

Feature Commentary**JOURNEY THROUGH THE MDT DIPLOMA PROGRAM***TARUNA RIJHWANI, PT, OCS, CERT. MDT*

As an MDT clinician, most of us find ourselves at the crossroads of whether or not to pursue the Diploma Program. Going through the credentialing process lays the foundation to understand the concepts of MDT, but being able to fully and efficiently use the system takes time and perseverance. I found myself asking the following questions before undergoing Diploma training: Are my outcomes as good as the faculty discuss in the courses? Do my clinical reasoning skills work as effectively when the clock is “ticking” in my everyday busy schedule? And more importantly, am I able to educate my patients enough as to why this approach works?

While all these thoughts boggled my mind, another side pondered “Is the effort really worth it?” With a huge financial investment and time away from work, I questioned whether reinforcing a system that was already in place was worth the time. Working as the sole MDT clinician in my office, I did not have any idea about the Diploma Program nor the expectations of personal gain. I searched the web several times and the only information that came up was the official MDT Diploma brochure on the Institute’s website. Not having any information about the program and what seemed to be a huge step at the time, I had mixed feelings about my decision to apply for the Diploma Program.

When all of the pieces of the puzzle were finally put together, I began my quest to attain Diploma in 2016. The distance learning component lifted my blinders and exposed me to a whole new gamut of existing literature not only pertaining to MDT but also clinical reasoning, patient communication, etc. The list goes on! Meeting different professionals from all over the world and having discussions with them was an experience I had never had before. It opened my mind and gave me a broader perspective.

The next step in the journey was the clinical residency at St. David’s in Austin, TX. As excited as I was about making it so far, I knew that the clinical piece would be a bigger challenge to face. After being in clinical practice for a few years, we all get set in our ways and it is not easy to have your clinical skills evaluated and critiqued on a regular basis. Neale D. Walsh once said, “Life begins at the end of your comfort zone.” Indeed, this is very true. Once you establish an open mind, can take criticism constructively and are willing to make the effort, good things do happen! I found myself becoming a better clinician every week. Right when I thought I had surpassed all the hurdles on Friday, there was a new challenge waiting for me the following Monday!

One of the most important things that changed after my clinical residency of the Diploma Program was that I stopped trying to fit round pegs in square holes. It was repeatedly emphasized by my mentors to classify the patients first before trying to “fix them”. Spending those initial visits trying to understand and assess the patient’s problem and classifying them is half the battle and most patients appreciate a thorough assessment process.


Educating the patient is another important aspect of MDT and my skills in doing this improved significantly during the Diploma training. Taking every opportunity to educate the patient, starting from the history and working all of the way through the assessment process, is what gets the patients on board. They feel they are a part of the process and the assessment is worth their time and money. A

Inside This Issue:

- Feature Commentary
- Guest Commentary
- International Spotlight
- Clinician’s Perspective
- Literature Review
- Benefits of MDT & Supportive Studies
- Business & Marketing Corner

good clinician is not the one who can “fix” every patient that walks into their clinic, but one who classifies them, understands their condition and guides them appropriately in the right direction. Not being afraid to refer them out, giving them the right prognosis and being confident to do so is what will set you apart from other professionals they might have seen! “It is not the message the clinician gives that matters but that which the patient receives” (Dixon and Sweeney; 2000).

At the end of my residency in Austin, I returned back to my own clinical practice. I found myself abreast of the recent literature, taking



the time to thoroughly evaluate my patients and getting to the right classification before starting to address the problem. I focused on making the patients an integral part of the process, being an active participant throughout and not a passive recipient. While all these changes happened in a short span, it made me realize that professional growth is crucial and is key at any and every stage of your career. The Diploma Program takes a lot of effort and mentors constantly pushing the envelope, but the rewards are worth it in the end!

While this realization dawned on me, I decided to contribute my personal experience and journey through the Diploma Program with this platform hoping that any clinicians pondering through the same questions may find some answers! As I prepare to take the next step of the final exam, I can't wait to be added to the list of MDT Diplomates with The McKenzie Institute and be recognized as a member of this elite musculoskeletal expert community.

So, go ahead, take that leap of faith and find yourself on a professionally enriching journey!

GUEST COMMENTARY**MDT and the North American Spine Society***Amy Fletcher, PT, DPT, Dip. MDT, FAAOMPT*

I was fortunate to have had the opportunity to attend the North American Spine Society (NASS) Annual Meeting in Boston, Massachusetts in October 2016 to assist with the Exercise Booth. It was a great opportunity to expose NASS members to MDT and to “Movement is the Medicine”, which was the topic of our Exercise Booth.

Compared to when I last attended in 2013, more attendees answered, “Yes” when I asked if they were familiar with the terms Directional Preference and Centralization. This is, no doubt, the result of the work of a small group of MDT clinicians who have been planting seeds within the NASS community for many years.

While at the meeting, I spent time with Ryan Tazzell, PT, Cert. MDT, the current chair of the NASS Exercise Committee, Ron Donelson, MD, a former chair of Exercise Committee as well as a 2016 meeting presenter, and the other booth volunteers including PTs Dan Perry, Dip. MDT, Casey Vedder, Cert. MDT and Sean Vonderfecht, Cert. MDT. Both Ryan and Ron have been generous enough to contribute to this article by sharing some of their NASS experience and providing editorial support.


The Exercise Committee has an exercise booth at the conference each year to provide education on the importance of exercise in the treatment and prevention of spine problems. Several physical therapists staff the booth to educate the meeting attendees. The call for booth volunteers is sent to Physical Therapists, primarily those with MDT training, the spring prior to the annual meeting. This affords the volunteers the opportunity to attend the annual meeting at a significant cost savings. The Exercise Committee is also charged with providing educational materials focused on reducing the societal burden of spine-related problems to the public and clinicians. MDT has been a central component of the exercise booth due to the prominent involvement and leadership of MDT clinicians.

The Exercise Committee began as a task force co-chaired by Ron Donelson and Ted Dreisinger. During Ron Donelson’s last year as committee chair, and with the encouragement of Todd Wetzel, MD, a committee member at that time, an exercise decision-making algorithm was developed to provide a recommended pathway for clinicians in determining the specific type of therapy they should provide for each individual patient based on the current body of evidence. Using Spratt’s ADTO research model, the Committee reviewed the evidence supporting the commonly used exercise-based paradigms for low back pain and concluded that MDT should be the starting point for each patient’s care. The algorithm went on for evidentiary review by the full NASS Low Back Pain Guideline Committee, which, when completed and approved, will be the most comprehensive MDT acknowledgement to date. Although the process will take years to complete, it has been a monumentally important effort. The guideline process involves approximately 80 reviewers, comprised of multiple stakeholders grouped by their individual areas of expertise.

Ryan’s involvement with NASS has led to opportunities for him to present at multiple NASS events around the country, influencing clinical practice and policy. He states, “Involvement in an international, interdisciplinary, professional society allows collaboration between multiple disciplines that have a shared goal. NASS is unmatched in this deliberate cross-pollination effort. Looking back, my view of spine care was full within my profession, yet narrow compared to the rest of the spine care world. NASS has broadened my view of spine care to a global scale and there is still so much to learn. In order to realize all these benefits, I had to invest my time generously and become involved.”

At the 2016 Annual Meeting in Boston, Ron Donelson presented the paper, “The Impact of a Precise Mechanical Diagnosis for Low Back Pain: A Cost Comparison with Standard Community Care.” It reported a 51.5% overall savings for LBP care utilizing Integrated Mechanical Care’s “enhanced” version of MDT. It was a well-attended break out session that generated good questions and discussion on the topic.

Ron anticipates having another cost-savings paper or two to present at the 2017 annual meeting. In addition, he plans to submit a proposal for at least one MDT-related symposium on the 2017 program. Todd Wetzel, MD, as the incoming NASS President and also a MII Board of Trustees member, provides a unique opportunity to influence the program content. Todd also sees 2017 as an excellent year for



MDT clinicians to attend NASS, become members and promptly become influential through committee membership.

Many MDT-trained clinicians have volunteered their services within the NASS Exercise Booth over the years. These include, but are not limited to, Beata Smela, Kim Greene, Lois Donelson, Eze Ghercovici, Yoav Suprun, Chad Gray and Denise Campbell. Further, Allison Stout, DO, a Seattle-based physiatrist and former MIUSA Board member, also chaired the NASS Exercise Committee during these timely years.

This fall, The McKenzie Institute, working in partnership with NASS, will present the 14th Annual Conference in Mechanical Diagnosis and Therapy: Patients Come First – Exploring Optimal Care in San Francisco, California. This conference marks the first formal partnership between the two organizations and will, no doubt, be just the beginning of a mutually beneficial relationship.

The 2017 NASS Annual Meeting will be held in Orlando, Florida from October 25-28.

INTERNATIONAL SPOTLIGHT

The People Who Never Heard of McKenzie

Ryan Borck, PT, DPT, OCS, Cert. MDT

“Estaba un placer. Gracia para viniendo. Buenas dias.”

In my broken Spanish – “It was a pleasure. Thanks for coming. Have a good day.”

As the attendees gathered their notes and filed out, a twenty-something *Guatemalteca* female therapist named Raquel approached the podium at the front of the room. She was dressed professionally, wearing the type of glasses that make you think of someone who studies a lot. She asked thoughtful, curious questions throughout the presentation, but now she asked the one question I was hoping for, the solitary purpose of months of preparation, study and support from a half-dozen clinicians connected to The McKenzie Institute USA. She delivered the payoff with hesitation, like she knew she was asking for more than she expected to receive.

“Donde puedo aprender mas?”

“Where can I learn more?”

Why Guatemala Needs MDT

Guatemala is the same distance from my hometown as California, but it might as well be light-years apart. When America created its constitution in 1787, Guatemala, a nation the size of Ohio, was still ruled by Spanish *conquistadors*. Since the US declared independence, Guatemala has been separately ruled by Spain, Mexico, the short-lived Republic of Central America and autonomously. In that timeframe, it has had seven different constitutions and operated under socialist, authoritarian and democratic rule. Although The McKenzie Institute is one of the most well-established brands in therapy worldwide, here it might as well be a foreign language.

Typically, if you ask a room full of therapists what their opinion is of the McKenzie Method, you know what responses to expect. Some enthusiastically raise the banner or demonstrate respectful admiration. Others roll eyes or roll up their sleeves preparing for a therapeutic approach slugfest. But in Guatemala the response is fundamentally different – blank stares. We discovered this in late 2016. Nearing the end of a four-month stint in the country, I wanted to make a bigger impact than just seeing the patients who came in to the clinic. I wanted to find the therapists. I wanted to let them know there is a logical, intuitive and, most importantly, empowering system of mechanical care available to them.



I knew McKenzie could be revolutionary in a developing nation where the standard care for mechanical pain looks a lot like it did in America in the 1960's. Everyone receives passive modalities: a hot pack, massage or PROM, e-stim if your clinic can afford a machine and definitely ultrasound for all the Bell's Palsy patients. Through incredibly fortuitous circumstances, we made contacts with leaders in the local therapy community who expressed a desire to learn more about this completely unknown way of practice. Seizing the open door, we offered the first-ever Guatemalan MDT introduction on three different days, in three different regions (Zacapa, Antigua and Guatemala City) to 87 practicing rehabilitation specialists and two physiatrists. It's almost too fantastic for a US-based

therapist to believe – Robin McKenzie and his infamous Mr. Smith to be unknown. As the responses lined up, it was clear. Less than 5% had heard of the name McKenzie. Even then, the most knowledgeable of those could only associate him with a specific extension exercise, not a system.

Challenges

A lack of familiarity was not the only unexpected difficulty. For example, as we shared information about the objective reliability and validity of the McKenzie Method relative to palpation and other assessment measures, we discovered the impressive figures on the 0-1 scale were undercut by the fact that research evaluation is not a covered subject in therapy curricula, rendering the argument meaningless. “Centralization” was another new concept entirely foreign to their practice which, when explained, the audiences quickly grasped its significance. The difficulty describing “Peripheralization” was more substantial. As far as we could tell, no word yet existed to define that phenomena. One morning in rural Zacapa, I was humbled as I began outlining the stoplight rule, only to realize most students in the class had never even encountered a stoplight in their daily lives.



A New Hunger

Despite the cultural obstacles, the strength and rigor of Mechanical Diagnosis and Therapy revealed a level of care powerful enough to capture those in attendance. In fact, on the last day, Claudia and Juan Cicheros, our hosts for the day and owners of one of the largest medical companies in Central America, had to turn professionals away at the door. Participants heard a brief overview of the system, saw a demonstration and were able to practice active problem solving and classification in small groups. The response was like someone who has only ever eaten off a restaurant appetizer menu, now seeing the whole menu unfolded before them for the first time. They embraced it and were hungry for more.

Guatemalans have a reason to be hungry. Compared to its tourist-favorite and border neighbor Belize, Guatemala is four times larger and has 43 times the population. One perfect example of the economic and political struggles holding the country back due to debt and embezzlement, nearly all of the country has no mail service. Thinking this was an exception, we experienced this first hand when we attempted to send mail home, realizing that it literally was an impossibility to send mail, regardless of money. We traveled a few miles across the border and the same

package went from Belize to Chicago for 60 cents. Each tidal wave of positive momentum over the last 300 years had been pulled under by greed, government corruption, civil war and the like.

Hope for the Future

Change is coming through people like Claudia and Juan, who are passionately leveraging their position in the medical community to offer education to the locals (or “ay-do-cation” as Juan says it.). Schooled in America in their youth, they believe passionately in the innate importance of training as the vehicle to drive change for their broken country. For this reason, and at no profit to themselves, they’ve offered any and all training they could get their hands on at their state-of-the-art facility in the capitol at no cost. In recent years, they’ve hosted a series by a scoliosis specialist from Europe and, in a remarkable feat, last year coordinated the first Mulligan series, culminated by a certification examination



in December which was completed by over 20 people paying over \$500 per level. What they really want now, they say, is McKenzie.

“The people are hungry, but they don’t have access to what they need,” Juan remarks. They say Guatemala has been poor so long, that it has transformed the way people think. They hold onto to whatever knowledge or training they can put their hands on, rather than share and dispense for the common good. It sounds a lot like Depression-era hoarding, everyone hiding copper pennies under their mattresses.

Locals tell a popular legend. There were two fishing boats, one full of American lobsters and the other full of Guatemalan lobsters. In the American boat, the fishermen had to place a cover over the lobster cage because the lobsters kept climbing up each other and escaping out the top. As the tale goes, the Guatemalan cage didn’t need a cover, because any time a lobster would try to climb out, the other captives would pull them back down.

Juan reflects on this story with a resolved surrender, but you can see a determination to change the way things have been. For decades, this has been the way of things, but there’s hope for change. For the first time, a class of people have the financial ability to pay a fair wage for advanced training like MDT. More importantly, talented and motivated advocates like Juan and Claudia, working together with others like their PT friend Marta, who founded the first-ever PT association in Guatemala, are committed to bringing whatever will best help PT in their country, and eventually help every person. Good people looking to raise the level for all in Guatemala, not just keep everyone else down.

As of this writing, representatives of the Guatemala constituency are in talks with The McKenzie Institute International to coordinate presenting the full MDT Series and Certification, for which 30+ local therapists and delegates from bordering Honduras have expressed interest.

A CLINICIAN'S PERSPECTIVE

The Key is in the Classification: A Clinician's Perspective of the Largest MDT Case Series Studying Directional Preference of the Wrist

Lindsay Carlton, ATC, DPT, Cert. MDT

Citation: Maccio JR, Carlton L, Fink S, Ninan C, Van Vranken C, Beise G, McGowan C, Maccio JG, Tranquillo J. Directional Preference of the wrist: a preliminary study. *J Man Manip Ther.* 2017;1-7. doi: <http://dx.doi.org/10.1080/10669817.2017.1283767>

Among the MDT community, it is commonly known that mechanical joint Derangements, either in the spine or extremities, can mimic common pathoanatomical diagnoses, such as sciatica, de Quervain's, lateral epicondylagia, osteoarthritis, meniscus tear or shoulder tendonitis.¹⁻⁷ The key to establishing the most effective and efficient care for a patient will most often come by proper classification. It has been well supported in the literature that when Directional Preference and classification of mechanical joint Derangement is established in an extremity joint, rapid resolution of symptoms and restoration of function is typically expected.³⁻¹³ This most recent MDT case series¹² analyzed predictive variables for establishing Directional Preference at the wrist. Facilitating a clinician's ability to identify Directional Preference and classify mechanical joint pain may ultimately have the power to improve care and lead to better clinical outcomes, while also eliminating the need for diagnostic imaging and unnecessary treatments or procedures.

Nineteen patients with the primary complaint of wrist pain were evaluated by physical therapists and physical therapy students with various levels of MDT training over a two-month period. All assessments and treatments were overseen by the principle investigator (JRM), who holds a doctorate in physical therapy and is a Diplomate of MDT. Patient history and MDT repeated movement testing was utilized to rule out any influence of cervical spine pathology, allowing mechanical assessment to progress to repeated movements of the wrist. Directional Preference was established if pain decreased two or more points on Numeric Pain Rating Scale (NPRS), range of motion improved 50% or more, and/or ability to perform a functional task improved 50% or more or pain on NPRS with a functional activity decreased two or more points.

Seventy-nine percent of evaluated patients were classified as wrist Derangement Syndrome, significantly higher than previously reported in the literature. Repeated movement testing first began in the sagittal plane with varying forces. If a favorable response was not found, as described above, then repeated movement testing in the frontal or transverse planes was explored under varying forces; as one would navigate through the MDT system to treat mechanical Derangements of the spine.¹ Eight different loading strategies were utilized in this study¹², where previously there were only two loading strategies published^{3,14} concerning the treatment of mechanical wrist joint Derangements. The variables analyzed for association with Directional Preference were: mechanical stress, obstructed movement, directional vulnerability and painful movement. Identifying these variables during clinical assessment will aid the clinician in determining Directional Preference at the wrist, which may lead to faster resolution of symptoms and functional deficits.

The highest association for prediction of Directional Preference at the wrist was mechanical stress, which was inversely related to Directional Preference by 73.3%. In nearly three-quarters of evaluated patients, their Directional Preference could be identified from their history alone. Developing a well-understood patient and mechanical history will allow the clinician to navigate through the examination and treatment in a more directed way. After the patient history, the clinician should be able to determine if the patient can be classified as a wrist derangement in 73.3% of patients and should also have a general idea of which loading strategy to employ for treatment. This pattern recognition will allow the clinician to establish more effective treatment plans which should resolve quicker than when traditional methods are used.

Obstructed movement was the second most useful determinate for Directional Preference, with 46.6% of patients' Directional Preference matching their obstructed movement. This finding has incredible clinical relevance as traditional physical therapy often works to restore obstructed movement by mobilizing and moving into that direction; however, by doing so in this study, it would have resulted in more than half of the participants developing a worsened presentation of their symptoms and function. Finding an obstruction to movement during the assessment will help to indicate to the clinician that the presence of a joint Derangement is likely, and the direction that the patient will need to move to experience rapid improvement in the condition is not expected to be in this direction.

The direction of movement which provoked the patients' symptoms, or directional vulnerability, was found to be opposite of their Directional Preference in 66% of wrist Derangements in this study. This is key, again, as the clinician might be able to determine directional vulnerability through patient and mechanical history. If not through the history, then upon mechanical movement assessment the clinician may find a directional vulnerability. Once identified, this will allow the clinician to confidently make the provisional classification of Derangement and begin to establish Directional Preference, which was opposite of the directional vulnerability in two-thirds of the wrist Derangements studied.

The final variable of interest, the patients' most painful movement, was found to match their Directional Preference in 53.3% of wrist Derangements. Again, this finding is clinically applicable as traditional physical therapy and orthopedic treatments often work to prevent or limit patients' ability to move toward painful movements via bracing, immobilization or behavior and activity modification. This finding is of interest as it challenges the current belief that rest and disuse helps return function. If these painful movements were avoided in this study, less than half of the participants would not have improved their pain and function.

The clinical application resulting from this study is immense, for both the MDT-minded clinician as well as clinicians using more traditional treatment methods. This study had the highest reported prevalence of Derangement to date (79%), which may be explained by the higher number of loading strategies employed for treatment (eight versus the previously published two). This study¹² also found that patients with central symmetrical symptoms only required sagittal plane loading strategies while patients with lateral symptoms responded to loading strategies in both the sagittal and frontal or transverse planes. Nevertheless, this study presents an even greater societal impact as using MDT assessment and treatment methods may dramatically reduce medical consumption (i.e., diagnostic imaging, invasive procedures, pharmacological agents, etc.) and the resulting dependence on narcotics and unnecessary medical interventions.¹² Further research is needed to establish more concrete cost-saving analysis and data, as well as predictive variable data at other extremity joints. Conversely, mechanical joint Derangements tend to behave in a predictable manner, despite the joint being assessed,¹ therefore it is hypothesized, based on this study,¹² that these findings will generalize well to other extremity joints.

Supplemental Video: <https://www.youtube.com/watch?v=PfoPGUrnISY>

References

1. McKenzie R. *The Lumbar Spine: Mechanical Diagnosis and Therapy*. 1st ed. Wellington: Spinal Publications New Zealand Ltd; 1981.
2. McKenzie R, May S. *The Human Extremities: Mechanical Diagnosis and Therapy*. 2nd ed. Wellington: Spinal Publications New Zealand Ltd; 2003.
3. Kaneko S, Takasaki H, May S. Application of Mechanical Diagnosis and Therapy to a Patient Diagnosed with de Quervain's Disease: A Case Study. *J Hand Ther*. 2009;22(3):278-284. doi:10.1016/j.jht.2009.03.002.
4. Maccio JR, Fink S, Yarnzbowicz R, et al. The application of mechanical diagnosis and therapy in lateral epicondylalgia The application of mechanical diagnosis and therapy in lateral epicondylalgia. 2016;9817(February). doi:10.1080/10669817.2015.1110303.
5. Rosedale R, Mdt D, Rastogi R, et al. Efficacy of exercise intervention as determined by the McKenzie system of mechanical diagnosis and therapy for knee osteoarthritis: a randomized controlled trial. *J Orthop Sport Phys Ther*. 2014;44(3):173-181. doi:10.2519/jospt.2014.4791.
6. Lynch G, May S. Directional Preference at the knee: a case report using mechanical diagnosis and therapy. *J Man Manip Ther*. 2013;21(1):60-66. doi:10.1179/2042618612Y.0000000019.
7. Kidd J. Treatment of shoulder pain utilizing mechanical diagnosis and therapy principles. *J Man Manip Ther*. 2013;21(3):168-173. doi:10.1179/2042618613Y.0000000037.
8. Aina A, May S. A shoulder derangement. *Man Ther*. 2005;10(2):159-163. doi:10.1016/j.math.2005.01.001.
9. Aytona MC, Dudley K. Rapid resolution of chronic shoulder pain classified as derangement using the McKenzie method: a case series. *J Man Manip Ther*. 2013;21(4):207-212. doi:10.1179/2042618613Y.0000000034.
10. Krog C, May S. Derangement of the temporomandibular joint; a case study using Mechanical Diagnosis and Therapy. *Man Ther*. 2012;17(5):483-486. doi:10.1016/j.math.2011.12.002.
11. Menon A, May S. Shoulder pain: Differential diagnosis with mechanical diagnosis and therapy extremity assessment - A case report. *Man Ther*. 2012;18(4):4-7. doi:10.1016/j.math.2012.06.011.
12. Maccio JR, Carlton L, Fink S, et al. Directional Preference of the wrist: a preliminary investigation. *J Man Manip Ther*. 2017;9817(February):1-7. doi:10.1080/10669817.2017.1283767.
13. Littlewood C, May S. A contractile dysfunction of the shoulder. *Man Ther*. 2007;12(1):80-83. doi:10.1016/j.math.2005.11.002.
14. May SJ, Rosedale R, May SJ, Rosedale R. Research Report A Survey of the McKenzie Classification System in the Extremities: Prevalence of Preferred Loading Strategies. 2012:1175-1186. doi:10.2522/ptj.20110371.

LITERATURE REVIEWS

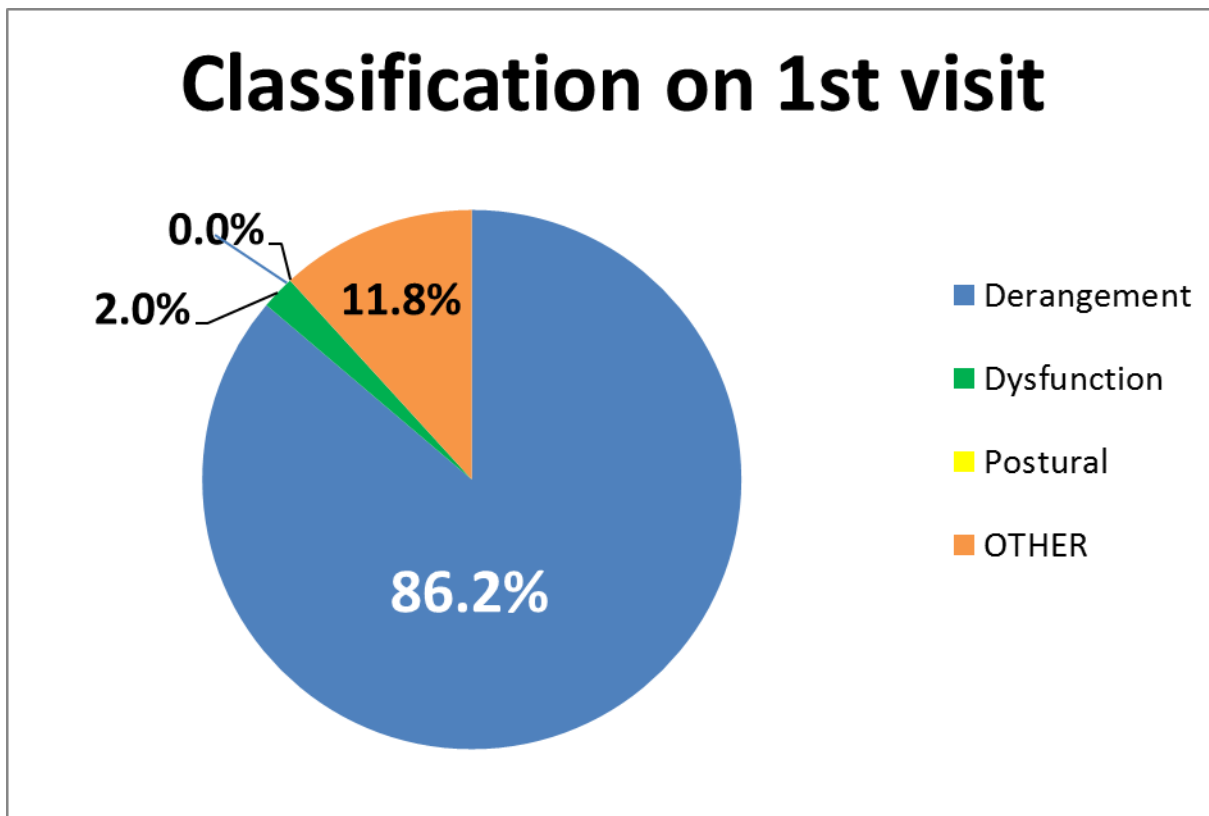
Summary and Perspective of Recent Literature

Jacky Otéro, PT, Cert. MDT and Richard Rosedale, PT, Dip. MDT

Otéro J, Bonnet F. 2016. Cervicalgie: Prévalence des syndromes McKenzie et des préférences directionnelles. (Neck pain: Prevalence of McKenzie's syndromes and directional preferences) *Kinesithérapie; 14(145):36-44.*

This prospective multi-center study assessed the prevalence of Derangement, Dysfunction, Postural Syndrome, OTHER subgroups, Centralization and Directional Preference (DP) as well as their consistency over five visits (Otéro & Bonnet, 2016). 293 patients with nonspecific neck pain of any duration were classified by 34 Certified MDT therapists working in a variety of clinical settings in France.

At the initial visit, the proportion classified is shown below. As can be seen, the proportion of patients classified as Derangement is encouragingly high, despite the fact that more than 40% of the patients had a history of greater than three months. (Note: the 'Irreducible Derangements' (now known as Mechanically Unresponsive Radiculopathies) found in the study are included in the OTHER category).

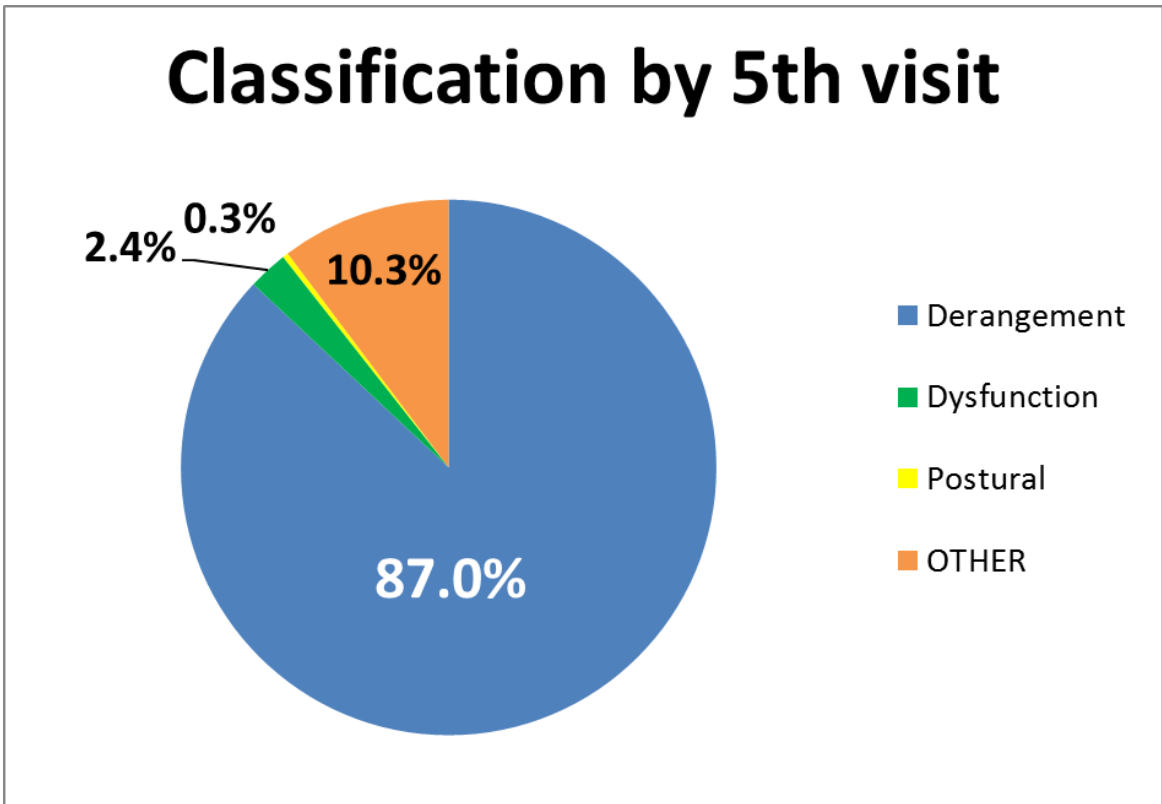


For Derangements, Extension was the most frequent DP at 83.6%. Of these, 49.2% were Retraction responders, 31.6% Retraction-Extension, and 2.7% Extension responders. A lateral principle was reductive in 13.7% and a DP for flexion was observed in only 2.7%.

During the initial visit, Centralization was observed in 52.9% and 'partial' Centralization in 21.9%.

Concerning the consistency of classification over five visits, only 3.51% of Derangements were reclassified in another subgroup, mostly OTHER subgroups (77.77%). On the other hand, 34.28% of OTHERs were reclassified, all of them as Derangements. The proportions by the fifth visit are shown below:

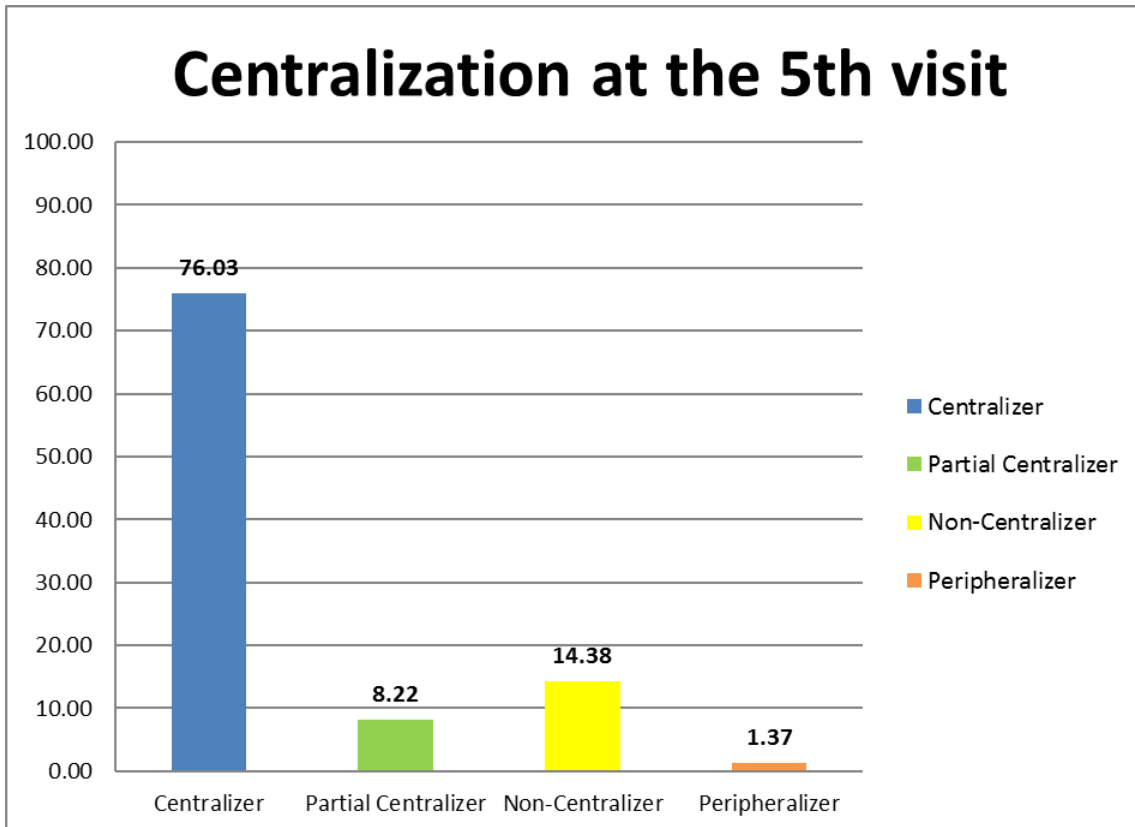
Classification by 5th visit



For the consistency of observation of DP, the overall prevalence rates varied only marginally over the five visits. However, the DP changed from one spinal movement to another in a total of 41.4%. The authors describe a total of 23 such changes; the most common change was, in fact, a progression (rather than a change in direction) from Retraction to Retraction-Extension (38.8%) and then there was a change from Retraction to Lateral Flexion (10.7%). In 9.9%, no DP changed to a DP, and, conversely, in another 5.8% with a DP changed to no DP.

Concerning the prevalence of centralization, by the fifth visit, the breakdown is shown below. The incidence of Centralization changed between the 1st and the 5th visit from 52.9% to 76%.

Centralization at the 5th visit



So, what are the implications for the MDT clinician? While this study confirms the prevalence rates observed in other studies, the prevalence rates of the various reclassifications and their detailed descriptions adds interesting new information to the current literature and informs clinical practice. It substantiates the importance of continuous re-assessments in order to confirm a provisional diagnosis and to guide management. Indeed, clinicians should not hesitate to test and confirm appropriate management over a few visits in order to thoroughly assess challenging clinical presentations.

The most compelling finding, though, is the overwhelming proportion of Derangements reported and the large percentage of those that demonstrate Centralisation. The implications are clear; most patients with neck pain who see a MDT clinician, have the potential to treat themselves with simple end range exercise and the prognosis is excellent.

Our inclination is to think that these patients will respond to Directional Preference exercises and posture correction better than to any other intervention, but we desperately need trials to confirm or contradict this inclination. In the meantime, surveys like this give us some encouragement that we can provide simple solutions to the majority of our patients in the hope that it will empower them to manage current and future episodes.

<http://dx.doi.org/10.1016/j.kine.2015.05.009>

Summary and Perspective of Recent Literature

David Ham, PT, Cert. MDT

Ayanniyi O, Sanya A, Ogunlade O. 2016. Effects of the McKenzie protocol on pregnancy-related back pain. *J Experim Integ Med*; 6: 118-124.

The aim of this study was to determine the effects of a McKenzie-based exercise and postural program compared to usual care (advice, patient education, analgesics) for the management of back pain in pregnant women.

Back pain is a well-known problem that can occur during pregnancy, with etiological consideration given to hormonal and biomechanical factors. A multitude of treatment approaches have surfaced to manage this problem conservatively such as educational programs, exercise regimens, sacroiliac belts for pelvic girdle pain and manipulative therapy. MDT is frequently used to assess and manage back pain in the general population, but its effects in the pregnant population are not well known. One case series of 72 pregnant women with low back pain found that Derangement was present in 80%, with 76% of this group achieving an excellent or good outcome (Rath 1997).

This study investigated pain (Numeric Rating Scale) and disability (Modified Roland-Morris Disability Questionnaire) outcomes for pregnant women over a seven-week period. 466 pregnant women were purposively recruited from five Nigerian antenatal centres and assessed by one investigator holding the MDT Diploma. Participants were initially screened and subgrouped according to pain location: High Back Pain (HBP) in the thoracic region, Low Back Pain (LBP) in the lumbar area, and Pelvic Girdle Pain (PGP) in the pelvis. Participants were excluded if they could not understand English or Yoruba, had a complicated pregnancy, showed indicators of serious spinal pathology, demonstrated at least two signs of nerve root compression or had an expected date of delivery less than eight weeks. Participants with HBP or LBP were also excluded if they did not fit into one of the three McKenzie syndromes (author correspondence). Patients were then randomized into a Usual Care Group (UCG) or a McKenzie Protocol Group (MPG) including usual care.

Treatment protocols lasted six weeks with a final assessment one week following completion. Participants in the UCG received treatment as deemed appropriate by the patient's physician which could include any or all of analgesics, counselling, postural education, and modification of activities of daily living. Participants in the MPG were given directional preference exercises (if indicated) and education on posture, avoidance of aggravating activities, prevention of recurrence, and self-management. One therapist assessed and treated all MPG patients. Repeated movement testing was limited to two to three movements in a given direction due to an ethical concern raised regarding repetitive movement in the presence of structural laxity; sustained positioning was also used. In the PGP group, if there was no response to movement or positioning then lumbopelvic manual techniques were used as a force progression; if again no response was seen then a sacroiliac belt was prescribed.

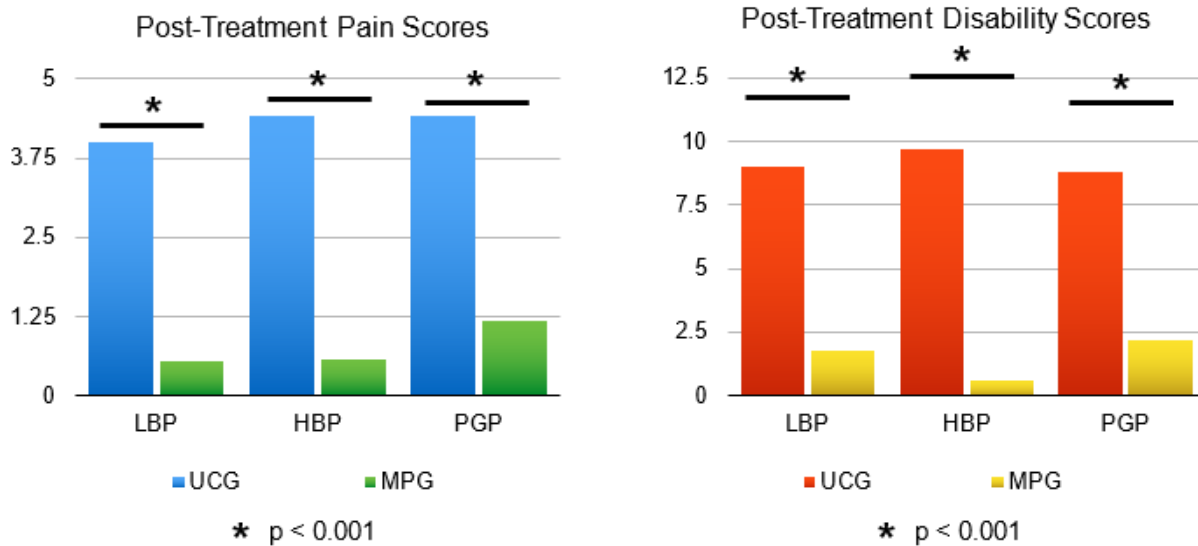
Results

466 pregnant women were enrolled in the study, with 28 dropouts from the MPG and 16 from the UCG due to delivery dates earlier than expected. Only the participants who completed the study had their data analyzed.

Overall prevalence of the MDT syndromes as determined by initial screening is presented below (author correspondence).

Pain Site	Derangement	Dysfunction	Postural	Inconclusive	Total
LBP	220 (86% extension, 14% flexion)	0	10	0	230
HBP	86 (100% extension)	0	0	0	86
PGP	78 (52% flexion, 48 % extension)	0	0	72	150

Prior to treatment, there were no significant differences between the two treatment groups for age, parity, pain scores or disability scores. Participants within the MPG showed statistically significant and clinically important reductions in pain and disability for all pain location subgroups post-treatment; participants within the UCG showed statistically significant but not clinically important reductions in pain and disability only in the LBP and PGP subgroups. A between-group comparison revealed participants in the MPG achieved significantly greater reductions in pain and disability than those in the UCG across all pain locations:



The mean number of treatment visits for the MPG varied by pain location subgroup: LBP needed 2.41 (range 1-4), PGP 2.63 (range 2-4), and HBP 2.08 (range 1-3).

Commentary

This study is an informative addition to the MDT literature as it provides evidence of the effectiveness of the approach in the pregnant population. The prevalence of Derangement and Directional Preference for the LBP and HBP groups is consistent with the previous case series (Rath, 1997), but interestingly for those in the PGP subgroup with directional preference, a slight majority responded to flexion. Importantly, robust results were shown in favour of MDT management; none of the participants in the usual care group achieved a clinically meaningful reduction in pain or disability, while all the McKenzie group participants did.

Strengths of this study included the large sample size with over 200 participants in each group and consistency in management of the MPG with one highly-trained therapist assessing and treating all participants. Additionally, MDT intervention was reflective of true clinical practice with an emphasis on self-management, postural education, temporary avoidance of aggravating factors and regular performance of reductive exercise.

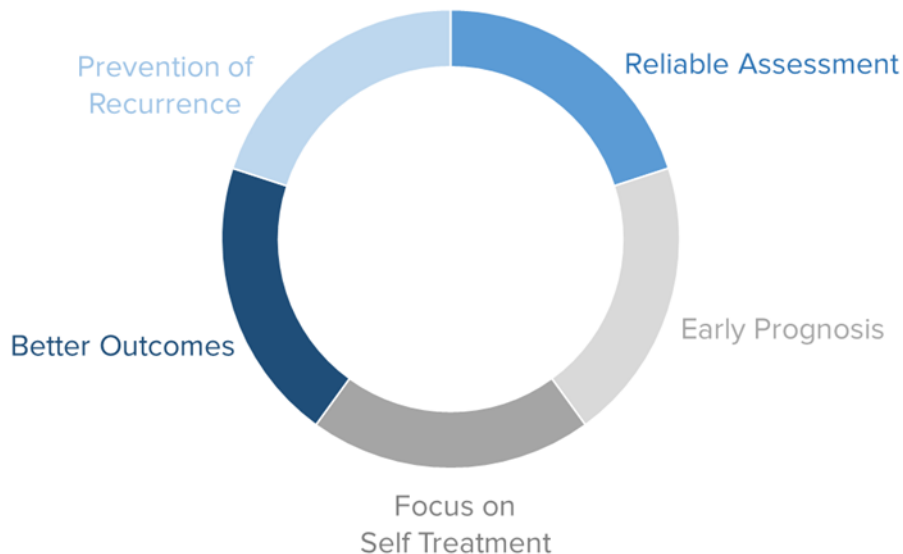
Several limitations were noted. Firstly, the intervention in the usual care group was not standardized and was delivered by numerous care providers. Also, it is possible that some of the response seen in the MPG was due to a general exercise effect, since the usual care group did not receive any exercise interventions; an additional group performing non-specific exercises would have been enlightening to elucidate the specific impact of MDT. Furthermore, only two to three repetitions were performed in the repeated movement exam due to ethical concerns of structural laxity. This is an overly cautious approach; if the symptomatic response is followed then safety in the examination can ultimately be assured.

Despite these limitations, compelling and clinically important results were achieved in the MDT group. Thus, back pain in the pregnant population appears similar to the general population in that a high prevalence of Derangement is present and thus many will respond rapidly. Some procedures need to be modified but the system can be followed as for any other patient. Additionally, a notable finding from this study is that 52% of patients with pelvic girdle pain had a Directional Preference; therefore, just under half needed a sacroiliac belt as part of their care, less than what might be expected for this group.

https://www.researchgate.net/publication/309586042_Effects_of_the_McKenzie_protocol_on_pregnancy-related_back_pain

THE BENEFITS OF MDT & SUPPORTIVE STUDIES

The McKenzie Institute International



1. Reliable Assessment

To be effective, any treatment system must be based upon a sound assessment and an accurate diagnosis or classification.

Scientific research supports the reliability of the McKenzie system¹⁻⁴ and can assist to further improve the formal education⁵.

Numerous studies provide data on the prevalence rates, demonstrate the comprehensiveness of the system⁶⁻⁸ and the validity of the diagnostic process^{9,10}.

2. Early Prognosis

Patients seek information on their estimated prognosis¹¹⁻¹³.

The McKenzie evaluation process makes it possible to predict patient prognosis mostly within 1-2 consultations¹⁴⁻¹⁷.

3. Focus on Self Treatment

The emphasis on self-treatment empowers the patient and helps foster a strong sense of independence. Research demonstrates that patients who are empowered through participation in their own care acquire the skills, knowledge and confidence that result in beneficial outcomes¹⁸.

Further research has shown that management with a patient specific exercise program based on a classification system monitoring symptomatic and mechanical responses achieves better outcomes than non-specific exercise therapy^{19,20}.

4. Better outcomes

The MDT evaluation allows a quick determination of who will benefit from management according to the MDT principles^{21,22}.

Using MDT strategies has been shown to be able to:

- reduce surgery rates²³
- avoid surgical interventions^{24,25}
- lead to better outcomes than therapy that is focused on spinal manipulation²⁶ or general exercise²⁷
- be cost effective^{28,29}

5. Prevention of recurrence

Patients who have been educated in self-management are able to initiate treatment at the first sign of recurrence.

Symptoms can usually be relieved before they become severe³⁰⁻³².

References

1. Heidar Abady 2014
2. Kilpikoski 2002
3. May and Ross 2009
4. Willis 2016
5. Werneke 2014
6. May and Aina 2012
7. Hefford 2008
8. May and Rosedale 2012
9. Werneke 2010
10. Apeldoorn 2016
11. Hasenbring and Pincus 2015
12. Schmidt 2012
13. Ali and May 2015
14. Edmond 2014
15. Edmond 2010
16. Werneke 2008
17. Deutscher 2014
18. Vahdat 2014
19. Long 2004
20. Rosedale 2014
21. Rosedale 2014
22. Long 2004
23. Rasmussen 2005
24. van Helvoirt 2014
25. van Helvoirt 2016
26. Petersen 2011
27. Albert and Manniche 2012
28. Deutscher 2014
29. Manca 2007
30. Larsen 2002
31. Matsudaira 2015
32. Udermann 2004

References – Full list (Alphabetised by First Author)

- Heidar Abady, Afshin; Rosedale, Richard; Overend, Tom J.; Chesworth, Bert M.; Rotondi, Michael A. (2014): Inter-examiner reliability of diplomats in the mechanical diagnosis and therapy system in assessing patients with shoulder pain. In: *The Journal of manual & manipulative therapy* 22 (4), S. 199–205. DOI: 10.1179/2042618614Y.0000000068.
- Ali, Nancy; May, Stephen (2015): A Qualitative Study into Egyptian Patients' Satisfaction with Physiotherapy Management of Low Back Pain. In: *Physiotherapy research international: the journal for researchers and clinicians in physical therapy*. DOI: 10.1002/pri.1647.
- Albert H, Manniche C. The Efficacy of Systematic Active Conservative Treatment for Patients with Severe Sciatica. A Single-Blind, Randomized, Clinical, Controlled Trial. *Spine* Vol 37, 7. 2012
- Apeldoorn, Adri T.; van Helvoirt, Hans; Meihuizen, Hanneke; Tempelman, Henk; Vandeput, David; Knol, Dirk L. et al. (2016): The Influence of Centralization and Directional Preference on Spinal Control in Patients With Nonspecific Low Back Pain. In: *The Journal of orthopaedic and sports physical therapy* 46 (4), S. 258–269. DOI: 10.2519/jospt.2016.6158.
- Deutscher, Daniel; Werneke, Mark W.; Gottlieb, Ditzza; Fritz, Julie M.; Resnik, Linda (2014): Physical therapists' level of McKenzie education, functional outcomes, and utilization in patients with low back pain. In: *The Journal of orthopaedic and sports physical therapy* 44 (12), S. 925–936. DOI: 10.2519/jospt.2014.5272.
- Edmond, Susan L.; Cutrone, Guillermo; Werneke, Mark; Ward, Jason; Grigsby, David; Weinberg, Jon et al. (2014): Association between centralization and directional preference and functional and pain outcomes in patients with neck pain. In: *The Journal of orthopaedic and sports physical therapy* 44 (2), S. 68–75. DOI: 10.2519/jospt.2014.4632.
- Edmond, Susan L.; Werneke, Mark W.; Hart, Dennis L. (2010): Association between centralization, depression, somatization, and disability among patients with nonspecific low back pain. In: *The Journal of orthopaedic and sports physical therapy* 40 (12), S. 801–810. DOI: 10.2519/jospt.2010.3334.
- Hasenbring, Monika I.; Pincus, Tamar (2015): Effective reassurance in primary care of low back pain: what messages from clinicians are most beneficial at early stages? In: *The Clinical journal of pain* 31 (2), S. 133–136. DOI: 10.1097/AJP.0000000000000097.
- Hefford, Cheryl (2008): McKenzie classification of mechanical spinal pain: profile of syndromes and directions of preference. In: *Manual therapy* 13 (1), S. 75–81. DOI: 10.1016/j.math.2006.08.005.
- Kilpikoski, Sinikka; Airaksinen, Olavi; Kankaanpaa, Markku; Leminen, Paivi; Videman, Tapio; Alen, Markku (2002): Interexaminer reliability of low back pain assessment using the McKenzie method. In: *Spine* 27 (8), S. E207-14.
- Larsen, Kristian; Weidick, Flemming; Leboeuf-Yde, Charlotte (2002): Can passive prone extensions of the back prevent back problems? A randomized, controlled intervention trial of 314 military conscripts. In: *Spine* 27 (24), S. 2747–2752. DOI: 10.1097/01.BRS.0000035677.18307.FC.
- Long, Audrey; Donelson, Ron; Fung, Tak (2004): Does it matter which exercise? A randomized control trial of exercise for low back pain. In: *Spine* 29 (23), S. 2593–2602.
- Manca A, Dumville J, Torgerson D, Klaber Moffett J, Mooney M, Jackson D, Eaton S (2007) Randomized trial of two physiotherapy interventions for primary care back and neck pain patients: cost-effectiveness analysis. *Rheumatology* 46: 1495-1501
- Matsudaira, Ko; Hiroe, Miho; Kikkawa, Masatomo; Sawada, Takayuki; Suzuki, Mari; Isomura, Tatsuya et al. (2015): Can standing back extension exercise improve or prevent low back pain in Japanese care workers? In: *The Journal of manual & manipulative therapy* 23 (4), S. 205–209. DOI: 10.1179/2042618614Y.0000000100.
- May, Stephen; Aina, Alessandro (2012): Centralization and directional preference: a systematic review. In: *Manual therapy* 17 (6), S. 497–506. DOI: 10.1016/j.math.2012.05.003.
- May, Stephen; Ross, Jenny (2009): The McKenzie classification system in the extremities: a reliability study using Mckenzie assessment forms and experienced clinicians. In: *Journal of manipulative and physiological therapeutics* 32 (7), S. 556–563. DOI: 10.1016/j.jmpt.2009.08.007.
- May, Stephen J.; Rosedale, Richard (2012): A survey of the McKenzie Classification System in the Extremities: prevalence of mechanical syndromes and preferred loading strategies. In: *Physical therapy* 92 (9), S. 1175–1186. DOI: 10.2522/ptj.20110371.
- Petersen, Tom; Larsen, Kristian; Nordsteen, Jan; Olsen, Steen; Fournier, Gilles; Jacobsen, Soren (2011): The McKenzie method compared with manipulation when used adjunctive to information and ad-

vice in low back pain patients presenting with centralization or peripheralization: a randomized controlled trial. In: *Spine* 36 (24), S. 1999–2010. DOI: 10.1097/BRS.0b013e318201ee8e.

Rasmussen C, Nielsen G, Hansen V, Jensen O, Schioetz-Christensen B. Rates of Lumbar Disc Surgery Before and After Implementation of Multidisciplinary Nonsurgical Spine Clinics. *Spine* Vol. 30, 21. 2005

Rosedale, Richard; Rastogi, Ravi; May, Stephen; Chesworth, Bert M.; Filice, Frank; Willis, Sean et al. (2014): Efficacy of exercise intervention as determined by the McKenzie System of Mechanical Diagnosis and Therapy for knee osteoarthritis: a randomized controlled trial. In: *The Journal of orthopaedic and sports physical therapy* 44 (3), S. 173-81, A1-6. DOI: 10.2519/jospt.2014.4791.

Schmidt, E.; Gramm, L.; Farin, E. (2012): Kommunikationspräferenzen chronischer Rückenschmerzpatienten in der medizinischen Rehabilitation. In: *Schmerz (Berlin, Germany)* 26 (1), S. 69–76. DOI: 10.1007/s00482-011-1105-5.

Udermann, Brian E.; Spratt, Kevin F.; Donelson, Ronald G.; Mayer, John; Graves, James E.; Tillotson, John (2004): Can a patient educational book change behavior and reduce pain in chronic low back pain patients? In: *The spine journal: official journal of the North American Spine Society* 4 (4), S. 425–435. DOI: 10.1016/j.spinee.2004.01.016.

Vahdat S ; Hamzehgardeshi L; Hessam S; Hamzehgardeshi Z (2014): Patient involvement in health care decision making: A review. In: *Iran Red Cross Med J*, 16 (1):e12454: DOI: 10.5812/ircmj.12454

van Helvoirt, Hans; Apeldoorn, Adri T.; Knol, Dirk L.; Arts, Mark P.; Kamper, Steven J.; van Tulder, Maurits W.; Ostelo, Raymond W. (2016): Transforaminal epidural steroid injections influence Mechanical Diagnosis and Therapy (MDT) pain response classification in candidates for lumbar herniated disc surgery. In: *Journal of back and musculoskeletal rehabilitation*. DOI: 10.3233/BMR-160662.

van Helvoirt, Hans; Apeldoorn, Adri T.; Ostelo, Raymond W.; Knol, Dirk L.; Arts, Mark P.; Kamper, Steven J.; van Tulder, Maurits W. (2014): Transforaminal epidural steroid injections followed by mechanical diagnosis and therapy to prevent surgery for lumbar disc herniation. In: *Pain medicine (Malden, Mass.)* 15 (7), S. 1100–1108. DOI: 10.1111/pme.12450.

Werneke, Mark W.; Deutscher, Daniel; Hart, Dennis L.; Stratford, Paul; Ladin, Joel; Weinberg, Jon et al. (2014): McKenzie lumbar classification: inter-rater agreement by physical therapists with different levels of formal McKenzie postgraduate training. In: *Spine* 39 (3), S. E182-90. DOI: 10.1097/BRS.000000000000117.

Werneke, Mark W.; Hart, Dennis; Oliver, Dave; McGill, Troy; Grigsby, David; Ward, Jason et al. (2010): Prevalence of classification methods for patients with lumbar impairments using the McKenzie syndromes, pain pattern, manipulation, and stabilization clinical prediction rules. In: *The Journal of manual & manipulative therapy* 18 (4), S. 197–204. DOI: 10.1179/106698110X12804993426965.

Werneke, Mark W.; Hart, Dennis L.; Resnik, Linda; Stratford, Paul W.; Reyes, Adrian (2008): Centralization: prevalence and effect on treatment outcomes using a standardized operational definition and measurement method. In: *The Journal of orthopaedic and sports physical therapy* 38 (3), S. 116–125. DOI: 10.2519/jospt.2008.2596.

Willis, Sean; Rosedale, Richard; Rastogi, Ravi; Robbins, Shawn M. (2016): Inter-rater reliability of the McKenzie System of Mechanical Diagnosis and Therapy in the examination of the knee. In: *Journal of Manual & Manipulative Therapy*, S. 1–18. DOI: 10.1080/10669817.2016.1229396.

Overview of Supportive Studies: McKenzie Method® of Mechanical Diagnosis and Therapy® (MDT)

Richard Rosedale PT, Dip. MDT, Robert Medcalf PT, Dip. MDT

The McKenzie Method of MDT continues to be one of the most researched conservative approaches to musculoskeletal problems available. It has been examined in depth in relation to its utility in the spine, and the research is accumulating to support its use in the extremities. The following is a small selection of some of the most important studies on the approach to date, with an explanation of their significance.

Assessment Reliability

It is fundamentally important that any system of assessment and treatment has established reliability:

Reliability means that different examiners will agree on the assessment findings and reach the same patient classification. Since treatment decisions rely exclusively on the assessment and classification, this is critical. The following four studies demonstrate that the McKenzie Method, when applied by Credentialed or Diplomaed clinicians to the spine and extremities, found good to almost perfect reliability using a concurrent reliability design:

[Kilpikoski S. et al. Inter-examiner reliability of LBP assessment using the McKenzie method. Spine 15:27. 2002](#)

[Clare HA. et al. Reliability of McKenzie classification of patients with cervical or lumbar pain. JMPT 28. 2005](#)

[Heidar Abady A. et al. Inter-examiner reliability of diplomats in the MDT system in assessing patients with shoulder pain. JMMT 22. 4. 2014](#)

[Willis S. et al. Inter-rater reliability of the McKenzie System of MDT in the examination of the knee. JMMT Published online 07 Sept 2016](#)

Treatment Efficacy

The following RCTs endorse the treatment value of MDT, showing efficacy in the spine and in the extremity.

[Long A. et al. Does it matter which exercise? A RCT of exercises for LBP. Spine; 29:2593-2602. 2004.](#)

This groundbreaking study clearly endorses the value of sub-classifying our patients using a McKenzie assessment, establishing directional preference and matching specific exercises based upon these findings. All patient outcomes including pain, function and medication use were dramatically affected.

[Petersen T. et al. The McKenzie Method Compared with Manipulation When Used Adjunctive to Information and Advice in LBP Patients Presenting with Centralization or Peripheralization. A RCT. Spine Vol 36. 24. 2011](#)

With a one year follow-up, this study compared two alternative LBP interventions. The McKenzie Method was found to be more effective than manipulation, and the study gives support to the Method's classification based approach.

[Albert H. Manniche C. The Efficacy of Systematic Active Conservative Treatment for Patients with Severe Sciatica. A Single-Blind, Randomized, Clinical, Controlled Trial. Spine Vol 37, 7. 2012](#)

The patients in this study had symptoms that would normally qualify them for surgery. The patients given directional preference exercises determined by the McKenzie Method improved significantly more with respect to global improvement, sick leave, vocational status, root compression signs, and patient satisfaction.

[Rosedale R. et al. Efficacy of Exercise Intervention as Determined by the McKenzie System of Mechanical Diagnosis and Therapy for Knee OA: A RCT. JOSPT. Vol 44, No.3. 2014](#)

Patients given exercises based on an MDT assessment had superior outcomes compared to those of wait-list controls. 40% of the knees examined were classified as Derangements; they demonstrated large effect sizes at two weeks for all primary outcomes and up to large effect sizes at three months. This demonstrated success with a population with severe knee OA awaiting potential knee joint replacement.

Efficacy with Psychosocial Factors

Numerous studies have explored the effect of MDT on psychosocial outcomes. There have been positive effects in relation to fear avoidance, fear and disability beliefs, somatization, depressive symptoms and pain self-efficacy.

[Werneke M. et al. Change in psychosocial distress associated with pain and functional status outcomes in patients with lumbar impairments referred to PT services. JOSPT. 41:969-980. 2011](#)

Data from 586 patients with LBP showed that those who demonstrated non-centralization (37%) had significantly worse pain, functional disability and psychosocial distress outcomes compared to those who centralized (45%).

[Mbada C, et al. Comparative efficacy of three active treatment modules on psychosocial variables in patients with long-term mechanical low- back pain: a randomized-controlled trial, Archives of Physiotherapy. 5, 10, 2015](#)

This RCT looked at psychosocial outcomes in patients with lumbar Derangement responding to the extension principle, given directional preference exercises alone and in combination with strengthening. At 4 and 8 weeks all groups demonstrated significant improvements on all measures of beliefs and fear avoidance

Predicting Outcomes

The McKenzie Method also has an important asset in its ability to predict patient outcome through classification and the determination of Centralisation. If a patient with lumbar or cervical pain is classified as a Derangement and can centralise their symptoms in a short time after initiating MDT, the prognosis for a rapid and lasting improvement is very good.

[Werneke M, Hart DL. Centralization phenomenon as a prognostic factor for chronic LBP and disability. Spine, 26\(7\). 2001](#)

[Werneke MW, Hart DL. Categorizing patients with occupational LBP by use of the Quebec Task Force classification system versus pain pattern classification procedures. PTJ 84. 2004](#)

[Skytte L, et al. Centralization: Its prognostic value in patients with referred symptoms and sciatica. Spine 30. 2005](#)

Avoiding potential surgery and cost saving implications

Several studies have shown the potential of MDT for pre-surgical screening and intervention to reduce surgery rates in the spine. This could have significant cost-saving implications. In the first study, four years after implementation of McKenzie based spine clinics in a Danish county, lumbar disc surgery rates were reduced by 50% compared with previous years. In the second study, transforaminal epidural injections followed by MDT demonstrated the potential to be an effective strategy in preventing surgical interventions for patients with lumbar disc herniation.

[Rasmussen C, et al. Rates of Lumbar Disc Surgery Before and After Implementation of Multidisciplinary Nonsurgical Spine Clinics. Spine 30, 21. 2005](#)

[Van Helvoirt H, et al. Transforaminal Epidural Steroid Injections Followed by MDT to Prevent Surgery for Lumbar Disc Herniation. Pain Med.15\(7\). 2014](#)

Systematic Reviews and Guidelines featuring The McKenzie Method

MDT and the phenomenon of Centralisation and Directional Preference have been the subject of, or included in, many systematic reviews and guidelines. Here are a few examples;

[May S, Alessandro A. Centralisation and directional preference: a systematic review. Manual Therapy 17, 497-506. 2012](#)

This review found that centralisation and directional preference had been reported in 62 studies. The majority of evidence was supportive of these responses as being reliably assessed and associated with a good prognosis.

[Stynes S, et al. Classification of patients with LB-related leg pain: a systematic review. BMC MSK Disorders 17:226. 2016](#)

This review evaluated 22 systems that classify populations with low back-related leg pain. MDT scored the highest of any system, with criteria based upon purpose, validity, feasibility, reliability and generalisability.

[Danish Health Technology Assessment: LBP. Frequency, management and prevention from an HTA perspective. National Board of Health, Copenhagen, Denmark. 1-106. 1999](#)

This wide-ranging review and guideline includes a summary of the McKenzie approach, both as a treatment and as a diagnostic method. They concluded there was limited evidence to support its use as a treatment for both acute and

chronic LBP, and moderate evidence indicating its value as a diagnostic tool and prognostic indicator.

[Rossignol M, et al. Clinic on LBP in Interdisciplinary Practice \(CLIP\) Guidelines Montreal: Direction de sante publique, Agence de la sante et des services sociaux de Montreal. 2007](#)

The McKenzie Method is a recommended 'therapeutic intervention' for acute, subacute and chronic LBP patients with varying grades of scientific evidence.

[Delitto A, et al. Low Back pain. Clinical Practice Guidelines. JOSPT 42, 4. 2012](#)

It was recommended that clinicians should use specific repeated movements to promote centralization in patients with acute, subacute or chronic low back pain, with the recommendation based on Grade A 'Strong evidence'

For the most up-to-date and complete list of MDT references, visit:

www.mckenzieinstitute.org

BUSINESS & MARKETING CORNER

A Cup of MDT

Yoav Suprun, DPT, Dip. MDT

Recently, I had the opportunity to present on neck and back pain prevention to all of the employees while on the job at a new local coffee shop located in the Wynwood section of Miami, Florida called *OTL*.

You may ask yourself, "Employees at a coffee shop? Why even bother?" The answer is that you should ALWAYS look and think outside of the box for referral sources. Since I know the owner of the shop, offering to give a free talk was an easy decision because it is inherently good to provide quality health education in your community. It also creates a win-win. For the business owner, it showed his concern for his employees; the employees gained practical advice applicable in the workplace; and it supported my goal to gain an additional referral source to my office, *South Beach Spine Physical Therapy*.

The coffee shop employees are in daily contact with customers who may be presenting with mechanical pain. I spoke with the *OTL* staff about the prevention strategies and self-healing concepts of MDT and how my line of work differs from that of other physical therapists. Furthermore, I guided the staff to detect mechanical pain behavior/presentation and explained to them how to make the appropriate referral to my office. For example, for someone who is a regular customer - a customer the barista knows well - s/he sees that customer rubbing or stretching their neck in discomfort. S/he can then ask "Is your neck bothering you?" If yes, s/he would continue by saying "I know this mechanical therapist who can teach you how to adjust your own neck so you don't have to deal with neck pain or stiffness anymore..."

By offering large discounts for employees and their family members to see me in my office for evaluation if the need arises, I infused motivation and value to the employees who refer patients my way.

Chasing doctors with invitations for lunch in hopes to gain referrals is not my cup of tea. My primary marketing focus is public education; I immediately help people and any opportunity to expand on my referral sources is a good opportunity. Can you think of a local business that you could approach to teach about mechanical pain, prevention strategies and MDT?

You can find pictures from this event posted on my Facebook page for [South Beach Spine Physical Therapy](#).

Feel free to email me with any questions at yoav@sobespine.com

Think outside the box... and let us know about your creative success!

Yours,

