

## UNDERSTANDING THE DEVELOPMENT OF LOW BACK PAIN LEADS TO EFFECTIVE LONG TERM REHABILITATION

By Don McCann, MA, LMT, LMHC, CSETT

*“Republished with permission from the June, 2016 issue of Massage Today, www.massagetoday.com”*

If you are a massage therapist who stands clients up for postural or structural evaluation to determine a treatment protocol then I'm sure you have noticed certain structural imbalances that are evident with every client. These will be greater or lesser in different clients and usually correlate directly to the severity of symptoms (example: a greater degree of rotation of the hip causes a greater curvature in the lumbar spine and increased pressure on the discs causing bulging, herniation and pain). Unfortunately, the medical profession would just examine and treat the bulging or herniated discs. However, when concentrating only on the discs they are not looking at the rotation of the iliums and the tipping of the sacrum which are responsible for the exaggerated curvature of the spine, and the reason for the pressure on and damage to the discs. In doing this they tend to ignore that these imbalances repeat themselves throughout the structure of the entire body. Consequently they miss both seeing and understanding the overall structural distortion and weakness. Perhaps one reason they don't pay attention to the ilium / sacrum relationship is that an expert in radiology, Dr. Terry Yokum, who has taken tens of thousands of x-rays of children, has determined that a one year old has iliac angles of 55 degrees and acetabula angles of 20 degrees<sup>1</sup> which he refers to as being “normal.” Since this rotation of the iliums represented in this data is considered “normal” is it any wonder that it is overlooked as part of the problem in structural imbalances related to musculoskeletal issues. A standing weight bearing one year old already has this structural imbalance so the additional stresses and injuries of life experience will contribute to more imbalance and distortion.

I call this structural imbalance the **core distortion** with the rotations of the iliums and tippage of the sacrum that is identified in normal one year olds. Understanding this “normal” child's structure with its strengths and weaknesses helps to explain how herniated discs can develop in adults. Using functional kinesiology, which is testing the actual strength and function of muscles, we find significant muscle weaknesses throughout the structure. Some of the most easily tested muscle groups show greater than a 50% loss of strength and function. In basic kinesiology an imbalance or rotation in the structure of more than 15 degrees will produce substantial diminishing lever strength of muscles. According to Dr. Yokum these substantial rotations of the iliums already exist in the one year old. The imbalances of the core distortion easily explain the muscle weaknesses in the legs and pelvis of our one year old. In this core distortion the left ilium rotates anteriorly which means the left leg will test weak when the child is supine holding the leg out straight at a 45 degree angle. Using the same test the right leg will test strong because the right ilium is rotated posteriorly. If the child is then turned over and tested the same way while prone the left leg which has the anteriorly rotated ilium will test strong. The right leg with the posteriorly rotated ilium will test weak. This substantial weakness in the legs and pelvis will dramatically affect the spine and its curvatures. Just normal weight bearing walking and standing in gravity with these weaknesses can cause a further distortion of the structure with increased tippage of the sacrum and even greater stresses on the spine and discs.

Examining these muscle weaknesses further as they affect the developing child's life, the normal falls, strains and twists of childhood can add additional distortion to the structure due to lack of strength in the muscles to stabilize the pelvis and low back. Add to this the growth spurts and we again see the development of more distortions from the lack of muscle support and stabilization. Now include

---

<sup>1</sup> ESSENTIALS OF SKELETAL RADIOLOGY, Vol. 1, 2<sup>nd</sup> ed., Terry R. Yochum, BS, DC, DACBR, FCCR, (C), FICC, and Lindsay J. Rowe, M. App. Sc. (Chiropractic), M.D., DACBR, FCCR, (C), FACC. (AUS), FICC, Williams & Wilkins 1996, pg 175, Table 2.26, pg 176, Table 2.27, 2.28

structural imbalances from shoes, desk chairs and beds, car and airplane seats, and the adverse effects of muscle weaknesses continue to accumulate. Looking at a five year old we see a structure where half the muscles of the legs, pelvis and spine will test at 50% or less strength and efficiency. This has been noted through my 40 years of practice. Adding more rigorous physical activity and opportunities for injuries as the child develops towards adulthood we see more reasons for an increase of spinal distortion leading to disc issues. Injuries tend to occur in the weakened areas where if the muscles were stronger the injuries probably would not have happened. The lack of muscle strength to stabilize the joints of the legs, pelvis and low back can result in strains, sprains and sometimes worse injuries that would have been minor had the muscle strength been there. Major accidents like falls down the stairs or auto accidents can result in even more damage and distortion to the spine due to the inability to stabilize the structure because of muscle weaknesses from the core distortion. Any one of these major accidents by itself could cause a disc issue, but with the core distortion the muscle weakness and the exaggerated curvatures of the spine are much more likely to result in disc injuries.

Having seen the development of this child that started in the core distortion which was significant at the age of one we now see that life experiences can lead to further distortions in the core distortion which also lead to further muscle weakness, a continuing cycle of increasing structural imbalance, weakness, and degeneration. Add to all this the constant force of gravity and in time the pressure on the discs can increase until degeneration or herniation or worse takes place.

The unrecognized cause of this degeneration is the core distortion which is so common it is viewed as normal. Thus it has been overlooked as the cause and focus for rehabilitation.

A degenerated or herniated disc is a symptom where pressure has increased to the point of damage. What causes this pressure is the exaggerated curvatures of the spine from the lack of support of the core distortion. Keeping in mind that the body wants to heal itself and, if given a chance it will, massage therapists need to focus on taking the pressure off the discs by reducing the curvatures in the spine which come from the core distortion. When this happens significant number of disc issues including herniations resolve without surgery or other invasive treatments.

Successfully addressing the core distortion with massage and soft tissue manipulation requires an understanding of the core distortion and a high level of soft tissue myofascial therapeutic skills. For long term rehabilitation it is necessary to first, reduce the rotation of the iliums to the point where they can support a leveling of the sacrum and be able to maintain the support while the client is weight bearing. Second, restore muscle strength and function to the weakened muscles both for structural support and functional life activities. Third, release the soft tissue myofascial holding patterns, adhesions and scar tissue back into balance to support pain free structure and function. Obviously these improvements need to be long term to provide time for the long term rehabilitation of the spine.

The good news is there is a connection between the movement of the cranial bones and the rotations of the iliums. By releasing the soft tissue restrictions that created the imbalances affecting the movement of the cranial bones using Cranial/Structural Core Distortion Releases (CSCDR) it is possible to achieve a substantial reduction of the rotation of the iliums and bring weight bearing support to the sacrum. Thus leveling out the base of the spine and allowing an unwinding of the exaggerated spinal curvatures of the core distortion. Fortunately this is a long term correction. An additional benefit of the CSCDR is that the balancing of the iliums reduces the rotation to less than 15 degrees bringing about an immediate increase in strength and function of the weakened muscles. This stabilizes the improvements and returns strength to the structure that had been missing. This will initiate an unwinding of the old myofascial holding patterns along with the structural distortions of the core distortion.

The second therapeutic component of the rehabilitation of the back is specialized myofascial soft tissue release protocols designed to further unwind the core distortion imbalances of the legs, pelvis and low back. The CSCDR has already brought the structure back into weight bearing support and initiated the unwinding of the body out of the core distortion. Now the myofascial protocols will further release and unwind the body into the direction it wants to go. Additionally specialized myofascial techniques are used to release scar tissue and soft tissue impingement of nerves which are often present with the exaggerated curvatures of the low back. This is further aided by muscles that were weak due to the major rotations of the core distortion that have been strengthened because of the reduction of the rotation of the iliums due to the CSCDR. This increased muscle strength helps maintain the increased structural balance. Specialized energetic healing techniques are also used to release energetic and emotional blockages which are a result of the distortion, dysfunction and pain.

Having an understanding of the core distortion and how it leads to degeneration and exaggerated curvatures of the spine, and then being able to apply effective treatment protocols that will lead to long term rehabilitation, massage therapists can help many clients avoid surgery and costly invasive medical treatments for severe low back and disc issues.