

MUSCLES OF THE SOLE OF FOOT - 4 LAYERS



-presented for educational purposes only -

Four Layers of Muscle in Constant Feedback w/ the Brain

MUSCLE	ORIGIN	INSERTION	NERVE	ACTION
-FIRST LAYER-				
abductor hallucis	medial tubercle of calcaneus	base of proximal phalanx of big toe	medial plantar, S2-3	abducts big toe, also flexes it
flexor digitorum brevis	medial tubercle of calcaneus	middle phalanges of lateral 4 toes	medial plantar, S2-3	flexes middle phalanges of lateral 4 toes
abductor digiti minimi	lateral tubercle of calcaneus	proximal phalanx of little toe	lateral plantar, S2-3	abducts little toe, also flexes it
-SECOND LAYER-				
quadratus plantae	medial and lateral border of calcaneus	tendon of flexor digitorum longus	lateral plantar, S2-3	helps flex lateral 4 toes
lumbricals (4)	tendons of flexor digitorum longus	extensor expansion; proximal phalanges	first: medial plantar, S2-3. lateral 3: lateral plantar, S2-3	flex metacarpal phalange MP joints and extend intercarpal phalange IP joints
-THIRD LAYER-				
flexor hallucis brevis	cubeoid; lateral cuneiform	medial and lateral tubercles of base of proximal phalanx of big toe (sesamoid bones in tendons)	medial plantar, S2-3	flexes big toe at MP joint

adductor hallucis	transverse head: plantar ligaments of MP joints. Oblique head: bases of metatarsals 2, 3 & 4	lateral tubercle of base of proximal phalanx of big toe	deep branch of lateral plantar, S2-3	adduct big toe
flexor digiti minimi brevis	base of fifth metatarsal	tubercle of base of little digit proximal phalanx	superficial branch of lateral plantar, S2-3	flexes little digit at MP joint
-FOURTH LAYER-				
plantar interossei (3)	medial sides of metatarsals 3-5	medial sides of base of proximal phalanges, and extensor expansions of digits 3-5	deep branch of lateral plantar, S2-3	adducts; flexes MP joints and extends IP joints of toes 3-5
dorsal interossei (4)	adjacent sides of metatarsals 1-5	1st and 2nd: medial and lateral sides of proximal phalanx and extensor expansion of second digit. 3rd and 4th: lateral sides and extensor expansion of digits 3 and 4	deep branch of lateral plantar, S2-3	abducts; flexes MP joints and extends IP joints of digits 2-4