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Get Healthy, Stay Healthy with Kinetic Health

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Lower Cross Syndrome (LCS)

By: Dr. Brian Abelson DC.



In our last newsletter I discussed **Upper Cross Syndrome (UCS)**, in this edition I will cover some of the basics of **Lower Cross Syndrome (LCS)**. LCS refers to a pattern of muscle imbalances in the low back, gluteal, hip flexors, and abdominal muscles. LCS causes chronic low back pain, hip and abdominal weakness, shortened hip flexors and considerable postural stress. Like Upper Cross Syndrome (UCS) I first learned about LCS over twenty plus years ago from a Czechoslovakian Neurologist by the name of Dr. Vladimir Janda. I consider myself very lucky to have taken courses with this expert in neurology and biomechanics.

The postural distortions caused by LCS are easy to recognize. The most obvious being an anteriorly tilted pelvis, extremely tight paraspinal muscles (thoracolumbar extensors), tight hip flexors (iliopsoas and rectus femoris), weak gluteal muscles (gluteus maximus and medius), and weak abdominals. Lower Cross Syndrome (LCS) creates a pattern of both tight and weak muscles on opposite sides of the body. This often occurs when people sit for long periods of time, ... *Article continued on page 2*

Obturator Nerve Entrapment in Groin Injuries

By: Dr. Evangelos Mylonas DC.



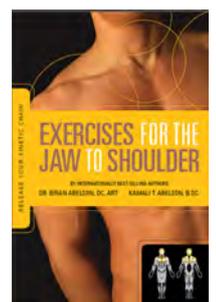
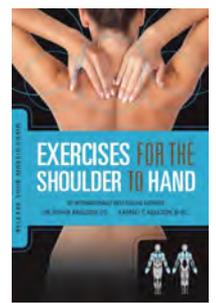
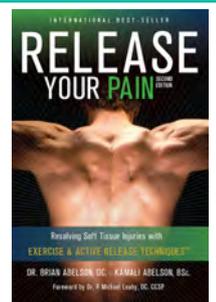
This summer Dr. Abelson and I had the opportunity to present a series of lectures about sport injury and performance to some up-and-coming goalies. We were invited by *World Pro Goaltending* to educate the goalies participating in their summer camps on how they can manage and prevent injuries during the hockey season and enhance their performance on the ice. When we polled these dedicated athletes we found that many of them commonly suffered from one or more groin injuries. A groin injury can be a debilitating and in some cases a season-ending injury, for a goalie or any athlete. Statistically, the majority of groin injuries are the result of a strained

or pulled muscle, but in some cases (especially with recurring groin injuries) you may be dealing with an entrapped obturator nerve.

Anatomy

The obturator nerve is formed by the anterior branches of the second, third and fourth lumbar nerves. These nerves fuse together as they descend from the lumbar spine and pass through the muscle fibres of the primary hip flexor (psoas), eventually emerging from the medial border of the muscle to form the obturator nerve. From here the obturator nerve enters the inner part of the thigh (medial compartment), splits into front (anterior) and back (posterior) divisions and innervates almost all of the muscles that make up your inner thigh.

.... *Article continued on page - 3*



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Lower Cross Syndrome (continued)

or in athletes such triathletes who spend hours on their bikes.

When you sit for a long period of time, your pelvis rotates anteriorly, and your hip flexors begin to shorten. This anterior tilt of the pelvis increase the curvature of the lumbar spine and creates considerable stress in the paraspinal muscles that run from the low back right up into the mid back.

The muscle weakness caused by LCS often occurs through a process known as **reciprocal inhibition**. For example, in order for the *Quadriceps* muscle in the front of your leg to contract, the *hamstring* muscle along the back of your leg must relax. If the *hamstring* muscle is tight, it will inhibit or weaken the *quadriceps* muscle. This is an example of *reciprocal inhibition*. This means that muscle weakness is in part, a reflex-mediated process. Weakness in any muscle can be caused by increased tension in its antagonist or oppositional muscle.

In the case of LCS, the tight hip flexors (*iliopsoas*) inhibits the gluteal muscles, causing them to be much weaker than they should be. This is great information because it tells us that if we want to make certain muscles strong, we will first have to release it's oppositional muscle. This also tells us that simply performing strengthening exercise on a weak muscle without concurrently releasing the oppositional muscle could actually make the weak muscle even weaker (due to reciprocal inhibition).

The LCS pattern of muscle imbalances also creates joint dysfunction. Some of the areas that are especially affected are the L4-L5 and L5-S1 spinal segments of the low back.

Bottom line, if we are going achieve long term success in resolving LCS, we must be sure to address **all** the affected areas, on both the anterior and posterior sides of the body. This is best achieved with a combination of soft-tissue therapy (Active Release, Fascial Manipulation), joint manipulation, and exercise.



Lower Cross Syndrome - Video

For more information, watch our video about "Lower Cross Syndrome".

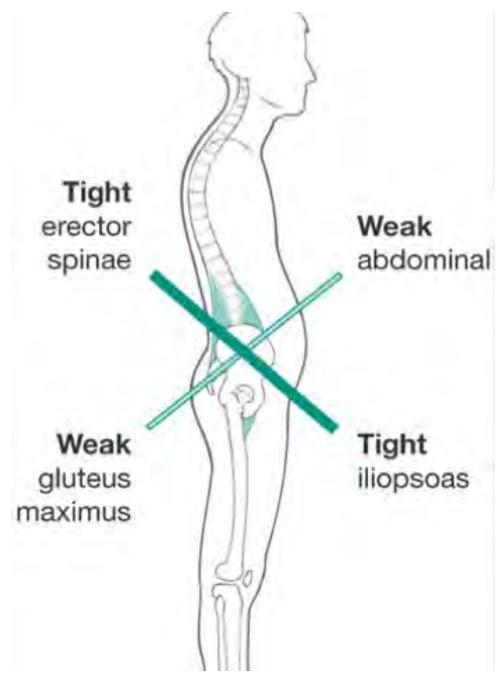
<http://youtu.be/H0SzYyz6cpM>

The specific exercises and therapy that we recommend to each patient will always vary depending on that individuals particular restrictions. But in general, they will require a combination of stretches, self-myofascial releases, and strengthening routines. Addressing only one component of this syndrome could actually make things worse. That is why it so important **not** to pick and choose from the recommended treatments and exercises, but instead do them all.

If you would like more information about Lower Cross Syndrome, or want to make an appointment please give us a call at **403-241-3772**.

We have two excellent Registered Massage Therapists (RMT's) at Kinetic Health.

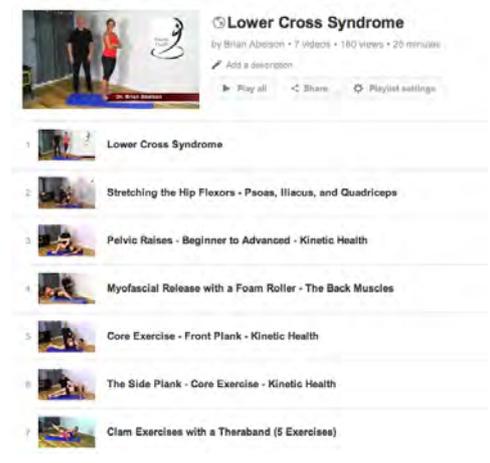
Massage appointments are available Monday thru Saturday. Call 403-241-3772 to book your massage.



Lower Cross Syndrome Play List

Check out our Lower Cross Syndrome play list. This list provides you with six exercise videos that you can use to help over come LCS. Please note this is not a complete LCS program, but it will give you an idea of the type of exercises you may need to do for your LCS.

<https://www.youtube.com/playlist?list=PLgOYZJk3rv6Xh55-R6PHncD3O02FJdPlk>



Ironman Calgary 70.3 - 2014 - Video

Check out our video on this great event, definately the best year yet.

<http://youtu.be/ETIZgKnAWCI>

Our Treatment Approach

When dealing with nerve entrapments, our treatment approach at Kinetic Health combines nerve flossing exercises with soft-tissue therapies (Active Release Techniques, Fascial Manipulation, and Graston) and functional rehabilitative exercises. By doing so, we facilitate a quick return to normal activities by releasing the entrapped nerve and aiding in healing, remodeling and strengthening of soft-tissues.

Case Study of Obturator Nerve Entrapment

For the purpose of this article, I'd like to illustrate treatment approach by using an actual case study of a patient that I treated at our clinic who was suffering from an obturator nerve entrapment. Mark (not his real name) had suffered a groin strain while playing hockey. He was 35 years old, in good shape and played hockey three times per week in a recreational league. Mark sought treatment at the clinic because his team had qualified for the playoffs and he wanted to recover as quickly as possible so that he could return to the ice.

I treated Mark with soft-tissue therapies (ART, FM) for about 2 weeks and prescribed specific stretches, self-myofascial release, strengthening, and balance exercises for him to perform at home as part of his treatment plan. During those two weeks, his condition improved greatly and it looked like he would be able to make the playoffs.

But just as things were getting better, Mark started to experience a deep ache in his groin and some focal pain and tingling along the inside of his thigh while performing some of his exercises. He described this feeling as an electrical or tingling sensation.

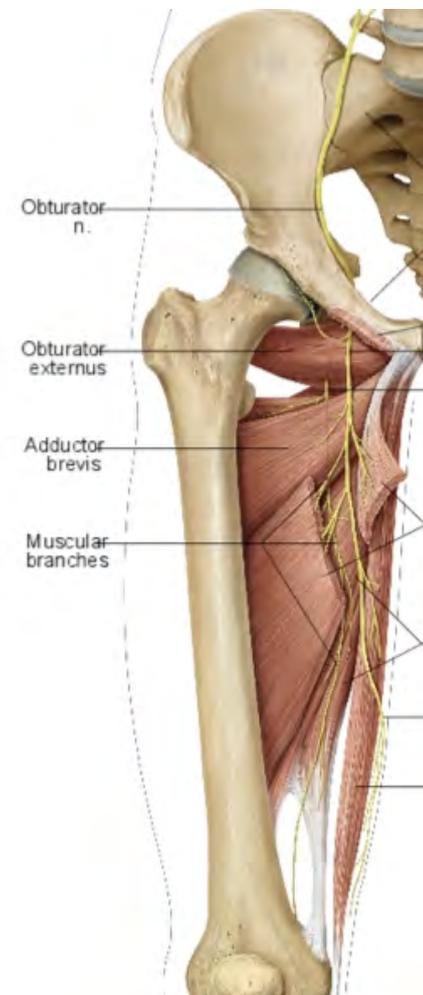
I re-examined Mark with a specific focus on his inner thigh (adductor brevis and adductor longus muscles). I found that the tissue quality of these muscles was very tight and ropy. On palpation Mark felt the same "electrical" sensation followed by tingling along his inner thigh. This "electrical" sensation was also recreated when I performed an *obturator nerve impingement test* on Mark. We had found the source of Marks new symptoms – he was suffering from an *obturator nerve entrapment*.

Nerves can become entrapped within or between soft-tissue structures, especially if there is underlying inflammation that leads to the formation of soft-tissue restrictions. When I asked Mark if he had been performing ALL of his prescribed exercises, he admitted that because he had been feeling much better he had focused all his energy on performing his strengthening exercises, and that he had neglected using his foam roller (self myofascial release) and had considerably decreased the amount of stretching he was doing. By doing so, Mark had inadvertently increased the amount of physical stress to the adductor region. As a result, the *adductor longus* and *adductor brevis* muscles had become inflamed, resulting in the formation of soft-tissue restrictions between the two muscles, and entrapping the **obturator nerve** as it travelled through the area.

The important point to be made here is that you cannot pick and choose your exercises or treatment plan. Every component from initial examination, to soft-tissue therapy, to functional rehabilitative exercise plays an integral role in the resolution of your condition. Mark had experienced great results initially, but had not followed his treatment plan as directed, and by doing so had created a new problem in the form of a nerve entrapment.

Fortunately, we treat many nerve entrapment syndromes at Kinetic Health and are quite experienced in managing them. I performed specific soft-tissue therapy on Mark, making sure to gently mobilize the *obturator nerve* so that it released from the scar-tissue in which it was entrapped. Obturator nerve flossing exercises were also prescribed so that Mark could continue to mobilize the nerve while at home. Within a short time Mark's condition was resolved and he was able to make the playoffs.

As you can see, a simple groin injury can actually be quite complex and groin pain can be caused by a number of factors. If you have any further questions or are suffering from recurrent or acute groin or inner thigh pain, please do not hesitate to contact us at the clinic. In the majority of cases we **can** help you resolve your condition.



Symptoms of Nerve Entrapment

Most patients that suffer from an *obturator nerve entrapment* will also experience altered sensation (paresthesia) along the inner thigh and groin.

Their symptoms may include tingling, burning, numbness, or pain and often become worse during exercise. Extending the hip or moving the leg laterally (abduction) during skating, tends to increase the tension along the nerve which can irritate it, leading to an exacerbation of the patient's symptoms.

Some patients also demonstrate muscle weakness when asked to move their leg inwards (adduction) against resistance.



Exercise Example For the Adductors

Myofascial Release of the Adductor Muscles

<http://youtu.be/cst4Xgl5ZKQ>

Check out our informative websites, blogs, and YouTube channel...



www.kinetichealth.ca

Welcome to our **Kinetic Health Clinic** website. Kinetic Health is located in northwest Calgary, in the community of Edgemont. Our information-rich site provides you with extensive healthcare information about the conditions we treat, our treatment methodologies, conditions we can help resolve, contact information, and information about our staff. You can also download **Admittance Forms** for Dr. Abelson, Dr. Mylonas, and our Registered Massage Therapists.

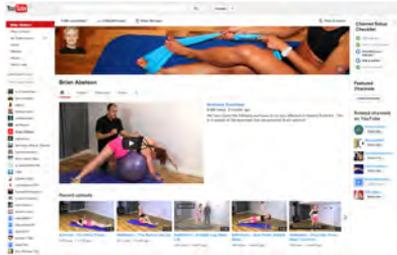
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www.activerelease.ca

This popular site is dedicated to providing you with information about one of the most effective and popular treatment methods we use in our clinical practice - **Active Release Techniques (ART)**. We bring extensive expertise in ART. Dr. Abelson was an instructor in ART for over 10 years, has co-authored the international best-seller about ART, "**Release Your Pain**", and contributed to the **ART Biomechanics Manual** that is currently used to instruct ART practitioners. Both Dr. Abelson and Dr. Mylonas are fully certified in all ART techniques.



www.youtube.com/kinetichealthonline

This is the link to our **YouTube** channel. We are constantly updating our channel with videos about new exercises, conditions, biomechanical analysis, local races (marathons, triathlon's), and even cultural events and travel. Please check us out, and feel free to *share* our videos with anyone that you think could use this information.



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- Exercises for the Shoulder to Hand: Release Your Kinetic Chain
- Exercises for the Jaw to Shoulder: Release Your Kinetic Chain
- A Quest for Healing - A Story of Love

Local services, resources, and events we highly recommend.



Kinetic Health Supports Plan Canada

Plan Canada's goal is to provide children and their families with the essentials of life needed to be successful in their communities. <http://plancanada.ca>



Supporting Women in Need...

Join the party and help support women in need. A portion of the funds collected from this event is being donated to the **Calgary Women's Emergency Shelter**. Kinetic Health will be there filming the event. Come join the party. For more information or tickets phone: 403-891-0362 or 403-808-6501.