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GET MORE FROM YOUR CORE!

Who out there has not dreamed of having a glorious “six pack” of bulging abdominal muscles for all to see while lounging on the beach? We constantly get asked, “How do I get rid of this so that I can get one of those?” as people grab a handful of “love handle” around their mid section and point at the rippling abs picture on the front of their Muscle Fitness magazine. Billions of dollars a year are poured into the fitness and fitness equipment industries in search of a “healthier core”.

The question should be asked, “What is the core?”

The core as the fitness industry sees it as a highly defined set of “six pack” muscles. However, in the true sense of the term this is not the core at all. **The core muscles are made up of actually 29 pairs of different muscles that work together to stabilize the lumbar, pelvis and hip complexes.** The core muscle system is often referred to as the “powerhouse” or the foundation of all other movement of the arms and legs. These muscles create this foundation by working together to create support to the otherwise unstable spine. A researcher by the name of Panjabi offered a core model that is very simple but very inclusive and accurate. **His model consists of three systems: passive, active and neural.** The passive system is made up of the vertebrae, discs, ligaments and joints. The active system consists of the muscles and tendons and the neural system consists of all the nerves that are connected to these structures as well as the brain. A truly “healthy core” is when these 29 muscles work together to fire at the right time, in the right sequence, for the right duration to improve stability of the spine and prevent injury.



The next question that should be answered is, “What is the difference between core strength and core stability and which is most important?” Strength is simply the ability of a muscle to exert or withstand force. Stability, on the other hand, is the ability of the body to control movement at a joint so that no injury occurs. Strength, therefore, directly affects stability in that if there is not sufficient strength in the muscles a state of instability will occur where the forces placed through the joints of the spine are too much for the muscles to control. The unpleasant result of this scenario is PAIN! So which is more important? Both are essential for good spine health and both are affected by many things including your brain and nervous system.

To illustrate how important good muscle health is in the core here is an interesting fact. A spine stripped of all muscles just leaving the ligaments and bone will buckle and fall apart under roughly 4 ½ lbs of force. Walking on even ground produces 31 lbs of force through the spine. Doing a bent-knee sit-up produces up to 765 lbs of force through the lumbar spine! As you can see, good core health is vital to preventing pain and injury in the spine.



As humans we are very good at substituting weak muscles with stronger muscles. In the core and spine this is a dangerous talent we have! Over time, due to our great substitution abilities, the weak muscles get weaker which creates a greater state of instability in the spine. This means that the forces placed through the spine begin to get too great for the muscle system to control. Before you know it, you are on the couch with raging back pain and those rippling abs and the beach are the furthest thing from your mind! As physical therapists we have good techniques to retrain your body on how to effectively use the core stabilization system that we all have in place. We have the ability to evaluate where the break down is in Panjabi’s model of the active, passive and neural systems of your

core and target those areas with effective exercises to get you back to doing the things that you love. A healthy core is so much more than chiseled abs. It is a well-tuned system that creates efficiency in all of your movement and improved spine health that will benefit you for years to come! So give us a call and let us help you get “more out of your core”!



WHEN THE PHYSICAL THERAPIST BECOMES THE PATIENT



Kari Lasco-Sanders, PT, DPT

Despite living an active lifestyle including hiking, biking, running, and skiing, I have experienced hip pain for several years as a result of decades of dance training. When the pain became so bad that I had to stop running and skiing, I decided to take action by having an MRI and seeking advice from my orthopedic surgeon. He originally laughed when I first came to see him stating "the pain must be bad if you can't fix it yourself!" Several tests, an injection, and many dollars later, we determined that I had a labral tear due to bone spurs on my femoral head and acetabulum. My only option was to undergo arthroscopic surgery to "clean up" the joint. While I have had injuries in the past, none required surgery, so despite my occupation this was a new experience for me. After a long discussion of risks and possible outcome with my surgeon, family, friends and colleagues, I underwent the procedure.

Following the surgery I had to be out of work for one week and then I was able to resume my duties as a physical therapist. I was given strict instructions to remain non-weight bearing, so in addition to working while on crutches ALL DAY (since therapists walk all day at work), I also had to learn how to clean the house, shop for groceries and cook on crutches. It was a tough 6 weeks to say the least, but the worst was not being able to begin any type of therapy! As a therapist, I couldn't help but begin thinking of ways to begin stretching and strengthening my hip.

After six weeks of non weight bearing status, I had to re-learn how to walk normally. I started with two crutches, then one, and then a cane donated to me by a patient (thanks Brett!). My sacroiliac (SI) joint was very sore and the muscles around the hip and lower leg were atrophied. I started with a light stretching and strengthening program then progressed with some help from my wonderful staff. My patients were very supportive, giving me words of encouragement and always reminding me of what I put them through every time they come in for a visit. I often had patients challenging me to get further than them on the Med-X stretch or balance longer on the wobble board with one leg, my eyes closed while using the body blade. I don't remember that one being taught in therapy school, but as the patient won, I'd like to think that means I'm a better therapist than patient!

I have been working 5 days a week on a therapy program focusing on strengthening the muscles around the hip and lower leg to return me to my previous lifestyle. I had a lot of help and support from my Rehab Authority colleagues and patients to make sure that I was compliant with my restrictions, kept faithful to my therapy program, and did not demonstrate poor gait patterns. Nate had to be firm with me to get me away from using two crutches at work, and I am very thankful for his help and support.

I am always preaching to my patients about compliance with visits, restrictions and home exercises because I know the impact it can have on the healing process. I have been trained and know from experience that patients can have success with physical therapy, and I am glad to say that I am living proof of that. I am 12 weeks out of surgery, back to light running, and cannot wait to start training for ski season. My dog Coco is also happy I am back to being active because she really missed our daily walks. While I would not want to go through surgery again, it certainly has given me a different perspective on therapy and I know it has made me a better therapist.

Thank you
"My patients were very supportive, giving me words of encouragement and always reminding me of what I put them through every time they come for a visit."

Have you visited our updated website?

Go to www.RehabAuthority.com to learn more about us and how we can SOLVE your back or neck problem.





Corey Rasmussen, PT, DPT

GOT PAIN?

When you read the words “chronic pain”, doesn’t your back mysteriously seem to start hurting? Maybe it was hurting before you read those words, and now it’s worse. You’re not alone! **56 million American adults experience chronic pain sometime in their life. That’s 28% of all Americans! How about having difficulty sleeping at night due to pain? A recent study showed 1/3 of Americans loose up to 20 hours of sleep per month due to pain! Sounds like an epidemic problem. Yes it is.** Up until recently, the primary means of treatment has been an onslaught of medication. Alternative means of treatment have included chiropractic care, massage therapy and physical therapy. Statistically speaking, successful outcomes have been minimal at best. However, there have been a number of recent studies that have shown significant advancements in the treatment of chronic pain.

Recently the Idaho Physical Therapy Association had the pleasure of hosting “Explain Pain”. The course was conducted by the International Spine and Pain Institute, an international leader in pain research and education. The seminar provided a comprehensive overview of the latest research regarding the epidemiology and treatment of chronic pain as well as the neurological changes that occur in pain disorders.

These neurologic changes create a cascade effect that influences the musculoskeletal, pulmonary (breathing), cardiac and endocrine (hormone) systems. These changes **cause high blood pressure, increased fatigue, muscle atrophy, mood swings, decreased sleep, depression, weight gain and memory loss.** Sounds complex doesn’t it.

The good news is treatment doesn’t have to be so complex. Research indicates significant improvements can be made with patient education and helping patients understanding of pain and the reaction of the nervous system to stimulus.

Pain has been commonly misunderstood as an input, when in fact it is an output. The new pain definition that is emerging states “ a multiple system output constructed by an individual specific neuro signature. This neuro signature is constructed whenever the brain concludes that

body tissues are in danger and action is required and pain is allocated an anatomical reference in the virtual body” (*Moseley 2003*)

You may be asking yourself now, what does that mean, that definition alone may stimulate a headache. In simpler terms, **pain is an output that affects multiple systems when influenced by the brain which has concluded the body is in danger.** If pain is an output from the brain, logically no brain no pain! Exactly!

This is the premise to which the latest research is looking at. How can we decrease the involvement of the brain’s perception of threat (input). Simple, teach the brain that life is ok, tissue will heal and function will return. But as the old adage says, “easier said than done”. **Experts in the field of chronic pain have found that spending one on one time educating their patients on the cause and effect of pain have produced successful outcomes in relation to quality of life.** In a recent study by Lorimer Moseley, he found reduced brain activity during abdominal exercise tasks after pain education. The study utilized a functional MRI to look at brain activity during abdominal stabilization exercises.

3 scans were performed; one immediately after instructing exercise, 2 after one week of practice, and a 3rd immediately after pain physiology education. During the first scan,

significant brain activity was measured in many areas of the brain including areas thought to be involved in pain perception. Second scan revealed slightly decreased activity but still widespread activity throughout brain. Third scan, after 2.5 hour pain education session, MRI scan showed no widespread brain activity during trunk stabilization exercises.

Chronic pain is complex and is not completely understood in its entirety. However, the latest research has better defined pain physiology and seminars like the “Explain Pain” course presented by the International Spine and Pain Institute offer strategies to convey complex information in simplistic ways to create better understanding for persons who suffer from chronic pain. Today this seems to be the most effective way to reduce pain and restore someone’s quality of life.

RehabAuthority Physical Therapy is committed to staying abreast of the latest research and treatment techniques in rehabilitation medicine. Several of our clinicians had the pleasure of attending this latest course. If you or a loved one you know suffers from chronic pain, do not lose another hour of sleep due to pain, contact your local RehabAuthority physical therapist. **For the physical therapist nearest you please visit our website: www.rehabauthority.com.**



PATIENT SUCCESS STORIES

Kevin Hulsey
REHABAUTHORITY
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Become a RehabAuthority fan!

Dear Mr. Hulsey;

I am a patient of your location at Overland Rd, Silverstone Plaza and Heather Henderson. I would like to give you some background of my condition and the care I received.

I have had four back surgeries, the last two fusions, two neck surgeries and fusions as well, and both hips replaced. I was born with scoliosis and had recently developed unbearable pain from the left sacro joint. Should you wish to look at my records, please feel free to do so. I have been so pleasantly surprised by how hard Dr. Henderson worked to find the multiple problems causing this pain. I am not able to function without taking the oral narcotic pain medication, My body is not going to ever be in great shape this side of Heaven, however she has made it possible for me to function at a much higher level and I am almost totally pain free from the sacro joint.

Please let her know how much she is appreciated!

PS - I don't know what she makes, but whatever it is, it is not enough!!

Sincerely,

Nancy M.



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