

INJURY OF THE MONTH: CALF

Have you noticed the well-defined calf of the runner ahead of you? You know the one, where you can clearly see the two separate parts of the calf or gastrocnemius. You might know that behind that muscle is the soleus which, along with the gastrocs, is responsible for plantar flexion or pointing the foot down toward the ground. Along with these 2 larger muscles in the back of the lower leg, there are two other muscles that help flex the foot down and two more that flex the toes. This month we'll concentrate on just the gastrocnemius and the soleus which, together, form the achilles tendon which attaches the muscles to the heel. I'll cover achilles injuries another month.

Tight calves can be the root of all evil. Remember when I mentioned tight calves as part of the problem in plantar fasciitis and also in shin splints? The reason is that ordinarily these lower leg muscles pass the shock of impact up through the body where this shock can be better, or at least more widely, absorbed. With a hard knotted calf the jolt of impact is much greater in the foot. Also the uneven workload between the back and front of the lower leg creates havoc.

You increase the workload of the calf when you run hills because the hill forces you to bend more at the knee which puts more stress on the soleus muscle. Not only hills can create problems for calf muscles, but also the long or hard run. As you continue to stress the muscle fibers, little tears form in the belly of the muscle, sometimes healing poorly leading to chronic problems.

Now that I've suggested some injury causes, what are the symptoms? Running and even walking can be uncomfortable, especially the part of the stride where the heel should, but hurts too much to, hit the ground. Warming up eases the pain, but expect to be sore during and right after your run. With a torn gastroc muscle, raising onto your toes with straight legs is painful, usually near the middle of the calf and nearer to the surface. An injured soleus, on the other hand, is a dull, aching pain deep and usually toward the top of the calf.

For self-treatment, you may want to temporarily use heel lifts (in both feet to keep from feeling lopsided) or shoes with heels an inch higher so you can stand and walk without pain. This will take the pressure off the torn muscle. Use ice, taking breaks to exercise the calf with alternate flexing and pointing while sitting with a slightly bent leg. As the injury heals, you should be able to straighten your leg during this exercise. Controlled movement during healing, in the same direction as typical movement, will keep the scar tissue aligned properly and help the muscle stay flexible.

Medical treatment is indicated if there is considerable tearing. Your sports physician may check your running mechanics and prescribe physical therapy or orthotic devices. Your massage therapist will treat the entire calf area with deep massage and friction massage to the specific injured area to promote faster healing and less scar formation. Palpation of the neighboring muscles will indicate weaker or other involved muscles. You might be made aware of compensating muscles and injuries ready to happen.

Should you run? If the strain is minor and there is no pain walking, try a short slow run on a flat easy surface. If the pain is insignificant, increase your mileage slowly, but keep it slow and flat until your calf has healed. Speed work and hills may bring you back to square one. A severe strain can take 5-8 weeks to heal.

For rehabilitation, continue with the seated point/flex exercise. When you have recovered, begin a few sets of bent knee (for the soleus) heel raises keeping your feet parallel and staying on the balls of your feet for a few seconds. Then do a set for the gastrocs with straight legs. Build slowly up to 50 repetitions.

In all cases with tears, be careful about stretching. I advise you to only stretch the muscle when it's warm and healthy. Start all your activity slowly to avoid injury, stretch after you've warmed up and before intense workout. For instance, at the track do your warm-up easy, stretch, then do your hard workout.

Stay on the roads.

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My training as a therapeutic massage therapist includes ongoing study in anatomy and physiology, pathology and clinical practice.

Please send me feedback on this series. Do you want more info than I offered? Do you want more case history? Less? Do you have an injury you're curious about? Let me know at BobbiVT2PA@aol.com