THE HAND

Complex and designed for both brute force and incredible delicacies of touch the hand is a subject of study in itself, like the portrait and its corresponding anatomies. The hand is primarily a surface form of bone and tendons, the mass of its musculature is in the palm.

To begin the study of the hand it is well advised to first considers its mass conception of simplified form. The hand is always drawn out from the forearm into the wrist which is the **Carpus**. From the carpus is the trapezoidal form of the **Metacarpus**. From the back of the hand, the dorsal aspect (or view) the metacarpus is convex; from the palmar aspect the metacarpus is concave.

The fleshy ball of the thumb (palmar aspect) is the **Thenar Eminence**; the ‘striking’ side of the hand is the **Hyperthenar Eminence**. These eminences are shaped by muscles that will be discussed at length later. The triangular sheet of tendinous fibers in the palm is the **Palmar Aponeurosis** – this form is subtly indicated when the hand is stretched out and flexed.

**The Carpus – proximal row**

- **Triquetral**
- **Scaphoid**
- **Lunate**
- **Pisiform**

**Back of Hand**
- **Dorsal Aspect**
**Palm of Hand**
- **Palmar Aspect**
**Side of Hand**
- **Lateral Aspect**
The Wrist (Carpus)

Articulating to the radius and ulna are the eight, various and irregularly shaped, bones of the carpus. These eight bones of the wrist are arranged in two rows: the Proximal and the Distal. In the proximal row, with is the row articulating directly into the radius and ulna, is the Scaphoid, Lunate, Triquetral and the Pisiform. The four bones in the distal row are the Trapezium, Trapezoid, Capitate and the Hamate.

Overall the carpus is curved – its dorsal aspect is convex, the palmar concave. On the dorsal, or back of the carpus is a depression, towards the radial side of the wrist, between the two rows of carpal bones that is visible when the wrist is flexed. On the palmar side the carpus has two significant bony landmarks: the pisiform on the ulnar side at the base of the hyperthenar eminence, and the tubercles of the trapezium and scaphoid on the radial side at the base of the thenar eminence. Again, these bony projections are most visible when the wrist is flexed.

The Metacarpus

The body of the hand is the Metacarpus which is comprised of the five metacarpal bones. Each metacarpal has articular facets fitting into the distal row of the carpus at its base, or superior extremity. The head of each metacarpal is rounded and articulates with the fingers, which are the phalanges, thus forming the primary knuckles.
The four metacarpals of the fingers display a radially descending relationship to each other from the index finger to the little finger. The heads of the metacarpals describe a curve that is called the **Transverse Arch**.

The fifth metacarpal is the body of the thumb. This metacarpal is isolated from the other four; its base is articulated with the trapezium of the carpus defining the carpometacarpal joint. This provides the thumb with a wide range of movement including its critical oppositional gesture for grasping objects.

![The Phalanges (fingers & thumb)](image)

The phalanges are the four fingers and the thumb. The singular term is phalanx. Each finger has three phalanges – a proximal, a middle and a distal; the thumb has only two – a proximal and a distal. Each phalanx tapers distally and is approximately 2/3 the length of its immediate proximate phalanx. The base of each phalanx is larger than its distal head. The articulating base and head of each phalanx is squarish and defines each transverse arch of the knuckles lines, particularly the proximal and middle phalanges. When the fingers are flexed a groove is noticeable at these interphalangeal joints. All five of the distal phalanges are flattened at their tips where they are embedded with fibrous fat.

Anatomically, the primary knuckle joint of the middle finger – which is the **Metacarpophalangeal Joint** – is the mid-point of the hand’s length.
Learn How to DRAW HANDS!

Knowing how to draw hands is indispensable to portrait and figure artists. Whether your work is high realism or more gesturally expressive you know how important it is to draw hands that work.

No more hidden hands or banana fingers!

Never again curtail your expression because you cannot draw hands.

This is a no nonsense, step-by-step structural approach to understanding the hand.

Originally published as a 2 hour DVD, Drawing Hands sold for $77. Now, for ONE WEEK ONLY get this same workshop as an instant video download for ONLY $12.95!

Drawing Hands presents four lessons on drawing the hand: Beginning with the anatomy of the hand you then proceed to a structural line drawing and then progress to constructing and tonally rendering the hand in graphite pencil; you then conclude the workshop with drawing the hand in sanguine conte from beginning to end.

My Drawing Hands Instant Video Download regularly sells for $27! YOU SAVE $14!

Get all the info on this workshop here!
The hand is comprised of both extrinsic and intrinsic muscles. The extrinsic muscles are those of the forearm whose tendons insert into the hand. The intrinsic muscles are those of the hand, or manus, itself.

The dorsal aspect, the back of the hand, is bony and tendinous. The palmar aspect has three muscle masses: the Thenar Eminence, the Hypotenar Eminence and the First Dorsal Intercoseous muscle. All of these muscles masses are tear-shaped.

The thenar eminence is the muscle mass of the thumb. This muscle mass is the abductor pollicis brevis, the flexor pollicis brevis and the opponens pollicis (which is hidden from view). These three muscles constitute the tear-dropped shape of the ball of the thumb.

The abductor pollicis brevis is the largest muscle of the thenar eminence: it just overlaps the flexor pollicis brevis and pretty much covers the opponens pollicis. The opponens pollicis is a deep muscle that contributes to the bulk of the thenar eminence. The thenar eminence is wider and thicker than the hypothenar eminence.

The hypothenar eminence is an elongated form, narrow and long and situated on the outside edge of the hand and palm it inserts distally on the outside of the little finger. The hypothenar eminence is comprised of four muscles: the abductor digiti minimi, the flexor digiti minimi brevis, the opponens digiti minimi (which is hidden from view) and the palmaris brevis. The individual muscles of the hypothenar eminence are not visibly distinguishable.

The inner edge of the hypothenar eminence blends into the concavity of the palm due to the palmar fat.
The **First Dorsal Interosseous** muscle originates on the inside of the shaft of the thumb’s metacarpal and the outside edge of the metacarpal shaft of the index finger. It inserts into the outside edge of the proximal phalanx of the index finger. The first dorsal interosseous muscle adducts the finger away from the middle finger. It doesn’t adduct the thumb. Adduct means moving towards a common center.

The first dorsal interosseous forms the bulging tear-drop mass within the triangular shape of the metacarpus between the thumb and index finger. It is the largest of the four dorsal interosseous muscles (the other three are between the metacarpal bones).
The *Adductor Pollicis – Transverse Head* originates on the palmar aspect of the middle-finger's metacarpal and inserts into the base of the thumb's proximal phalanx. The *Adductor Pollicis – Transverse Head* is flat and triangular; it adducts and flexes the thumb at the metacarpophalangeal joint.
The largest of the thenar muscles is the *Abductor Pollicis Brevis* which originates on the anterior surface of the carpus at the trapezium and scaphoid. It inserts into the outside edge of the proximal phalanx of the thumb. This flat, triangular and elongated muscle abducts (which means draw away from) the thumb from the palm at the metacarpal joint. It also works to rotate the thumb medially.
The **Flexor Pollicis Brevis** originates from the palmar aspect of the trapezium, trapezoid and scaphoid of the wrist. It inserts into the base of the outside edge of the thumb’s proximal phalanx. This is a small, slender muscle that flexes the proximal phalanx of the thumb and also abducts the thumb away from the fingers. This is the action of the opposable thumb.
The *Palmaris Brevis* transverses across the hypothenar eminence and inserts into the skin on the ulner (outside) side of the palm. This is a thin, rectangular skin muscle that pulls the skin of the palm towards the middle thus thickening the volume of the hyperthenar eminence deeping the hand when it is cupped.
The largest of the hypothenar muscle mass on the outside edge of the hand is the *Abductor Digiti Minimi*. It originates from the pisiform of the carpus and inserts into the outside of the proximal phalanx of the little finger. Its purpose is to abduct and flex the little finger at the metacarpophalangeal joint.
The *Flexor Digiti Minimi Brevis* is a narrow muscle that contributes to the mass of the hypothenar eminence. It originates from the medial hook of the hamate and inserts into the palmar base of the proximal phalanx of the little finger and works to flex and assist in abducting it.
Within the back of the hand (the dorsal aspect) between the metacarpal bones of the fingers are the three *Dorsal Interosseous* muscles that create subtle oblique folds when the fingers are extended. Their movement is highly restricted to a very minimal lateral expansion. Their purpose is to stabilize and strengthen the metacarpus.
Situated deep in the palm of the hand are small muscles called the *Lumbricales*. They fill the hollow of the palm and do not influence surface form. The hollow of the palm is covered by the strong *Palmar Aponeurosis*. 
The extrinsic muscles of the hand are those of the forearm and, as mentioned previously, only the tendons extend into the hand. These are numerous and complex. Thus they are best understood in the context of the fifteen muscles of the forearm. These forearm muscles have little influence on the palmar surface view.

In the dorsal aspect of the hand the Extensor Digitorum is of note. The tendons of the Extensor Digitorum is visible running the length of the fingers, especially when the hand is flexed you will see these tendons running length-wise from the metacarpophalangeal joints through the interphalangeal joints.

Generally speaking, each finger (the index, middle, ring and little) has one visible tendon of the Extensor Digitorum extending along their length. Anatomically, however, the tendon’s configuration is more complex and layered – in fact, the extensor digitorum is composed of several layers although they are usually seen as just one.
The Extensor Pollicis Longus (Pink) adducts the thumb at the carpometacarpal joint and extends the distal phalanx. The squarish depression on the radial side of the wrist is the snuffbox which is, in large part, formed by the extensor pollicis longus and the Extensor Pollicis Brevis (Blue). The snuffbox is formed when the thumb is extended and these two tendons are prominent.

And, finally, the block-like form of the wrist is cuffed by a thick, toughened band of fascia which is the Extensor Retinaculum which holds all of the extrinsic muscles in place.
The Portrait Drawing Mastery Studio

The Compleat Instant Download Portrait Drawing Training Program

Get started right now! The Portrait Drawing Mastery Studio is THE comprehensive portrait artist’s training and education!

The Portrait Drawing Mastery Studio contains everything you need to become a fully rounded portrait artist. Suitable for the hobbyist or professional at any level from beginner to advanced who wants college-level instruction in all aspects of portrait drawing.

Whether you want to paint, sculpt or draw portraits—Drawing is the foundation of all art. This is a truth, which has been taught for centuries by all the greatest masters and still holds true today even if you only want to do expressionistic or abstract art.

An enormous amount of thought and care has been put into developing these instant download programs as a total package for your highest learning advantage.

Another truism is painting mistakes are generally drawing mistakes. As a figurative painter, I can tell you this is an infallible truth. Master your drawing now and save yourself heartbreak later. It is quite disillusioning to spend weeks and months on a painting and as it nears completion all of those drawing errors begin to emerge and take center stage.

The central focus of the collection are our best-selling Mastering Portrait Drawing 1, 2 & 3 workshops and Drawing Hands. These workshops will lay the solid foundation and be your eternal reference material for improving your portraits year after year. (You won’t absorb it all the first time).

INCLUDED with the Portrait Drawing Mastery Studio are these 5 Ebooks including my Atlas of Facial Anatomy – a combined $62.55 straight up value.

A total value of over $264 for ONLY $97!!

Order Now and Start Drawing Today!

Get all the details here!
THE SURFACE FORMS OF THE HAND

The dorsal aspect (back) of the hand is primarily distinguished by the metacarpals, ligaments (most noticeably the Extensor Digitorum and snuff box) and the veins.

Oblique skin folds appear when the fingers (two through five) are pressed together. These folds are the result of the interosseous muscles contracting laterally and pushing the skin upwards.

When the thumb is adducted a deep fold is formed and the mass of the first dorsal interosseous is pushed up into a convex mass.

As a general rule, when the fingers are extended the usually subtle skin folds of the metacarpus are directed obliquely across the back of the hand towards the outside edge.

Extended fingers create oval reliefs that are crossed and transversed by raised wrinkles at the interphalangeal joints. The center of these ovals is quite often concave.

Veins are seen only on the dorsal aspect of the hand, not the palm. The Dorsal Venous Network can be roughly described as a downwardly zigzagging loop connecting the cephalic vein on the radial side and the basilic vein on the ulnar side. From these two veins the dorsal metacarpal veins branch off to the fingers (two through five) when they descend between the fingers. (These descending veins are now called the Dorsal Digital Veins.)

The dorsal digital vein of the thumb branches off of the cephalic vein at the first metacarpal (on the radial side).

The veins on the back of the hand are numerous and, when engorged, quite prominent. When rendering the veins take care of how you want the hands to read. Veins can either be subtly indicated or stressed.

Fingernails are hardened skin structures that are double curved and roughly trapezoidal. The base of the fingernail has a small, semi-circular Lunula that is lighter in color. The flattened Cuticle is rendered as a suble form at the base of the nail that extends for a short distance up the sides of the nail. The thumb nail is the largest and often squarish in shape. The little finger’s nail is the smallest. The nails of the index, middle and ring finger are approximately similar in size and shape.
The palmar (also called the **Volar**) aspect of the hand is comprised mainly of dense fat. There are two primary folds and two accessory folds in the palm. From these four folds there are numerous other folds branching out depending upon both the gesture and volume of flesh in the sitter’s palm.

The **Line of the Thumb** and laterally bisecting **Distal Transverse Furrow** (the line of the fingers) are the primary folds. The line of the thumb describes the border of the thenar eminence. It deepens when the thumb is flexed and adducted.

The distal transverse furrow crosses the palm proximally from the heads of the metacarpals from the index finger to the ulnar side of the hypothenar eminence. This furrow deepens significantly when the fingers are flexed.

The accessory folds are the **Longitudinal** and **Oblique** lines. The longitudinal line travels distally through the center of the palm between the thenar and hypothenar eminences beginning almost at the wrist and ending towards the base of the middle finger.

The oblique line crosses the palm beginning at the middle of the hypothenar eminence and concludes between the thumb and index finger.

The transverse folds at the base of the fingers extend distally beyond the metacarpophalangeal joints (the knuckles) and, thus, the length of the palm is longer than the dorsal aspect of the hand. The skin between the fingers are the **Webs**.

The palmar aspect of the fingers (except for the thumb) are padded. Each phalanx has a fatty, cushioning pad. The thumb has only one distal pad.

The tips of the fingers are padded. These distal pads taper towards the fingertips (which are rounded). These pads extend beyond the skeletal phalanges affording them protection.

In summation, the human hand is one of the most important conduits of human expression and emotion a figural artist has to work with. They are powerful symbolically and literally and feature in many great works of art in both starring and supporting roles.

Understanding the anatomy of the hand will unravel the mysteries of its’ rather complex and somewhat daunting mechanics and allow you to draw hands with confidence from any aspect – lifting your figure drawings and paintings to new heights.