

# ORIGIN AND INSERTION OF MUSCLES OF UPPER LIMB

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KGMC

## 1. TRAPEZIUS

ORIGIN – occipital bone

Ligamentum nuchae (C<sub>1</sub> to C<sub>7</sub>)

Spinous process (T<sub>1</sub> to T<sub>12</sub>)

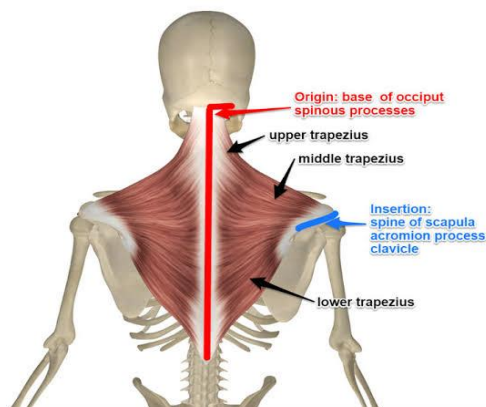
INSERTION – lateral third of clavicle

Acromion of scapula

Scapular spine of scapula

INNERVATION – motor spinal part of accessory nerve (XI)

Sensory anterior rami of C<sub>3</sub> and C<sub>4</sub>



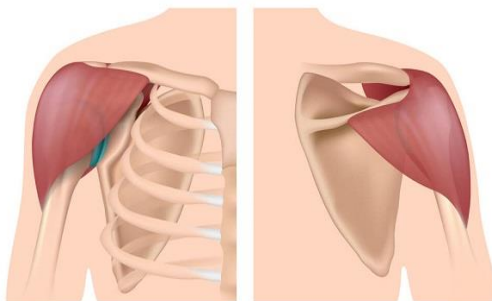
## 2. DELTOID

ORIGIN – scapula and clavicle

INSERTION – deltoid tuberosity of humerus

INNERVATION – axillary nerve

Deltoid Muscle



Anterior view

Posterior view

**3. LEVATOR SCAPULAE**

ORIGIN – transverse process of C<sub>1</sub> to C<sub>5</sub> vertebrae

INSERTION – medial border and superior angle of scapula

INNERVATION – branches directly from anterior rami of C<sub>3</sub> and C<sub>4</sub> spinal nerves and by branches (C<sub>5</sub>) from dorsal scapular nerve



**4. RHOMBOID MINOR**

ORIGIN – spines of C<sub>8</sub> and T<sub>1</sub>

INSERTION – medial border of scapula

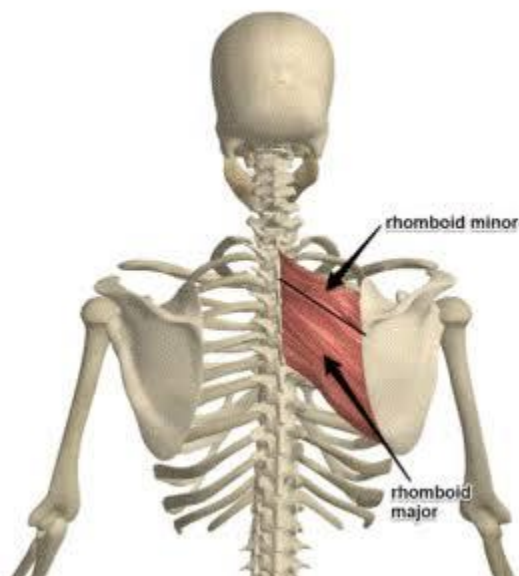
INNERVATION – dorsal scapular nerve (C<sub>4</sub>, C<sub>5</sub>)

**5. RHOMBOID MAJOR**

ORIGIN – spinous processes T<sub>2</sub>-T<sub>5</sub>

INSERTION – medial border of scapula down towards the inferior angle

INNERVATION - dorsal scapular nerve (C<sub>4</sub>, C<sub>5</sub>)

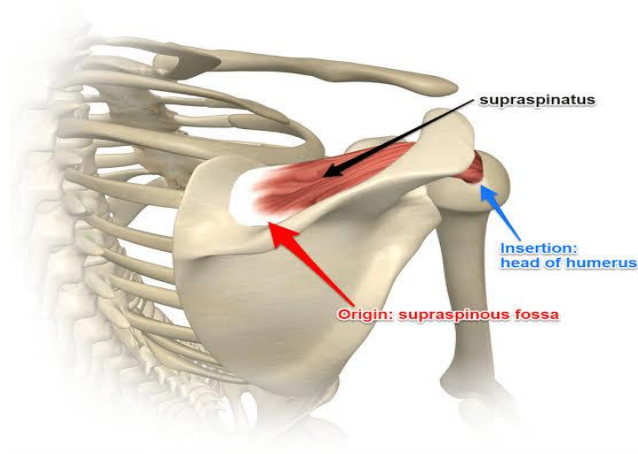


**6. SUPRASPINATUS**

ORIGIN – supraspinous fossa of scapula

INSERTION – superior facet of greater tubercle of humerus

INNERVATION – suprascapular nerve (C<sub>5</sub>, C<sub>6</sub>)

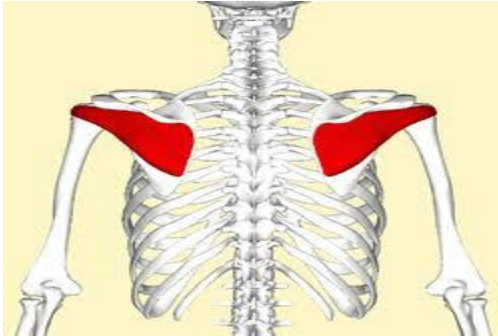


## 7. **INFRASPINATUS**

ORIGIN – infraspinous fossa of scapula

INSERTION - middle facet of greater tubercle of humerus

INNERVATION - suprascapular nerve (C<sub>5</sub>, C<sub>6</sub>)

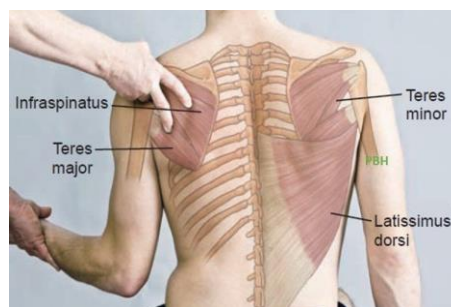
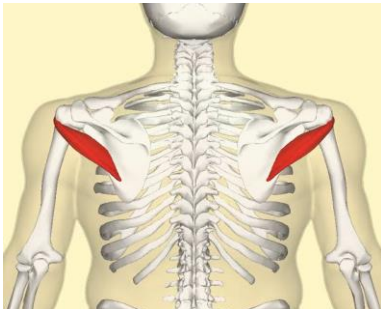


## 8. **TERES MINOR**

ORIGIN – lateral border of scapula

INSERTION – inferior facet of greater tubercle of humerus

INNERVATION – Axillary nerve (C<sub>5</sub>, C<sub>6</sub>)

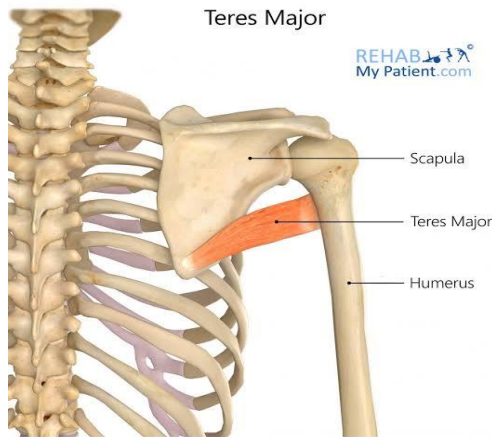


## 9. **TERES MAJOR**

ORIGIN – dorsal surface of inferior angle and lower part of lateral border of scapula

INSERTION – medial lip of intertubercular sulcus on anterior surface of humerus

INNERVATION – inferior subscapular nerve



## 10. TRICEPS BRACHII

**Long Head Origin** – infraglenoid tubercle of scapula

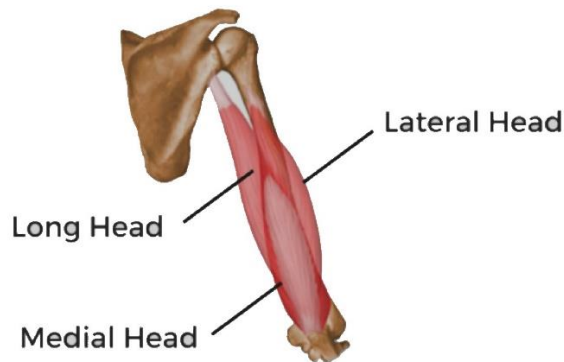
**Lateral Head Origin** – lateral and posterior surfaces of the humerus above the radial groove and lateral intermuscular septum

**Medial Head Origin** – posterior surface of humerus below the radial groove and from the medial intermuscular septum

**Insertion** – posterior surface of olecranon process of ulna, capsule of elbow joint and antebrachial fascia.

INNERVATION OF LONG HEAD– Radial nerve (C<sub>6</sub>, C<sub>7</sub>, C<sub>8</sub>)

### Triceps Brachii



## 11. PECTORALIS MAJOR (pecs)

Origin of Clavicular head – medial half of clavicle

Origin of sternocostal head – anterior surface of sternum

First seven costal cartilages

Sternal end of sixth rib

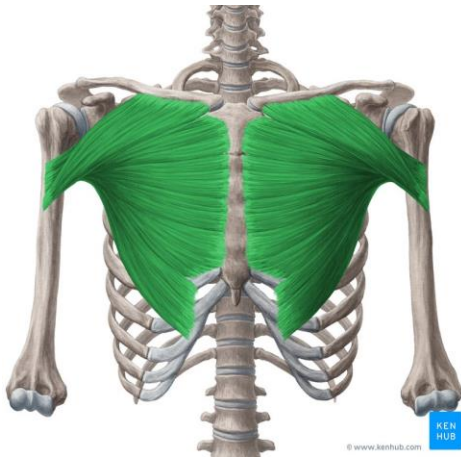
Aponeurosis of external oblique muscle

INSERTION – lateral lip of intertubercular sulcus of humerus

INNERVATION – medial and lateral pectoral nerves

Clavicular head (C<sub>5</sub>, C<sub>6</sub>)

Sternocostal head (C<sub>6</sub>, C<sub>7</sub>, C<sub>8</sub>, T<sub>1</sub>)

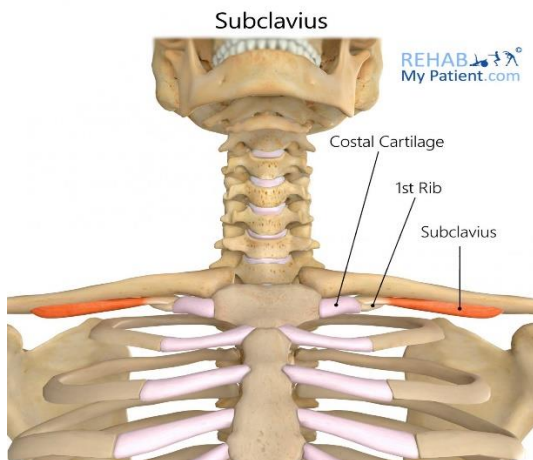


## 12. **SUBCLAVIUS**

ORIGIN – first rib at junction between rib and costal cartilage

INSERTION – groove on inferior surface of middle one-third of clavicle

INNERVATION – nerve to subclavius (C<sub>5</sub>, C<sub>6</sub>)

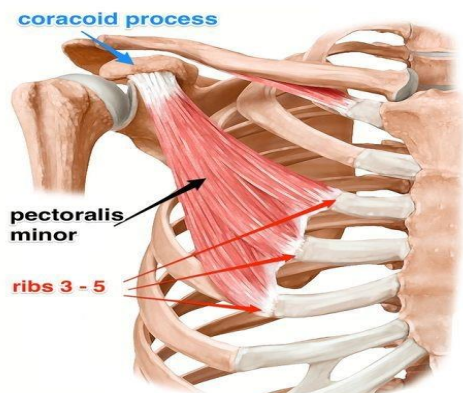


## 13. **PECTORALIS MINOR**

ORIGIN – 3<sup>rd</sup> to 5<sup>th</sup> rib

INSERTION – coracoid of scapula

INNERVATION – medial pectoral nerve (C<sub>5</sub>, C<sub>6</sub>, C<sub>7</sub>, C<sub>8</sub>, T<sub>1</sub>)

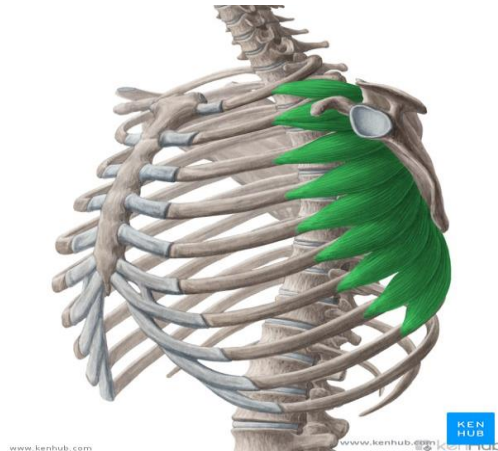
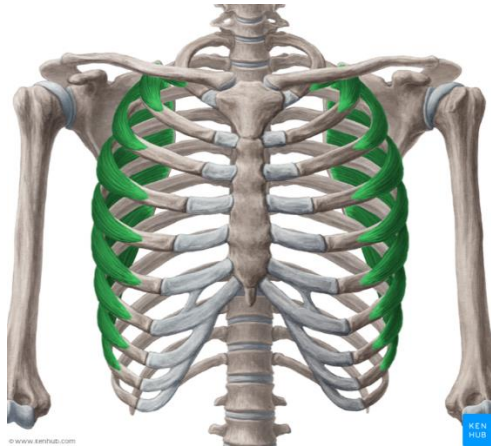


#### 14. **SERRATUS ANTERIOR**

ORIGIN – lateral surfaces of upper 8-9 ribs and deep fascia overlying the related intercostal spaces

INSERTION – costal surface of medial border of scapula

INNERVATION – long thoracic nerve (C<sub>5</sub>, C<sub>6</sub>, C<sub>7</sub>)



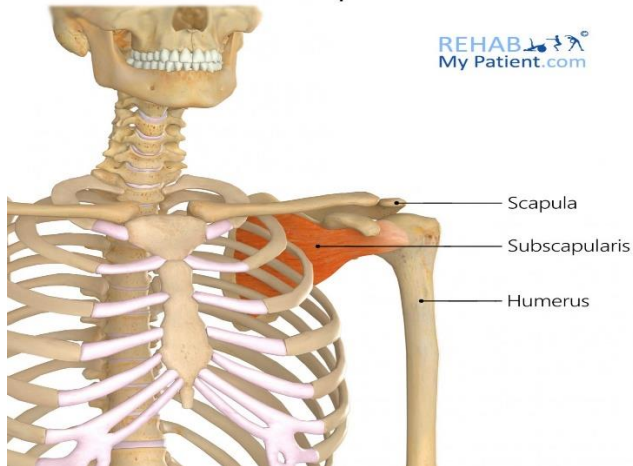
#### 15. **SUBSCAPULARIS**

ORIGIN – subscapular fossa

INSERTION – lesser tubercle of humerus

INNERVATION – upper and lower subscapular nerves (C<sub>5</sub>, C<sub>6</sub>, C<sub>7</sub>)

Subscapularis



#### 16. **LATISSIMUS DORSI**

ORIGIN – spinous process of thoracic T<sub>7</sub>-T<sub>12</sub>

Thoracolumbar fascia

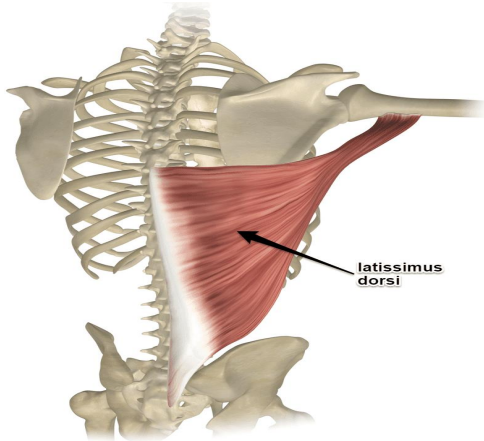
Iliac crest

Inferior 3 or 4 ribs

Inferior angle of scapula

INSERTION – floor of intertubercular sulcus of humerus

INNERVATION – thoracodorsal nerve (C<sub>6</sub>, C<sub>7</sub>, C<sub>8</sub>)



### 17. **BICEPS BRACHII**

Long Head Origin – supraglenoid tubercle of scapula

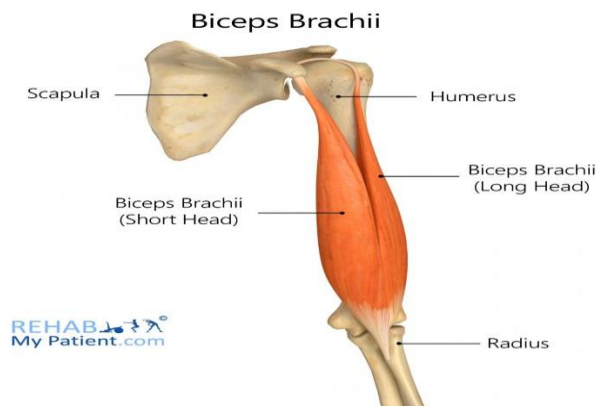
Short Head Origin – apex of coracoid process

Insertion – tuberosity of radius

INNERVATION OF LONG HEAD – radial nerve (C<sub>6</sub>, C<sub>7</sub>, C<sub>8</sub>)

Musculocutaneous nerve (C<sub>5</sub>, C<sub>6</sub>)

INNERVATION OF SHORT HEAD – musculocutaneous nerve (C<sub>5</sub>, C<sub>6</sub>)



### 18. **CORACOBRACHIALIS**

ORIGIN – apex of coracoid process

INSERTION – linear roughening on midshaft of humerus on medial side

INNERVATION – musculocutaneous nerve (C<sub>5</sub>, C<sub>6</sub>, C<sub>7</sub>)



## 19. **BRACHIALIS**

ORIGIN – distal half of anterior aspect of humerus (medial and lateral surfaces) and adjacent intermuscular septa

INSERTION – tuberosity of ulna

INNERVATION – musculocutaneous nerve (C<sub>5</sub>, C<sub>6</sub>)

Small contribution by the radial nerve (C<sub>7</sub>) to lateral part of muscle



## 20. **SUPINATOR**

ORIGIN – supinator crest of ulna

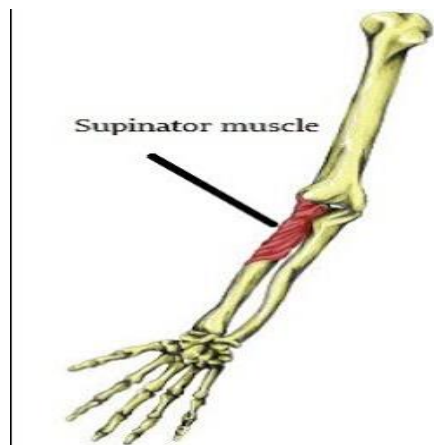
Lateral epicondyle of humerus

Radial collateral ligament

Annular radial ligament

INSERTION – lateral edge of radial tuberosity and oblique line of radius

INNERVATION – Posterior interosseous nerve (C<sub>6</sub>, C<sub>7</sub>)



## 21. **PRONATOR TERES**

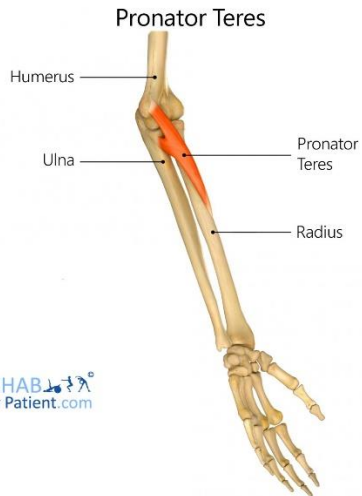
ORIGIN OF HUMERAL HEAD – medial epicondyle and supracondylar ridge of humerus

ORIGIN OF ULNAR HEAD – coronoid process of ulna

INSERTION – middle of lateral surface of body of radius

INNERVATION – Median nerve





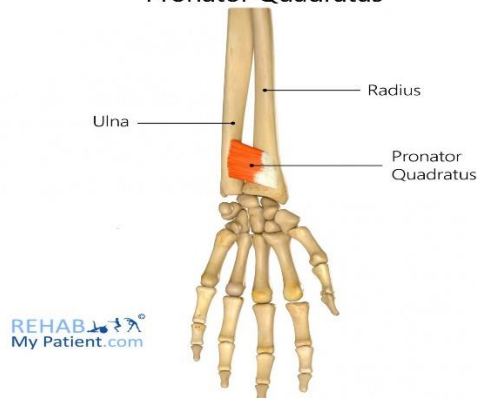
## 22. **PRONATOR QUADRATUS**

ORIGIN – linear ridge on anterior surface of lower end of ulna

INSERTION – lateral, anterior surface of radius

INNERVATION – median nerve (anterior interosseous nerve) [C<sub>7</sub>, C<sub>8</sub>]

Pronator Quadratus



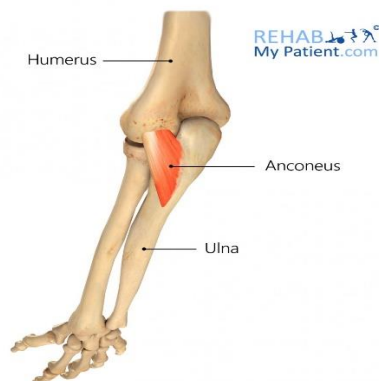
## 23. **ANCONEUS**

ORIGIN – lateral epicondyle of humerus

INSERTION – lateral surface of olecranon

INNERVATION – Radial nerve (via branch to medial head of triceps brachii)

Anconeus



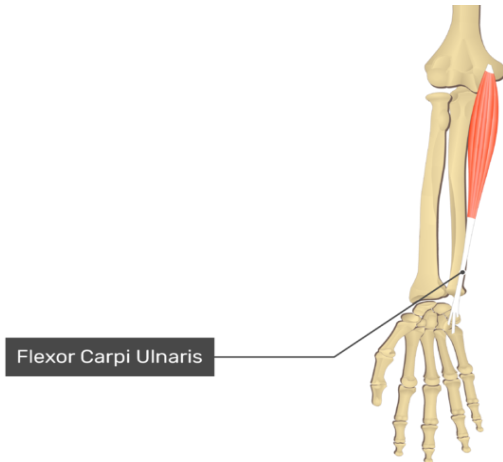
#### 24. **FLEXOR CARPI ULNARIS**

ORIGIN OF HUMERAL HEAD – medial epicondyle of humerus

ORIGIN OF ULNAR HEAD – olecranon and posterior border of ulna

INSERTION – pisiform bone, and then via pisohamate and pisometacarpal ligaments into the hamate and base of metacarpal V.

INNERVATION – ulnar nerve (C<sub>7</sub>, C<sub>8</sub>, T<sub>1</sub>)

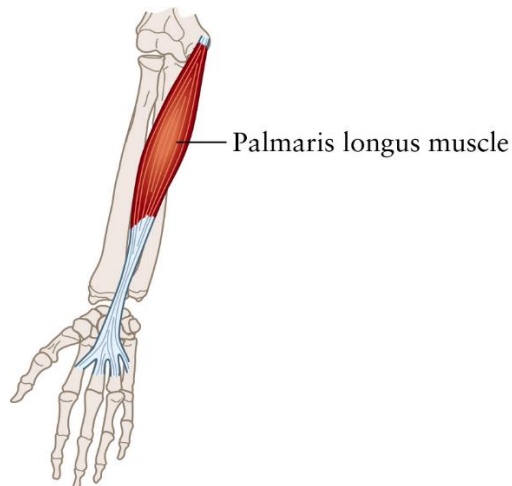


#### 25. **PALMARIS LONGUS**

ORIGIN – medial epicondyle of humerus

INSERTION – palmar aponeurosis of hand

INNERVATION – median nerve (C<sub>7</sub>, C<sub>8</sub>)



#### 26. **FLEXOR CARPI RADIALIS**

ORIGIN – medial epicondyle of humerus

INSERTION – base of metacarpals II and III

INNERVATION – Median nerve (C<sub>6</sub>, C<sub>7</sub>)



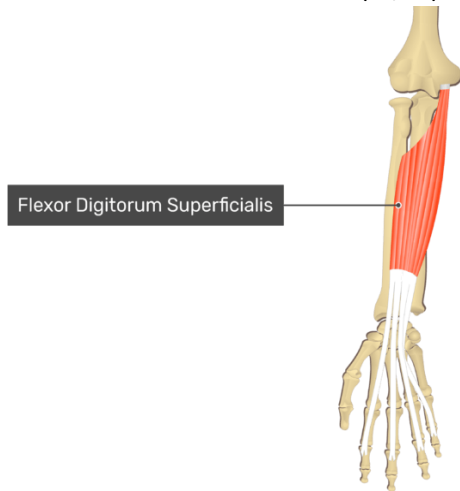
**27. FLEXOR DIGITORUM SUPERFICIALIS**

ORIGIN OF HUMERO-ULNAR HEAD – medial epicondyle of humerus and adjacent margin of coronoid process

ORIGIN OF RADIAL HEAD – oblique line of radius

INSERTION – four tendons, which attach to the palmar surfaces of the middle phalanges of the index, middle, ring, and little fingers

INNERVATION – Median nerve (C<sub>8</sub>, T<sub>1</sub>)



**28. FLEXOR DIGITORUM PROFUNDUS**

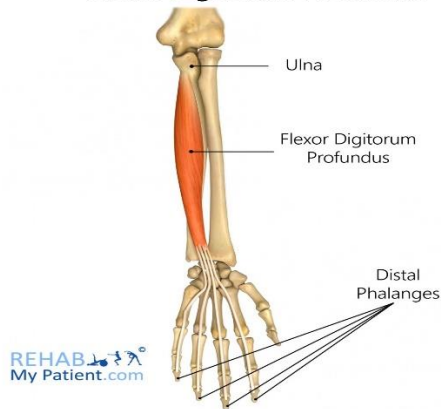
ORIGIN – anterior and medial surfaces of ulna

Anteromedial half of interosseous membrane

INSERTION – four tendons, which attach to palmar surface of distal phalanges of the index, middle, ring, and little fingers

INNERVATION – lateral half by median nerve; medial half by ulnar nerve (C<sub>8</sub>, T<sub>1</sub>)

### Flexor Digitorum Profundus



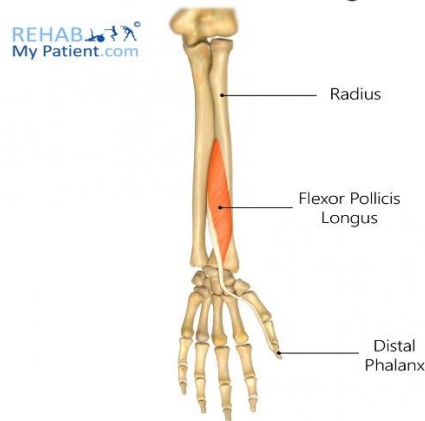
### 29. FLEXOR POLLICIS LONGUS

ORIGIN – anterior surface of radius and radial half of interosseous membrane

INSERTION – palmar surface of base of distal phalanx of thumb

INNERVATION – median nerve (anterior interosseous nerve) [C<sub>7</sub>, C<sub>8</sub>]

### Flexor Pollicis Longus

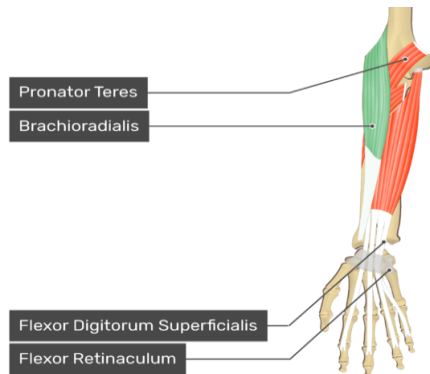


### 30. BRACHIORADIALIS

ORIGIN – Proximal part of lateral supraepicondylar ridge of humerus and adjacent intermuscular septum

INSERTION – lateral surface of distal end of radius

INNERVATION – radial nerve before division into superficial and deep branches

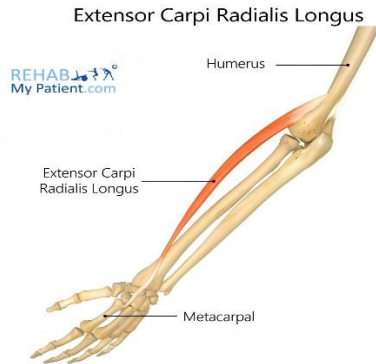


### 31. EXTENSOR CARPI RADIALIS LONGUS

ORIGIN – distal part of lateral supraepicondylar ridge of humerus and adjacent intermuscular septum

INSERTION – dorsal surface of base of metacarpal II

INNERVATION – radial nerve (C<sub>6</sub>, C<sub>7</sub>) before division into superficial and deep branches

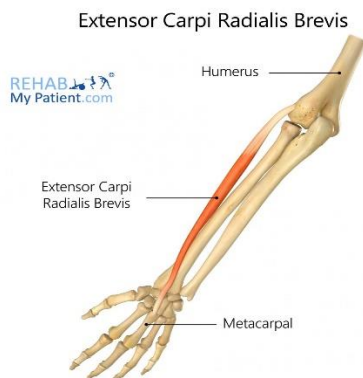


### 32. EXTENSOR CARPI RADIALIS BREVIS

ORIGIN – lateral epicondyle of humerus and adjacent intermuscular septum

INSERTION – dorsal surface of base of metacarpals II and III

INNERVATION - deep branch of radial nerve (C<sub>7</sub>, C<sub>8</sub>) before penetrating supinator muscle

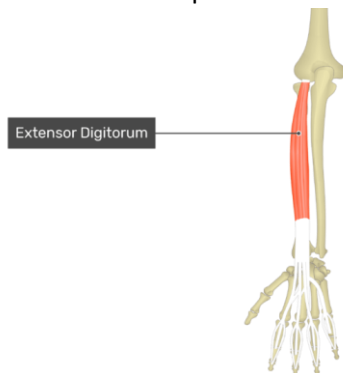


### 33. EXTENSOR DIGITORUM

ORIGIN – lateral epicondyle of humerus and adjacent intermuscular septum and deep fascia

INSERTION – four tendons, which insert via extensor hoods into the dorsal aspect of the bases of the middle and distal phalanges of the index, middle, ring, and little fingers

INNERVATION – posterior interosseous nerve (C<sub>7</sub>, C<sub>8</sub>)



#### 34. **EXTENSOR DIGITI MINIMI**

ORIGIN – lateral epicondyle of humerus and adjacent intermuscular septum together with extensor digitorum

INSERTION – extensor hood of little finger

INNERVATION – posterior interosseous nerve (C<sub>7</sub>, C<sub>8</sub>)

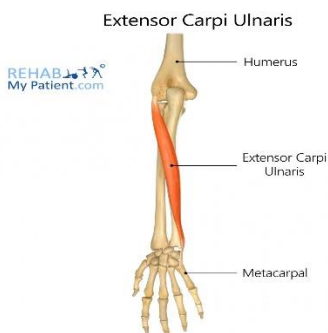


#### 35. **EXTENSOR CARPI ULNARIS**

ORIGIN – lateral epicondyle of humerus and posterior border of ulna

INSERTION – tubercle on the base of the medial side of metacarpal

INNERVATION – posterior interosseous nerve (C<sub>7</sub>, C<sub>8</sub>)

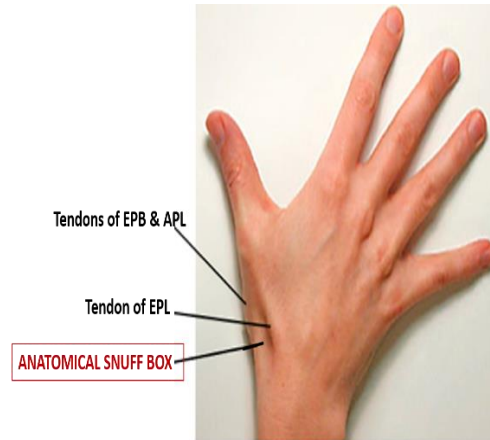


#### 36. **ABDUCTOR POLLICIS LONGUS**

ORIGIN – Posterior surface of ulna and radius (distal to the attachments of supinator and anconeus), and intervening interosseous membrane

INSERTION – lateral side of base of metacarpal I

INNERVATION – posterior interosseous nerve (C<sub>7</sub>, C<sub>8</sub>)

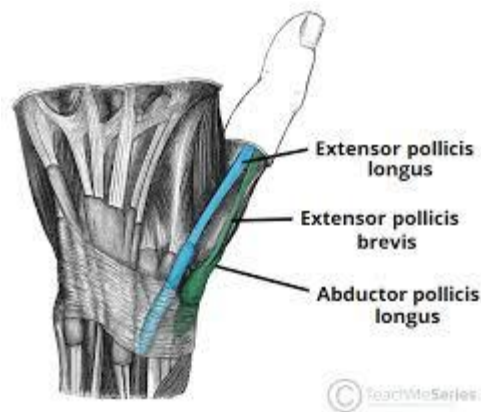
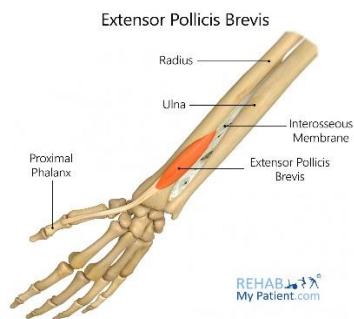


### 37. EXTENSOR POLLICIS BREVES

ORIGIN – posterior surface of radius (distal to abductor pollicis longus) and the adjacent interosseous membrane

INSERTION – dorsal surface of base of proximal phalanx of thumb

INNERVATION – posterior interosseous nerve (C<sub>7</sub>, C<sub>8</sub>)

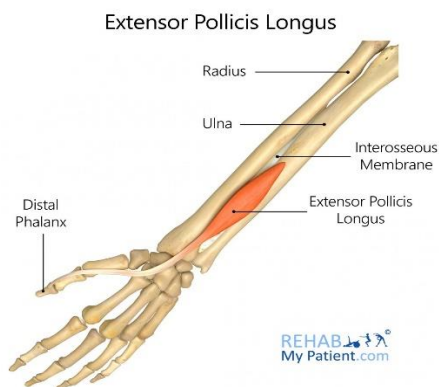


### 38. EXTENSOR POLLICIS LONGUS

ORIGIN – posterior surface of ulna (distal to the abductor pollicis longus) and the adjacent interosseous membrane

INSERTION – dorsal surface of base of distal phalanx of thumb

INNERVATION – posterior interosseous nerve (C<sub>7</sub>, C<sub>8</sub>)

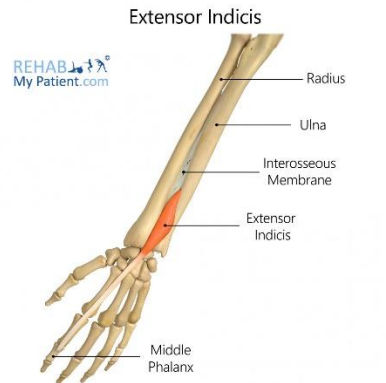


### 39. EXTENSOR INDICES

ORIGIN – posterior surface of ulna (distal to extensor pollicis longus) and the adjacent interosseous membrane

INSERTION – extensor hood of index finger

INNERVATION - posterior interosseous nerve (C<sub>7</sub>, C<sub>8</sub>)



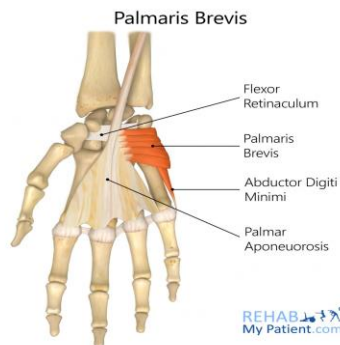
### 40. PALMARIS BREVIS

ORIGIN – Palmar aponeurosis

Flexor retinaculum

INSERTION – dermis of skin on medial margin of hand

INNERVATION – superficial branch of ulnar nerve (C<sub>8</sub>, T<sub>1</sub>)



### 41. DORSAL INTEROSSEI (FOUR MUSCLES)

ORIGIN – adjacent sides of metacarpals

INSERTION – extensor hood and base of proximal phalanges of index, middle and ring fingers

INNERVATION – Deep branch of ulnar nerve (C<sub>8</sub>, T<sub>1</sub>)



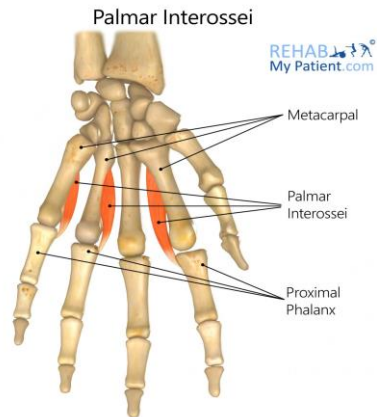


#### 42. **PALMAR INTEROSSEI**

ORIGIN – Sides of metacarpals

INSERTION – Extensor hoods of the thumb, index, ring, and little fingers and the proximal phalanx of thumb

INNERVATION – Deep branch of ulnar nerve (C8,T1)



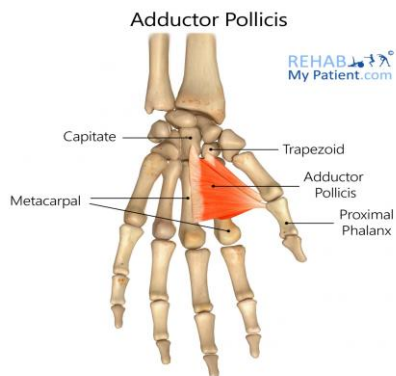
#### 43. **ADDUCTOR POLLICIS**

ORIGIN OF TRANSVERSE HEAD – metacarpal III

ORIGIN OF OBLIQUE HEAD – capitate and bases of metacarpal II and III

INSERTION – base of proximal phalanx extensor hood of thumb

INNERVATION – deep branch of ulnar nerve (C<sub>8</sub>, T<sub>1</sub>)

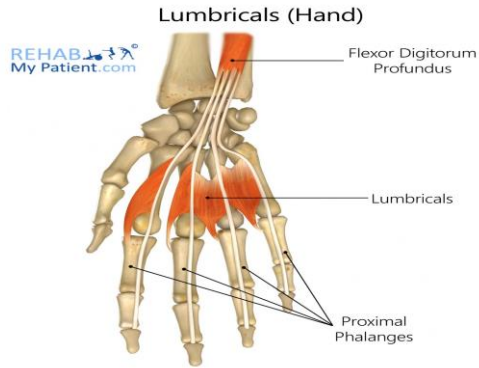


#### 44. **LUMBRICALS (FOUR MUSCLES)**

ORIGIN – tendons of flexor digitorum profundus

INSERTION – extensor hoods of index, ring, middle and little fingers

INNERVATION – medial two by the deep branch of the ulnar nerve; lateral two by digital branches of median nerve

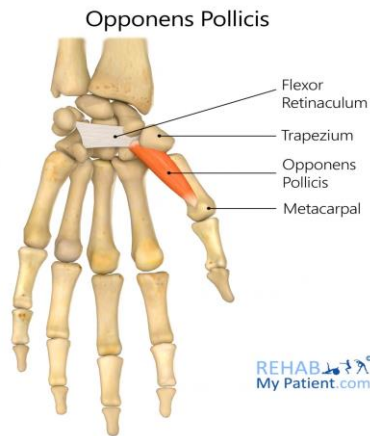


**45. OPPONENS POLLICIS**

ORIGIN – Tubercle of trapezium and flexor retinaculum

INSERTION – Lateral margin and adjacent palmar surface of metacarpal I

INNERVATION – Recurrent branch of median nerve (C<sub>8</sub>, T<sub>1</sub>)



**46. ABDUCTOR POLLICIS BREVIS**

ORIGIN – Tubercles of scaphoid and trapezium and adjacent flexor retinaculum

INSERTION – Proximal phalanx and extensor hood of thumb

INNERVATION – Recurrent branch of median nerve (C<sub>8</sub>,T<sub>1</sub>)

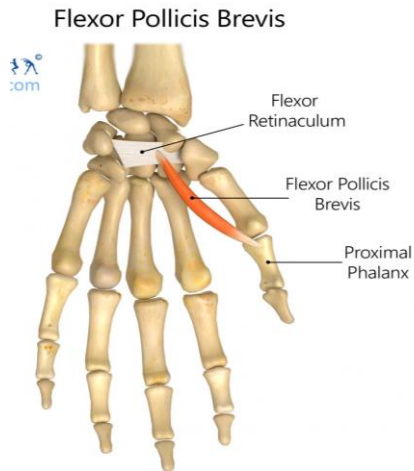


#### **47. FLEXOR POLLICIS BREVIS**

ORIGIN – Tubercle of the trapezium and flexor retinaculum

INSERTION – Proximal phalanx of the thumb

INNERVATION – Recurrent branch of median nerve (C8,T1)



#### **48. OPPONENS DIGITI MINIMI**

ORIGIN – Hook of hamate and flexor retinaculum

INSERTION – Medial aspect of metacarpal V

INNERVATION – Deep branch of ulnar nerve (C8,T1)

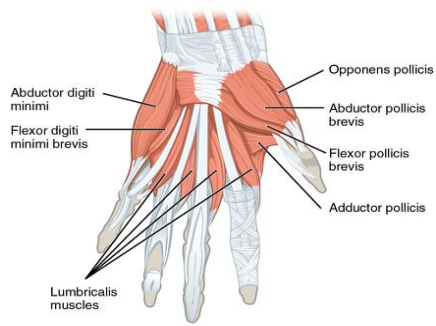


#### **49. ABDUCTOR DIGITI MINIMI**

ORIGIN – Pisiform, the pisohamate ligament, and tendon of flexor carpi ulnaris

INSERTION – Proximal phalanx of little finger

INNERVATION – Deep branch of ulnar nerve (C8,T1)



**50. FLEXOR DIGITI MINIMI BREVIS**

ORIGIN – Hook of the hamate and flexor retinaculum

INSERTION – Proximal phalanx of little finger

INNERVATION – Deep branch of ulnar nerve (C8,T1)

Flexor Digiti Minimi Brevis (Hand)

