

This summary is only for the muscles of the hand (slides: 14-33) please refer to the first 13 slide when studying.

For The innervation of these muscles its easier to memorize them from the last paragraph in the last page

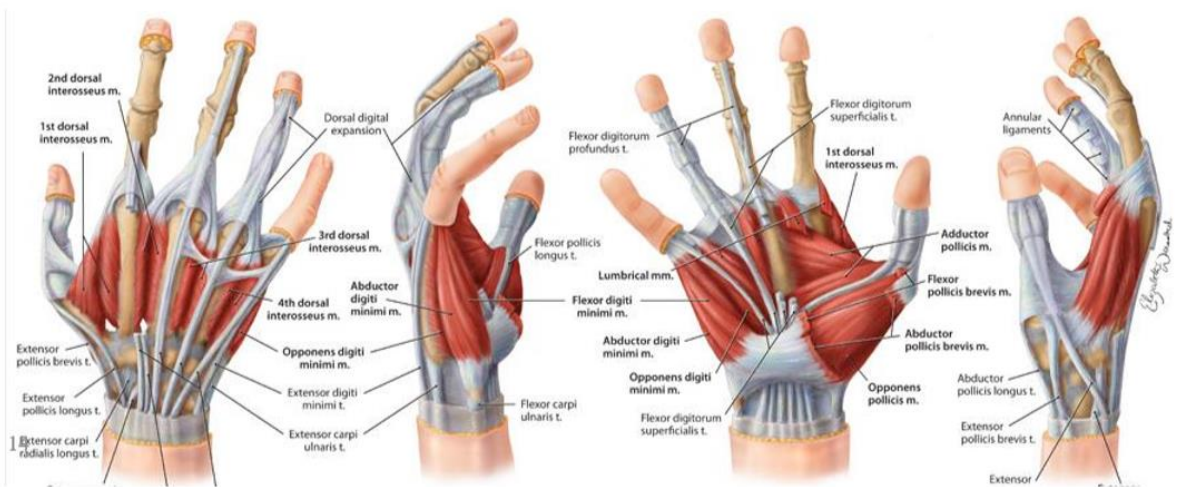
# Small Muscles of the Hand



Four Lumbricals


Eight Interossei

Muscles of the thumb

Muscles of the little finger.





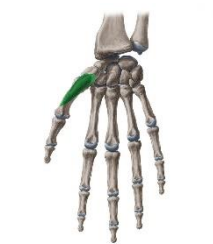
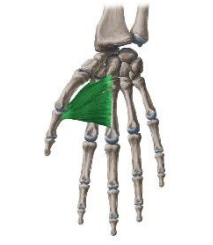
Muscle	Origin	Insertion	Nerve	Action	Image
<b>Lumbricals (4 muscles)</b>	Tendons of flexor Digitorum profundus	Extensor expansion of medial four fingers	1st and 2nd, (lateral two) median nerve; 3rd and 4th medial deep branch of ulnar nerve	Flexmetacarpophalangeal (MP) joints & extend interphalangeal (IP) joints of fingers except thumb	
<b>Palmar Interossei (4 muscles)</b>	-First arises from base of 1st metacarpal - remaining three from anterior surface of shafts of 2nd, 4th, and 5th metacarpals	<u>Proximal phalanges</u> of thumb and index, ring, and little fingers and <u>dorsal extensor expansion</u> of each finger .	Deep branch of ulnar nerve	adduct fingers toward center of third finger	

<b>Dorsal Interossei (4 muscles)</b>	Contiguous sides of shafts of metacarpal bones	Proximal phalanges of index, middle, and ring fingers and dorsal extensor expansion (1st:index \ 2nd,3rd:middle \ 4th:ring)	Deep branch of ulnar nerve	abduct fingers from center of third finger	
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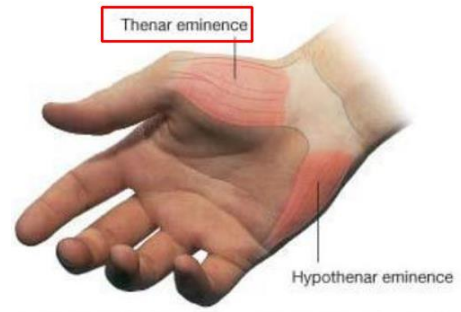
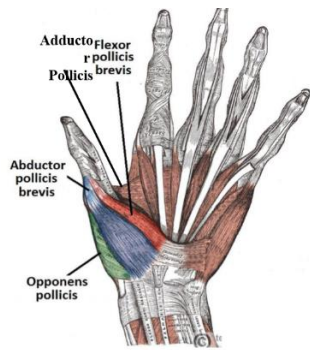
**Both palmar and dorsal:**  
 -Flex metacarpophalangeal joints  
 -Extend interphalangeal joints

Simultaneous flexion at the metacarpophalangeal joints and extension at the interphalangeal joints of a digit are essential for the fine movements of writing, drawing, threading a needle, etc. The Lumbricals and interossei have long been accepted as not only primary agents in flexing the metacarpophalangeal joints but also in extending the interphalangeal joints via their attachments to the dorsal digital expansions

**Muscles of the Thumb**

<b>Abductor Pollicis Brevis</b>	Not required "read only" Just know that the insertion is in base of proximal phalanx	Median nerve	Abduction of thumb	
<b>Flexor Pollicis Brevis</b>		Median nerve	Flexes metacarpophalangeal joint of thumb	
<b>Opponens Pollicis</b>		Median nerve	Pulls thumb medially and forward across palm	
<b>Adductor Pollicis</b>		Deep branch of ulnar nerve	Adduction of thumb	

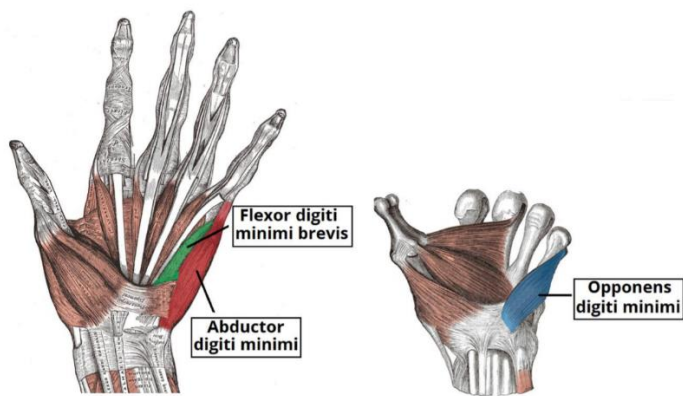
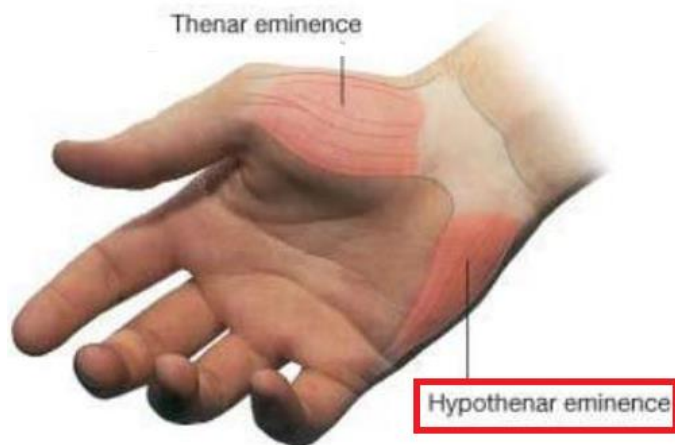
**- The first three of these muscles form the Thenar Eminence.**



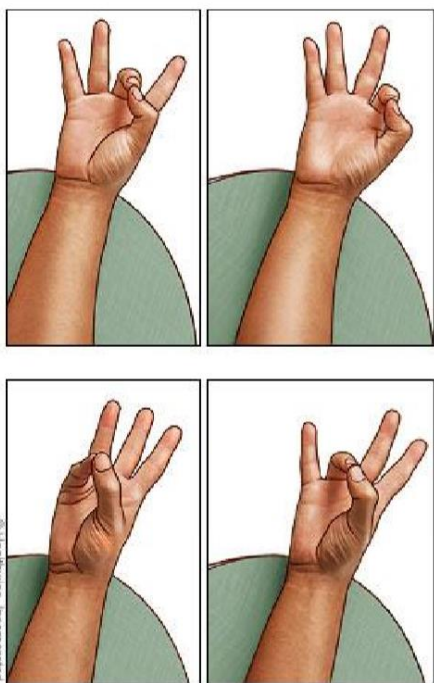
**Muscles of the little finger**

<p><b>Abductor digiti minimi</b></p>		<p>Deep branch of ulnar nerve</p>	<p>Abducts little finger</p>	
<p><b>Flexor digiti minimi brevis</b></p>	<p align="center">Not required "read only" Refer to the slides if you are interested</p>	<p>Deep branch of ulnar nerve</p>	<p>Flexes little finger</p>	
<p><b>Opponens digiti minimi</b></p>		<p>Deep branch of ulnar nerve</p>	<p>Pulls 5th metacarpal forward as in cupping the palm</p>	
<p><b>Palmaris Brevis</b></p>		<p>Superficial branch of ulnar nerve</p>	<p>Corrugates skin to improve grip of palm</p>	

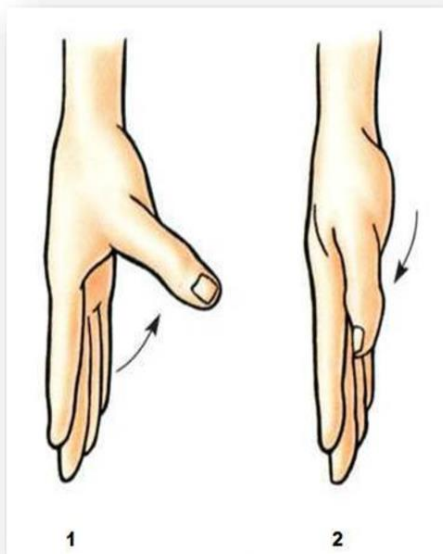
Together these muscles form Hypothenar Eminence



Movements of the thumb and the little finger:



Opposition of the Thumb



Thumb abduction/adduction



Opposition of the Little Finger

Muscles innervation In total:-

Median nerve

gives 5 muscles:-

(thenar eminence (3 muscles) + 1st & 2nd lumbrical)

Ulnar nerve

gives 15 muscles:-

-Superficial : one muscle (palmaris brevis)  
 -Deep : 14 muscle ( hypothenar eminence (3 muscles) \ 8 muscles the palmar and dorsal interossei, \ the 3rd and 4th lumbrical muscles, adductor pollicis muscle.