Hand Muscles

The hand muscles can be divided into the thenar, hypothenar and intrinsic muscles. The thenar muscles include the opponens pollicis, abductor pollicis brevis, flexor pollicis brevis and adductor pollicis. The hypothenar muscles include the flexor digiti minimi brevis, abductor digiti minimi, and the opponens digiti minimi. Superficial to the hypothenar muscles is the palmaris brevis. The intrinsic muscles include the interossei and lumbrical muscles.



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Characteristics

Opponens Pollicis
Opening-box Police
The opponens pollicis originates at the trapezium and flexor retinaculum of the hand, and inserts onto the metacarpal bone of the first digit. The opponens pollicis acts to oppose the thumb. It is innervated by the median nerve.

Abductor Pollicis Brevis
Abs Police in Briefs
The abductor pollicis brevis originates at the scaphoid and the flexor retinaculum of the hand, and inserts onto the proximal phalanx of the first digit (thumb). The abductor pollicis brevis acts to abduct the thumb. It is innervated by the recurrent branch of the median nerve.

Flexor Pollicis Brevis
Flexing Police in Briefs
The flexor pollicis brevis has two heads, a superficial head and a deep head. The superficial head arises from the trapezium and flexor retinaculum and inserts on the proximal phalanx of the first digit. The deep head arises from the first metacarpal bone, and inserts onto the base of the first phalanx. The flexor pollicis brevis acts to flex the thumb. The flexor pollicis brevis is mostly innervated by the median nerve, although the deep part is often innervated by the ulnar nerve.

Flexor Digiti Minimi Brevis
Flexing Digital Mini-me in Briefs
The flexor digiti minimi brevis originates from the hook of the hamate and the flexor retinaculum, and inserts onto the base of the proximal phalanx of the fifth digit. It acts to flex the fifth finger. It is innervated by the ulnar nerve.

Abductor Digiti Minimi Brevis
Abs Digital Mini-me in Briefs
The abductor digiti minimi brevis originates from the pisiform and the flexor retinaculum, and inserts onto the medial base of the proximal phalanx of the fifth finger. It acts to abduct the fifth finger. It is innervated by the ulnar nerve.

Opponens Digiti Minimi
Opening-box Digital Mini-me
The opponens digiti minimi originates from the hook of the hamate, and the flexor retinaculum and inserts on the medial border of the fifth metacarpal (pinky finger). It acts to draw the fifth metacarpal anteriorly and rotates it, bringing the fifth finger into opposition with the thumb. It is innervated by the ulnar nerve.

Lumbricals
Lubricant
The lumbricals originate from the flexor digitorum profundus and insert onto the extensor expansion. They act to extend the PIP and DIP joints. They also act to flex the metacarpophalangeal joints. The first and second lumbricals are innervated by the median nerve, while the third and fourth lumbricals are innervated by the ulnar nerve.

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Interossei (Palmar and Dorsal)

Inner-roses

The interossei originate from the metacarpals and insert onto the proximal phalanges and extensor expansions. The interossei are divided into palmar and dorsal interossei based on their location. The palmar interossei act to adduct the fingers. The dorsal interossei act to abduct the fingers. A common mnemonic to remember this is PAD and DAB. Palmar= ADduct. Dorsal= ABduct. The interossei are innervated by the ulnar nerve.

Palmaris Brevis

Palm-tree with Briefs

The palmaris brevis originates from the flexor retinaculum and the palmar aponeurosis, and inserts onto the ulnar border of the palm of the hand. The palmaris brevis acts to improve grip. It is innervated by the ulnar nerve. The palmaris longus is a related muscle that has variable presence in the human population; its absence is seen in up to 25% of select groups, but does not affect function or strength of the hand.

Adductor Pollicis

Add-duct-tape Police

The adductor pollicis has two heads, the oblique head and the transverse head. The oblique head originates from the bases of the second and the third metacarpals and capitate. The transverse head originates from the anterior body of the third metacarpal. Both heads insert on the medial side at the base of the proximal phalanx of the thumb. This muscle acts to adduct the thumb at the carpometacarpal joint. It is innervated by the ulnar nerve.

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