

How Muscles are Named

There are over 600 muscles in the human body. Identifying these six hundred muscles is a daunting task. Furthermore, the names of these muscles seem foreign to most of us. Most of our modern anatomical terms were developed throughout the mid- to late-1500s when many anatomists were performing dissections of the human body. As a result of the influence of the early Greek and Roman anatomists, muscles were named using Latin and Greek roots. Thus, if you have some appreciation for Latin or Greek roots, you would have an advantage in knowing the function and/or location of a muscle in the body as a result of its name.

Muscles can be named according to the direction their fibers run, their size, where they are found in the body, what bones they attach to, what the muscle looks like, where it is in relation to certain bones, and their function within the body. Often the name of a muscle contains combinations of each of the above.

Direction of Muscle Fibers

When looking at a muscle, you can often see that it appears to have lines running within it. These lines are composed of muscle fibers and the direction that these fibers run in relation to the midline of the body has been used to provide partial names to many different muscles.

If the fibers of the muscle are running with or parallel to the midline of the body, the term *rectus* is often used to describe that muscle. *Rectus* is of Latin origin and literally means "straight." Some examples of muscles that have the term *rectus* in their name include the *rectus femoris* and *rectus abdominis*.

If the fibers of the muscle run at an angle to the midline of the body, they are said to run obliquely. The term *oblique* is also of Latin origin. Some examples of muscles that have the term *oblique* associated with their name include the *internal* and *external oblique* muscles of the thorax.

Muscle Size

Early anatomists often included the name of the muscle something about its size or length. If a muscle were long, its name would likely include the term *longus*, while if the muscle were short, its name would contain the term *brevis* (Latin for "short"). Muscles that were large would have the term *maximus* (Latin for "largest" or "greatest"), *major* (Latin for "larger"), or *vastus* (Latin for "huge") in their names, while small muscles would contain terms such as *minus* (Latin for "least" or "smallest") or *minor* (Latin for "smaller").

Location in the Body

Another component of many muscle names is the association of the muscle with a particular area of the body. The *rectus abdominis* is a straight muscle located in the abdominal region. The *palmaris longus* is a long muscle that attaches to connective tissue in the palm of the hand. Below are more examples of the Greek and Latin terms for the various regions of the body.

oris (L: "mouth")
oculi (L: "eye")
palmaris (L: "palm of the hand")
abdominis (L: "abdomen")
brachii (G: "arm")
femoris (L: "thigh")
tibialis (L: "shin bone")
peroneus (G: "fibula")
digitorum (L: "finger or toe")
pollicis (L: "thumb")
hallicus (L: "great toe")
costals (L: "rib")
carpi (G: "wrist")
spinalis (L: "spine")
scapularis (L: "shoulder blade")

Where in the body would you expect to find the following: *biceps brachii*, *rectus femoris*, *adductor pollicis longus*, *orbicularis oculi*, *external intercostals*, *tibialis anterior*, *spinalis thoracis*, *peroneus longus*?

Location of the Muscle Attachment (Association with Bone)

Many muscles are named as a result of their association with a particular bone. The *temporalis* muscle is found covering the temporal bone while the *frontalis* muscle is found covering the frontal bone of the skull.

Location of Muscle's Origin and Insertion on Bones

All muscles have an origin and insertion. The origin is the part of the body, usually a bone, where the muscle attaches, and does not move when the muscle contracts. The insertion is the part of the body where the muscle attaches, and moves when the muscle contracts. Some muscles are named based upon their origin and insertion. The first part of the muscle name indicates the origin while the second part indicates the insertion. For example, the muscle that has its origin on the breast bone and clavicle (collar bone) and that inserts on a breast shaped process of the skull is termed the *sternocleidomastoid*: *sterno* (G: "breast bone"), *cleido* (G: "clavicle"), and *mastoid* (G: "breast shape").

Number of Origins

Some muscles have multiple origins. As a result, the number of origins is often used in the muscle's name. Some common names: the *biceps brachii* and *triceps brachii*. The term *bi* is of Latin origin and refers to "two" while *ceps*, also of Latin origin, refers to "head." Thus this muscle has two heads that attach to two different origins. How many heads and origins would the *triceps brachii* have?

Relation of the Muscle to the Bone

Not only is a muscle sometimes named because of the bone to which it attaches, but the name may be even more detailed to describe where its position is in relation to the bone or body part. Below are given some Latin terms and prefixes that describe position.

supra (L: above or over)

infra (L: below or beneath)

sub (L: below or under)

lateralis (L: the side)

medialis (L: the middle)

inter (L: between or among)

external (L: outer)

internal (L: inner)

superior (L: above or over)

inferior (L: underneath)

dorsi (L: the back)

anterior (L: in front of)

Examples of muscles that contain some of the above terms include: *supraspinatus*, *infraspinatus*, *subscapularis*, *vastus lateralis*, *vastus medialis*, *intercostals*, *external* and *internal obliques*, *superior* and *inferior rectus muscles* of the eye.

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