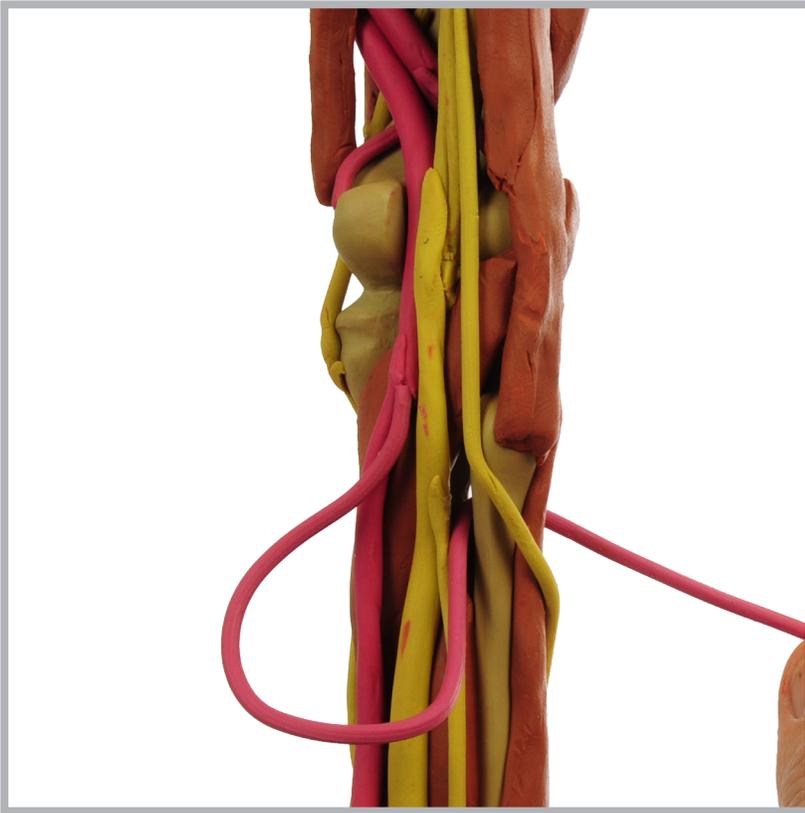
# 91

The *posterior tibial* n. then enters the tarsal tunnel as it extends into the plantar foot and toes.



# 92

Just past the popliteal fossa, the *tibial* a. branches off with an artery destined to become the *anterior tibial* a.



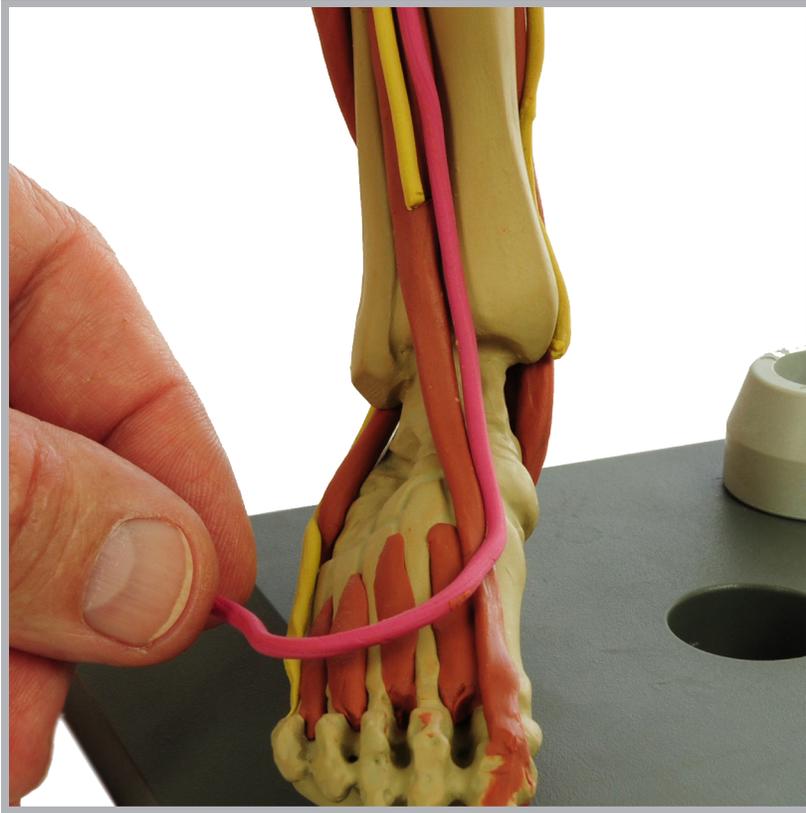
# 93

The *anterior tibial a.* passes through the hiatus in the interosseus membrane to reach the dorsal (anterior) compartment of the leg.



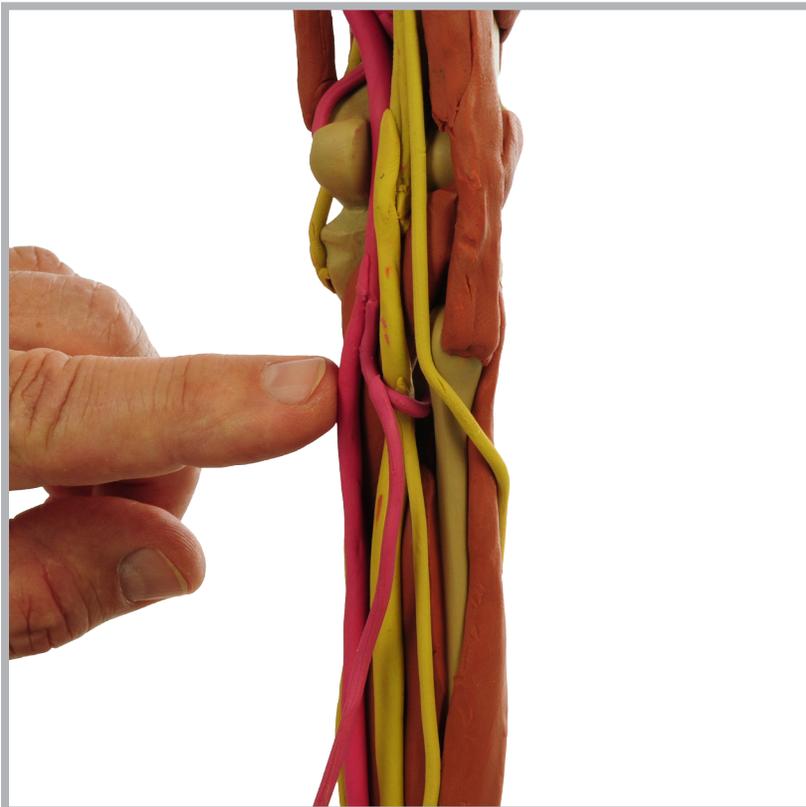
# 94

This is the *anterior tibial a.*, which emerges through the interosseus membrane and runs down the leg along the *deep peroneal n.*



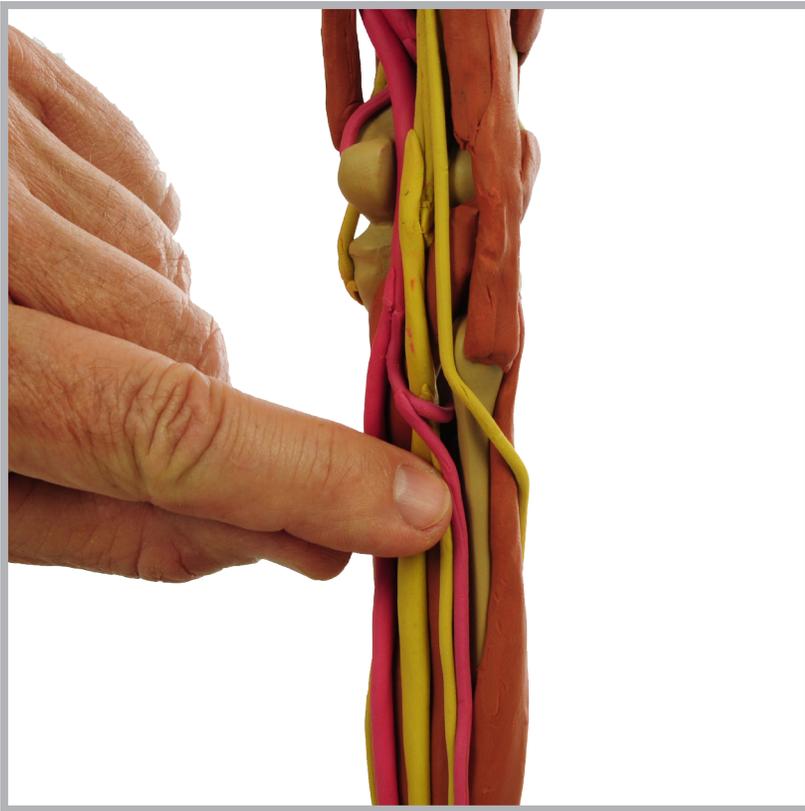
# 95

After crossing the ankle, the *anterior tibial a.* arcs over the dorsum of the foot, where it is called the *dorsal arch a.*



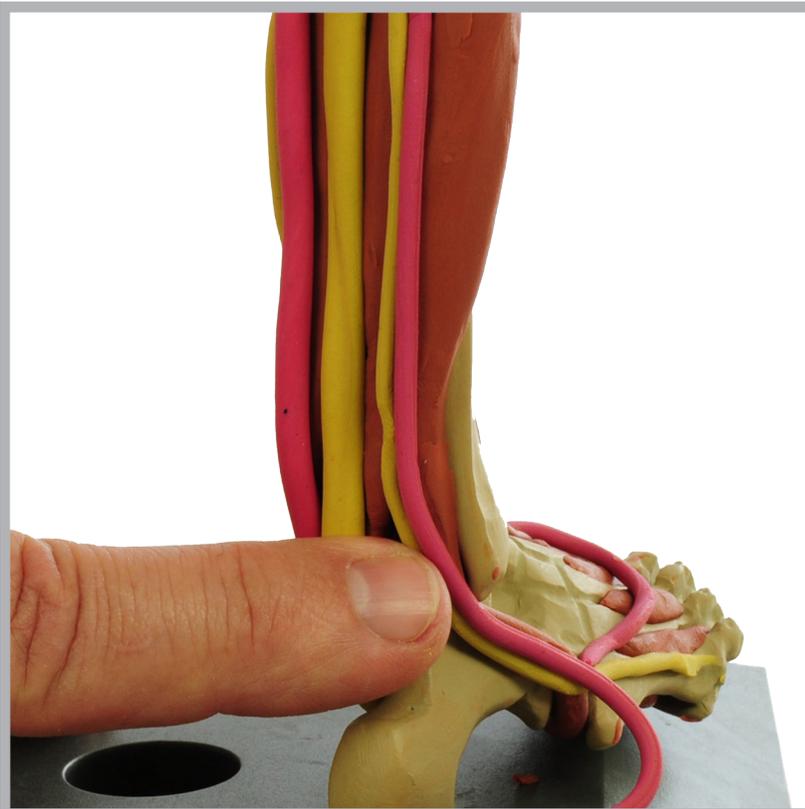
# 96

The *posterior tibial a.* continues past the hiatus in the interosseus membrane.



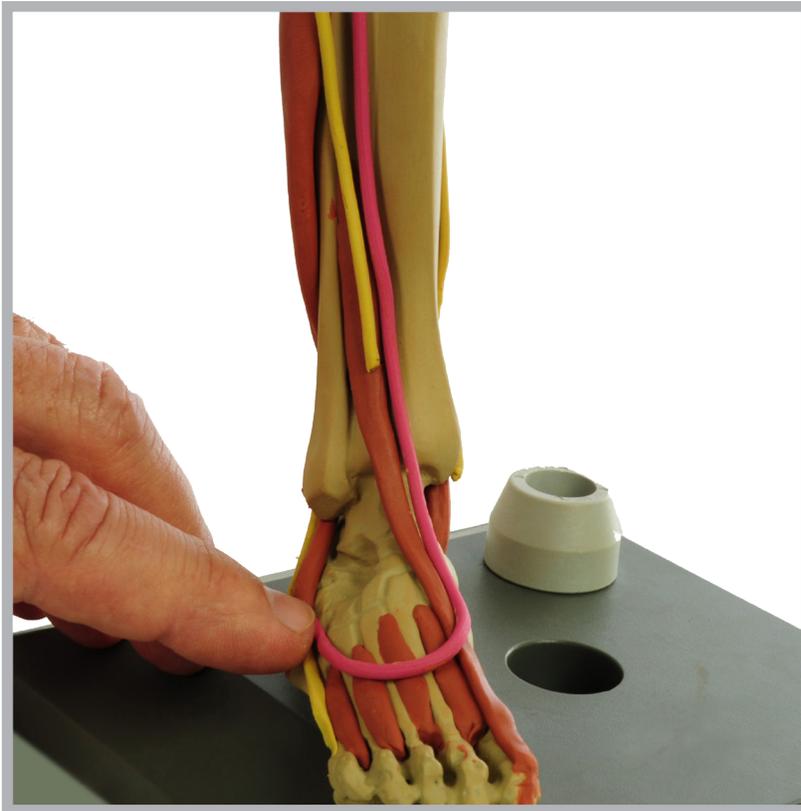
# 97

Another branch off of the *posterior tibial a.* is the *posterior fibular a.*, which continues distally down the length of the ventral fibula.



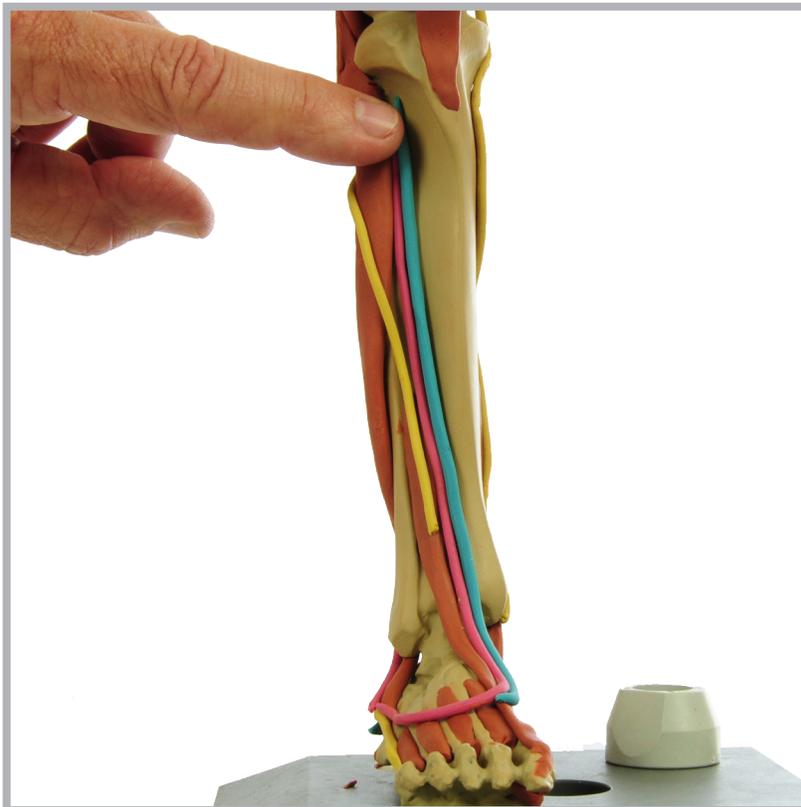
# 98

The *posterior fibular a.* runs along the *sural n.* and wraps with it around the lateral malleolus.



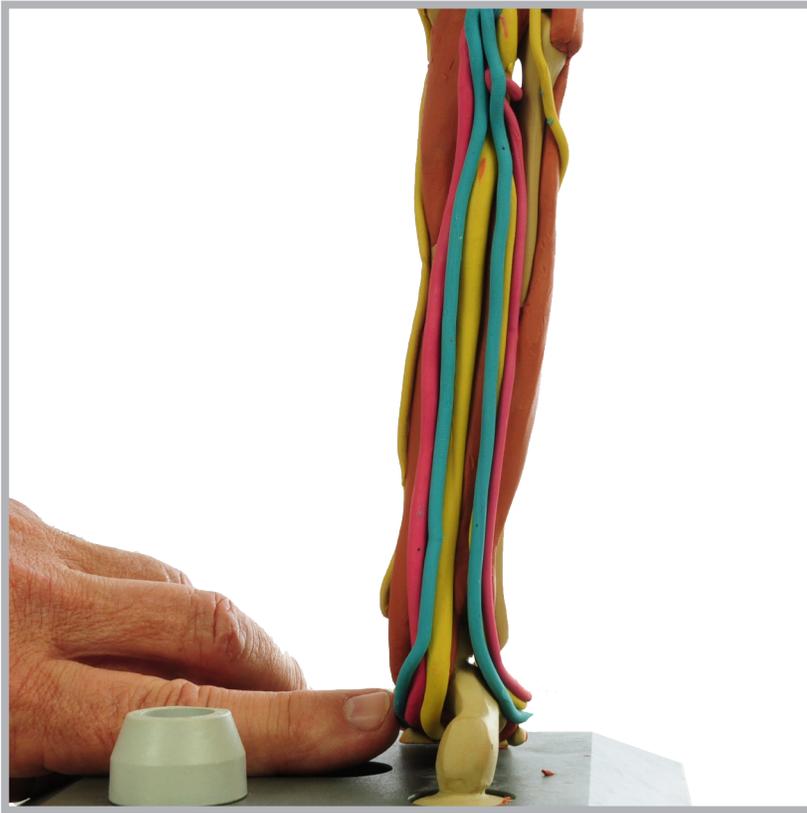
# 99

The *posterior fibular a.* then extends forward to anastomose (connect) with the *dorsal arch a.*, completing the structure.



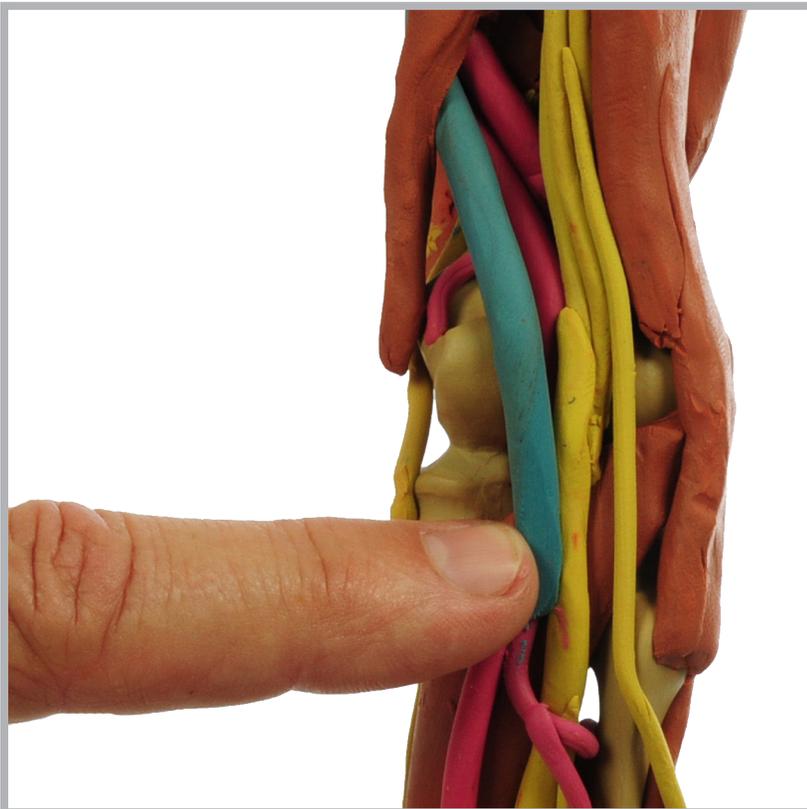
# 100

The *dorsal arch v.* returns exhausted blood up the leg and back toward the heart.



# 101

The veins in the plantar foot run back up the leg as *comitantes vv.* along the path of the *posterior tibial a.* and *peroneal a.*



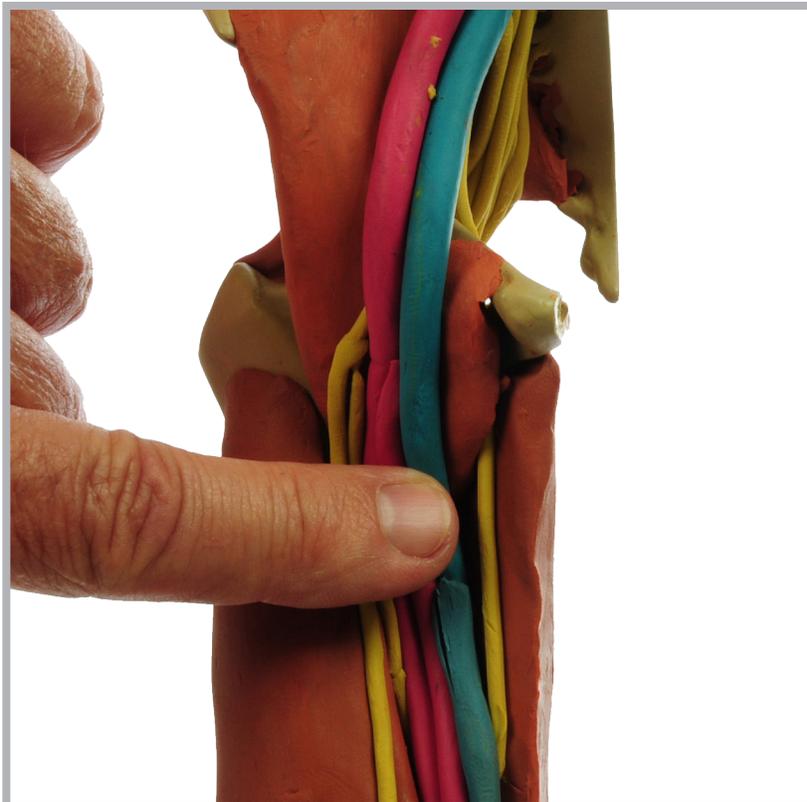
# 102

The *posterior tibial a.* and the *peroneal a.* merge into the *popliteal v.* and follow its counterpart artery through the hiatus in the *adductor mm.*



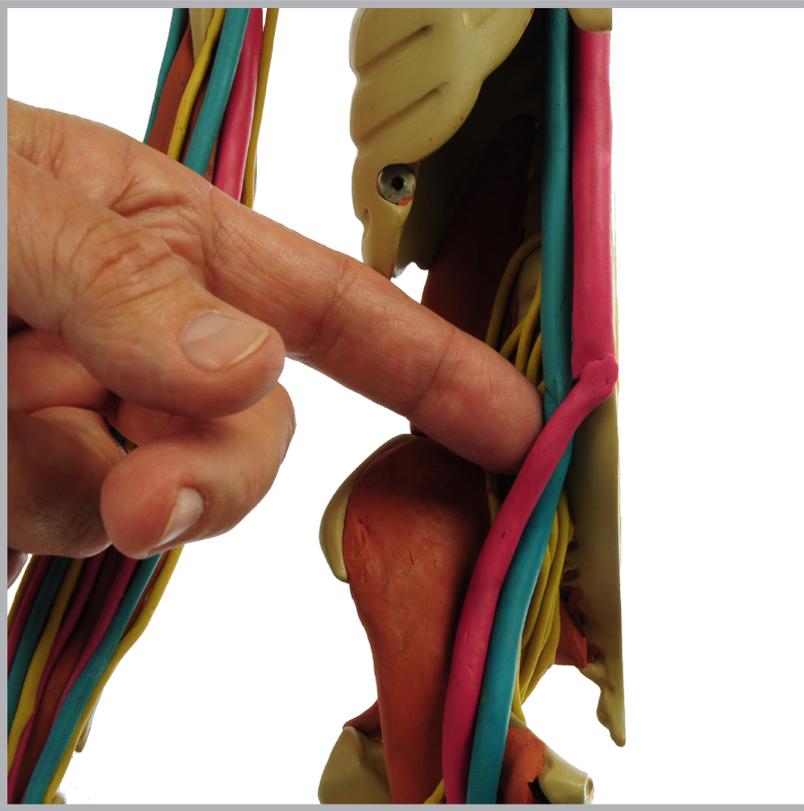
# 103

The *popliteal v.* shares the pathway and name of its companion artery. They both take the name of the region they cross, therefore the *femoral a.* is accompanied by the *comitante femoral v.*



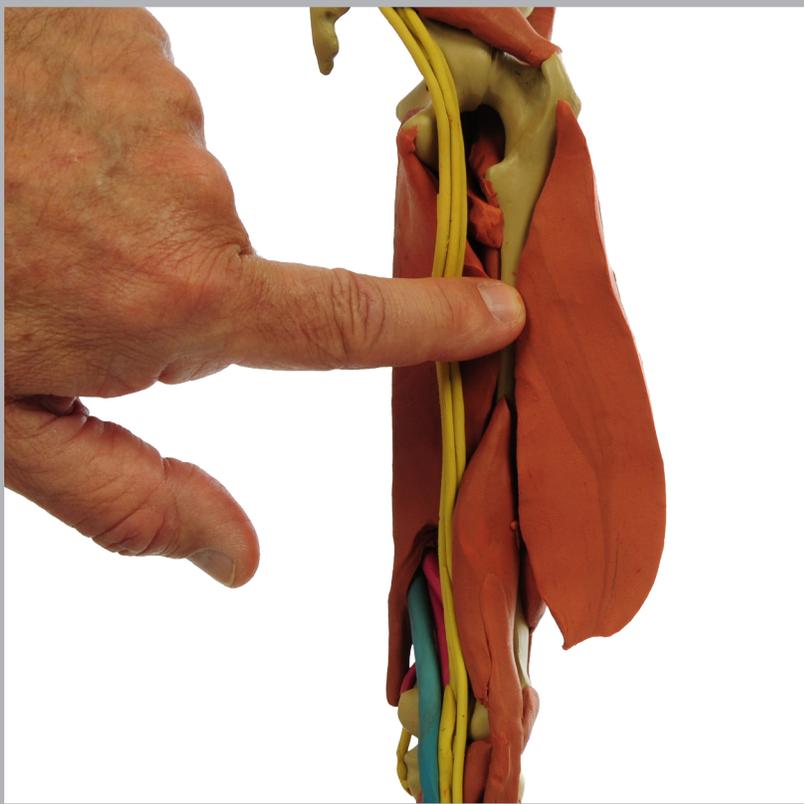
# 104

In the inguinal region the name of the vein changes to the *inguinal v.* and as it runs into the abdomen, the name changes again, to the *external iliac v.*



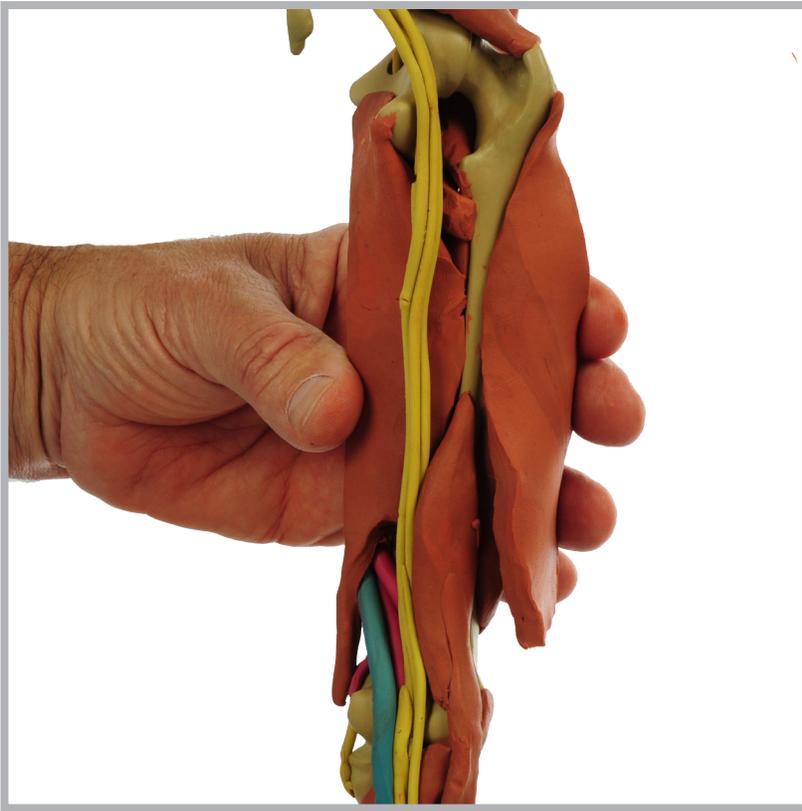
# 105

As the *external iliac v.* runs under the common iliac a., it is renamed the *common Iliac v.* It then connects to join the *inferior vena cava v.*



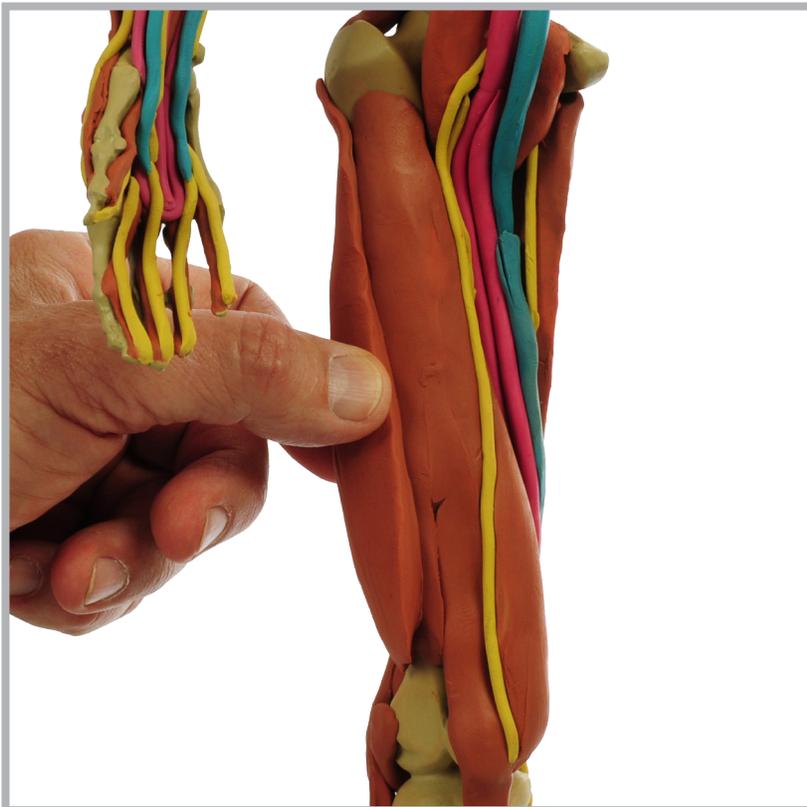
# 106

Begin making the superficial muscles by building a wide sheet and attaching the ventral edge of *vastus lateralis m.* to the lateral lip of the linea aspera.



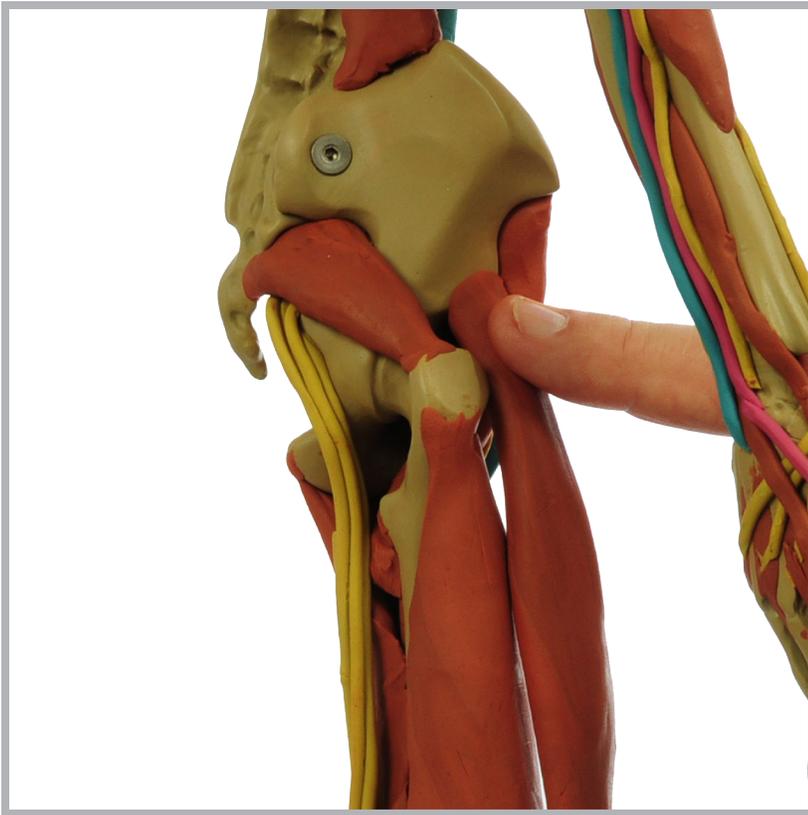
# 107

Roll the sheet of the *vastus lateralis* m. dorsolaterally over the *vastus intermedius* m.



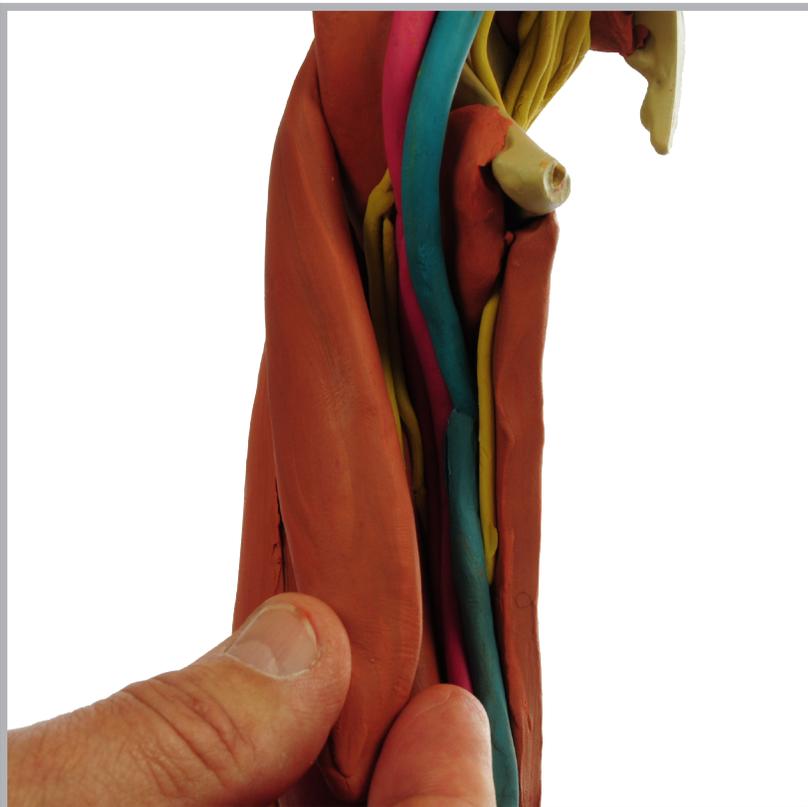
# 108

Press the dorsal edge of *vastus lateralis* m. to the tendinous plate covering the *vastus intermedius* m. This is the third of four heads of the muscle group forming *quadriceps* mm.



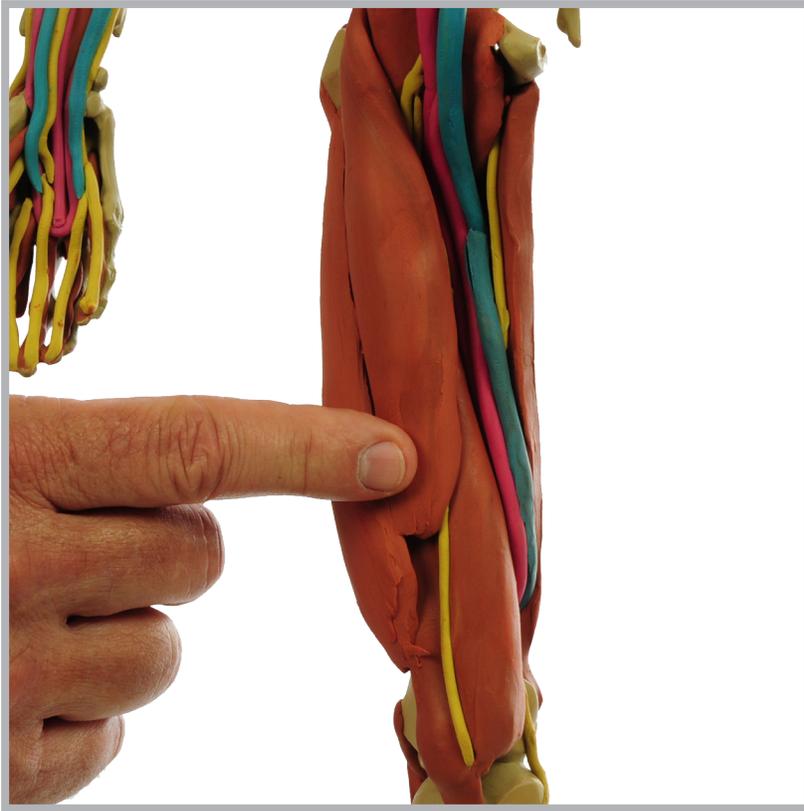
# 109

Complete the *quadriceps* mm. group by attaching the proximal tendon of a flattened *rectus femoris* m. to the anterior inferior spine of the hip.



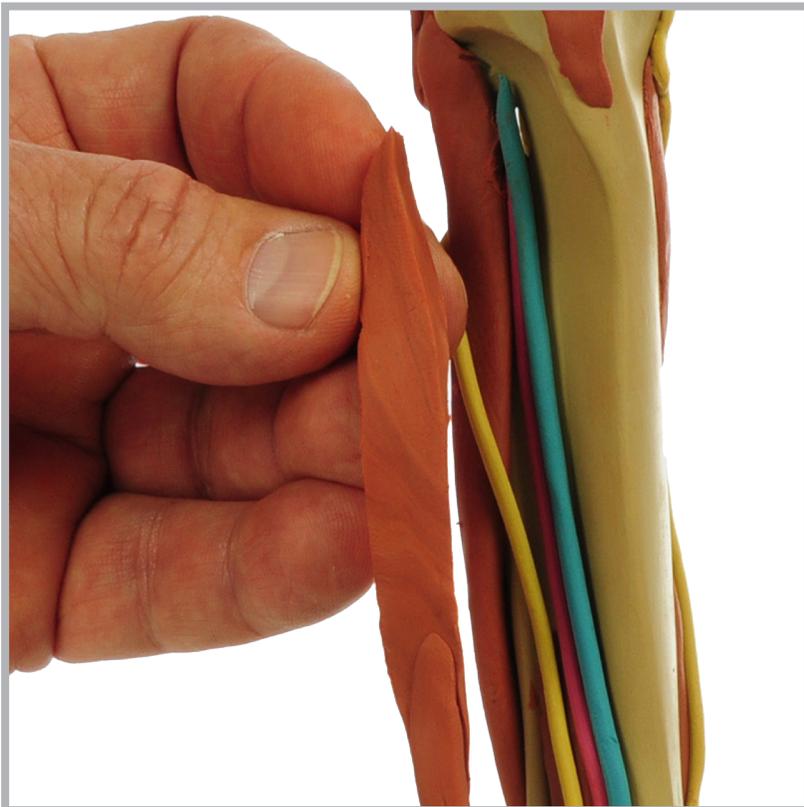
# 110

Shape the *rectus femoris* m. in a spiral around the *iliacus* m.



# 111

Press the distal end of *rectus femoris* m. between the *vasti* mm., adhering to the tendinous plate that crosses from the patella to the tibia.



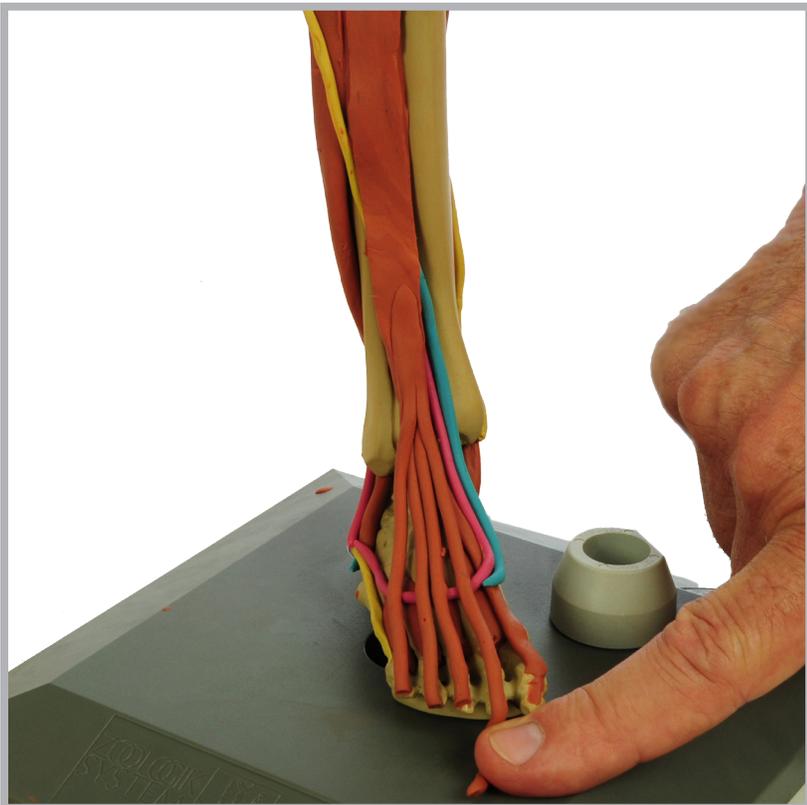
# 112

Move to the lower leg and form another long flat strap for the *extensor digitorum longus* m., which will reach to the toes.



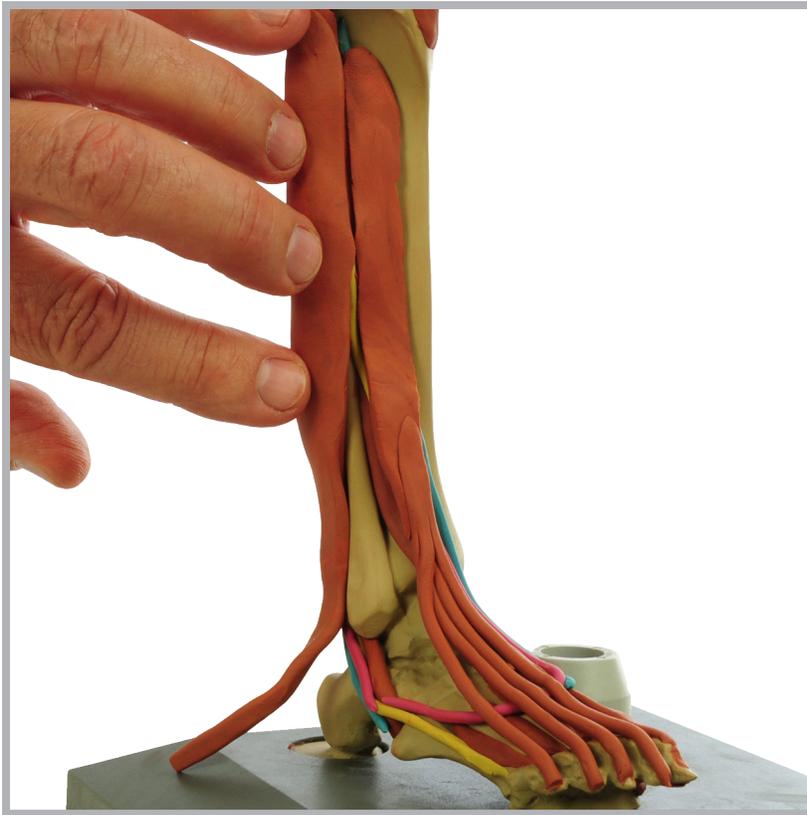
# 113

Fit the strap of *extensor digitorum longus* m. so that it arcs over the deeper nerves and blood vessels along the tibia and fibula.



# 114

Four tendons branch out from the common tendon of *extensor digitorum longus* m. and fan out to the dorsal digits II-V.



# 115

The *peroneus longus* m. fits to the edge of digitorum and like its cousin, *peroneus brevis* m., it spirals down the fibula and behind the lateral malleolus.



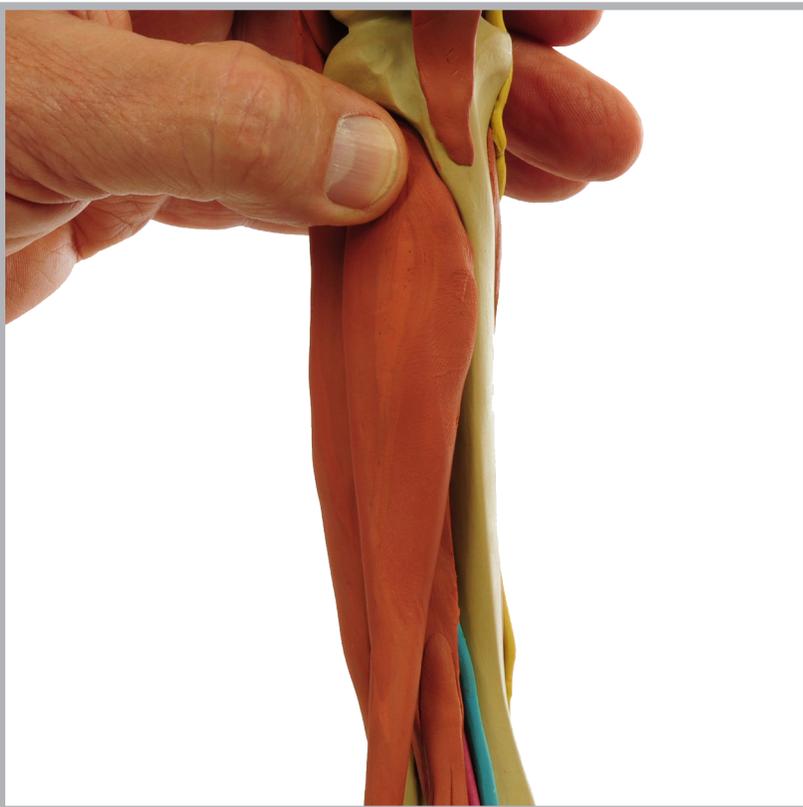
# 116

Pull the tendon around the “pulley” of the lateral malleolus.



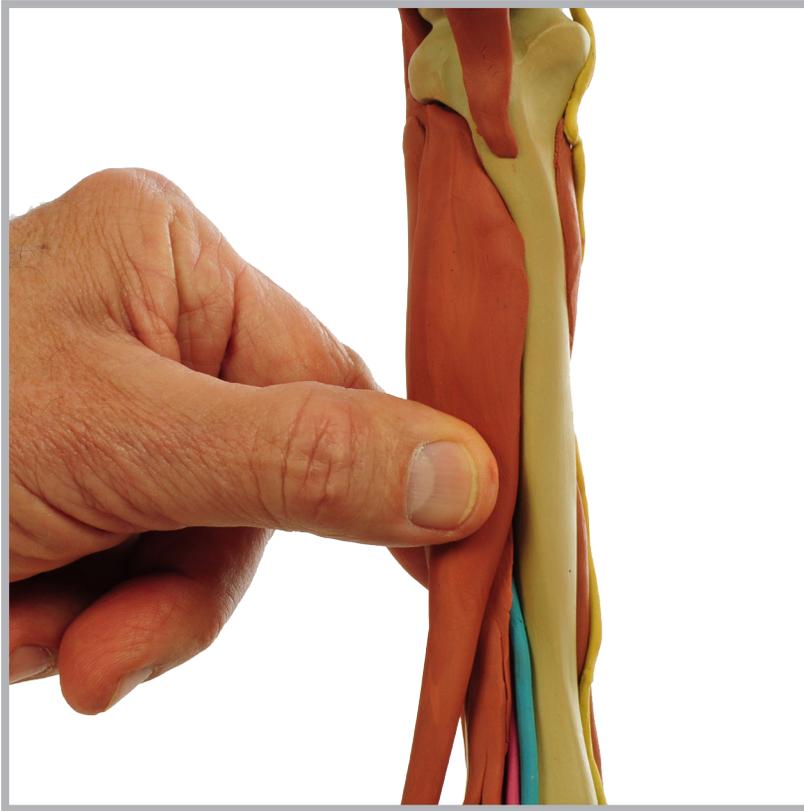
# 117

After rounding the lateral malleolus, the *peroneus longus* m. spans across the tarsals to the styloid process of the proximal end of the 5th metacarpal bone.



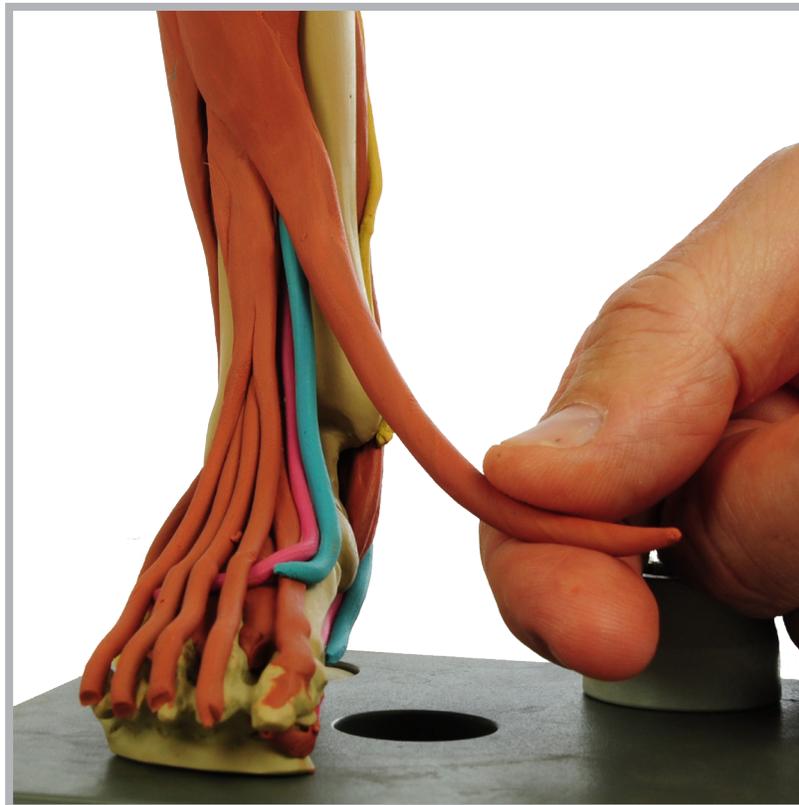
# 118

The *tibialis anterior* m. attaches to the tibial fossa and the fibular head. Its shape is wide and thick above, flattening distally.



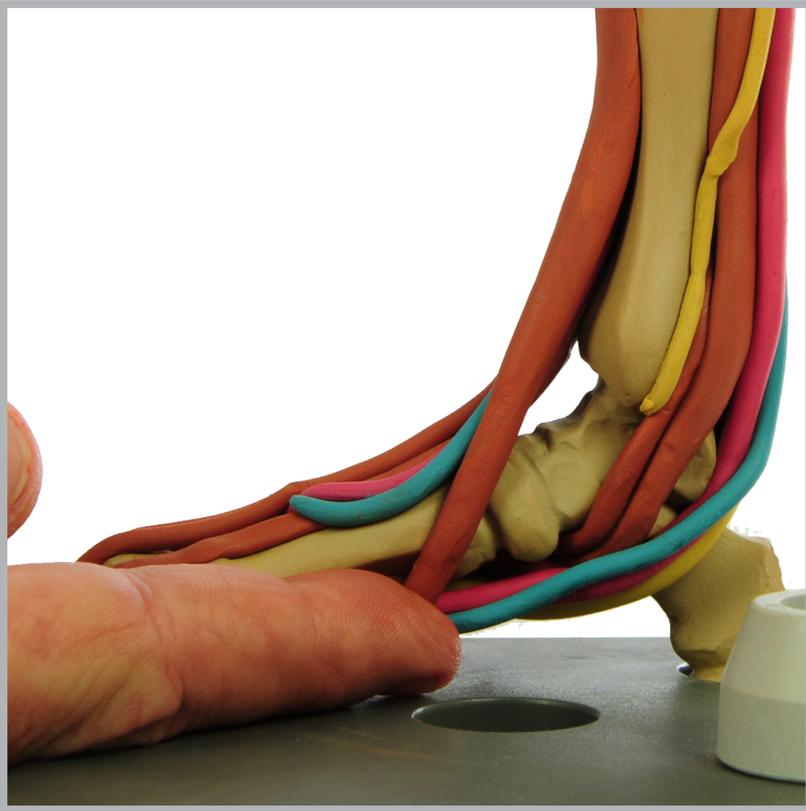
# 119

The *tibialis anterior* m. thins toward its tendon. The layers over the deep muscles and neurovascular anatomy make their attachment along the tibia near its crest.



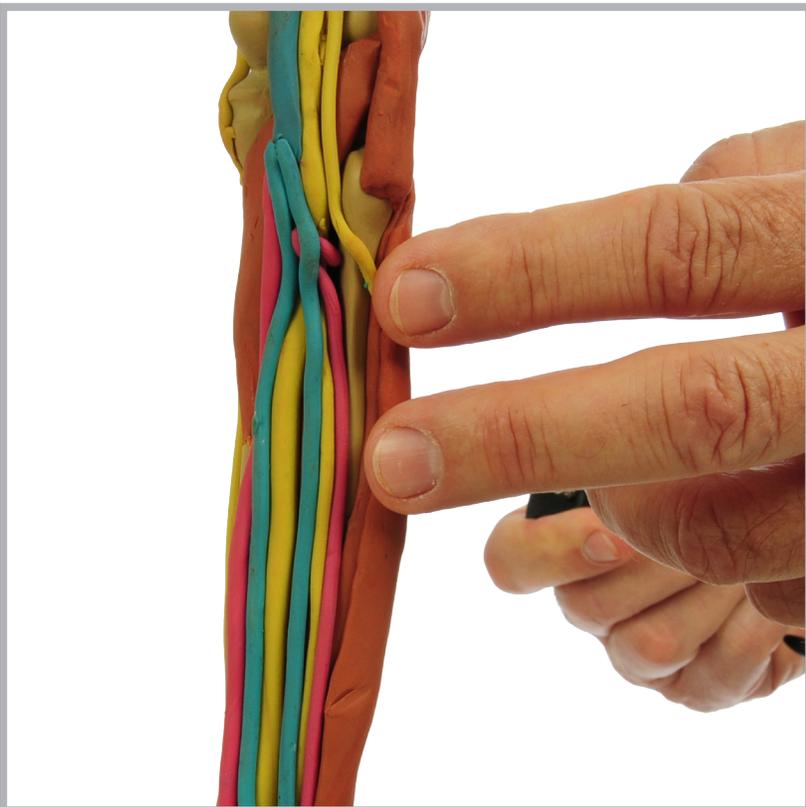
# 120

The distal tendon of *tibialis anterior* m. is round and strong. It crosses the ankle diagonally.



# 121

The *tibialis anterior* m. attaches under the medioplantar foot at the base of the 1st metatarsal and its neighboring tarsal.



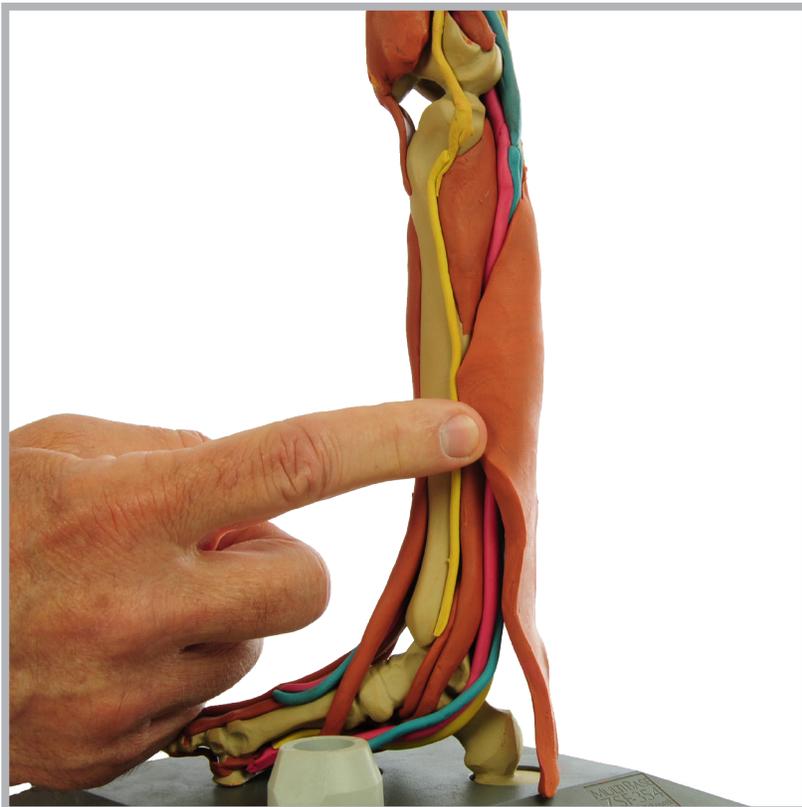
# 122

Identify the fibular head and its ventral edge that remains exposed in the proximal half of the fibula.



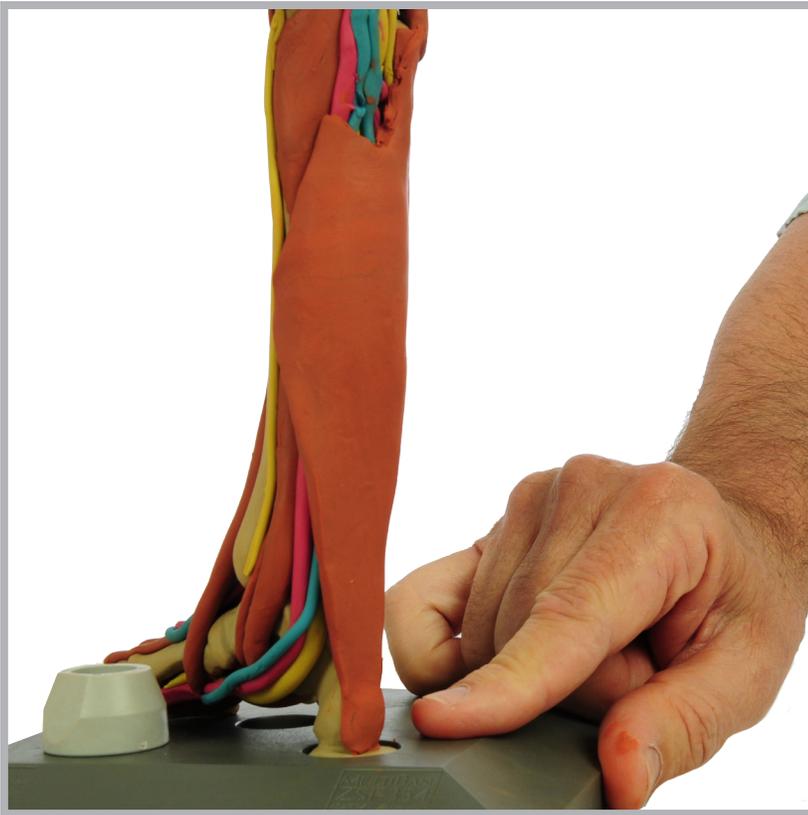
# 123

Construct the *soleus* m. as a thick, flat, boat-shaped sheet and attach the diagonal edge against the exposed fibule.



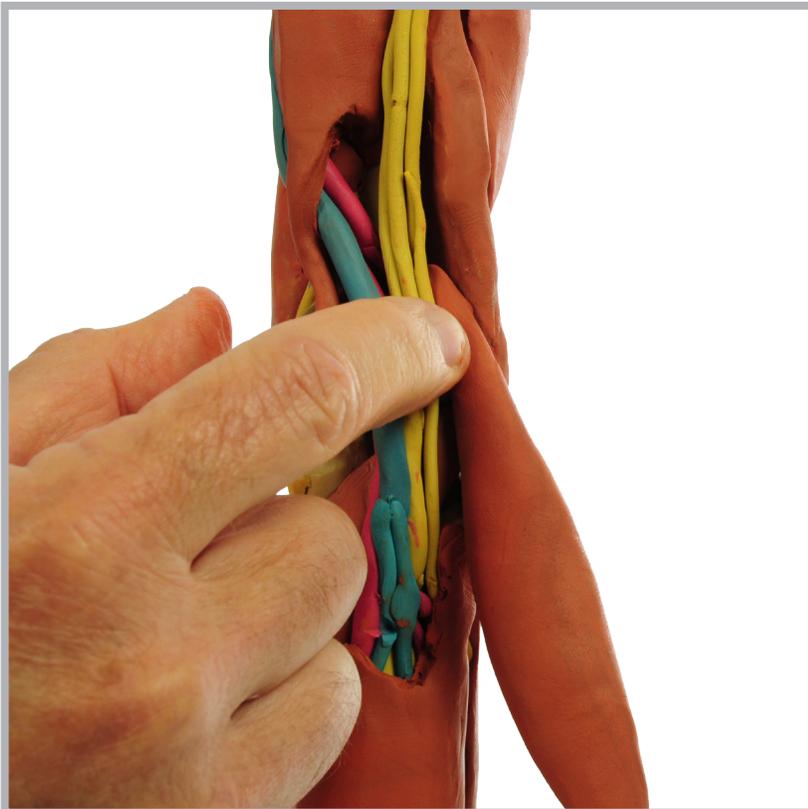
# 124

Half-way down the tibia, attach the other angle of the diagonal to the medial edge of the tibia.



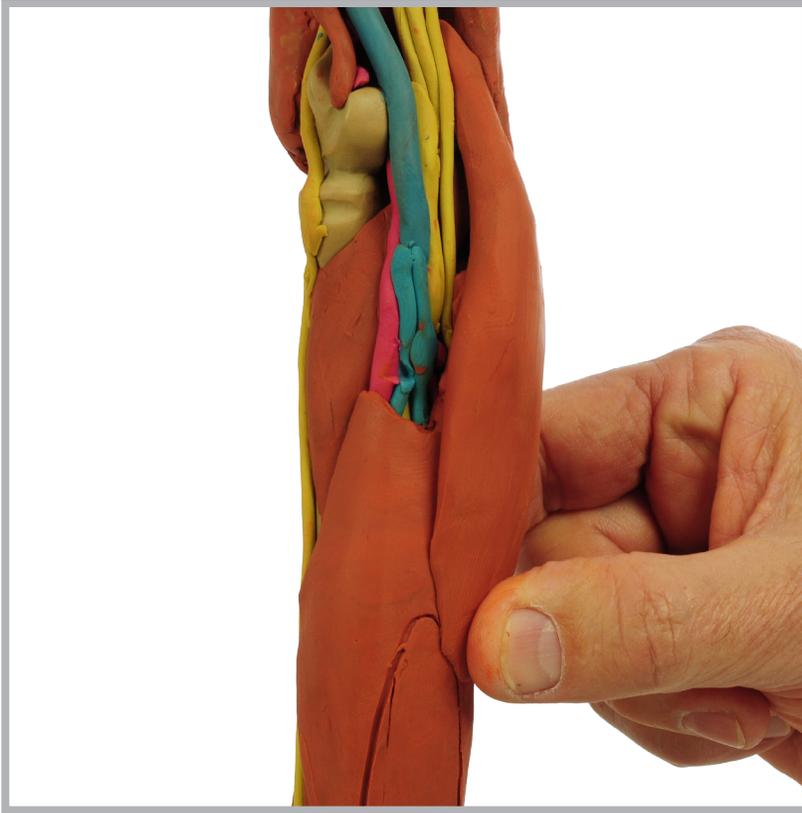
# 125

Pull the tapered distal tendon of the sheet of *soleus* m. to the tip of the calcaneus, which spans the neurovascular bundle as it wraps around the sustentaculum tali.



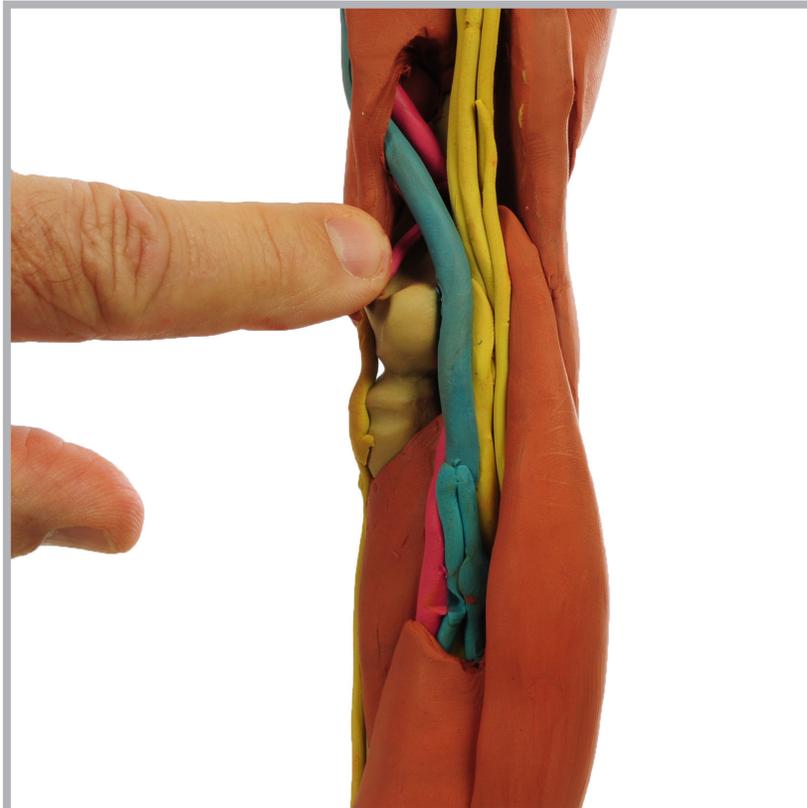
# 126

Just medial to the tendon of the *biceps femoris* mm. is the lateral femoral condyle. The narrow end of a long flat teardrop-shaped *gastrocnemius* m. is slipped into that space on top of the condyle.



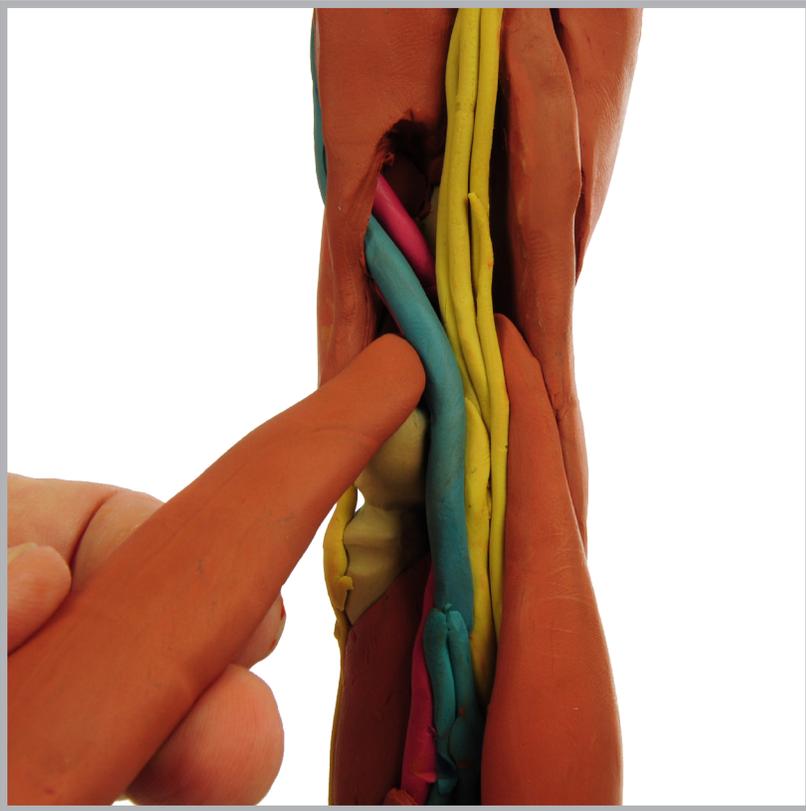
# 127

Spiral the lateral of the two heads of *gastrocnemius* m. over the *soleus* m. and attach this muscle to the tendinous “plate” on the *vasti intermedius* m. This kind of plate is shared by all the *quadriceps* mm. group.



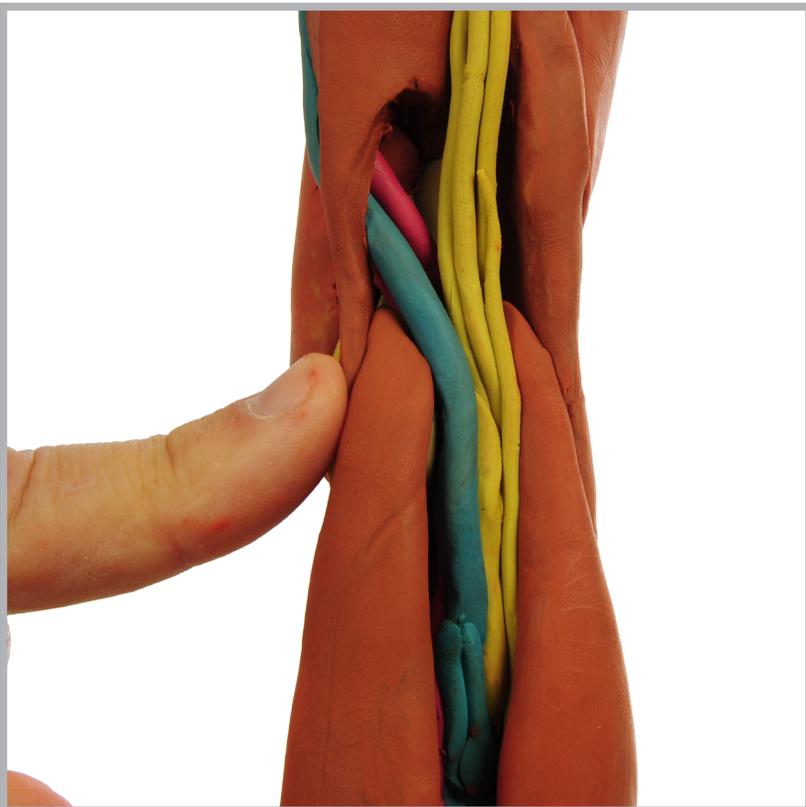
# 128

The medial condyle is still available as an proximal attachment site for the medial head of the *gastrocnemius* m.



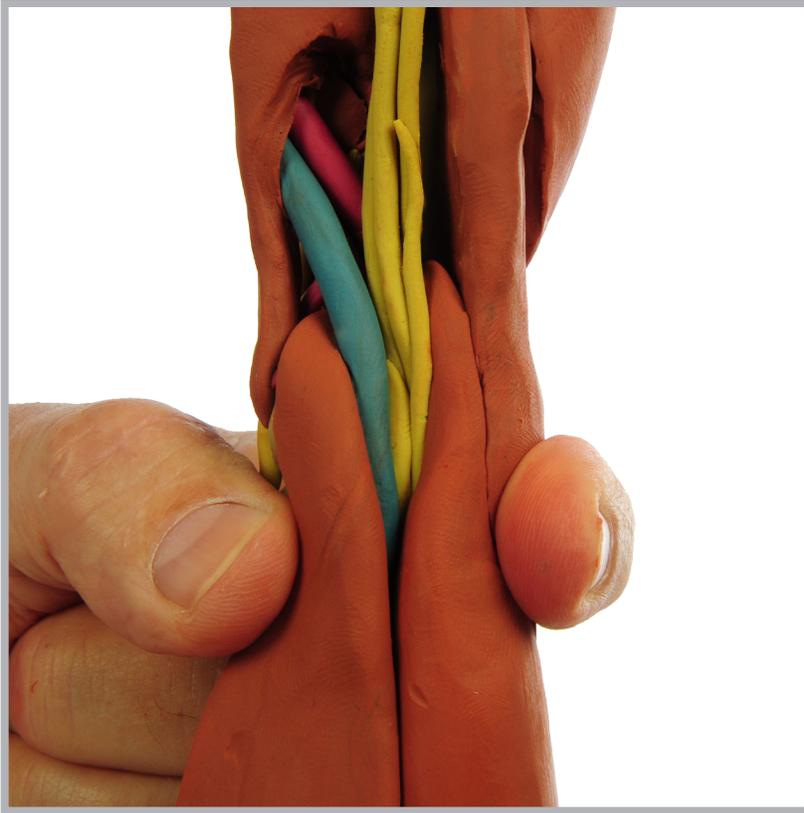
# 129

This is the tapered tendon forming the medial head of *gastrocnemius* m., which ...



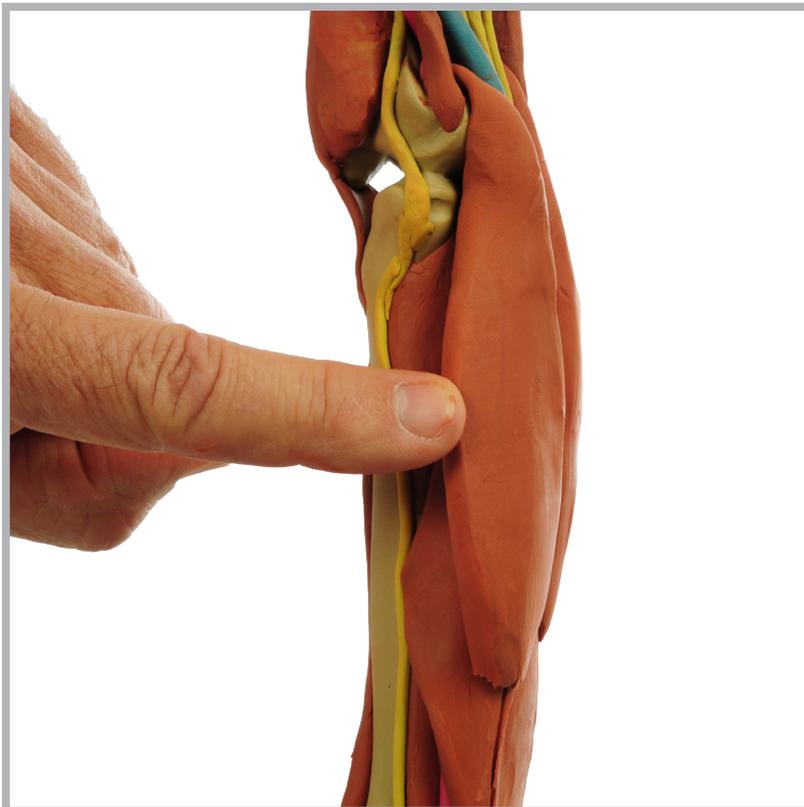
# 130

... slips above and over the medial tibial condyle. Snug the tendon of the *adductor* mm. up to the adductor tubercle and the new belly of *gastrocnemius* m.



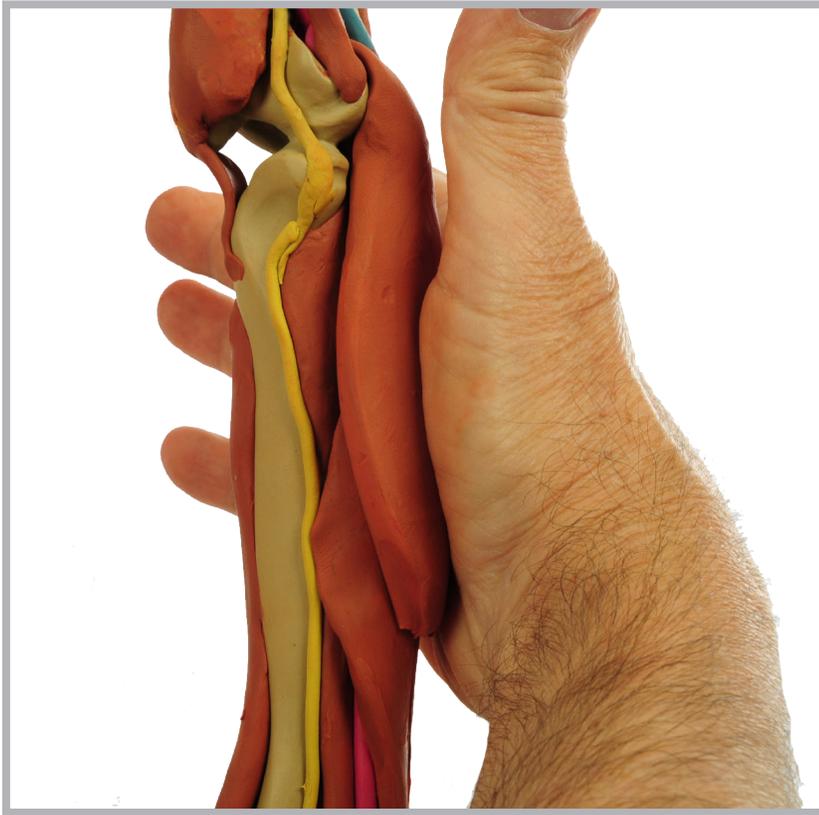
# 131

Medial and lateral heads of *gastrocnemius* m. pinch together at the proximal tibia to capture the neurovascular bundle. This juncture provides access to both the ventral tibial “platform” and the head of the fibula.



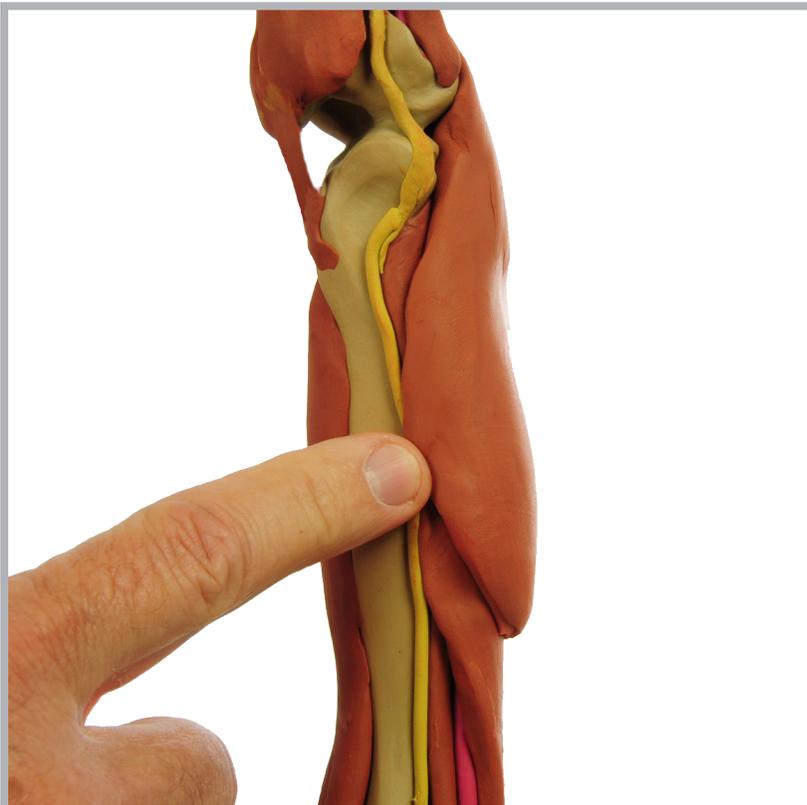
# 132

Spiral the flatter head of the *gastrocnemius* m. around and wrap it to the *soleus* m., with the edge rolled toward the tibia.



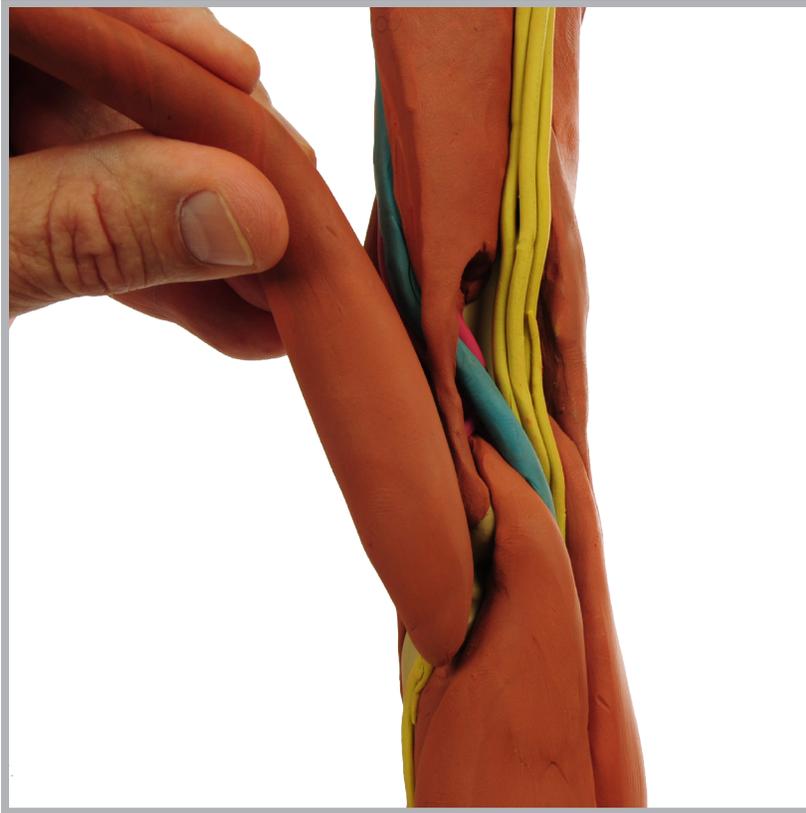
# 133

With the palm of the hand, press the clay snugly against the *soleus* m. and its tendon, and also press the lateral edge of the medial head against the edge of the lateral head of *gastrocnemius* m.



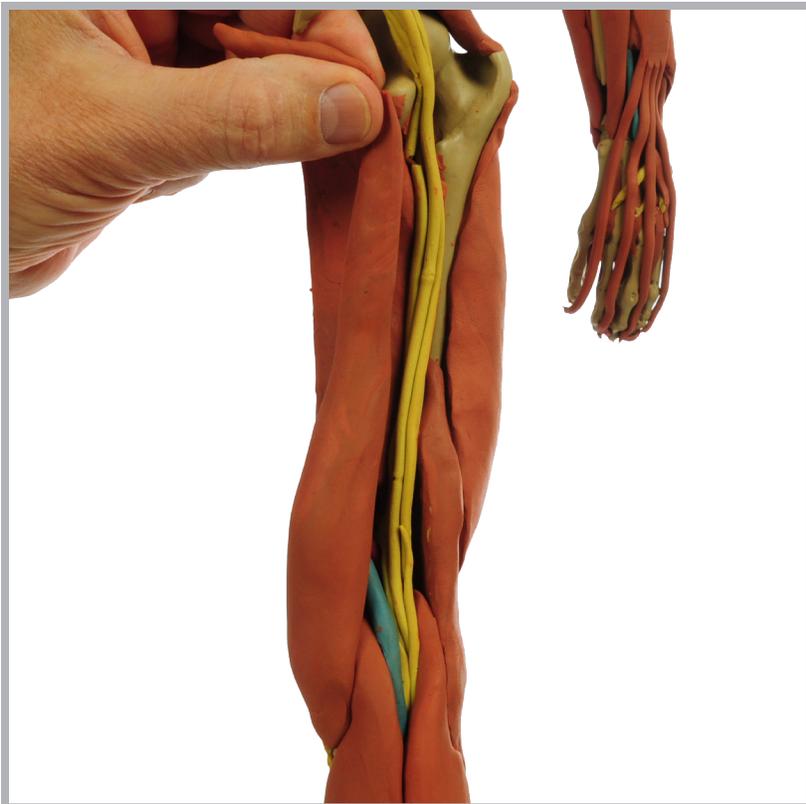
# 134

Press the free, dorsal edge of the medial head of *gastrocnemius* m. to the ventromedial edge of the tibia.



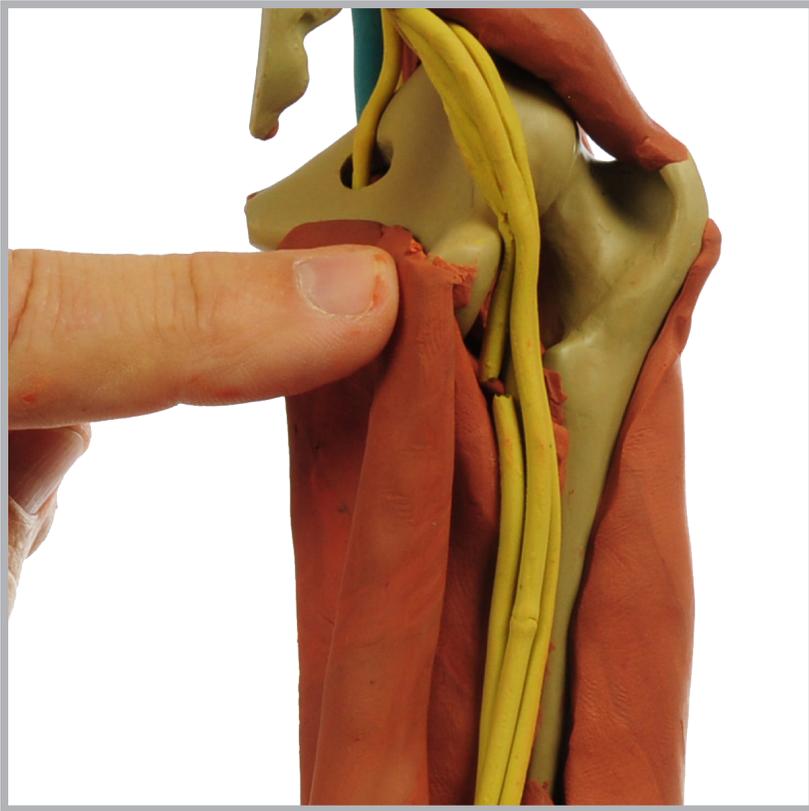
# 135

The space left on the proximal ventral tibial “platform” provides the area for a fleshy distal attachment of the *semimembranosus* m.



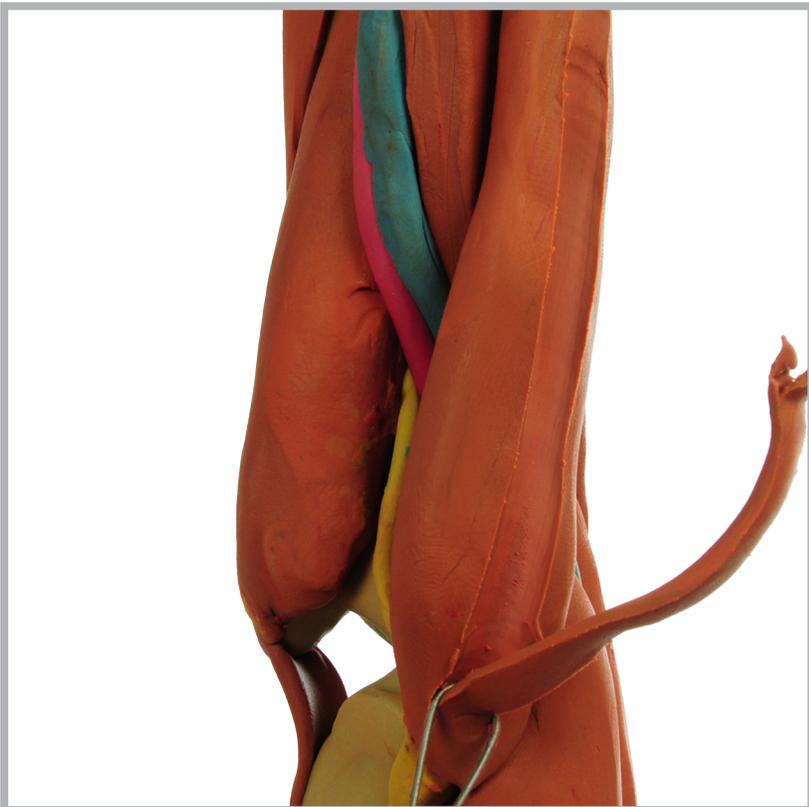
# 136

From the plump distal belly up, the *semimembranosus* m. is flattened into a strap that runs up to the pelvis.



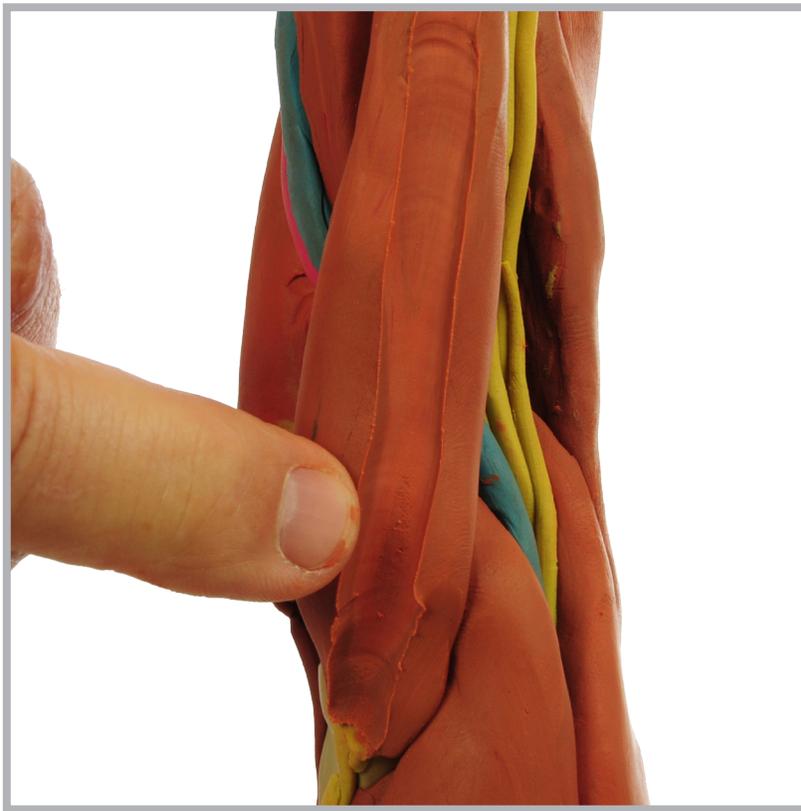
# 137

The *semimembranosus* m. is attached to the ischial tuberosity of the pelvis. The attachment is shared by a common tendon with *biceps femoris longum* m.



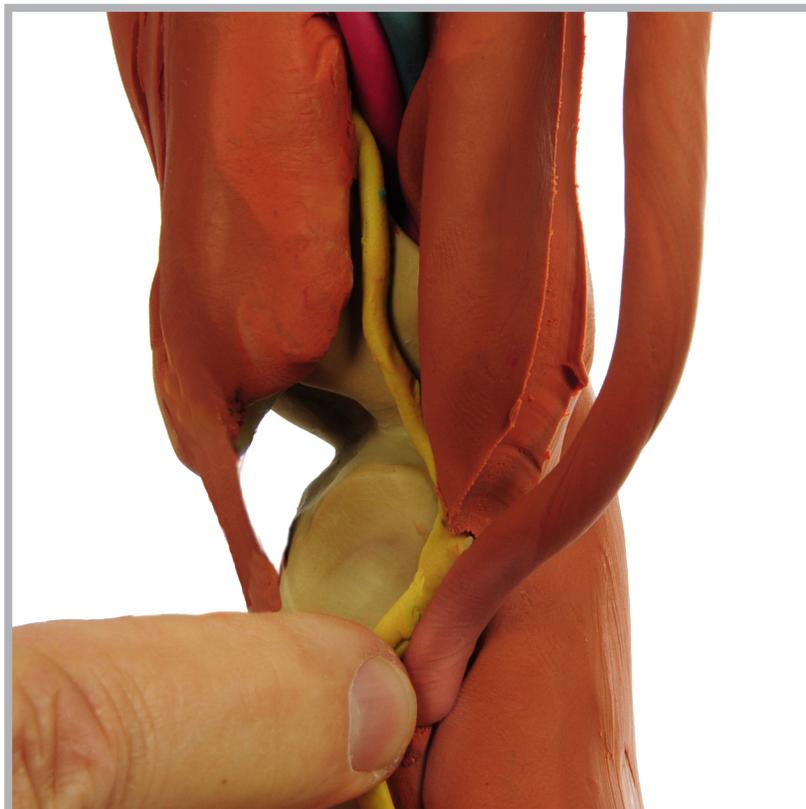
# 138

With a wire loop tool, scoop out a groove in the muscle belly along its length.



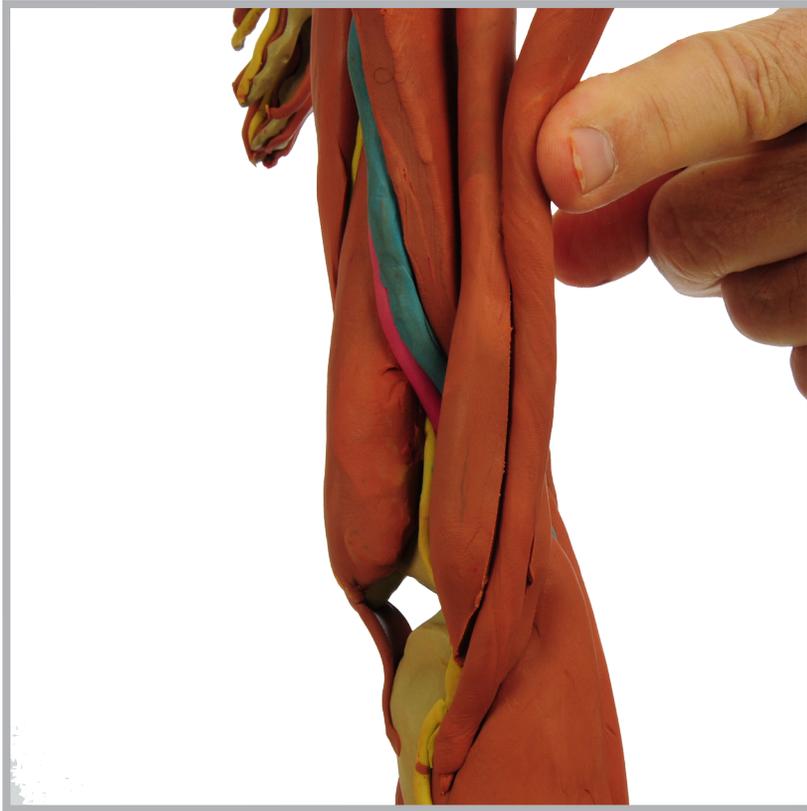
# 139

An “upside-down” version of *semimembranosus* m., the *semitendinosus* m. is half proximal belly and half distal big round tendon. That tendon will lie into the groove.



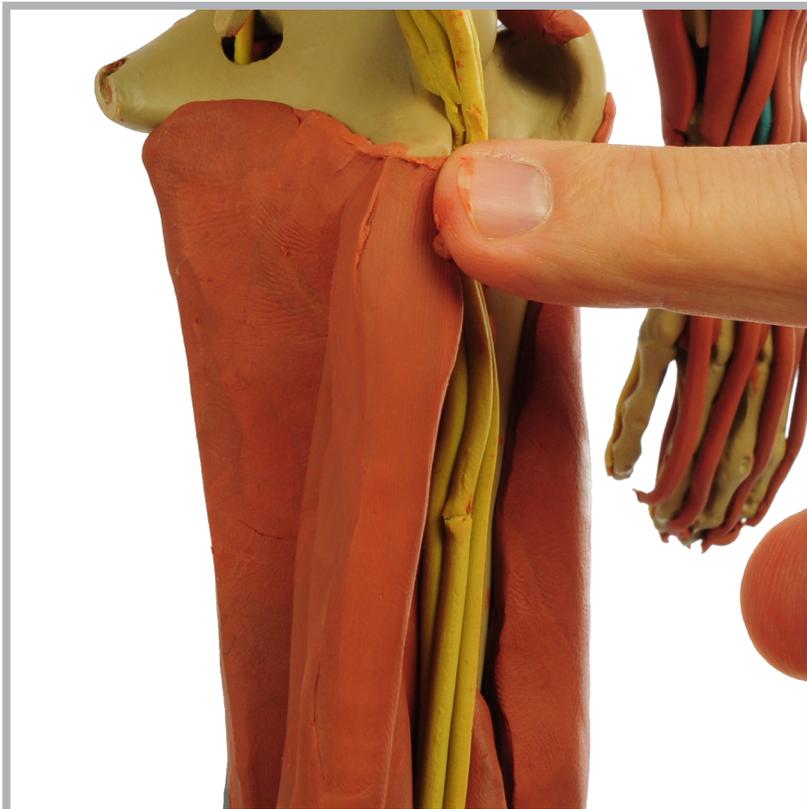
# 140

The tendon of *semitendinosus* m. wraps around the muscle belly of its deep counterpart and attaches to the medial tibia.



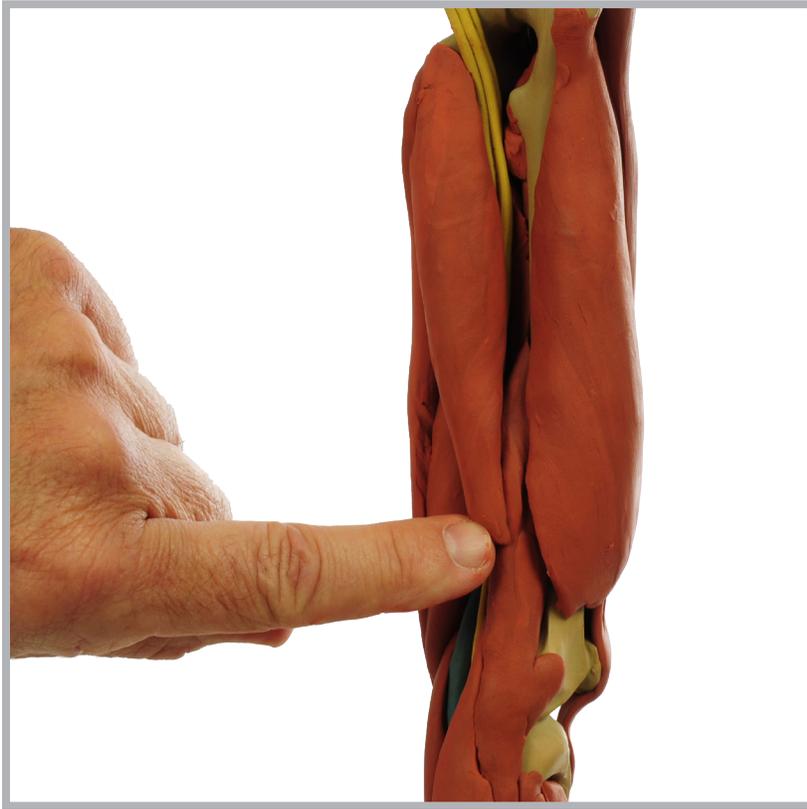
# 141

Lay the tendon of the *semitendinosus* m. in the groove and run the belly up against the flat tendon of the *semimembranosus* m.



# 142

This is the proximal belly of the *semitendinosus* m. at the ischial tuberosity.



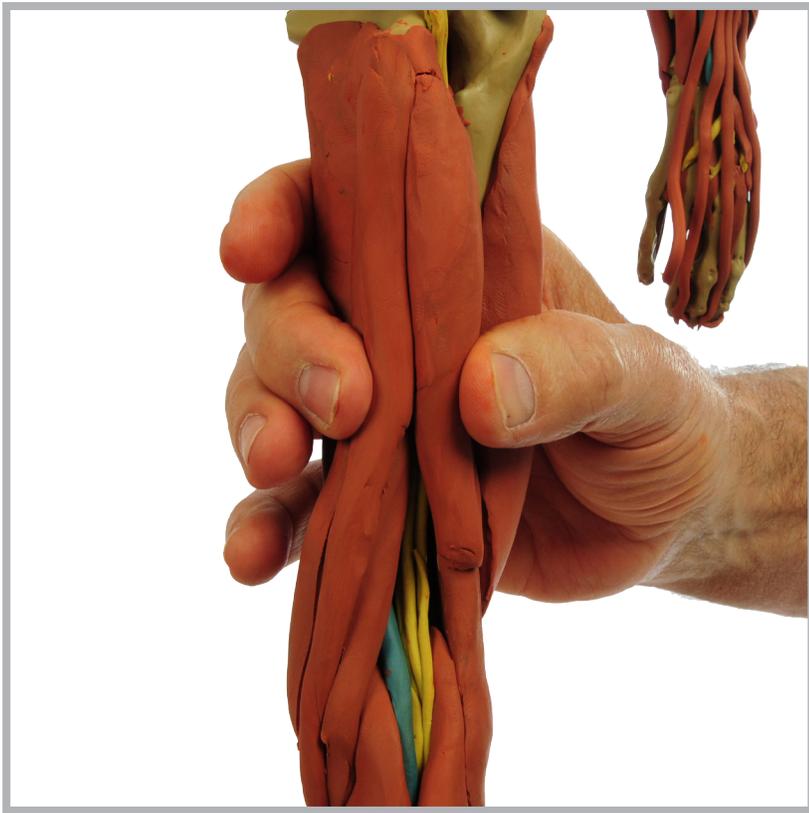
# 143

The *biceps femoris longum* m. shares the same round distal tendon as the *biceps femoris brevis* m. This tendon is attached distally to the head of the fibula.



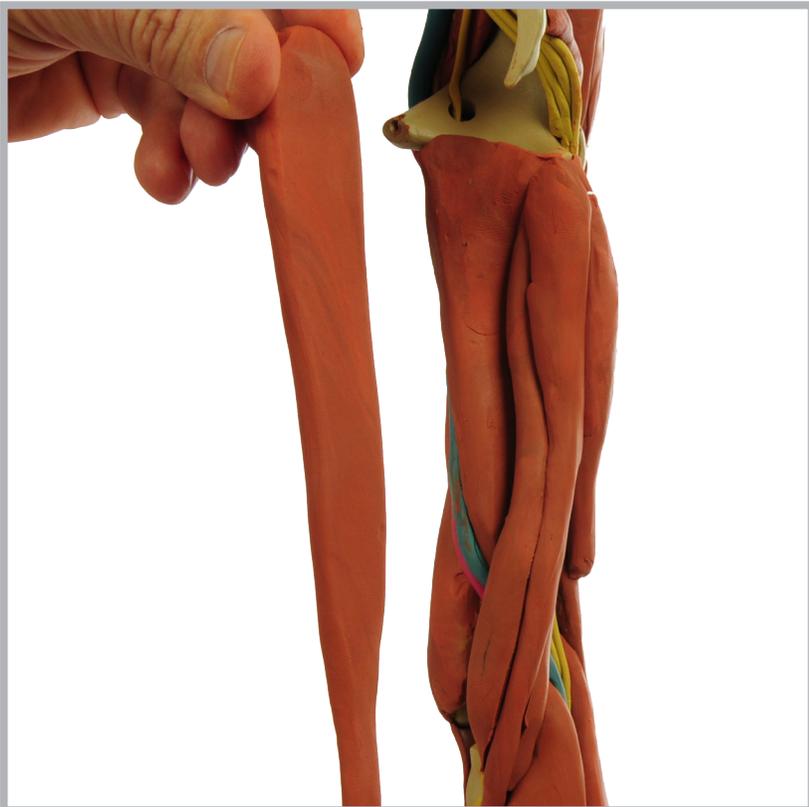
# 144

This is a long, two-joint, lateral part of the “hamstrings” and it also shares a big common tendon with the two medial muscles of the ventral thigh.



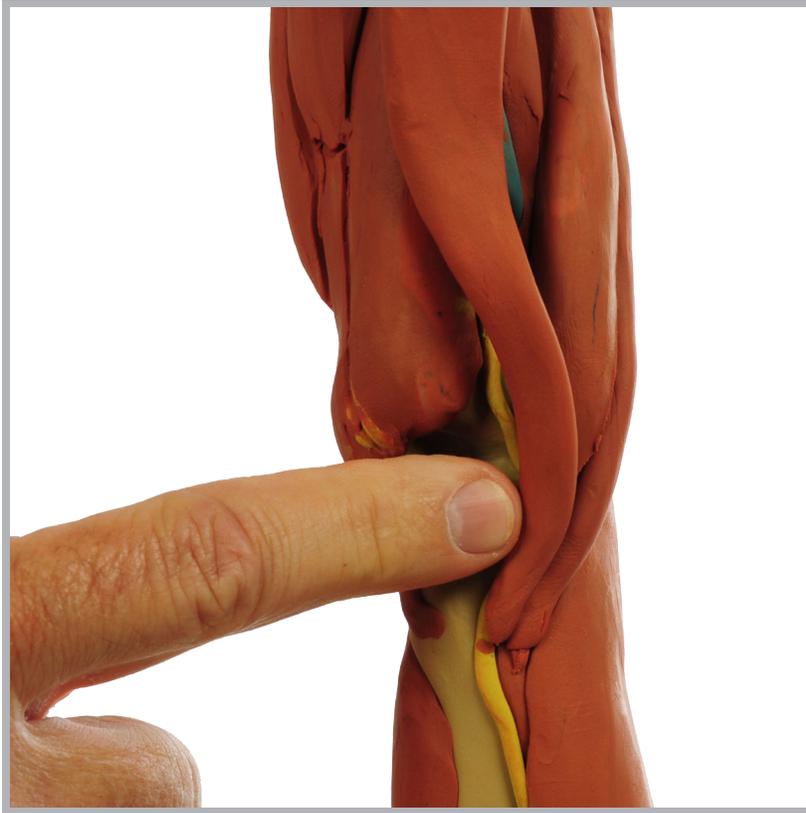
# 145

The medial and lateral hamstrings adhere to each other for three quarters of their length. Press them together.



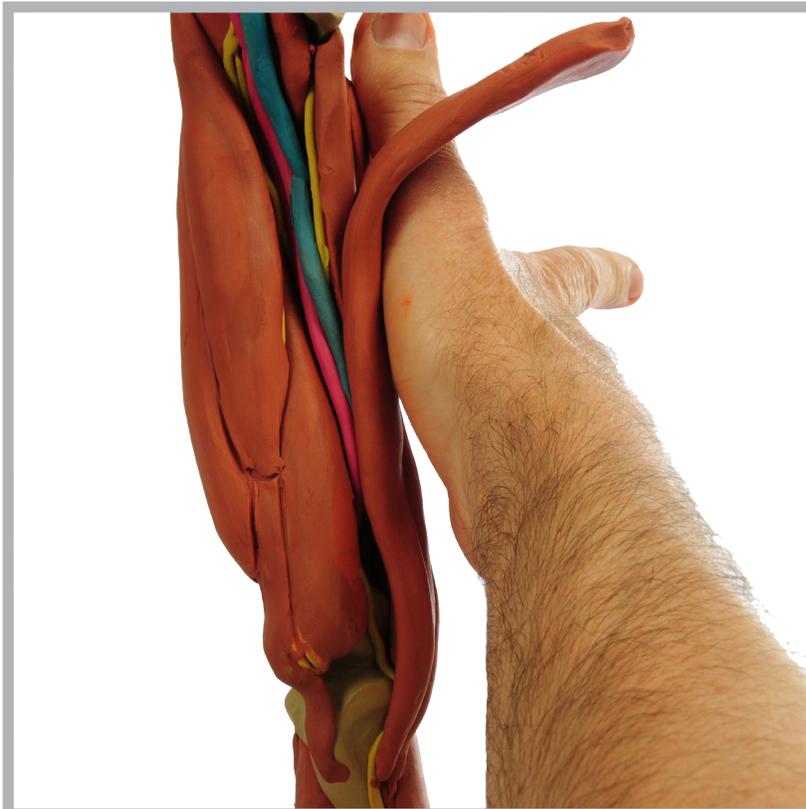
# 146

The *gracilis* m. is flat, thin, and wide and tapers to a narrow distal tendon.



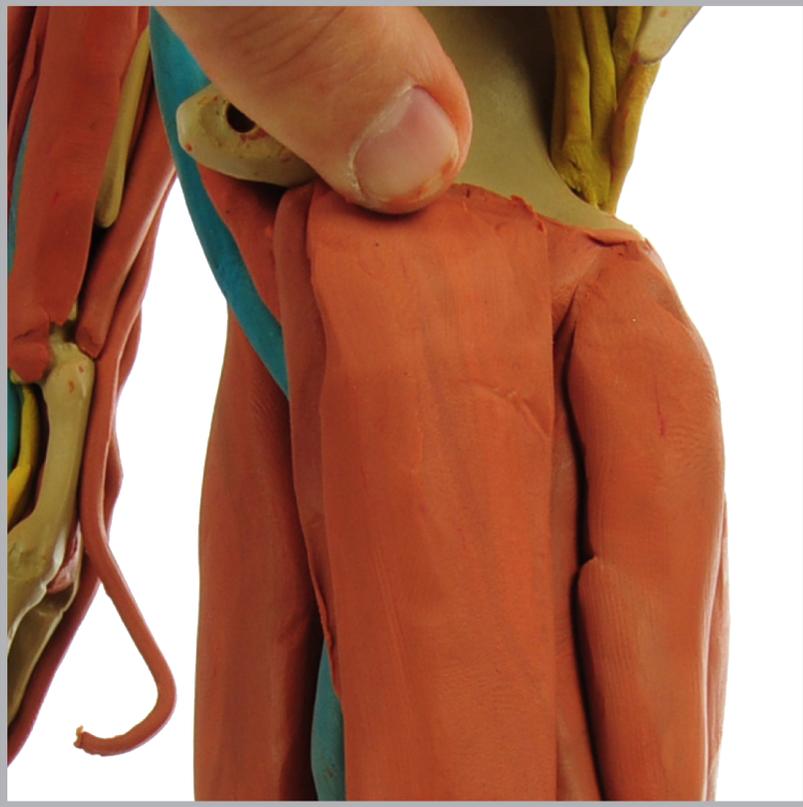
# 147

The narrow distal tendon of the *gracilis* m. curves ventrally to attach in front of the *semitendinosus* m. and onto the medial tibia.



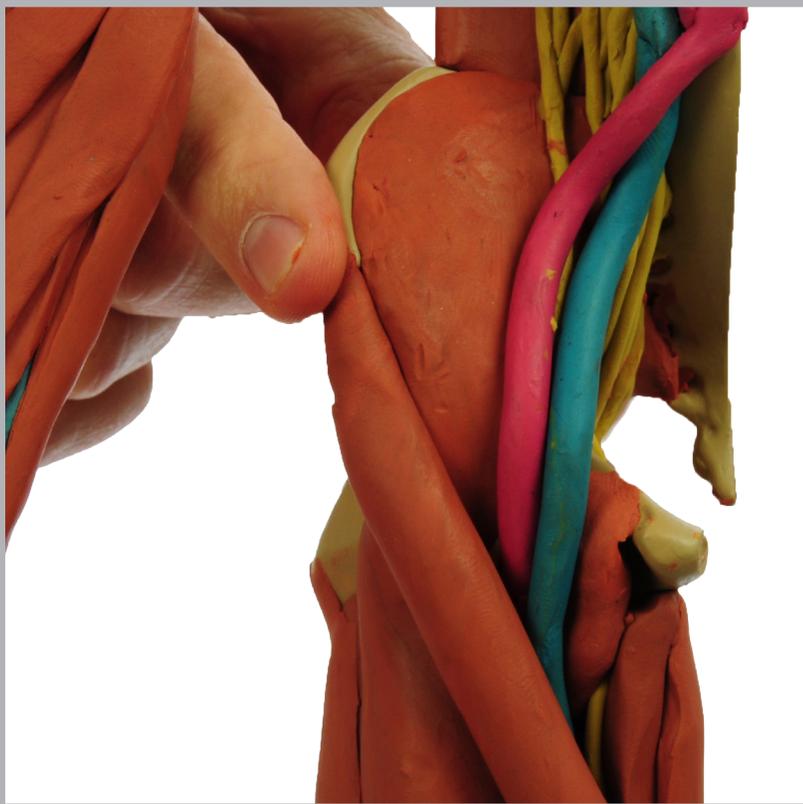
# 148

With the flat of the palm, press this thin muscle belly over the medial thigh to cover the edges of the *adductor* mm. group as well as the *semimembranosus* m.



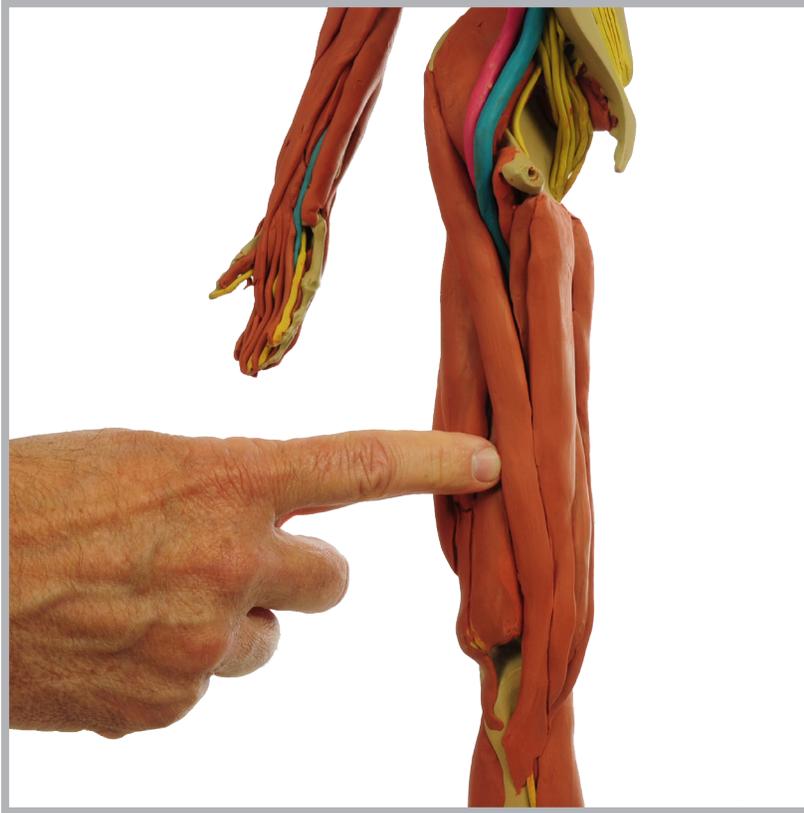
# 149

The *gracilis* m. is the most superficial muscle of the inner thigh. Its proximal tendon is wide and thin and attaches to the medial lip of the ischiopubic rami.



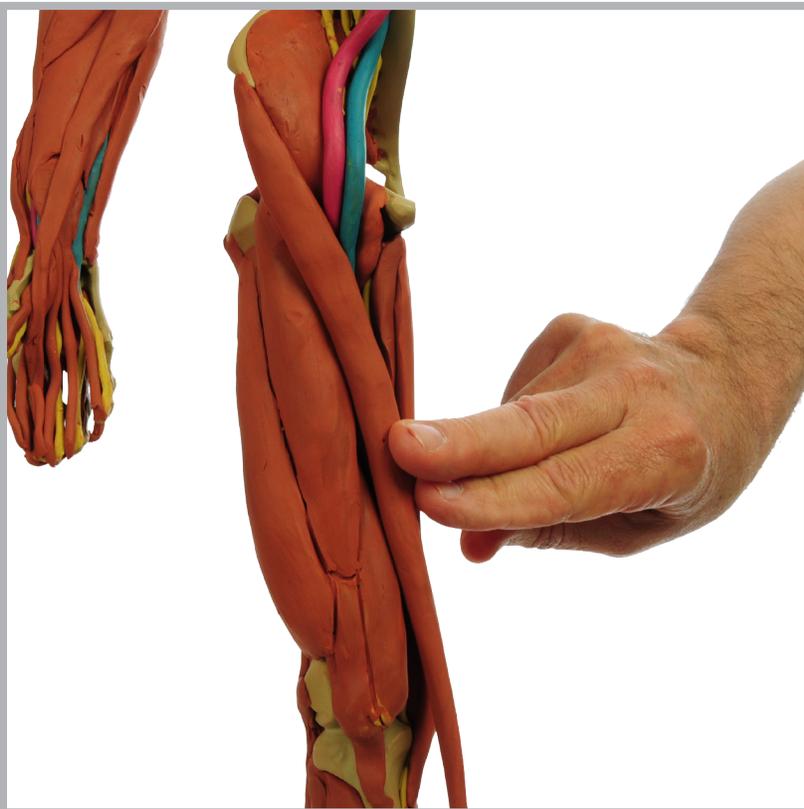
# 150

The *sartorius* m. is a prism-shaped strap that spans from the anterior superior iliac spine and ...



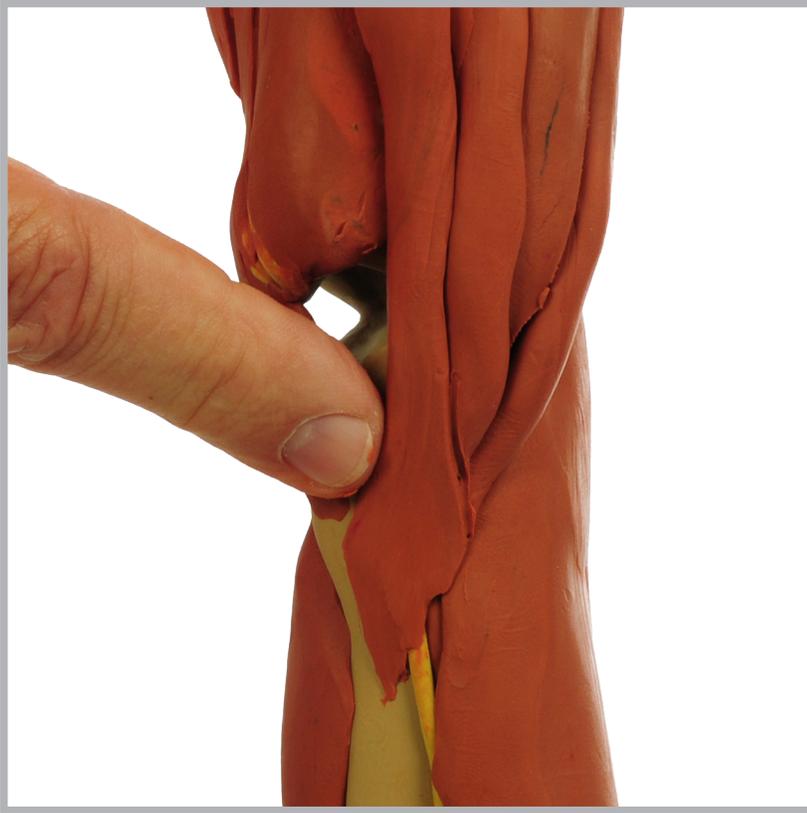
# 151

... spirals down the thigh.  
It covers the neurovascular  
anatomy that lies in the  
"subsartorial canal."



# 152

The strap of *sartorius* m. spirals  
around the thigh so significantly  
that it wraps around the medial  
head of the *quadriceps* mm.  
group.



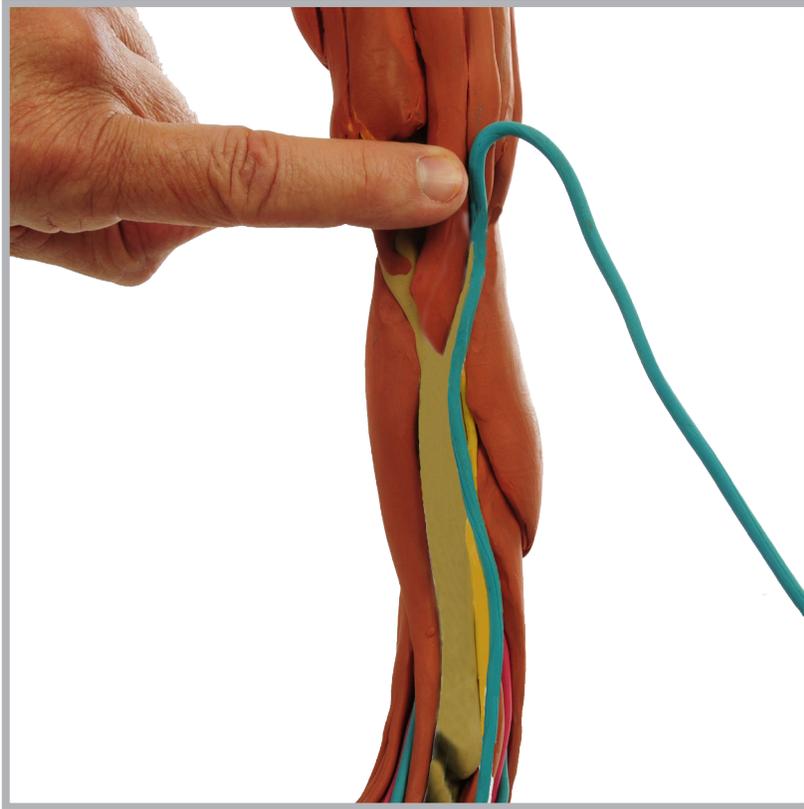
# 153

The distal tendon of the *sartorius* m. curves forward along with the tendons of *gracilis* m. and *semitendinosus* m. Together, these three tendons are called the *pes anserinus* or "goose's foot."



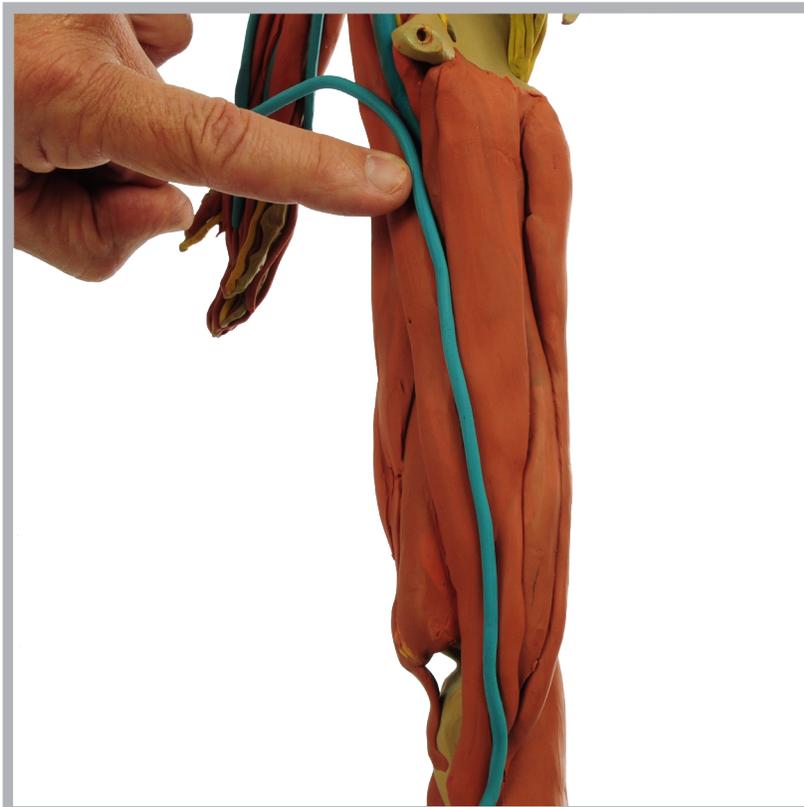
# 154

We continue with the superficial veins of the leg at the *dorsal arch* v. in the foot. Its path back toward the heart takes it up the medial shin as the *great saphenous* v.



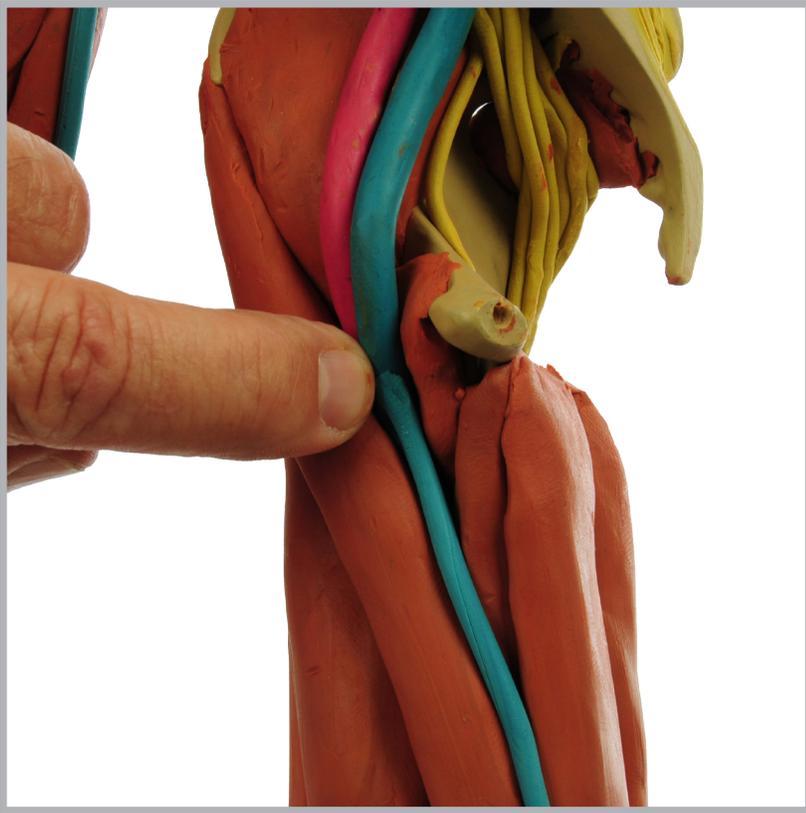
# 155

The *great saphenous v.* runs up the medial tibia and ...



# 156

... then continues up the thigh just ventral to *sartorius m.*



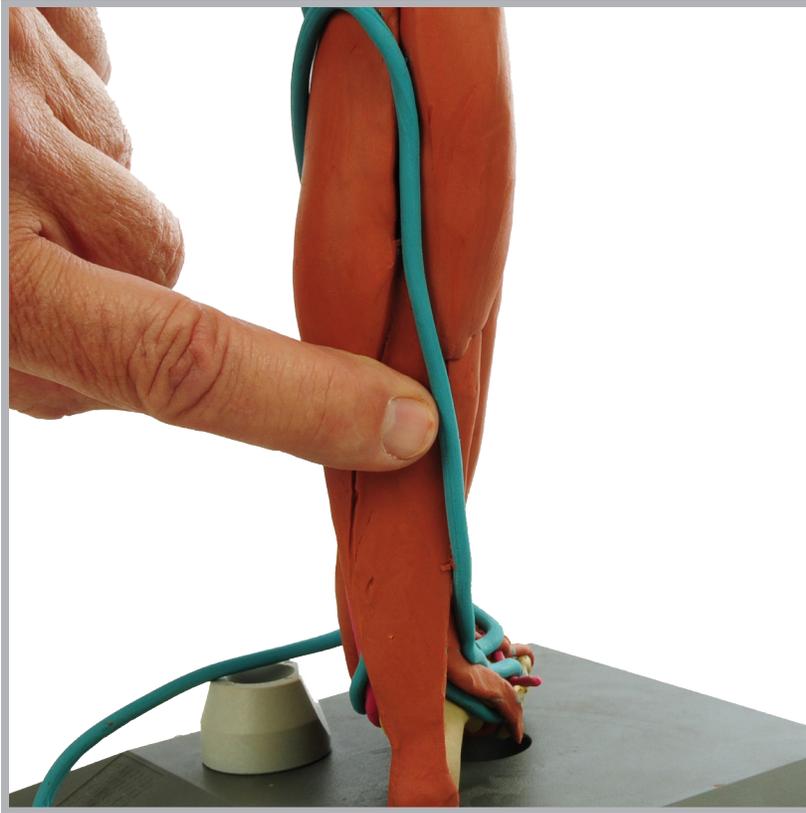
# 157

The *great saphenous v.* joins the *inguinal v.* to feed into the *external iliac v.* and then runs upward toward the heart.



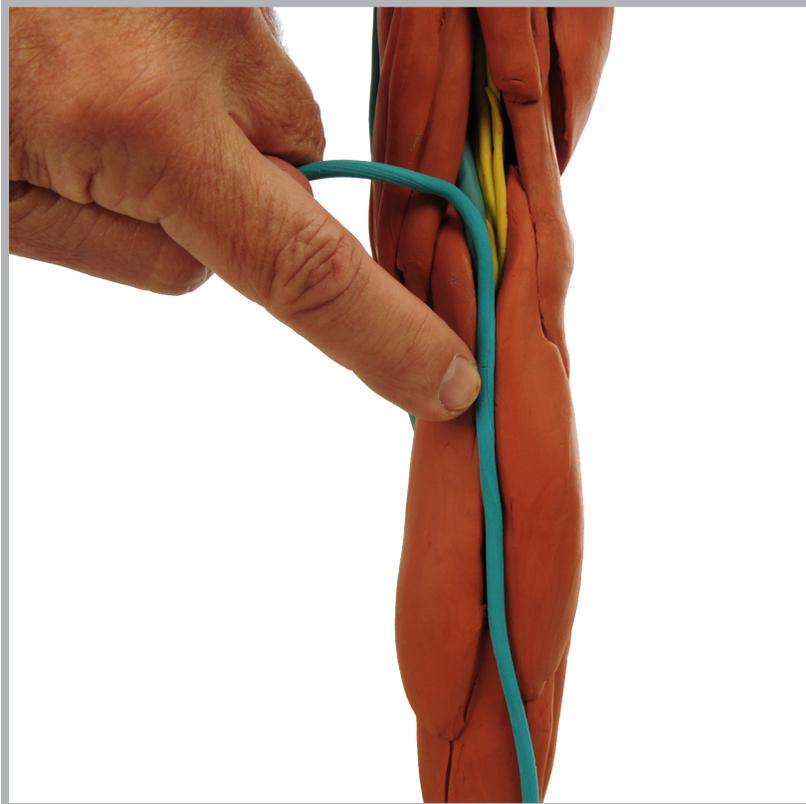
# 158

The *small saphenous v.* begins along the 5th metatarsal and runs up and back to the lateral malleolus, which it wraps around.



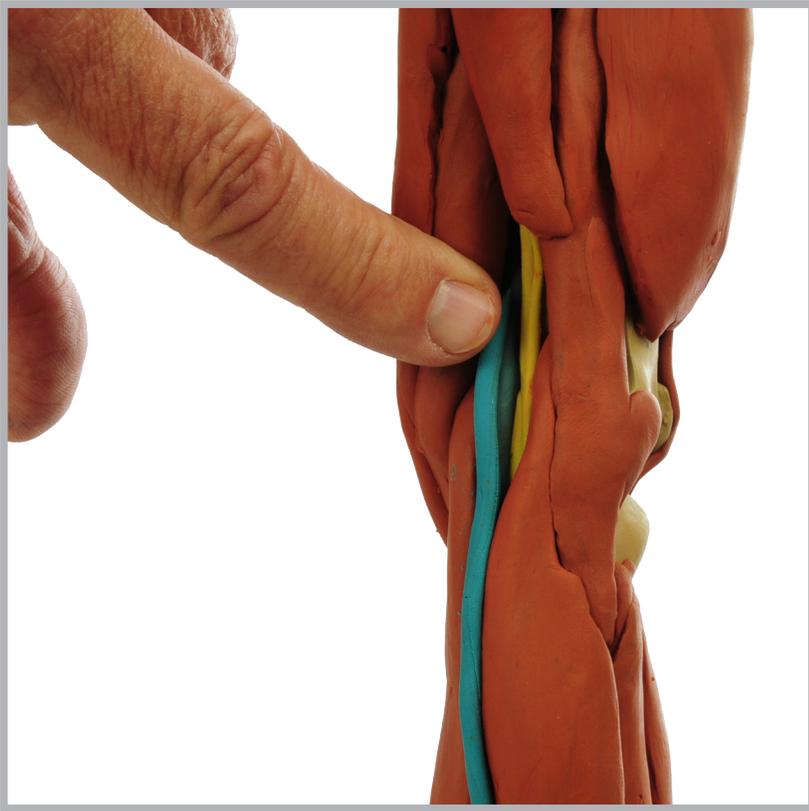
# 159

From the lateral malleolus, the *small saphenous v.* runs along the tendon shared by the *soleus m.* and the *gastrocnemius mm.*



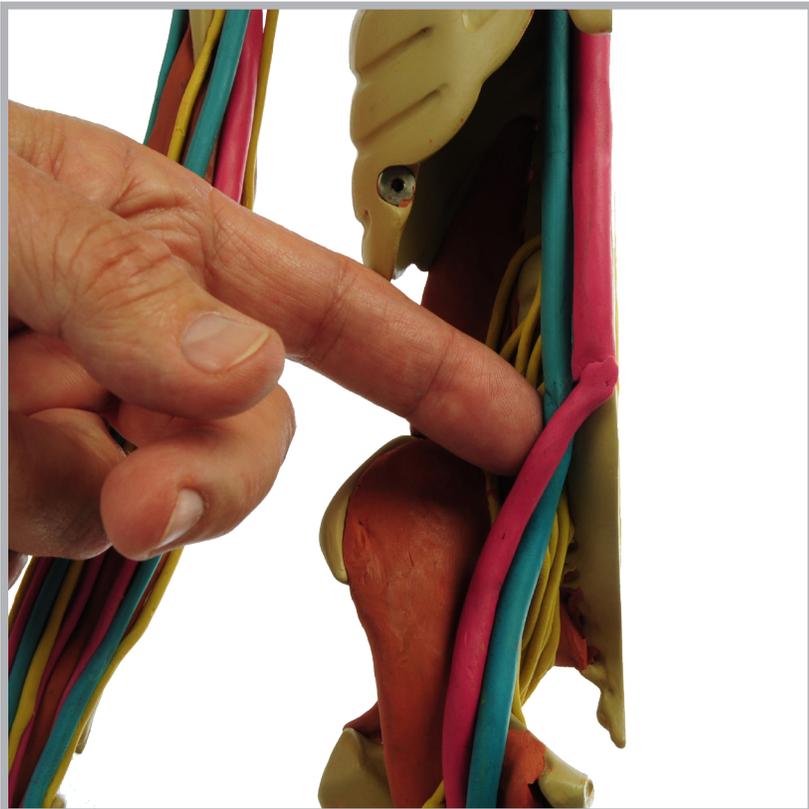
# 160

It now passes up between the edges of the medial and lateral *gastrocnemius mm.*



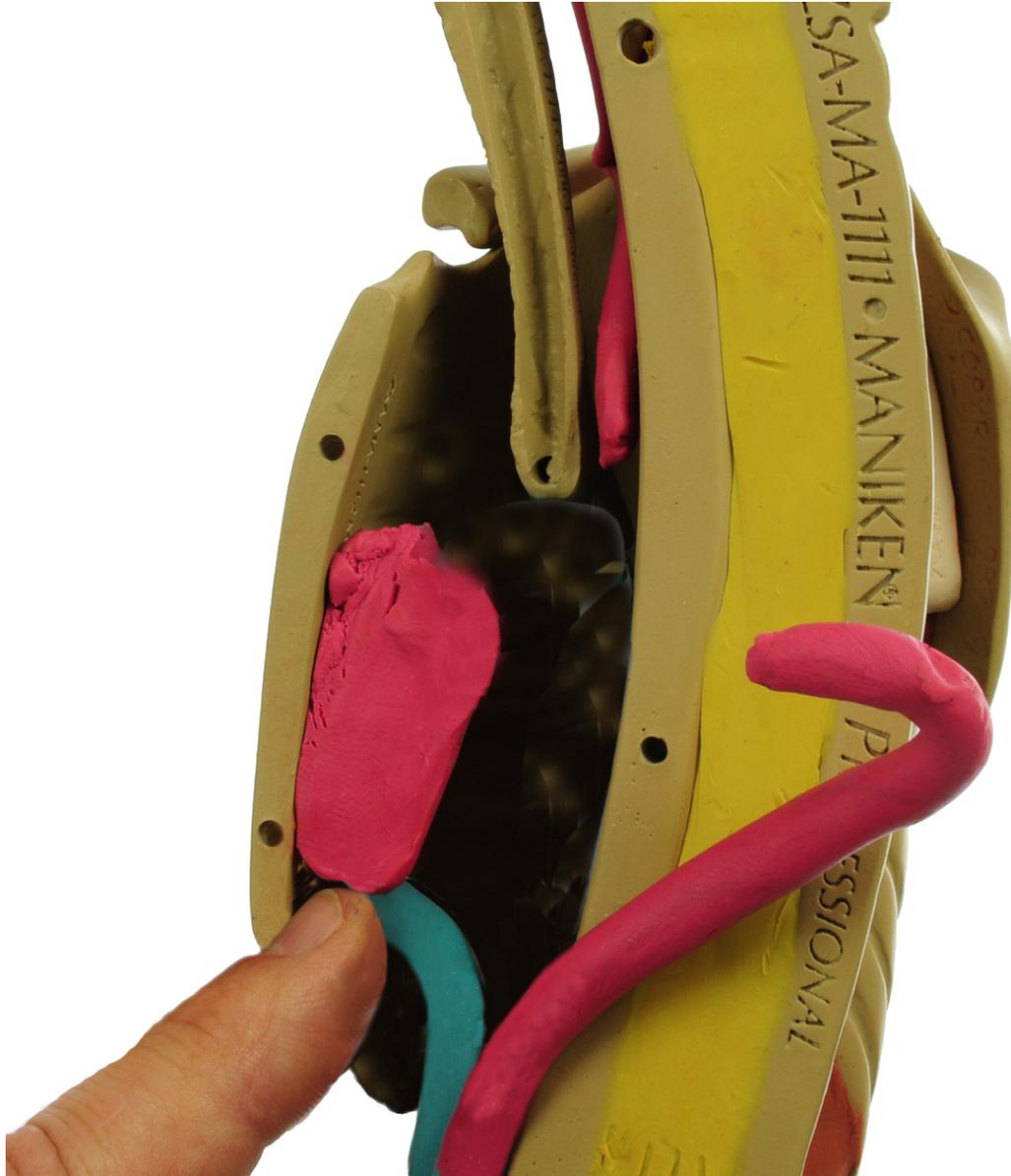
# 161

The *small saphenous v.* joins the neurovascular bundle in the popliteal fossa, where it feeds into the *popliteal v.*



# 162

All the superficial veins have now found their way back to the deep veins of the pelvic subsystem, through which they ultimately flow into the *inferior vena cava v.* on its return to the heart.

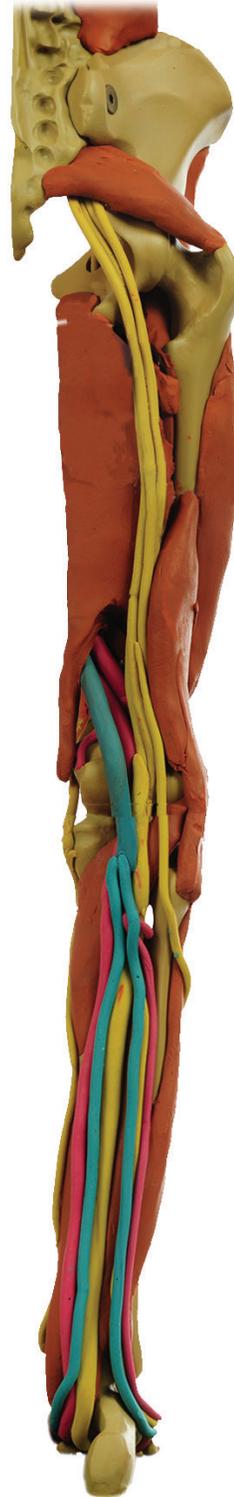


163

The thoracic aorta has here been “reflected,” or pulled out of the way so that you can see that the *vena cava v.* passes alongside the aorta to enter the heart. From there, the pulmonary vessels send the blood through the lungs and back to the heart to complete the circulation system.



Summary Deep  
Dorsal (Anterior) Leg



Summary Deep  
Ventral (Posterior) Leg



Summary Superficial  
Dorsal (Anterior) Leg



Summary Superficial  
Ventral (Posterior) Leg

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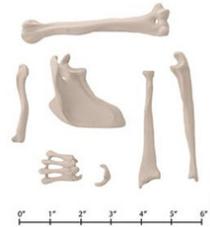
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