

Visible

Official Guide Book

VISIBLE SP-1
Superficial and Deep Muscles - Spats Style

How to Wear the Garment

1. Align the pelvis

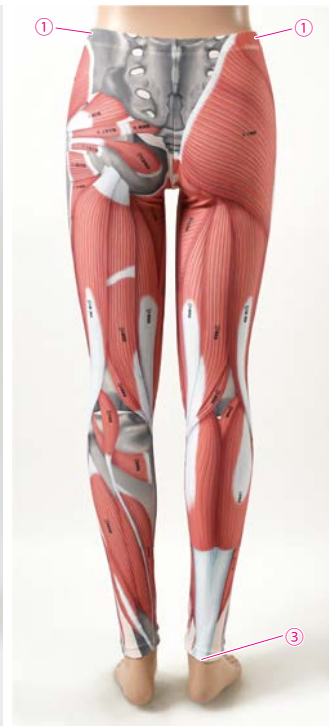
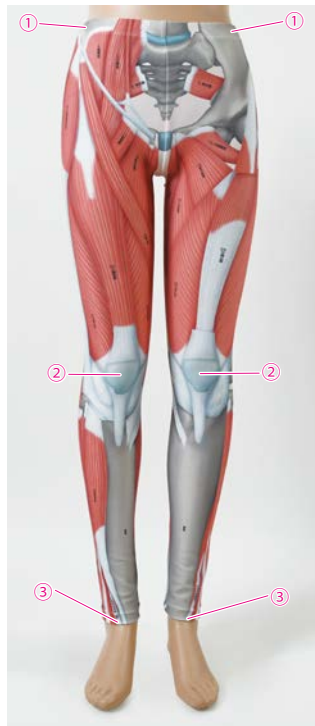
Position the waistband to match the printed pelvic landmarks with your iliac crest and the front and rear iliac spines.

2. Align the knees

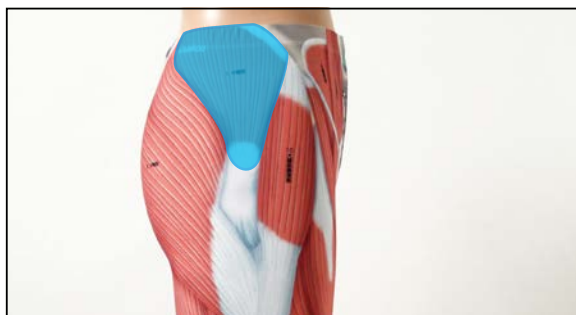
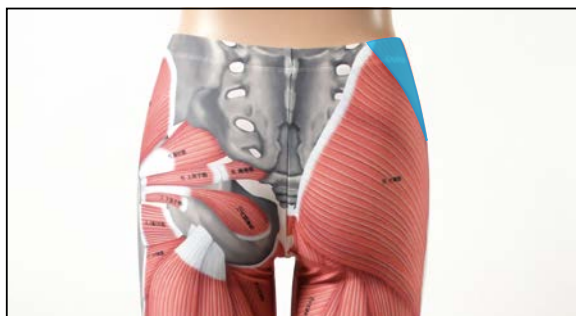
Match the printed patellae with your own kneecaps.

3. Align the ankles

Straighten any twists below the knees. Align the printed extensor hallucis longus with the front center of each ankle.



1 Gluteus medius



Classification: Pelvic girdle; gluteal muscles, layer 2.

Description: A triangular muscle partly covered by the gluteus maximus.

Origin: Outer ilium between the anterior and posterior gluteal lines, iliac crest, and gluteal fascia. Fibers converge toward the greater trochanter.

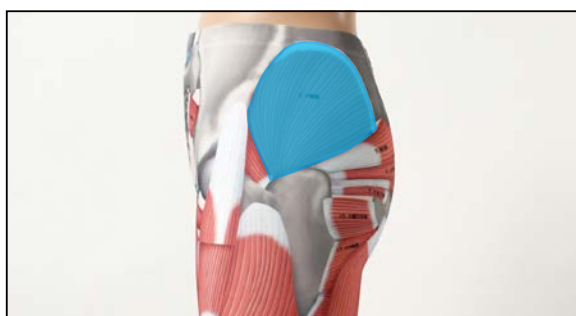
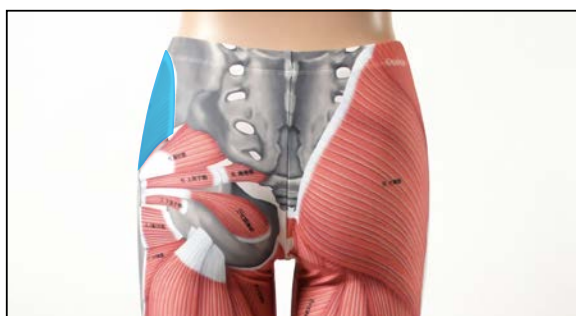
Insertion: Lateral surface of the greater trochanter of the femur.

Action: Abducts and medially rotates the thigh; stabilizes the pelvis during walking.

Innervation: Superior gluteal nerve (L4, L5, S1).

*Listed as No. 42 on T-shirt models TS01 and TS02.

2 Gluteus minimus



Classification: Pelvic girdle; gluteal muscles, layer 3.

Description: A flat, triangular muscle deep to the gluteus medius.

Origin: Outer ilium between the anterior and inferior gluteal lines. Fibers run inferolaterally.

Insertion: Anterior surface of the greater trochanter of the femur.

Action: Abducts and medially rotates the thigh; stabilizes the pelvis.

Innervation: Superior gluteal nerve (L4, L5, S1).

*Listed as No. 43 on T-shirt models TS01 and TS02.

3

Psoas major



Classification: Pelvic girdle; internal hip muscles; hip flexors.

Description: An important hip flexor. Together with the iliacus, it forms the iliopsoas.

Origin: Bodies and intervertebral discs of T12-L5 and transverse processes of the lumbar vertebrae. Fibers converge inferolaterally.

Insertion: Lesser trochanter of the femur via the iliopsoas tendon.

Action: Flexes the hip. With the lower limb fixed, assists flexion and lateral bending of the lumbar spine.

Innervation: Anterior rami of L1, L2, and L3.

*Listed as No. 14 on T-shirt models TS01 and TS02.

Psoas minor



Classification: Posterior abdominal wall; internal hip muscles.

Description: A slender muscle on the anterior surface of the psoas major; absent in about half of individuals.

Origin: Bodies of T12 and L1 and the intervening intervertebral disc.

Insertion: Iliopubic eminence and pectineal line, blending with the iliac fascia.

Action: Weakly flexes the lumbar spine and tenses the iliac fascia.

Innervation: Anterior ramus of L1.

*Not labeled on the SP-1 garment.

4 Iliacus



Classification: Pelvic girdle; internal hip muscles; hip flexors.

Description: Occupies the iliac fossa and joins the psoas major to form the iliopsoas.

Origin: Iliac fossa and adjacent iliac crest. Fibers descend inferomedially.

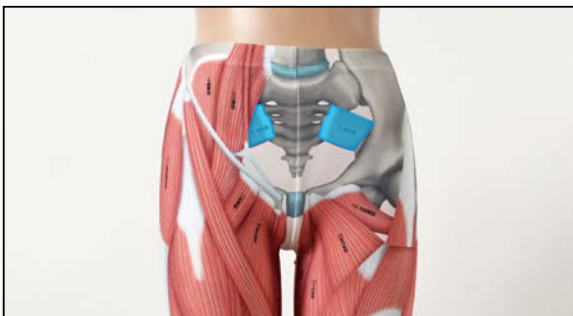
Insertion: Most fibers join the psoas major tendon; some attach directly to the lesser trochanter.

Action: Flexes the hip and assists lateral rotation of the thigh.

Innervation: Femoral nerve (L2, L3).

*Listed as No. 13 on T-shirt models TS01 and TS02.

5 Piriformis



Classification: Pelvic girdle; deep lateral rotators, layer 3.

Description: A conical muscle extending from the sacrum to the greater trochanter.

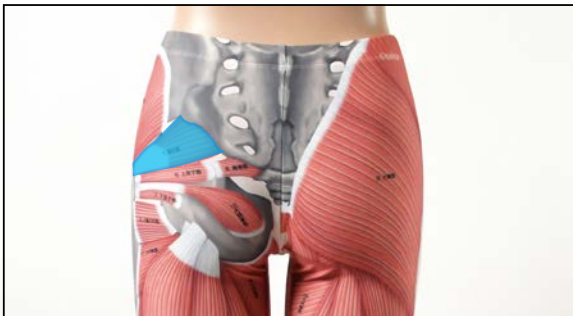
Origin: Anterior sacrum around the anterior sacral foramina. Fibers pass through the greater sciatic foramen to leave the pelvis.

Insertion: Superior border of the greater trochanter of the femur.

Action: Laterally rotates the extended thigh and abducts the flexed thigh.

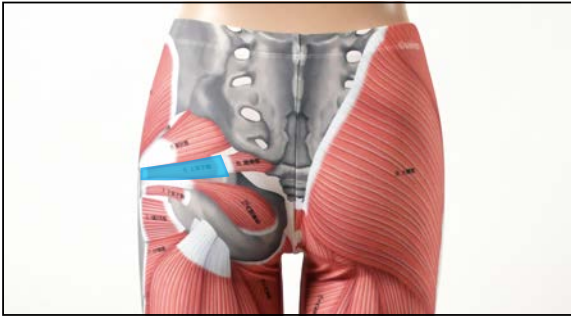
Innervation: Nerve to piriformis (S1, S2).

*Listed as Nos. 16 and 44 on T-shirt models TS01 and TS02.



6

Superior gemellus



Classification: Pelvic girdle; deep lateral rotators, layer 3.

Description: Lies superior to the obturator internus tendon.

Origin: Ischial spine.

Insertion: Joins the obturator internus tendon on its way to the greater trochanter.

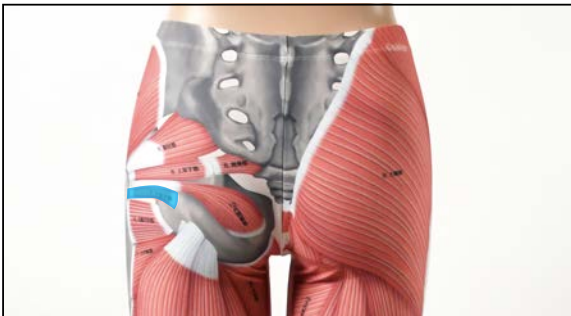
Action: Laterally rotates the thigh.

Innervation: Nerve to obturator internus (L5, S1, S2).

*Listed as No. 45 on T-shirt models TS01 and TS02.

7

Inferior gemellus



Classification: Pelvic girdle; deep lateral rotators, layer 3.

Description: Lies inferior to the obturator internus tendon.

Origin: Ischial tuberosity.

Insertion: Joins the obturator internus tendon on its way to the greater trochanter.

Action: Laterally rotates the thigh.

Innervation: Nerve to quadratus femoris (L4, L5, S1).

*Listed as No. 47 on T-shirt models TS01 and TS02.

8

Coccygeus



Classification: Pelvic floor; pelvic diaphragm.

Description: Together with the levator ani, forms the muscular pelvic diaphragm.

Origin: Ischial spine and sacrospinous ligament.

Insertion: Lateral borders of the lower sacrum and coccyx.

Action: Supports the pelvic floor and assists forward movement of the coccyx.

Innervation: Anterior rami of S4 and S5.

9

Gluteus maximus



Classification: Pelvic girdle; gluteal muscles, layer 1.

Description: A large muscle with thick fibers running inferolaterally.

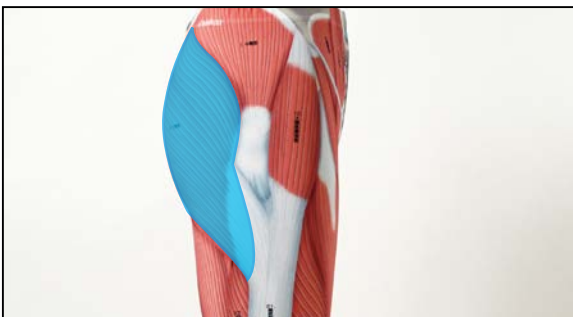
Origin: Ilium behind the posterior gluteal line, posterior sacrum and coccyx, thoracolumbar fascia, and sacrotuberous ligament.

Insertion: Superficial fibers join the iliotibial tract; deep fibers attach to the gluteal tuberosity of the femur.

Action: Extends and laterally rotates the hip.

Innervation: Inferior gluteal nerve (L5, S1, S2).

*Listed as No. 48 on T-shirt models TS01 and TS02.



10 Tensor fasciae latae



Classification: Pelvic girdle; superficial gluteal muscles.

Description: A flat muscle anterior to the gluteus medius.

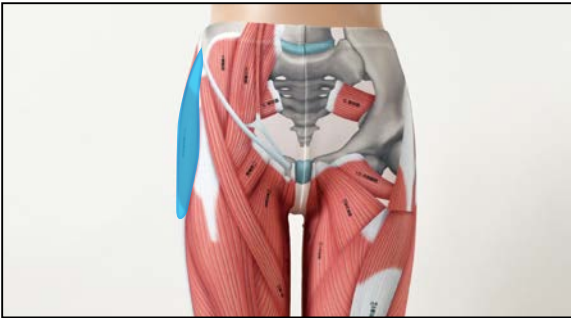
Origin: Anterior superior iliac spine and anterior part of the iliac crest.

Insertion: Iliotibial tract, which attaches to the lateral proximal tibia.

Action: Tenses the fascia lata; flexes, abducts, and medially rotates the hip. Helps stabilize the extended knee.

Innervation: Superior gluteal nerve (L4, L5, S1).

*Listed as No. 17 on T-shirt models TS01 and TS02.



11 Pectineus



Classification: Thigh; adductor group, layer 1.

Description: Lies at the proximal part of the medial thigh.

Origin: Pecten pubis on the superior pubic ramus.

Insertion: Pectineal line of the femur, below the lesser trochanter.

Action: Adducts and flexes the hip; assists medial rotation.

Innervation: Femoral nerve (L2, L3); may also receive a branch of the obturator nerve.

*Listed as No. 18 on T-shirt models TS01 and TS02.

12 Obturator internus



Classification: Pelvic girdle; deep lateral rotators, layer 3.

Description: Lies on the internal surface of the obturator membrane.

Origin: Internal surface of the obturator membrane and surrounding hip bone. The tendon turns around the lesser sciatic notch and leaves the pelvis through the lesser sciatic foramen.

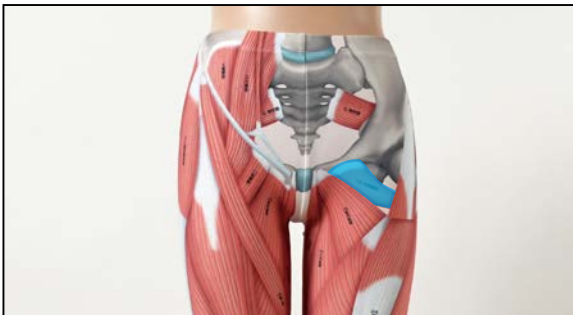
Insertion: Medial surface of the greater trochanter, above the trochanteric fossa.

Action: Laterally rotates the thigh and abducts the flexed thigh.

Innervation: Nerve to obturator internus (L5, S1, S2).

*Listed as No. 46 on T-shirt models TS01 and TS02.

13 Obturator externus



Classification: Pelvic girdle; deep lateral rotators, layer 3.

Description: Lies outside the pelvis, opposite the obturator internus.

Origin: External surface of the obturator membrane and adjacent pubic and ischial margins. The tendon passes behind the femoral neck.

Insertion: Trochanteric fossa of the femur.

Action: Laterally rotates the thigh and assists adduction.

Innervation: Obturator nerve (L3, L4).

14 Adductor longus



Classification: Thigh; adductor group, layer 1.

Description: A long, flat, triangular muscle.

Origin: Body of the pubis below the pubic crest.

Insertion: Middle third of the linea aspera of the femur.

Action: Adducts and assists flexion of the hip.

Innervation: Obturator nerve (L2, L3, L4).

*Listed as No. 20 on T-shirt models TS01 and TS02.

15 Quadratus femoris



Classification: Pelvic girdle; deep lateral rotators, layer 3.

Description: A quadrangular muscle inferior to the inferior gemellus.

Origin: Lateral border of the ischial tuberosity.

Insertion: Quadrate tubercle and adjacent intertrochanteric crest of the femur.

Action: Laterally rotates and assists adduction of the thigh.

Innervation: Nerve to quadratus femoris (L4, L5, S1).

*Listed as No. 49 on T-shirt models TS01 and TS02.



16 Adductor magnus



Classification: Thigh; adductor group, layer 3.

Description: The largest adductor, with distinct adductor and hamstring parts.

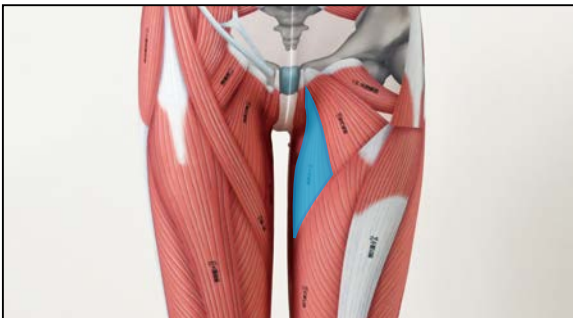
Origin: Adductor part: inferior pubic and ischial rami. Hamstring part: ischial tuberosity.

Insertion: Adductor part: linea aspera and medial supracondylar line. Hamstring part: adductor tubercle of the femur.

Action: Adducts the hip. The adductor part assists flexion; the hamstring part assists extension.

Innervation: Adductor part: obturator nerve (L2, L3, L4). Hamstring part: tibial division of the sciatic nerve (mainly L4).

*Listed as No. 50 on T-shirt models TS01 and TS02.



17 Adductor minimus



Classification: Thigh; adductor group, layer 3.

Description: The superior portion of the adductor magnus, often difficult to distinguish from it.

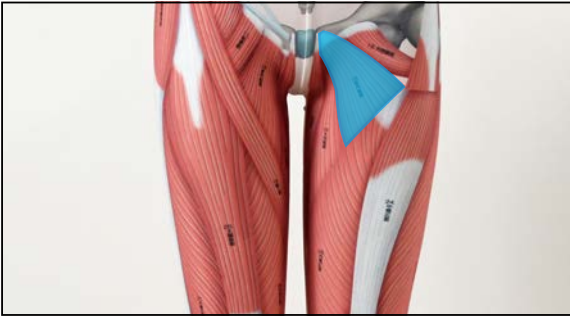
Origin: Inferior pubic and ischial rami.

Insertion: Proximal medial lip of the linea aspera, near the gluteal tuberosity of the femur.

Action: Adducts the hip and assists lateral rotation.

Innervation: Obturator nerve (L3, L4).

18 Adductor brevis



Classification: Thigh; adductor group, layer 2.

Description: A flat, triangular muscle deep to the pectineus and adductor longus.

Origin: Body and inferior ramus of the pubis.

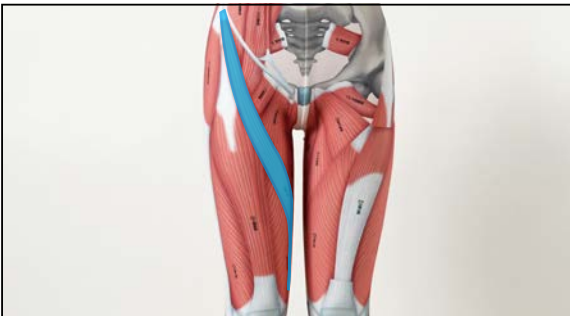
Insertion: Pectineal line and proximal medial lip of the linea aspera of the femur.

Action: Adducts and assists flexion of the hip.

Innervation: Obturator nerve (L2, L3, L4).

*Listed as No. 19 on T-shirt models TS01 and TS02.

19 Sartorius



Classification: Thigh; anterior compartment, layer 1.

Description: A narrow muscle and the longest in the human body.

Origin: Anterior superior iliac spine. Fibers run inferomedially across the thigh.

Insertion: Medial proximal tibia via the pes anserinus.

Action: Flexes, abducts, and laterally rotates the hip; flexes the knee and medially rotates the flexed leg.

Innervation: Femoral nerve (L2, L3).

Pes anserinus: the shared insertion of the sartorius, gracilis, and semitendinosus.

*Listed as No. 21 on T-shirt models TS01 and TS02.

20 Gracilis



Classification: Thigh; adductor group, layer 1.

Description: A long, slender muscle on the medial side of the thigh.

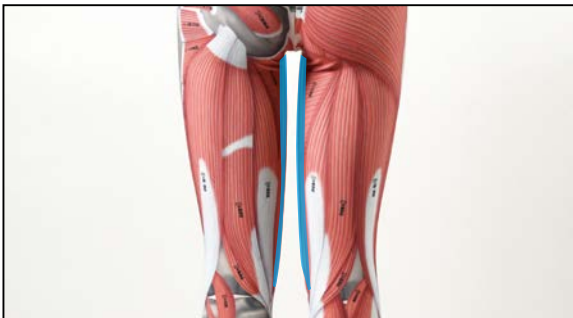
Origin: Body and inferior ramus of the pubis.

Insertion: Medial proximal tibia via the pes anserinus (see item 19).

Action: Adducts the hip; flexes the knee and medially rotates the flexed leg.

Innervation: Obturator nerve (L2, L3, L4).

*Listed as Nos. 22 and 54 on T-shirt models TS01 and TS02.



21 Iliotibial tract



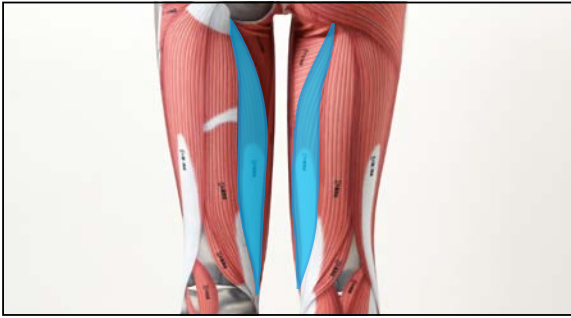
Classification: Lower-limb fascia; fascia lata.

Description: The thickened lateral part of the fascia lata. Receives the tensor fasciae latae tendon and fibers of the gluteus maximus, and extends down the lateral thigh to the lateral proximal tibia.

Action: Helps stabilize the lateral hip and knee.

*Listed as No. 52 on T-shirt models TS01 and TS02.

22 Semimembranosus



Classification: Thigh; posterior compartment; hamstrings.

Description: A broad proximal aponeurosis becomes a muscle belly deep to the semitendinosus.

Origin: Ischial tuberosity.

Insertion: Posterior part of the medial tibial condyle; tendon expansions reinforce the posterior knee capsule and blend with the crural fascia.

Action: Extends the hip, flexes the knee, and medially rotates the flexed leg.

Innervation: Tibial division of the sciatic nerve (L5, S1, S2).

Hamstrings: biceps femoris, semitendinosus, and semimembranosus.

23 Semitendinosus



Classification: Thigh; posterior compartment; hamstrings (see item 22).

Description: A slender muscle medial to the biceps femoris, with a tendinous intersection near its middle.

Origin: Ischial tuberosity, sharing a proximal tendon with the long head of the biceps femoris.

Insertion: Medial proximal tibia via the pes anserinus, posterior and inferior to the gracilis tendon.

Action: Extends the hip, flexes the knee, and medially rotates the flexed leg.

Innervation: Tibial division of the sciatic nerve (L5, S1, S2).

*Listed as No. 53 on T-shirt models TS01 and TS02.

24

Vastus intermedius



Classification: Thigh; anterior compartment; quadriceps femoris.

Description: Deep to the rectus femoris. The quadriceps comprise rectus femoris, vastus lateralis, vastus medialis, and vastus intermedius.

Origin: Anterior and lateral surfaces of the femoral shaft.

Insertion: Patella via the quadriceps tendon, then tibial tuberosity via the patellar ligament.

Action: Extends the knee.

Innervation: Femoral nerve (L2, L3, L4).

25

Rectus femoris



Classification: Thigh; anterior compartment; quadriceps femoris (see item 24).

Description: The quadriceps muscle that crosses both the hip and knee.

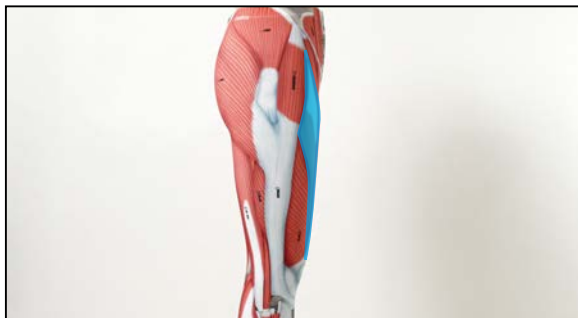
Origin: Straight head: anterior inferior iliac spine. Reflected head: superior acetabular margin. The heads merge above the patella.

Insertion: Base of the patella via the quadriceps tendon; tibial tuberosity via the patellar ligament.

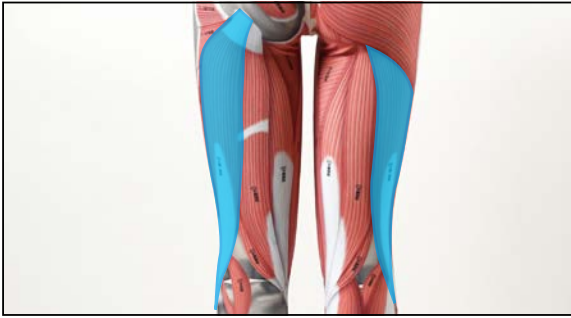
Action: Extends the knee and flexes the hip.

Innervation: Femoral nerve (L2, L3, L4).

*Listed as No. 23 on T-shirt models TS01 and TS02.



26 Biceps femoris



Classification: Thigh; posterior compartment; hamstrings (see item 22).

Description: Occupies the lateral posterior thigh and has long and short heads.

Origin: Long head: ischial tuberosity. Short head: lateral lip of the linea aspera and lateral supracondylar line.

Insertion: Fibular head, with expansions to the lateral proximal tibia and crural fascia.

Action: Flexes the knee and laterally rotates the flexed leg. The long head also extends the hip.

Innervation: Long head: tibial division of the sciatic nerve (L5, S1, S2). Short head: common fibular division (L5, S1, S2).

*Listed as No. 51 on T-shirt models TS01 and TS02.



27 Vastus lateralis



Classification: Thigh; anterior compartment; quadriceps femoris (see item 24).

Description: Forms the lateral part of the quadriceps.

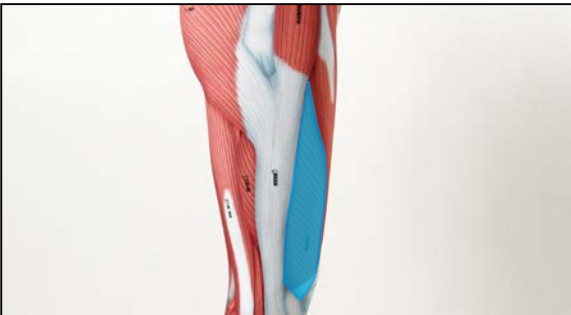
Origin: Greater trochanter, gluteal tuberosity, and lateral lip of the linea aspera of the femur.

Insertion: Patella via the quadriceps tendon; tibial tuberosity via the patellar ligament.

Action: Extends the knee and helps stabilize the patella.

Innervation: Femoral nerve (L2, L3, L4).

*Listed as No. 24 on T-shirt models TS01 and TS02.



28 Vastus medialis



Classification: Thigh; anterior compartment; quadriceps femoris (see item 24).

Description: Forms the medial part of the quadriceps.

Origin: Distal intertrochanteric line and medial lip of the linea aspera of the femur.

Insertion: Patella via the quadriceps tendon; tibial tuberosity via the patellar ligament.

Action: Extends the knee and helps stabilize the patella medially.

Innervation: Femoral nerve (L2, L3, L4).

29 Plantaris



Classification: Leg; superficial posterior compartment.

Description: A small muscle with a long, slender tendon descending between the gastrocnemius and soleus.

Origin: Lateral supracondylar region of the femur and adjacent posterior knee capsule.

Insertion: Medial calcaneus, often near or blending with the calcaneal tendon.

Action: Weakly assists knee flexion and plantar-flexion of the foot.

Innervation: Tibial nerve (S1, S2).

30 Popliteus



Classification: Leg; deep posterior compartment.

Description: A flat muscle running inferomedially across the posterior knee.

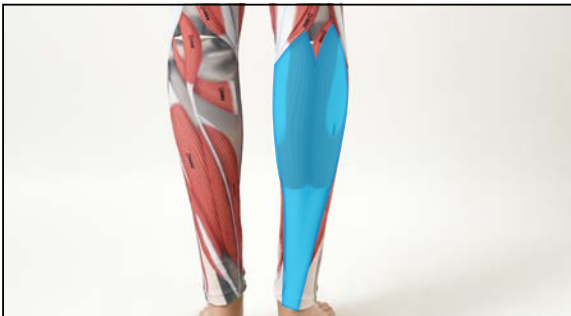
Origin: Lateral condyle of the femur; tendon associated with the lateral meniscus and knee capsule.

Insertion: Posterior tibia above the soleal line.

Action: Unlocks the knee by medially rotating the tibia; with the foot fixed, laterally rotates the femur. Assists knee flexion.

Innervation: Tibial nerve (L4, L5, S1).

31 Gastrocnemius



Classification: Leg; superficial posterior compartment; triceps surae.

Description: A powerful, two-headed superficial calf muscle. Together with the soleus, forms the triceps surae.

Origin: Medial head: posterior femur above the medial condyle. Lateral head: posterior aspect of the lateral condyle.

Insertion: Calcaneal tuberosity via the calcaneal (Achilles) tendon, shared with the soleus.

Action: Plantarflexes the foot, raises the heel, and flexes the knee.

Innervation: Tibial nerve (S1, S2).



32 Tibialis anterior



Classification: Leg; anterior compartment; extensor group.

Description: Lies along the lateral surface of the tibia.

Origin: Lateral tibial condyle, proximal lateral tibia, interosseous membrane, and crural fascia.

Insertion: Medial cuneiform and base of the first metatarsal; the tendon passes beneath the extensor retinacula.

Action: Dorsiflexes and inverts the foot. With the foot fixed, draws the leg forward.

Innervation: Deep fibular nerve (L4, L5).



33 Tibialis posterior



Classification: Leg; deep posterior compartment.

Description: A pennate muscle deep to the other posterior leg muscles.

Origin: Posterior tibia and fibula and interosseous membrane. The tendon passes behind the medial malleolus and beneath the flexor retinaculum.

Insertion: Navicular tuberosity, cuneiforms, cuboid, and plantar bases of metatarsals 2-4.

Action: Plantarflexes and inverts the foot; supports the medial longitudinal arch.

Innervation: Tibial nerve (L4, L5).



34 Soleus



Classification: Leg; superficial posterior compartment; triceps surae (see item 31).

Description: A broad muscle deep to the gastrocnemius.

Origin: Posterior fibular head and proximal fibula, soleal line and medial tibia, and tendinous arch between the bones.

Insertion: Calcaneal tuberosity via the calcaneal (Achilles) tendon, shared with the gastrocnemius.

Action: Plantarflexes the foot and raises the heel; helps maintain posture when the foot is fixed.

Innervation: Tibial nerve (S1, S2).

35 Flexor digitorum longus



Classification: Leg; deep posterior compartment.

Description: Lies medial to the flexor hallucis longus and deep to the soleus.

Origin: Posterior tibia. The tendon passes behind the medial malleolus, beneath the flexor retinaculum, and into the sole.

Insertion: Bases of the distal phalanges of toes 2-5; each tendon passes through a flexor digitorum brevis tendon.

Action: Flexes toes 2-5 and plantarflexes the foot.

Innervation: Tibial nerve (L5, S1, S2).

36

Extensor digitorum longus



Classification: Leg; anterior compartment; extensor group.

Description: Descends lateral to the tibialis anterior.

Origin: Lateral tibial condyle, anterior fibula, interosseous membrane, and crural fascia.

Insertion: Extensor expansions of toes 2-5; the four tendons pass beneath the inferior extensor retinaculum.

Action: Extends toes 2-5 and dorsiflexes and everts the foot.

Innervation: Deep fibular nerve (L5, S1).

37

Fibularis longus



Classification: Leg; lateral compartment.

Description: A superficial muscle on the lateral fibula. Fibularis is also called peroneus.

Origin: Fibular head and proximal lateral fibula, intermuscular septa, and crural fascia.

Insertion: Medial cuneiform and base of the first metatarsal; the tendon passes behind the lateral malleolus and crosses the sole.

Action: Everts and plantarflexes the foot; supports the transverse arch.

Innervation: Superficial fibular nerve (L5, S1).



38 Fibularis brevis



Classification: Leg; lateral compartment.

Description: Deep to the fibularis longus and posterior to the extensor digitorum longus.

Origin: Distal lateral fibula. The tendon passes behind the lateral malleolus beneath the fibular retinacula.

Insertion: Tuberosity at the base of the fifth metatarsal.

Action: Everts and assists plantarflexion of the foot.

Innervation: Superficial fibular nerve (L5, S1).



39 Fibularis tertius



Classification: Leg; anterior compartment; extensor group.

Description: A small muscle usually continuous with the extensor digitorum longus.

Origin: Distal anterior fibula. Its tendon passes beneath the inferior extensor retinaculum to the dorsum of the foot.

Insertion: Dorsal surface of the base of the fifth metatarsal.

Action: Assists dorsiflexion and eversion of the foot.

Innervation: Deep fibular nerve (L5, S1).



40

Flexor hallucis longus



Classification: Leg; deep posterior compartment.

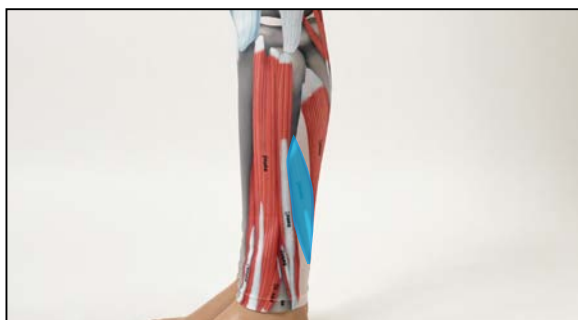
Description: The principal long flexor of the great toe.

Origin: Distal two-thirds of the posterior fibula and adjacent interosseous membrane. The tendon passes through the groove on the posterior talus and beneath the sustentaculum tali into the sole.

Insertion: Base of the distal phalanx of the great toe. Tendon connections to the flexor digitorum longus may transmit force to other toes.

Action: Flexes the great toe and assists plantar-flexion of the foot.

Innervation: Tibial nerve (L5, S1, S2).



41

Extensor hallucis longus



Classification: Leg; anterior compartment; extensor group.

Description: Deep to the tibialis anterior and extensor digitorum longus.

Origin: Middle fibula and interosseous membrane. The tendon descends between the tibialis anterior and extensor digitorum longus tendons, then passes beneath the inferior extensor retinaculum.

Insertion: Dorsal base of the distal phalanx of the great toe.

Action: Extends the great toe, dorsiflexes the foot, and assists inversion.

Innervation: Deep fibular nerve (L5, S1).

References and Sources

Nihon Jintai Kaibogaku, Vol. 1, revised 20th edition. Nanzando.

Illustrations in this edition were adapted (including coloring) or newly created by SAIKOU. The original Japanese explanatory text was quoted from this work; the English text has been edited for clarity.

Kokkakukin no Katachi to Shokusatsuho, 1st edition. Taihokaku.

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VISIBLE SP-1

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Nerve-root levels indicate typical contributions; descriptions may vary between anatomical references.

