



# TRIGGER POINT

## SINGLE BALL/GASTROCNEMIUS



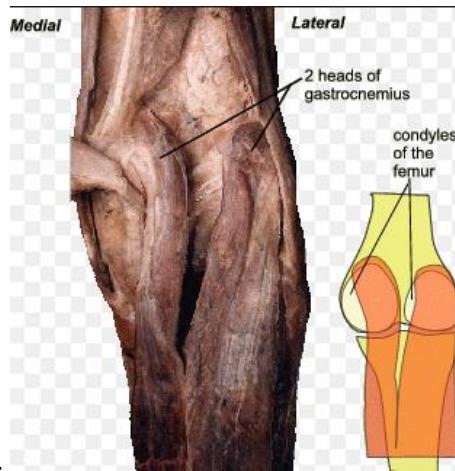
**Why:** This manipulation addresses both the soleus and the gastrocnemius. The two TP Massage Ball technique creates better mobility in the deep compartment of the lower leg. By placing the TP Massage Balls opposing each other the posterior tibialis, flexor digitorum longus and the flexor hallucis longus can also be manipulated.

The gastrocnemius is a multijoint muscle that is located in posterior aspect of the lower leg. Essentially, the gastrocnemius is divided up into two separate heads: the medial and lateral head. Although there are two heads, the gastroc is innervated by the tibial nerve and therefore will typically contract as one.

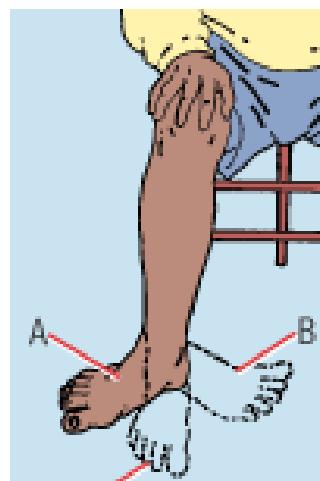


Gastroc

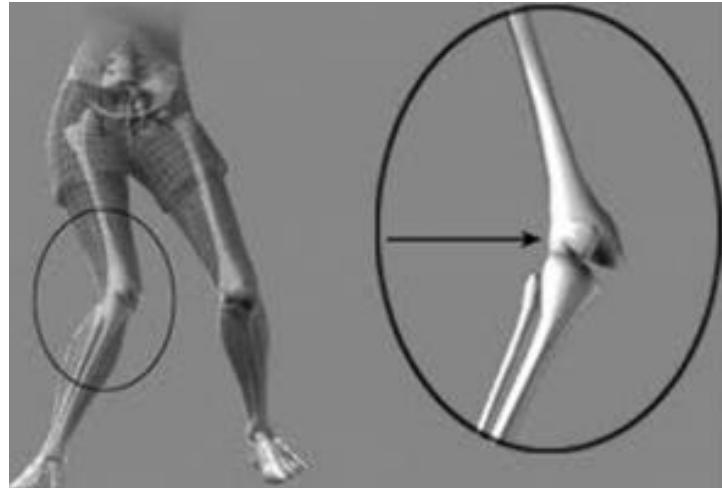
The gastrocnemius is typically referred to as an ankle plantar flexor. It connects with the Achilles down through the plantar fascia and indeed does assist the soleus in plantar flexion. But, the gastroc has several other tasks to perform. The proximal aspect of the gastroc crosses the knee joint and attaches to the condyles of the femur. The medial head attaches to the medial condyle and the lateral head attaches to the lateral condyle. This means, not only does this muscle play a role in knee flexion, it also works in rotation of the knee.



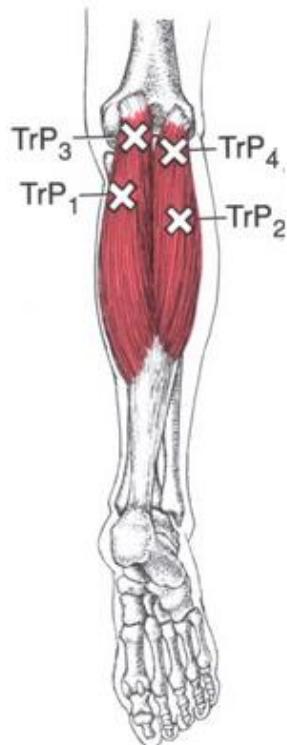
Most of the time people think of the knee joint of being a simple hinge joint, only moving in the sagittal plane to perform extension and flexion. All joints move in all three planes of motion at all times, but they can certainly dominate one particular plane. While the knee is dominate in the sagittal plane, it also has a significant amount of transverse plane motion to allow for rotation. This can be easily seen by sitting in a chair where the knee is bent to about 90 degrees. Then, attempt to rotate the foot in and then out. You will see that there is approximately 60 degrees of rotation. This rotation motion is primarily controlled by the hamstrings, but the medial head assists in internal rotation and the lateral head assist in the external rotation.



This rotation becomes more apparent when we begin to look at movement dysfunction. As is presented in the Level 2 MCT Manual, one of the prominent lower leg dysfunctions is foot and tibial external rotation associated with femur and hip internal rotation during an overhead squat or it may also be observed in a single leg squat.



It is important to realize that the knee is made to take this type of movement, but not every day all day. This motion, if left uncontrolled can begin to cause micro trauma in the ligaments and tendons that support the knee. One of the most common injuries associated with this position is an ACL tear. In this position, the lateral head of the gastroc is shortened and the medial head is lengthened. Therefore, it is very common to see myofascial trigger points begin to pop up in both the lateral and the medial head of the gastrocnemius.



Performing Myofascial Compression Techniques with the TP Massage Ball on the gastrocnemius is a great way to target and release these trigger points. Once these areas are released, some length may be added by performing either static or dynamic stretching, then movement re-patterning can be added in to help the body identify that the area is moving better. It is imperative to cue the client or athlete to keep the feet straight and the knee in line with the 2<sup>nd</sup> and 3<sup>rd</sup> toe during the re-patterning to assist in adding the length back to the lateral gastroc and maybe even shortening the medial gastroc.

