The Ultimate Anatomical Guide To Freaky Big Calves Part I

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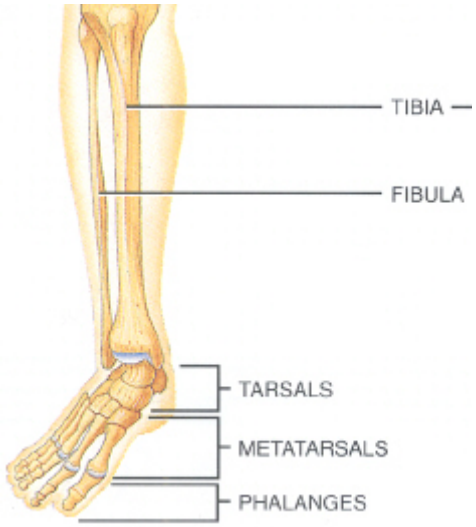
Abstract

The Great Unknown, an attempt to explain the unexplainable. Unfortunately that is what you and I must face in the brutally insane world of calf wars. It occurred to me quite a while ago, that no one on earth, has successfully defeated the calves on paper. I have seen experts empty their hearts and souls into the process and come up short. Even the most prominent geniuses squirm their way around this seemingly unbeatable subject. What can I give you, that others have not? Simple, a blue print to unlocking growth in the most resilient body part known to man...

Bone and Joint Structure of The Lower Leg

The first step to mastering the lower leg muscles, is to obtain a clear understanding of what type of joints they must conduct their energies through, and also what actions these joints will allow. After all, it is these actions that must be manipulated. How can this be effectively done, if you do not understand them from a physiological standpoint?



To begin this process, lets analyze the bones that the calf muscles attach to. As you can see the two main bones that make up the lower leg are the fibula, and the tibia. You will find that each of the muscles discussed in this article " originate " on one, or both of these bones and consequently one attaches to the femur, which is the bone that houses the quadriceps. This as you will see has extreme importance. Let me emphasize the significance of the word " origin. " A muscle attaches(directly or indirectly, see anatomy of a muscle) to basically two areas(or is classified in two

areas). The origin is the immoveable spot in which the muscle group attaches. Therefore if a muscle attaches to my tibia, and also into my heel, what do you think would be the origin? The part that inserts into the tibia right!? This is because this bone is not moving anywhere, but, because of the ankle joint(discussed in a minute) the heel attachment is able to move.

Bellow the tibia and fibula lies your ankle, heel, foot and toes. Now I could easily sit here and bore you with the technical names these bones. But in my opinion, they have no real relevance here. It would be much more productive to simply label them in English for a change(if you did want to know the technical names, just check out the picture above)! Think of it this way. If you are training a client and you tell him that a muscle inserts into the 1st phalange, and it is for this reason that he should perform an exercise a certain way, do you really think you would have his attention for very long? It would have been much easier to just say that it inserted into the big toe! The effect is just as good, and provides a much clearer illustration.

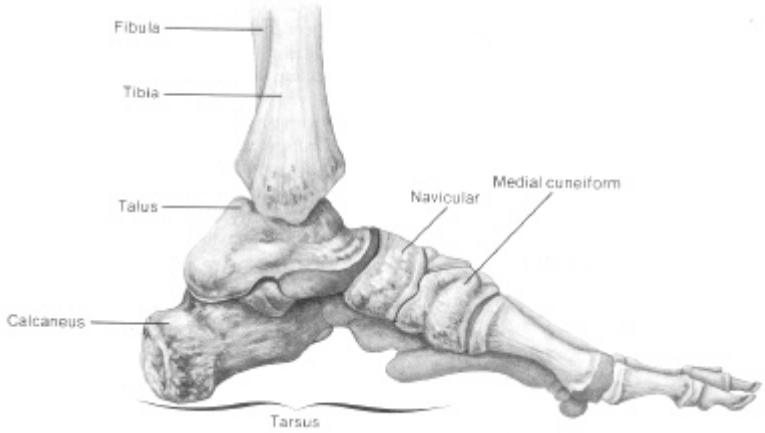
Allow me to now emphasize the fact that the muscles that originate in the fibula and tibia(your calf muscles) will all attach to either your heel, foot, or toes. These are the moveable attachment sites and that being the case, we will label them the insertion points of the lower leg muscles. Again, the origin is the immoveable attachment site, and the insertion point is the moveable attachment site.

Medial and Lateral???

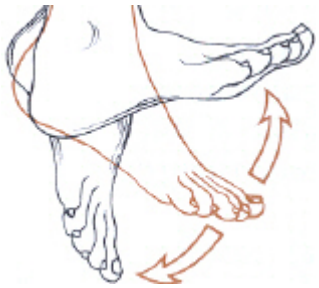
Going back to the picture above, you can clearly see that the tibia is the larger of the two lower leg bones. This is commonly referred to as the " shin bone, " or the shins. It is located on the medial side of the lower body. Medial, simply means towards the middle. Therefore, if I were to say the medial head of the gastrocnemius(a prominent calf muscle) I would be referring to the head closest to the midline of your body. That seems basic enough, but it can be confusing when trainers refer to the medial, or lateral head of a muscle group. The fibula is the lateral bone shown in the picture above, and happens to be the smaller of the two. The term lateral, refers to the bone being further away from the midline. Imagine drawing a line right down the center of your body, that would be the midline.

Joint Details and Actions

1. Grab the door handle to your room, or office, turn the handle on the knob and move the door in every direction possible. What did you notice? The door only moves two ways correct!? That is because it is attached to the wall with a " hinge " that only allows the door to move forward or away from you. There is no up or down movement. This is how you should think of your ankle joint. To further clarify this I will include an illustration.



You should see three bones in the above picture that make up the ankle joint. The long bones pointing straight upward are the ends of the fibula and tibia, and they connect, into the upper most part of the foot or ankle bone(called the talus, the calcaneus that you see is just your heel bone). This type of joint is so named a hinge joint, just as a door would be called one. Therefore only two movements are possible. The first movement that is allowed is called dorsi flexion. This classifies the actual raising of your foot towards your shin(in other words, you decrease the angle that your foot makes with the tibia and fibula). The second movement is called plantar flexion. You plantar flex your foot when you move the foot away from the shin bone(or increase the angle between the foot in regards to the tibia and fibula). Another term for plantar flexion is extension, which would make all muscles that extend through the ankle joint, ankle extensors. And similarly plantar flexion is termed flexion, making all muscles that flex through the ankle joint to be called ankle flexors.



dorsi flexion is upwards plantar flexion is downwards

2. Now that you know the previous actions, do me a favor and move your ankle/foot in every direction possible. Many of you must be saying: " Are the above statements correct? I can move my ankle in more directions than stated above. " While this is true, the reason for this added movement is not the ankle joint itself, but rather a joint below it, housed between the ankle bone, heel and foot. This allows two further actions. The first is called inversion, or adduction. In inversion, the bottom or sole of your foot is turned inward
and upward. The second movement is called eversion, and is also known as abduction. This is when the sole of your foot is turned outwards and upwards(therefore the toes of the foot should be pointing outwards).

Eversion is Left and Inversion is Right

3. The final movements of significance, in building the calf muscles to their full potential are the actions created by the toes. The names for ankle flexion and extension apply directly to this area of movement. If you move your toes towards your shin bones, then you have dorsi flexed them and when you move them away you have plantar flexed them. Its that simple!

Before terminating this subject I would like to emphasize that each and every movement discussed thus far is of prime significance to building mass in the lower leg limb, and also enhancing sports performance by leaps and bounds!

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