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Have you ever experienced

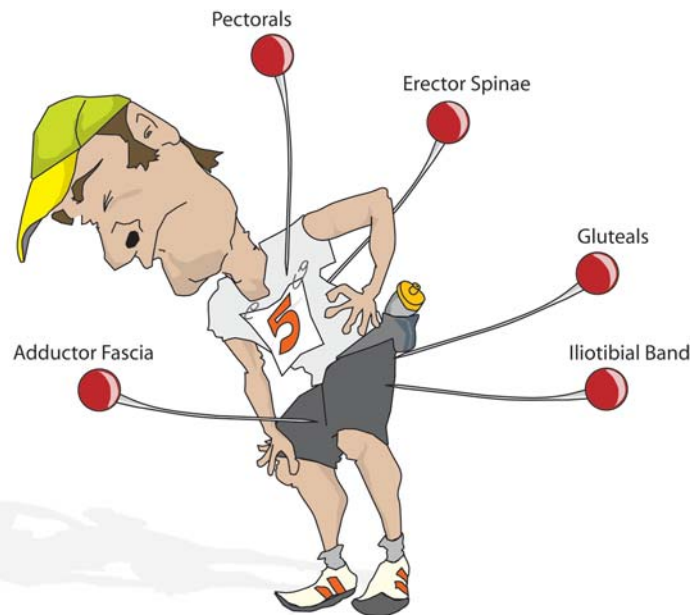
that nagging knee pain, or bothersome stiffness in your low back and can't seem to associate it with a traumatic event?

Your therapist asks you that famous question, "so what brings you in today?" and as you think about this, you realize that though you can identify a pain, you can't seem to figure out how it got there. Perhaps your low back is stiff as you bend over to brush your teeth in the morning, or there is that pesky pain on the inside of your knee during your run, or the most common of them all, that tight and sore iliotibial band (ITB). The problem is that you can't recall what might have caused it, only that one day you realized it was there.

What we are coming to understand more and more as therapists, is that the body is a collection of many intricate systems each working closely with the other to create an amazing working unit. The fasciae of the body can be directly connected to each of these systems. Serge Paoletti says it best in his book titled *The Fasciae* - "the fasciae constitute an uninterrupted sheet of tissue that extends from the head to the feet and from the exterior to the interior. This is a perfectly continuous system that is suspended from bony structures to form a fully integrated supporting framework". Think of a thin layer of saran wrap covering the body beneath the skin, connected to another thin layer of saran wrap covering each group of muscles, and yet another covering each individual muscle making up that group, and so on and so forth. This repetition continues until you reach the final layer, at the level of the tiny microscopic cells that create all tissues of the body and into the trabeculae of the bone that they are connected to.

Upon initial consideration one might feel that triathletes should in fact experience fewer overuse injuries than those that participate in only running, swimming or cycling as separate events, for the simple reason that they are thought to be doing a significant amount of cross-training. However, others might

THE FASCIAE - A TRIATHLETES SECRET TO STAYING INJURY FREE AND RECOVERING QUICKLY



believe the opposite is true since triathletes will often complete a greater number of training sessions in order to fit all disciplines into a week, and thus are taxing their bodies to a greater degree. Many athletes find themselves having little time left over to dedicate to stretching after the numerous hours of training, however it is important to recognize that all of that strengthening needs to be balanced out or a pathological tightening of the fascia will result in time.

Roles of the fascia

The fascia is a three-dimensional web of soft tissue with numerous roles within the body. Its presence allows the structural, physical and physiological integrity of the tissues to be maintained. Not only is it a support, but it is also a protector of the nervous, vascular, and visceral systems.

Because the vessels of these systems travel within and thus are supported by the fascial network, without its presence these vessels would be vulnerable to the forces applied to the body and would be compromised. It is actually the fasciae that act as "the pump" for venous blood return and lymph drainage. This means that fasciae in dysfunction could significantly affect circulation of fluids in the body and removal of toxins. This becomes important to the triathlete when we consider the efficiency of recovery and adequate oxygen delivery.

With such great expansion over all of the soft tissue of the body, an adhesion of the fascia will quickly and significantly affect the positioning and function of bones, muscles and organs. This is often overlooked because the change caused by fascial pull is often not visible to the untrained eye. The important message to take home is that the fasciae is present to make the body a more efficient machine, however if in dysfunction it will work against the body, altering the function of the muscular, vascular, nervous and lymphatic systems.



SELF TECHNIQUES

ILIO TIBIAL BAND

Position: Lying on the side to be treated, place a foam roller between you and the floor, with your outer hip bone (greater trochanter) on the foam. Both hands will be placed on the same side of the roller as your torso. The top leg bends such that its ankle rests in front of the knee of the lower leg.

Movement: Keeping your body perpendicular to the floor (hip bone over hip bone), begin moving down the roller slowly, walking hands and bent leg away from the roller. When you come over a tender spot, slowly oscillate over the area until the tenderness begins to dissipate. Cover the entire lateral surface (outside) of the thigh from the hip down to the knee, and back again. Spend about 2-4 minutes/side depending on how tender it is. This can be done 1-2 times per day.

Beneficial for: Individuals with outer hip or knee pain, gluteal soreness and low back pain.

Note: It is not uncommon to feel sore/bruised after a treatment session.

ERECTOR SPINAE

Preparation: In order to perform this technique you should be able to visualize a square area on the back on either side of the spine. The top border of the square being the spine of the scapulae (shoulder blade). The bottom being the area of the back where the thoracic curve becomes the lumbar curve. The inside border is the spine itself, and the outside border of the square being the inside (medial) border of the scapulae. There are two "squares", one for each side of the back.

Position: Standing with you back to a wall, far enough away to sit in a ½ squat without your knees going over your toes.

Movement: Place a tennis ball between you and the wall, holding it in place by the weight of your body against the wall. The ball should lie somewhere within the boundaries of your square. Gently lean back into the ball, allowing it to "sink into the tissue", and begin moving your body in small circular motions. As you feel the tenderness begin to dissipate, sink a little deeper and repeat, spending about 30sec-1min at each tender spot within the square. Repeat on the other side of your back.

Beneficial for: Individuals with low/mid back pain, shoulder problems, SIJ problems.

PECTORALS

Preparation: In the same way as the technique above, it is good to visualize your work space. The top border of our rectangle is the clavicle (collar bone), and the bottom is an imaginary line across the body at the level of the nipple. The sternum and lateral (outside) aspect of the body are our side borders.

Position: Standing facing a wall, feet hip width apart.

Movement: Place a tennis ball on the wall in front of you, somewhere within your boundaries where you anticipate it will be tender. Bend your knees to a ¼ squat and lean forward towards the wall, allowing the tennis ball to "sink into the tissue". Your head should rest comfortably through the open part of the doorway. Move in small circular motions until the pain begins to dissipate, and then sink deeper into the tissue. Move the ball around within the boundaries to different areas of tenderness. Spend 2-3 minutes per side.

Beneficial for: Individuals with shoulder dysfunction, neck pain, mid/low back pain.

GLUTEALS

Preparation: Upper boundary is the iliac crest, lower is the "sit bone". Side boundaries are the sacro-iliac joint of the same side and the lateral (outside) aspect of the hip.

Position: Seated on the floor with a tennis ball underneath you, somewhere within the boundaries where you anticipate it will be tender. Bend the knee of the leg opposite to that with the tennis ball. This leg will help guide your movement. The other leg (with the ball) remains straight.

Movement: As in the previous techniques, allow the ball to sink into the tissue, and using the bent knee and your hands, move your body in small circular motions. Allow the ball to sink deeper as the tissue relaxes. Be sure to target several different points.

Beneficial for: Individuals with hip/gluteal pain, knee pain (especially lateral/outside).

ADDUCTOR FASCIA

Preparation: Many of my patients complain of insidious onset knee pain, typically around the medial (inside) aspect of the knee. I believe that as a result of improper biomechanics and muscles sequencing, the adductor fascia develops great tension and elicits fascial pulls on neighbouring tissues. This results in symptoms such as vague aching surrounding the patella and tenderness and inflammation of the pes anserine bursa.

When trying to work on this area, keep in mind that the fascia related to the adductors is closely associated to that of the quadriceps and hamstrings, and so working at angles that will at the same time target these muscles also prove to be beneficial.

Position: Lying with your stomach facing the ground, with the foam roller positioned between both legs. Bend the limb to be treated at both the hip and knee such that the adductor aspect of the thigh is resting on the foam roller surface. Your body weight is to be supported by both hands. A change in the angle of pelvic tilt and/or rotation at the hip will help you to address all associated surfaces.

Movement: Using your hands to guide the movement, let the foam sink into the tissue and slowly roll the inside of the thigh from the knee all the way up to the groin, stopping to oscillate over tender areas. Be sure to go up and down a few times, changing the angle of the pelvis and that of the hip.

Beneficial for: Individuals complaining of pain along the inside of the knee, both above and below the joint line, and individuals with problems concerning the hip flexors, groin, and/or gastrocs (calves).

My hope is that this information has acted as an educational tool, and successfully communicated the importance of integrating self-myofascial release into your every day training plan. Though stretching and self-myofascial release work is easy to pass over when time or energy is limited, you must remember that damage to this tissue can take up to a few years to fully recover back to a normal state, and that a safe training program is a well-rounded one. It is possible to train as a triathlete in a safe and effective manner just by incorporating some of the techniques listed in this article into your daily routine. Though it may be cliché, the truth is if you take care of your body, it will in turn take care of you!

Good luck and happy training!

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