

| <b>MUSCLES OF FACIAL EXPRESSION</b> |                               |   |  |
|-------------------------------------|-------------------------------|---|--|
| <b>MUSCLE</b>                       | <b>ORIGIN</b>                 | <b>INSERTION</b>                                    | <b>ACTION</b>  |
| frontalis                           | galea aponeurotica            | skin of eyebrows and nose                           | raises eyebrows, wrinkles forehead skin                                      |
| orbicularis oculi                   | frontal and maxillary bone    | skin of eyelid                                      | blinking, squinting, forceful closing of eyelids                             |
| orbicularis oris                    | fibers of other mouth muscles | muscles and skin at angle of the mouth              | closes and protrudes lips  |
| platysma                            | pectoralis and deltoid fascia | lower border of the mandible, mouth skin and muscle | depresses mandible, draws angle of mouth downward, tightens skin of the neck |

| <b>MUSCLES OF MASTICATION</b> |                                     |                                  |                                |
|-------------------------------|-------------------------------------|----------------------------------|--------------------------------|
| <b>MUSCLE</b>                 | <b>ORIGIN</b>                       | <b>INSERTION</b>                 | <b>ACTION</b>                  |
| masseter                      | zygomatic arch                      | mandible                         | elevates mandible              |
| temporalis                    | temporal fossa of the temporal bone | coronoid process of the mandible | elevates and retracts mandible |

| <b>MUSCLES OF THE NECK</b> |  |                                      |   |
|----------------------------|--|--------------------------------------|---|
| <b>MUSCLE</b>              | <b>ORIGIN</b>                            | <b>INSERTION</b>                     | <b>ACTION</b>   |
| Sternocleidomastoid        | manubrium of sternum and medial clavicle | mastoid process of the temporal bone | both muscles acting together flex cervical vertebral column, acting alone rotates head to the opposite side |

| <b>MUSCLES OF THE THORACIC WALL</b> |                         |                                 |  |
|-------------------------------------|-------------------------|---------------------------------|--|
| <b>MUSCLE</b>                       | <b>ORIGIN</b>           | <b>INSERTION</b>                | <b>ACTION</b>  |
| pectoralis minor                    | ribs 3-5                | coracoid process of the scapula | depresses and pulls scapula anteriorly                     |
| external intercostals               | inferior border of ribs | superior border of ribs         | elevate and expand rib cage                                |
| internal intercostals               | superior border of ribs | inferior border of ribs         | depress rib cage   |
| serratus anterior                   | ribs                    | vertebral border of the scapula | draws scapula forward along thoracic wall, rotates scapula |

| <b>MUSCLES OF THE ABDOMINAL WALL</b> |                                 |   |  |
|--------------------------------------|---------------------------------|---|--|
| <b>MUSCLE</b>                        | <b>ORIGIN</b>                   | <b>INSERTION</b>  | <b>ACTION</b>  |
| external abdominal oblique           | lower eight ribs                | linea alba, aponeurosis of the external abdominal oblique | compresses abdominal contents, assists in flexion and rotation of vertebral column |
| internal abdominal oblique           | lumbodorsal fascia, iliac crest | linea alba, aponeurosis of internal abdominal oblique     | same as external abdominal oblique   |
| rectus abdominis                     | pubic crest and pubic symphysis | ribs and xiphoid process                                  | flexes vertebral column, compresses abdominal contents                             |

| <b>MUSCLES OF THE PECTORAL GIRDLE</b> |   |  |   |
|---------------------------------------|---|--|---|
| <b>MUSCLE</b>                         | <b>ORIGIN</b>   | <b>INSERTION</b>   | <b>ACTION</b>   |
| trapezius                             | occipital bone, cervical and thoracic vertebrae                     | lateral 1/3 of clavicle and scapular spine and acromion          | elevates, depresses, rotates, adducts scapula                           |
| deltoid                               | clavicle, acromion and spine of scapula                             | deltoid tuberosity of the humerus                                | abducts; flexes and medially rotates; extends and laterally rotates arm |
| latissimus dorsi                      | lumbodorsal fascia via thoracic and lumbar vertebrae, sacrum, ilium | intertubercular groove of the humerus                            | extends, adducts, and medially rotates arm                              |
| pectoralis major                      | sternum, clavicle, and ribs   | greater tubercle and along intertubercular groove of the humerus | flexes, medially rotates, and adducts arm                               |

| <b>MUSCLES ASSOCIATED WITH THE SCAPULA</b> |  |  |   |
|--|--|--|---|
| <b>MUSCLE</b>                              | <b>ORIGIN</b>                              | <b>INSERTION</b>                                   | <b>ACTION</b>                             |
| levator scapula                            | transverse processes of cervical vertebrae | superior angle and vertebral border of the scapula | elevates scapula                          |
| rhomboid major and minor                   | spinous processes of thoracic vertebrae    | vertebral border of the scapula                    | adducts, rotates scapula                  |
| supraspinatus                              | supraspinous fossa of the scapula          | greater tubercle of the humerus                    | arm abduction                             |
| infraspinatus                              | infraspinous fossa of the scapula          | greater tubercle of the humerus                    | laterally rotates arm                     |
| teres major                                | inferior angle of scapula                  | lesser tubercle of the humerus                     | adducts, extends and medially rotates arm |
| teres minor                                | lateral border of scapula                  | greater tubercle of the humerus                    | laterally rotates arm                     |
| subscapularis                              | subscapular fossa of the scapula           | lesser tubercle of the humerus                     | medially rotates arm                      |

| <b>MUSCLES OF THE ANTERIOR COMPARTMENT OF THE ARM</b> |   |                                 |   |
|---|---|---------------------------------|---|
| <b>MUSCLE</b>   | <b>ORIGIN</b>   | <b>INSERTION</b>                | <b>ACTION</b>                             |
| biceps brachii<br>long head<br><br>short head         | supraglenoid tubercle of the scapula<br><br>coracoid process of the scapula | radial tuberosity of the radius | flexes arm and forearm, supinates forearm |
| brachialis  | anterior humerus  | coronoid process of the ulna    | flexes forearm                            |
| coracobrachialis                                      | coracoid process of the scapula   | medial humerus                  | flexes arm                                |

| <b>MUSCLES OF THE POSTERIOR COMPARTMENT OF THE ARM</b> |                                      |                               |                         |
|--|--------------------------------------|-------------------------------|-------------------------|
| <b>MUSCLE</b>  | <b>ORIGIN</b>                        | <b>INSERTION</b>              | <b>ACTION</b>           |
| triceps brachii<br>long head                           | infraglenoid tubercle of the scapula | olecranon process of the ulna | extends arm and forearm |
| lateral head   | posterior humerus                    | olecranon process of the ulna | forearm extension       |
| medial head  | posterior humerus                    | olecranon process of the ulna | forearm extension       |

| <b>MUSCLES OF THE ANTERIOR COMPARTMENT OF THE FOREARM</b> |  |                                   |   |
|---|--|-----------------------------------|---|
| <b>MUSCLE</b>   | <b>ORIGIN</b>                            | <b>INSERTION</b>                  | <b>ACTION</b>                                   |
| pronator teres  | medial epicondyle of the humerus         | radius                            | pronates forearm                                |
| flexor carpi radialis                                     | medial epicondyle of the humerus         | metacarpals                       | flexes and abducts hand                         |
| palmaris longus   | medial epicondyle of the humerus         | palmar aponeurosis                | flexes hand                                     |
| flexor carpi ulnaris                                      | medial epicondyle of the humerus         | carpal and metacarpals            | flexes and adducts hand                         |
| flexor digitorum superficialis                            | medial epicondyle of the humerus         | middle phalanges 2nd to 5th digit | flexes phalanges                                |
| flexor digitorum profundus                                | ulna and interosseus membrane            | distal phalanges 2nd to 5th digit | flexes phalanges                                |
| flexor pollicis longus                                    | anterior radius and interosseus membrane | distal phalanx of the thumb       | flexes thumb                                    |
| pronator quadratus  | distal and anterior ulnar shaft          | distal and anterior radius        | pronates forearm, hold radius and ulna together |

| <b>MUSCLES OF THE POSTERIOR COMPARTMENT OF THE FOREARM</b> |  |  |  |
|--|--|--|--|
| <b>MUSCLE</b>  | <b>ORIGIN</b>                              | <b>INSERTION</b>                                   | <b>ACTION</b>                                  |
| brachioradialis  | lateral supracondylar ridge of the humerus | styloid process of the radius                      | flexes forearm                                 |
| extensor carpi radialis longus                             | lateral supracondylar ridge of the humerus | second metacarpal bone                             | extends and abducts hand                       |
| extensor carpi radialis brevis                             | lateral epicondyle of the humerus          | third metacarpal                                   | extends and abducts hand                       |
| extensor digitorum   | lateral epicondyle of the humerus          | middle and distal phalanges of medial four fingers | extends fingers and hand                       |
| extensor carpi ulnaris                                     | lateral epicondyle of the humerus          | fifth metacarpal                                   | extends and adducts hand                       |
| supinator  | lateral epicondyle of the humerus          | proximal end of radius                             | supinates forearm                              |
| abductor pollicis longus                                   | posterior radius and posterior ulna        | first metacarpal                                   | abducts and extends thumb                      |
| extensor pollicis brevis                                   | radius and posterior ulna                  | proximal phalanx of the thumb                      | extends thumb                                  |
| extensor pollicis longus                                   | ulna and posterior radius                  | distal phalanx of the thumb                        | extends thumb                                  |
| extensor indicis   | posterior ulna                             | extensor expansion of index finger                 | extends index finger                           |
| extensor digiti minimi                                     | lateral epicondyle of the humerus          | extensor expansion of the little finger            | extends little finger                          |
| anconeus   | lateral epicondyle of the humerus          | olecranon process of ulna                          | abducts ulna during pronation; elbow extension |

| INTRINSIC MUSCLES OF THE HAND |  |                               |  |
|-------------------------------|--|-------------------------------|--|
| MUSCLE                        | ORIGIN   | INSERTION                     | ACTION   |
| abductor pollicis brevis      | scaphoid, trapezium                                      | proximal phalanx of the thumb | abducts thumb  |
| opponens pollicis             | trapezium  | thumb metacarpal              | rotates first metacarpal medially, i.e., opposition of the thumb |
| flexor pollicis brevis        | trapezium, 1 <sup>st</sup> metacarpal                    | proximal phalanx of thumb     | flexes and adducts thumb   |
| adductor pollicis             | capitate, 2 <sup>nd</sup> and 3 <sup>rd</sup> metacarpal | proximal phalanx of the thumb | adducts thumb  |

| MUSCLES ASSOCIATED WITH THE ANTERIOR COMPARTMENT OF THE THIGH                                     |  |   |   |
|---|--|---|---|
| MUSCLE  | ORIGIN   | INSERTION   | ACTION  |
| iliopsoas   | iliac fossa, transverse processes of lumbar vertebrae  | lesser trochanter of the femur  | flexes hip  |
| sartorius   | anterior superior iliac spine  | medial tibia  | flexes, laterally rotates thigh; flexes and medially rotates leg at the knee              |
| quadriceps femoris<br>rectus femoris<br>vastus lateralis<br>vastus medialis<br>vastus intermedius | anterior inferior iliac spine<br>greater trochanter of the femur<br>linea aspera<br>shaft of the femur | all four:<br>via quadriceps tendon into patella, then ligamentum patellae onto tibial tuberosity of the tibia | <b>rectus femoris only</b> - flexes thigh at hip<br><b>all four</b> - extends leg at knee |
| pectineus   | superior ramus of pubis  | linea aspera of femur   | flexes, adducts thigh   |
| tensor fascia latae   | anterior superior iliac spine, iliac crest   | iliotibial tract  | flexes and abducts thigh  |

| <b>MUSCLES ASSOCIATED WITH THE MEDIAL COMPARTMENT OF THE THIGH</b> |   |                         |  |
|--|---|-------------------------|--|
| <b>MUSCLE</b>  | <b>ORIGIN</b>   | <b>INSERTION</b>        | <b>ACTION</b>                            |
| gracilis   | inferior ramus and body of the pubis                    | medial surface of tibia | adducts thigh at hip; flexes leg at knee |
| adductor longus  | pubis   | linea aspera of femur   | adducts and flexes thigh at hip          |
| adductor brevis  | body and inferior ramus of the pubis                    | lineas aspera of femur  | adducts thigh at hip                     |
| adductor magnus  | inferior ramus of pubis and ischium, ischial tuberosity | lineas aspera of femur  | adducts and flexes thigh at hip          |

| <b>MUSCLES ASSOCIATED WITH THE GLUTEAL REGION AND POSTERIOR COMPARTMENT OF THE THIGH</b> |                                     |   |  |
|--|-------------------------------------|---|--|
| <b>MUSCLE</b>  | <b>ORIGIN</b>                       | <b>INSERTION</b>                              | <b>ACTION</b>  |
| gluteus maximus  | posterior ilium, sacrum, and coccyx | iliotibial tract, gluteal tuberosity of femur | extends and laterally rotates hip  |
| gluteus medius   | lateral ilium                       | greater trochanter of the femur               | abducts thigh at hip   |
| biceps femoris<br>long head<br>short head  | ischial tuberosity<br>linea aspera  | head of fibula, lateral condyle of tibia      | flexes and laterally rotates leg at knee<br><b>long head only</b> - extends thigh at hip |
| semitendinosus   | ischial tuberosity                  | medial tibia                                  | extends thigh at hip; flexes and medially rotates leg at knee                            |
| semimembranosus  | ischial tuberosity                  | medial condyle of tibia                       | extends thigh at hip; flexes and medially rotates leg at knee                            |
| gluteus minimis  | external surface of ilium           | greater trochanter of femur                   | abducts and medially rotates thigh   |
| piriformis   | lateral surface of ilium            | greater trochanter of femur                   | rotates and extends thigh laterally, abducts thigh                                       |
| quadratus femoris  | ischial tuberosity                  | intertrochanteric crest of femur              | rotates thigh laterally  |

| <b>MUSCLES ASSOCIATED WITH THE ANTERIOR COMPARTMENT OF THE LEG</b> |  |                                      |   |
|--|--|--------------------------------------|---|
| <b>MUSCLE</b>  | <b>ORIGIN</b>  | <b>INSERTION</b>                     | <b>ACTION</b>                                 |
| tibialis anterior  | lateral condyle of tibia   | cuneiform and base of 1st metatarsal | dorsiflexes and inverts the foot; extends toe |
| extensor hallucis longus   | anterior fibula, interosseous membrane                           | distal phalanx of great toe          | dorsiflexes and inverts foot; extends big toe |
| extensor digitorum longus  | lateral condyle of tibia, proximal fibula, interosseous membrane | phalanges of toes 2-5                | dorsiflexes foot and extends toes             |
| fibularis (peroneus) tertius                                       | anterior fibula, interosseous membrane                           | fifth metatarsal                     | dorsiflexes and everts foot                   |

| <b>MUSCLES ASSOCIATED WITH THE LATERAL COMPARTMENT OF THE LEG</b> |                |                                   |                                |
|---|----------------|-----------------------------------|--------------------------------|
| <b>MUSCLE</b>   | <b>ORIGIN</b>  | <b>INSERTION</b>                  | <b>ACTION</b>                  |
| fibularis (peroneus) longus                                       | head of fibula | cuneiform, base of 1st metatarsal | plantar flexes and everts foot |
| fibularis (peroneus) brevis                                       | distal fibula  | fifth metatarsal                  | plantar flexes and everts foot |

| <b>MUSCLES ASSOCIATED WITH THE POSTERIOR COMPARTMENT OF THE LEG</b> |  |                                    |   |
|---|--|------------------------------------|---|
| <b>MUSCLE</b>   | <b>ORIGIN</b>  | <b>INSERTION</b>                   | <b>ACTION</b>                                       |
| gastrocnemius   | lateral and medial condyle of the femur                | calcaneus                          | plantar flexes the foot, weak flexor of leg at knee |
| soleus  | proximal tibia, proximal fibula, interosseous membrane | calcaneus                          | plantar flexes the foot                             |
| flexor digitorum longus   | posterior tibia  | distal phalanges lateral four toes | plantar flexes and inverts foot; flexes toes        |
| flexor hallucis longus  | middle shaft of fibula                                 | distal phalanx great toe           | plantar flexes and inverts foot; flexes great toe   |
| tibialis posterior  | tibia and fibula                                       | navicular bone                     | plantar flexes and inverts foot                     |



