

Richard Chaykin on the Importance of Hip Flexors

I want to thank the board of S.M.B.C. for asking me to start writing again. In particular Ian Tummon who pushed so hard for this to occur. For those of you that are unfamiliar with my work let me give you a short background. Professionally, I was a physical therapist. I dealt primarily with orthopedic problems and saw a fair number of cyclists in my practice. If you should have any questions about anything that I have written or a question that falls into my area of experience please contact me at richardchaykin@yahoo.com.

This article is going to be about a specific problem that is seen every day and can be a source of problems for riders as well as the population in general. I will attempt to keep the article as simple as possible though the topic is somewhat complicated. The hip flexors are a major area of problems for people and in particular the Psoas muscle. The Psoas is pronounced so-as with the P being silent. What makes this muscle in particular such a problem? The answer is that it is the only muscle that connects the upper body to the lower. Its origin starts at the last thoracic vertebrae T-12 and inserts into the lesser trochanter, a bump, on the inside of the femur. Before it inserts it passes in front of the hip. The vertebral attachments are more in front of the vertebrae as it traverses down. Its function is to stabilize the trunk, laterally flex the trunk, flex the hip, and assist in externally rotating the hip. The muscle is present on both sides looking like a rather large long mustache. It is one of the most powerful muscles in the body. The muscle is also joined by other hip flexors and rotators. These are the psoas minor and the iliacus forming what most know as the iliopsoas. The other hip flexors are the rectus femoris, sartorius, and the tenor fasciae latae.

So why do these muscles create problems? They cause changes in the dynamics of the pelvis and the spine. As stated before they exert a forward and downward force on the spine and an upward force on the hip. The big rage now is that too much sitting is bad for us. The reason for that are these muscles, particularly the psoas, they can become functionally shortened. When one stands up they are not assuming their normal lengthened state. This state creates an anterior tilt of the pelvis and an increase in the normal curve of the lower back. This creates forces on the posterior aspects of the vertebrae and the muscles that extend the lower back and pelvis. Those overtaxed muscles include the extensors of the spine, gluteus maximus, latissimus dorsi, the lower trapezius, quadratus lumborum, and diaphragm. These muscles are in pain due to the fact that they must hold the spine in as much of an extended position as possible for extended periods of time. They become weakened and oxygen deprived. How does this relate to cycling? One of the prime movers in the cycle of muscular movements is the hip flexors. Most lower back pain from riding comes from a poor fit and overuse of this group and having those back muscles constantly working to stabilize the back and pelvis.

Take a look at your posture. A simple way to tell how your pelvis is performing is to note where ones belt lies. Place the belt around the waist and make sure it is level. Walk around for a while and notice where the belt now lies. Has it shifted downward? This could mean that the pelvis has an anterior tilt. Another way is to have someone look at your posture while you are wearing shorts without a shirt. Is the curve in the lower back too large or exaggerated? Again a sign of an anterior tilt and as much as one hears about having strong abdominals to

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stabilize the lower back they are not going to help. Google best abdominal exercises and you will get a list of movements such as crunches, captain's chair leg ups, supine bicycle leg movements, mountain climbers, use of an ab roller, and other movements. What they have in common is to call on the hip flexors to engage. For some this will create a larger imbalance and more back pain. A really good way to find out about one's posture is to see a physical therapist or chiropractor. They are always evaluating posture. Sometimes they will do it for free or a nominal fee.

If you are experiencing back pain then it would be in your best interest to see someone about the issue. Specific tests can be done to evaluate what muscles are restricted or weak. What you are looking for in this evaluation is someone looking at you from the feet up to your head. Restricting it to just the lower back and pelvis could allow some other problems to be missed. Remember that the psoas is a bilateral muscle and shortening or weakness on one side is going to create problems in areas that you would not associate with this muscle. There are some simple stretches that can be done but please remember that in order to really stretch out a muscle and free it up you are going to have to be in professional hands. Some easy stretches are lying on the floor with the legs out stretched. Bring one knee up to the chest and hold it there for at least 30 seconds. You should feel a slight stretch in the front of the hip or groin in the straight leg. Reverse the legs and do this a few times a day. For people that have very tight hip flexors even some of the simplest stretches are going to be uncomfortable in the hip, groin, and or lower back area.

There are some simple movements that might offer some relief but here I really want to emphasize that seeing your doctor before beginning any of these movements would be in your best interest. The simplest of these movements is to lie on your back with both legs outstretched while lying next to a bed or wall. Bring the leg that is nearest to the wall or bed to as close to a 90 degree angle at the hip as possible. The other leg should be kept out as straight as comfortably possible. One of two things is going to occur. The first is that you are going to lose the hollow or arch to the lower back and that is okay. The other is that the leg that is still outstretched is going to start to rise off the floor. It is at this point that you want to hold the movement. One may have to place a pillow under the heel to take some of the stretch off the hip or lower back. Don't hold your breath but breathe slowly and try to relax. Keep that hold for as long as you can. It may take some time before the leg starts to return to the floor. For some it may be more than 5 minutes. If pain is felt in the lower back or groin area slowly release the stretch and place a pillow under the heel or if one is present add another. Do the other leg. This has its best results if done at least twice a day. There are a lot of stretches that one can look up on the internet. The problem occurs knowing which one is the proper one and making sure it is done correctly. The problem from my perspective is that most people have a hard time in achieving these positions. They also have difficulty in stabilizing the pelvis thus creating either little or no results or creating other issues. One of the problems with things on the internet is that they make you think you are capable of doing something that in reality is beyond one's scope. For instance take release techniques for the psoas. It lies deep in the abdomen and is difficult to find. Doing release techniques here can cause

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problems by applying too much pressure on the femoral nerve causing tingling or numbness down the leg. Pressure on the artery or intestine will cause problems that should be avoided by seeing someone that knows what they are doing.

Again if there are questions about this article or about a subject that you have a question about please feel free to contact me. I look forward to any and all responses.