Dear Friend:

Did you ever hear a football coach speak of a backfield man as being "legged up?" This usually means the player has muscular, well-formed calves that provide extra force and power in running. Yes sir, a halfback with good calf development is almost always a hard-driving "power" runner—the kind that's hard to bring down once he gets under way.

Good looking, muscular calves are important not only to athletes, but to all men seriously interested in seeking proportion and symmetry in their body build. The ideal is to have a thick, bulged, smoothly curved calf that tapers to a trim ankle, much as the one illustrated in today's anatomy chart. We can't change the shape of your leg and ankle bones to give your ankle trunks, but we can increase the size of the largest muscle of your calf, the Triceps-Surae. This muscle is the fourth largest in your body, being outranked only by the Gluteus Maximus (of the hips), the Quadriceps Femoris (of the thigh), and the Latissimus Dorsi (of the back).

Turn to today's anatomy chart and you'll see what the Triceps-Surae muscle looks like. This is a three-headed muscle with two of the heads attaching to the thigh bone above the knee joint, and the other head attaching to the bone of the lower leg, below the knee joint. All three heads insert into the thickest, strongest tendon in your body, the heel bone tendon.

Although the Triceps-Surae is really one big three-headed muscle most anatomists and body builders prefer to think of it as two distinct muscles. The outer part, which consists of the two heads that attach above the knee joint, is called the Gastrocnemius. The head which lies directly beneath the Gastrocnemius is called the Soleus. As you can see from the individual drawings the Gastrocnemius is the muscle which gives the calf its real thickness and shape. This is the one that we are going to specialize on today. The Soleus is important, but is much harder to develop, and doesn't give nearly as much shape to the calf, although it does give much definition to the side of the lower leg.

In ordinary walking movements the Soleus is used extensively in depressing the foot. The Soleus is therefore richly supplied with open capillaries and the muscle fibers are always fairly well developed. The Gastrocnemius, which is seldom used in walking, comes strongly into play in real power movements such as running and jumping. It therefore has plenty of undeveloped fibers just waiting to be developed. So your big increase in calf girth will come mainly from the Gastrocnemius.
TRICEPS SURAE

1. Gastrocnemius
2. Soleus

Gastrocnemius Soleus

Tibialis Anticus

Achilles Tendon

Inner Head

Outer Head
Let's take another good look at this Gastrocnemius muscle. Although it is ordinarily only slightly bigger than the Soleus, when fully developed it forms the greater part of the calf. The inner head is much larger than the outer head, has thicker fibers, and extends further down the leg. It is not at all unusual to find the outer head of this muscle completely missing in some men. In fact, in still others the entire Gastrocnemius may be absent. To be able to tell whether or not you have this muscle completely intact assume the position shown in Exercise 3. As you flex the leg hard and point the toes equally as hard the muscle will pop out and form the shape shown in the anatomy chart. Feel it to see if you can tell whether both heads are present.

The reason some men can't ever seem to develop big calves is that this muscle might just happen to be missing. Naturally, you can't develop what you haven't got. But don't be alarmed however, as the percentage of men that have the Gastrocnemius missing is very small.

Although it is possible to control the contractions of the Gastrocnemius at will the muscle usually doesn't come into play unless the knee joint is in either a position of extreme extension or extreme flexion. The Gastrocnemius is a very powerful flexor of the knee joint when the foot is elevated. When the knee is held straight it acts as a powerful depressor of the foot. It also has a tendency to turn the foot slightly toward the inside in either of the above positions.

When the knee is bent without trying to flex the knee joint, such as in a sitting position, then the Soleus becomes the main depressor of the foot and the Gastrocnemius is left completely out of it. For example, in driving your car when you press on the accelerator, or brakes, the Soleus is the muscle that depresses the foot.

Now turn to the exercise page and I'll show you five simple exercises that will give real massiveness and strength to your calves.

**EXERCISE 1.**

This exercise develops the Gastrocnemius, Soleus, and Tibialis Posterior muscles.

The position shown in this exercise is exactly the same as we used in the last lesson to develop the Gluteus Maximus. The main difference is that the muscular emphasis is changed. The object is to raise up on the toes as high as you possibly can, then higher, higher, and higher--as hard as you can for 6 seconds. All the time you do this you keep thinking about raising the muscles on the back of your lower leg hard and tense. If your effort is a good one the muscles may even cramp up on you forcing you to "walk them out" during the relaxation period.

**EXERCISE 2.**

This exercise develops the Gastrocnemius, Soleus, and Tibialis Posterior muscles.

Place one foot on an object at about the height shown. Raise your heel as high as it will go while flexing the leg and leaning slightly forward to make the flexion tighter. Flex the leg, lean into it, and depress your foot while raising the heel upward—harder, harder, and harder—for 6 seconds—and relax. Repeat with the opposite leg. Feel the big calf muscles with both hands as you do this exercise.
EXERCISE 3.

This exercise develops the Gastrocnemius, Soleus, and Tibialis Posterior muscles.

Standing on one leg, with the knee slightly bent, bring the raised leg to a position of extreme flexion as shown. Flex the leg as hard as you can, while pointing the toe equally as hard. In fact, the toe will point slightly inward. Now flex, and point, harder, harder, and harder—hold it for 5 seconds—and then relax. You can either feel the calf muscles as you do this, or check the flats to put added power into it.

This exercise also develops the flexor muscles of the thigh called the "Hamstrings," but our main emphasis here will be on the Gastrocnemius as a thigh flexor.

EXERCISE 4.

This exercise develops the Tibialis Anticus, which is a thick, fleshy muscle on the lateral side of your shin bone on the front of the calf. (See anatomy chart)

While in a sitting position pull the toes toward the knee, harder, harder, and harder—for 5 seconds—and relax. Theoretically try to make believe you are going to touch your toes to the knee cap. The foot will be turned slightly to the outside as you do this exercise. If you are doing the exercise correctly you will see the Tibialis Anticus bulge slightly as you contract it.

EXERCISE 5.

Now here is an excellent way to develop the Soleus muscle. While sitting in any chair raise your heels off the floor, but don't let your toes or the balls of your feet leave the floor. Keep raising your heels higher, higher, and higher for 5 seconds—and relax. If the Soleus muscle cramps up or you pull your toes toward your knees to stretch the muscle. This exercise is not illustrated because of its simplicity, but it is important and should be practiced along with the others. Notice as you do this how the Gastrocnemius remains fairly relaxed as the Soleus takes over.

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Exercises 2 and 3, where the leg is in extreme flexion will flush the Gastrocnemius muscle even more than Exercise 1. In just one week's time your calves will become fatter and more shapely. And wait until you see the tremendous force and power that you get on the take-off of each stride as you run. I told you that your running speed would increase with exercises 9, 10, and 11, and your ability to spring into the air, such as in basketball rebounding, will also improve.

Next week we're going to work on some of the biggest, most powerful muscles of your body as you learn the secrets of "super" thigh development.

So until then,

Yours for a pair of powerful, well-formed calves!

Tom Buckley