



LUTE SOCIETY of America, Inc.

Rochester, Michigan
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BASIC FINGER MOTIONS

- 1) FLEXATION: MOVING INWARD TOWARD PALM. FLEXORS LOCATED ON "UNDER" SIDE OF FOREARM. (FLEXION)
- 2) EXTENSION: MOVING OUTWARD, AWAY FROM PALM. EXTENSORS / ARE LOCATED ON THE "TOP" OF THE FOREARM.
- 3) ABDUCTION: MOVEMENT AWAY FROM A CENTER LINE RUNNING DOWN THE LENGTH OF THE MIDDLE FINGER. DORSAL INTEROSSEI.
- 4) ADDUCTION: MOVEMENT TOWARD THE CENTER LINE. PALMAR INTEROSSEI.
- 5) OPPOSITION
- 6) CIRCUMDUCTION

BASIC RIGHT HAND EXERCISE FOR TONE

- 1) Relax right hand and observe "natural" curve of fingers at rest, (N.B. If curve is distorted by habitual labor the "natural" position may not be right. Retraining may be necessary for muscles which are over developed in non-productive ways.)
- 2) Without disturbing "rest position", gently maneuver hand and arm so that the palm is parallel to the plane of the lute top.
- 3) Flex index finger as deeply as possible, (toward elbow!)
- 4) Observe, from repeated index flexion, the arc described by the fingertip, at its nearest point to the top, (strings.)
- 5) Arrange to contact the second course, at this lowest point of the finger's arc.
- 6) Gently rest the little finger on the top, disturbing the hand as little as possible. (Little finger rests at the convenience of the others, not the reverse.)
- 7) At contact with the string, the oval of the fingertip as it is viewed endwise, is bisected diagonally by the strings.
- 8) Relax right shoulder and arm so that their weight depresses the course toward the top, without the two strings contacting each other.
- 9) Pluck the finger off the course with the deep flexion of the index described above.
- 10) The amount of depression of the string toward the top just before plucking, determines the volume. Increasing flexion in degree or speed does not, by itself, create more usable sound.
- 11) At no time can the tip joint of the finger be flexed without, a) bringing the nail dangerously close to the string, b) a tightening of the adjacent finger, c) a loss of tone.

MUSCULAR SYSTEM / UPPER LIMB MUSCLES ACTING ON WRIST, HAND & FINGERS *

CN 14

1. This plate and the next should be considered and, if possible, colored together.
2. Color the title of flexor digitorum profundus (n) which is too deep to be shown, but whose tendons are colored on the next plate.
3. Notice that the title of extensor carpi radialis brevis is shortened to brevis and it gets a separate color.
4. Color the muscles acting on the thumb, including the arrow representing flexor pollicis longus, which is shown in the flexor view.

FLEXORS *

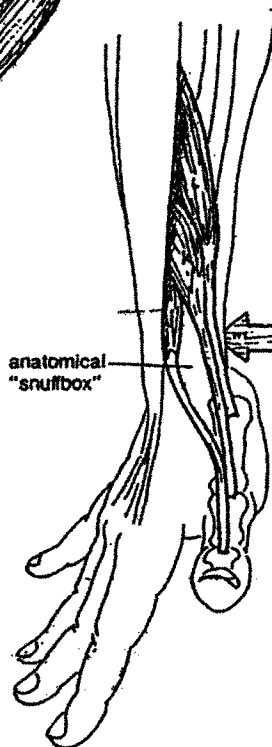
The flexors of the wrist and fingers take up most of the anterior compartment of the forearm, originating as a group from the medial epicondyle, the upper radius and ulna, and the intervening interosseous membrane. Crossing the wrist joint, the "carpi" muscles insert on the distal carpal bones or the metacarpals, while the two flexors of the digits, one immediately deep to the other and sharing the same tunnel and sheath, go on to the middle and distal phalanges. Palmaris longus, missing in about 10% of the population, merges with the palmar connective tissue (aponeurosis). See the next plate for continuation of digit flexors.

FLEX. CARPI ULNARIS_b
PALMARIS LONGUS_c
FLEX. CARPI RADIALIS_a
FLEX. DIGITORUM SUPERFICIALIS_d
FLEX. DIGITORUM PROFUNDUS_e



ANTERIOR VIEW

lateral epicondyle of the humerus
medial epicondyle of the humerus



LATERAL VIEW

EXTENSORS *

The extensors arise from the lateral epicondyle and upper parts of the bones and interosseous membrane of the forearm, but on the posterior side, creating an extensor compartment. As you can readily see on your own forearm, the mass of muscle here is less than on the flexor side. The "carpi" muscles insert on the distal carpal bones or metacarpals, while the extensors of the digits form an expansion of tendon over the middle and distal phalanges to which the small intrinsic muscles of the hand insert. This can best be appreciated in the following plate. The outcropping muscles to the thumb are considered below.

EXT. CARPI ULNARIS_b
EXT. DIGITI MINIMI_f
EXT. DIGITORUM_g
EXT. INDICIS_h
EXT. CARPI RADIALIS LONGUS_i
EXT. CARPI RADIALIS BREVIS_{i'}



POSTERIOR VIEW

ACTING ON THE THUMB *

These four muscles operate the thumb in concert with smaller intrinsic muscles to be drawn on the next plate. Flexor pollicis (L. pollex = thumb) longus is a member of the flexor compartment, lying along side flexor digitorum profundus: its tendon is best seen in the following plate. The two thumb extensors and the abductor create a small depression in the skin at the base of the thumb, laterally: the anatomical "snuffbox." These 4 muscles insert at the base of the metacarpal and the two phalanges as shown.

EXT. POLLICIS LONGUS_m
EXT. POLLICIS BREVIS_n
ABDUCTOR POLLICIS LONGUS_o
FLEX. POLLICIS LONGUS_m