

## SET TALK

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### ATHLETIC POTENTIAL AND THE CORE DISTORTION PATTERN

Many of the athletes I have worked with over the years have wondered why I have not promoted myself as a sports massage therapist. They sought treatment from numerous massage therapists for rehabilitation from injuries or to improve their performance and weren't satisfied with the results. Many had developed chronic problems either from their training or injuries that had accumulated from performances and competitions.

**Case study:** Carolyn, a 50-year-old triathlete, was training harder than ever, but her times continued to worsen. When she came to me it was obvious that no one had addressed her structural imbalances. These weren't extreme imbalances due to a major fall or accident, but were the normal imbalances seen in most people that are usually taken for granted. Some of the problems she was having were patellar tendonitis, a weak left ankle, and a chronic tightening of the long head of her right biceps femoris resulting in numerous painful strains. The therapist that she had seen for over a year had treated only the individual sites of her complaints with limited results.

The structural imbalance that was evident in her body was the classic core distortion pattern, which is a spiral that runs down through the body resulting in an anterior rotation of the left ilium and a posterior rotation of the right ilium. Other obvious distortions from this imbalance of the iliums included a scoliotic curvature of her spine, a right shoulder that was medially rotated, an apparent longer left leg with a medial knee and a laterally rotated foot. When considering her complaints from the perspective of these distortions it is easy to understand the reason for her particular symptoms.

Since I have worked with these patterns for years, I was aware of the strain patterns that exist with these distortions. Strain patterns are chronically weakened muscles and muscle groups that function with at least a 30% decrease in strength and limited range of motion.

On the anteriorly rotated ilium side, her left side, where she had the patellar tendonitis and weak ankle, two specific muscle groups were in the strain patterns due to the anterior rotation of the hip. They were the quadriceps and adductors and the gastrocnemius, soleus, and peroneus longus. These groups related directly to the problems that Carolyn was having in her left leg. Her

foot was rotated laterally and her knee rotated medially. This obviously resulted in stresses from the hip to the foot resulting in a weakening of her ankle which became less stable over time and intense training. Carolyn's patellar tendonitis had also developed from the stress placed on the knee due to the medial rotation of the knee and the lateral rotation of the lower leg and foot. With Carolyn's continued training and competitions all of these symptoms had grown progressively worse.

On the posteriorly rotated ilium side, the right side, the specific muscle that was in the strain pattern due to the posterior rotation of the hip was the actual muscle that had become the problem – the biceps femoris. This muscle was tight and shortened, and was at least 30% weaker due to the affects of the core distortion.

When looking at performance in the body, strain patterns are a perfect example of the concept that "structure begets function." In other words, if there is proper alignment of the muscles and bones, the function is much higher than if there is an imbalance. The imbalances from the core distortion result in the aforementioned strain patterns with at least a 30% decrease in strength and range of motion.

To treat Carolyn I addressed the imbalances of the core distortion pattern integrating Cranial/Structural techniques with soft tissue protocols. On her left side the knee and lower leg were moved into balance relieving stress on the knee and allowing the quadriceps and adductors to strengthen. The foot was also released out of lateral rotation allowing the gastrocnemius, soleus, and peroneus longus to strengthen. By balancing the collapsing core distortion pattern on the left side, the painful conditions that brought her to the office initially were directly resolved.

In addition, on her right side, the posterior hip moved forward into balance allowing the lateral head of the biceps femoris to release out of the strain pattern. As a result it returned to its full range of motion and strength even though it had suffered numerous strains and pulls resulting in a build up of scar tissue.

At this point, using kinesiology, I was able to test and confirm that the strain patterns that related to Carolyn's problems no longer existed. The muscle strength in the quadriceps and adductors had returned as well as the muscle strength of the gastrocnemius, soleus, and peroneus longus. As Carolyn continued to train she noticed her left leg felt stronger, her stride was longer, her ankle was stable, and the soreness and inflammation of her patellar tendonitis disappeared. She also noted that her right leg, her power leg, now gave her the spring and push she needed when running and bicycling since

the tension in the biceps femoris was released. She was excited about her upcoming triathlon, and so was I.

My next conversation with Carolyn was pure joy! Not only had Carolyn been able to effectively compete with no pain in the triathlon, she had actually accomplished a personal best in her time. As amazing as it sounds, the improvement over her old personal best was one full hour. This was a triathlon that she had competed in a number of times before. What is even more amazing is Carolyn's previous personal best time had been accomplished when she was years younger, and now, at 50, she was able to beat that time.

Carolyn's case is a perfect example of how bringing the core distortion pattern into balance dramatically increases an athlete's potential. Another wonderful benefit is the 50% decrease in the likelihood of injury. Athletes of today are all looking for an edge that will take them to the next level or allow them to maintain their previously high levels of performance. Usually, due to the accumulation of injuries and stresses, their bodies tend to move further into the structural collapse of the core distortion and it is extremely difficult to avoid the injuries that limit their performance. In addition, the further into the structural collapse of the core distortion an athlete moves, the greater the strain pattern and the greater the loss of strength and range of motion in major muscle groups that are necessary for their high level of athletic endeavor.

**Case Study:** Carl, a 23-year-old minor league pitcher, was referred to me for the shoulder problems that were developing in his pitching arm. He was a right-hander, and over the last year the velocity of his fast ball dropped from 93 mph to approximately 87 mph. At 93 mph he had been a top young prospect who just needed to gain experience and learn how to pitch at the big league level. At 87 mph he was one of many in a farm system that gave other prospects a chance to compete and develop their skills without a future in the big leagues.

Carl had noticed his velocity falling off about 6 months before his shoulder pain developed. He had been working extensively with his pitching coach on his dynamics and strengthening exercises, but his shoulder pain increased, and his velocity diminished.

When I evaluated Carl, his right shoulder was rotated internally and left shoulder rotated externally. His left ilium was rotated anteriorly and right was rotated posteriorly. This was a classic structural collapse of the core distortion pattern which had rapidly gone from imbalance to structural collapse with the stresses of training and competition. The internally rotated shoulder

and arm on the right side also left the teres major and teres minor, the medial fiber of the deltoid, the pectoralis minor, the subscapularis, and coracobrachialis in a strain pattern with a loss of at least 30% of strength. They were also becoming strained and inflamed causing his sore shoulder and compromised rotator cuff. This directly affected Carl's velocity.

To treat Carl I viewed his arm problem as part of the structural collapse of his entire structure, not just the soreness and weakness in his arm and shoulder. Integrating Cranial/Structural techniques with soft tissue work, I initially treated his pelvis to bring it into structural balance so it would be able to support balance through the shoulders. Once this was accomplished, I addressed his upper body including his neck, shoulders and arm. By balancing and stabilizing the pelvis first, the treatment of his shoulder and arm was more effective and long lasting because the changes were integrated into a balanced support of Carl's structure. After 5-6 sessions Carl was able to pitch pain free, and the velocity had returned on his fast ball. In addition, Carl also reported his legs felt stronger, and he was actually able to gain a longer stretch when throwing so that his fast ball was now reaching 95 mph. Carl is now in the big leagues pitching a rigorous schedule without pain.

As you can see in Carl's case, the structural collapse of the core distortion caused an imbalance with strain patterns in his shoulder resulting in pain and poor performance. With the proper balancing, Carl gained the 30% of lost strength and range of motion, became pain free and had a structure that supported his entire body allowing his performance to exceed what it had previously been before his injuries.

The potential for anyone increases when their bodies are balanced and supported whether they be an athlete, a stay at home mom, or a computer operator. Anyone with a structural collapse of the core distortion is missing at least 30% of their potential, prone to injuries and stress, and usually experiences pain due to the imbalance. As massage therapists we need to work to balance this distortion and its relationship to our client's complaints. Just working the area of complaint without providing the integrity of structural balance leads to limited results and prolongs the loss of potential.

For more information on how to balance the structural collapse of the core distortion and work deep tissue effectively, please see previous articles of SET TALK, or go to the Publications section of the website for copies of these articles. Keep working to support your clients with the world's best tools – your knowledge, hands and skills.