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Resolving Lower Back Pain for Good With NST

Analysis by Dr. Michael Nixon-Livy | November 06, 2023

STORY AT-A-GLANCE

- Neurostructural Integration Technique (NST) is a powerful technique that can ease muscle aches and pain by stimulating the central and peripheral autonomic nervous systems
- The main objective of NST is to remove pain and dysfunctional physiological conditions by restoring the structural integrity of the body; NST helps your body reintegrate on many levels, and thus return to and maintain normal homeostatic limits on a daily basis
- Approximately 80% of the world's population will suffer from lower back pain (LBP) at some point in their lives, and LBP is the world's leading cause of disability
- Barring instances when the LBP is caused by direct impact injury, the pain and its location are typically a manifestation resulting from systematic imbalances that have been in place far longer than the LBP
- As an example, patients will often present with debilitating LBP and chronic TMJ or TMD (temporomandibular joint dysfunction) that they, their doctor and/or health care practitioners have overlooked, discounted as insignificant or simply not understood, let alone associate with the LBP condition

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Overview

Without doubt lower back pain is one of modern man's most frequent, challenging and unrelenting problematic health conditions.

In this age of modern medical and scientific research, new discoveries are being made at a rapid rate; yet, nothing is emerging to quell the seemingly worsening state of affairs accompanying the undeniable fact that this global health condition is on the increase. Some salient information:

Approximately 80% of the world's population, ranging from adolescents to the elderly will suffer from lower back pain — LBP at some point in their lives.

Currently 1 person in 10 is suffering from LBP, making it the world's leading cause of disability.

The number of adult individuals affected by LBP in the USA alone is on the rise year on year, and the 65 and older age group appears to be more prone. Members of The Lancet editorial staff, Stephanie Clark and Richard Horton, concluded.

> *"Low back pain is a major problem throughout the world and it is getting worse — largely because of the aging and increasing world population."*

In 2018[1] in the U.S. around 31.6% of women and 28% of men suffered from LBP.

More than half of Americans who experience LBP spend the majority of their time at work sitting.

Various surveys performed over the last decade confirm that LBP sufferers report their condition negatively effects their work, daily tasks, exercise regime, sleep, social activities, emotional status and ultimately quality of life.

The direct cost to the U.S. economy in treating back per year is $50 billion, and when another 100 billion is added to this by way of indirect costs such as lost wages and productivity, insurance and legal costs and impact on the family, it is easy to

appreciate just how serious this condition is and how urgently we need to find better solutions.

Popular treatments utilized in the U.S. that produce relief from LBP but without any long-term guarantee of nonrecurrence, include medication, chiropractic and physical therapy.

According to the editors of a series of papers in the prestigious medical journal The Lancet: Lower back pain impacts an estimated 540 million people across the globe, and most are treated in a manner that is not consistent with best practice treatment guidelines.

Ultimately, 1 in 10 sufferers of LBP discovers the primary cause of their condition with a staggering 90% left completely in the dark as to its cause and origin.

Further Observations

Jan Hartvigsen, D.C., Ph.D., of the department of health professions at Macquarie University in Sydney, Australia, was part of the low back pain work group that discussed the prevalence of the condition.

Their findings suggest that very few population groups, if any, are completely immune to lower back pain, writing that it is an "extremely common symptom" that affects all age groups making it the most common disability worldwide. Other observations by Hartvigsen and colleagues include:

The global burden of lower back pain will likely increase during the next few decades, especially in low and middle-income countries.

Work disability and health care costs that were ascribed to lower back pain differed significantly worldwide.

Low levels of physical activity, obesity and smoking were linked to lower back pain.

Most people with the condition could not correctly pinpoint the exact nociceptive source of their pain.

LBP was a "complex condition" that has biophysical factors, comorbidities, pain-processing mechanisms, as well as psychological and social factors to the pain and related disability.

Most episodes of lower back pain did not last long and do not leave a lasting impact; however, periodic episodes are common and low back pain is "increasingly understood" as a long-lasting condition with a "variable course" as opposed to isolated events.

Disability from low back pain happened most frequently in working age groups.

LBP was the reason for 60.1 million disability-adjusted life-years in 2015, an increase of 54% since 1990, with the largest increases occurring in low and middle-income countries.

Hartvigsen and colleagues concluded:

> *"Although there are several global initiatives to address the global burden of low back pain as a public health problem, there is a need to identify cost-effective and context-specific strategies for managing low back pain to mitigate the consequences of the current and projected future burden."*

Resolving Lower Back Pain With NST

If we consider the foregoing it is easy to appreciate that resolving LBP convincingly is potentially a challenging task that has many permutations and, depending on the individual and the degree of their LBP condition, may require a singular intervention or multifactorial approach.

This article has been written not to criticize any other approach or methodology that seeks to resolve LBP, but to simply shine light on the fact that there are other ways, perhaps less known, but arguably more effective than those currently being used in the mainstream.

And, that NST is one of those remarkably effective musculoskeletal methods that has changed the lives of millions of LBP sufferers around the world in the last 25 years, and continues to do so year on year, with great simplicity and equally great dependability.

System Before Symptom

One of the most typical, common and firmly held beliefs that I have heard both patients and various health practitioners express over the last 30 years is that lower back pain — LBP — has its origin and source in the lower back itself.

Consistent with this belief is that therapy should be applied, therefore, to the lower back where the pain is.

When a patient presents to my office with an MRI (magnetic resonance image) of their lumbar spine that shows a bulging disc applying compression to a neighboring nerve, of course we are obliged to agree that this has something to do with their pain.

The expectation of the patient is for me to then treat where the obvious problem is, which is a completely reasonable attitude.

But barring when the LBP has been caused by direct impact injury, I have found in thousands of cases that the condition itself and its location are more of a "final expression" or "manifestation" resulting from systematic imbalances that have been in place for longer than the LBP itself.

The systematic imbalances may range from acute to chronic, up to and including degenerative in nature. They are referred to as "systematic" for two reasons.

- Firstly, because the imbalances are coexistent and function codependently between multiple systems. The neuromuscular, fascial, skeletal, visceral and endocrine systems and even the brain itself may all be involved in the one pattern that is ultimately delivering an LBP condition.

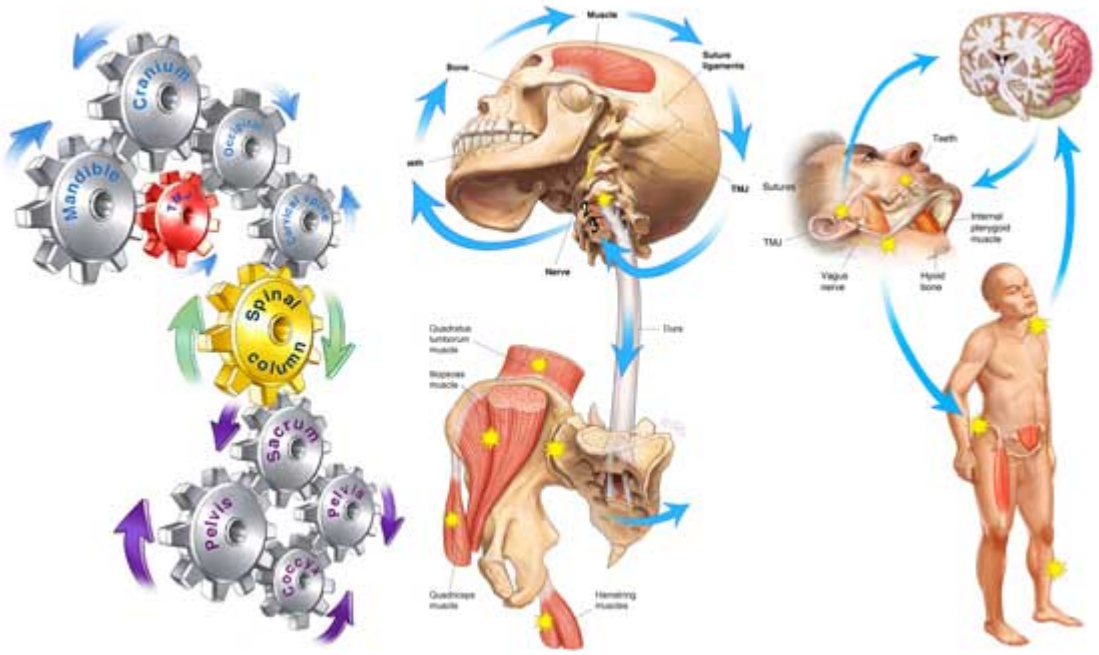
- Secondly, the imbalances are referred to as "systematic" because they interfere with the natural self-regulating capacity that the human organism depends on to function optimally and remain pain free.

  At the structural level itself this relationship is characterized by the perpetual synchronous rhythmic relationship between the diaphragm, pelvic girdle, spinal column and cranium. When this is lost, firstly dysfunction, and then pain, set in.

As an example, patients will often present with debilitating LBP and at the same time a chronic TMJ or TMD (temporomandibular joint dysfunction) that they, their doctor and/or health care practitioners have overlooked, discounted as insignificant or simply not understood, let alone associate with the LBP condition.

As a consequence corrections performed on the lumbar spine itself for the LBP condition may produce temporary relief but not long term resolution, simply because the body's center of gravity, "the sacrum," depends on the body's superstructure, "the cranium," and its host of auxiliary components (including TMJ) to remain dynamically balanced. And the rule applies vice versa.

Only when the TMJs are corrected and stabilized can we expect to have proper cranial-atlas-cervical spine integration, and consequently proper lumbo-sacral-pelvic integration. Only then will appropriate neuro-muscular-skeletal relationships between the diaphragm, pelvic girdle, spinal column and cranium be restored.



Images showing interconnectivity and systematic relationships between super and substructures of the body

Consequently, chronic tensions and pressure acting around and on the lumbar spine itself will be released.

To resolve this particular scenario described above, an NST session lasting approximately 30 to 45 minutes would include, at the very least, adjustments for the lumbar, thoracic and cervical spines, sacrum, diaphragm, shoulders and TMJ.

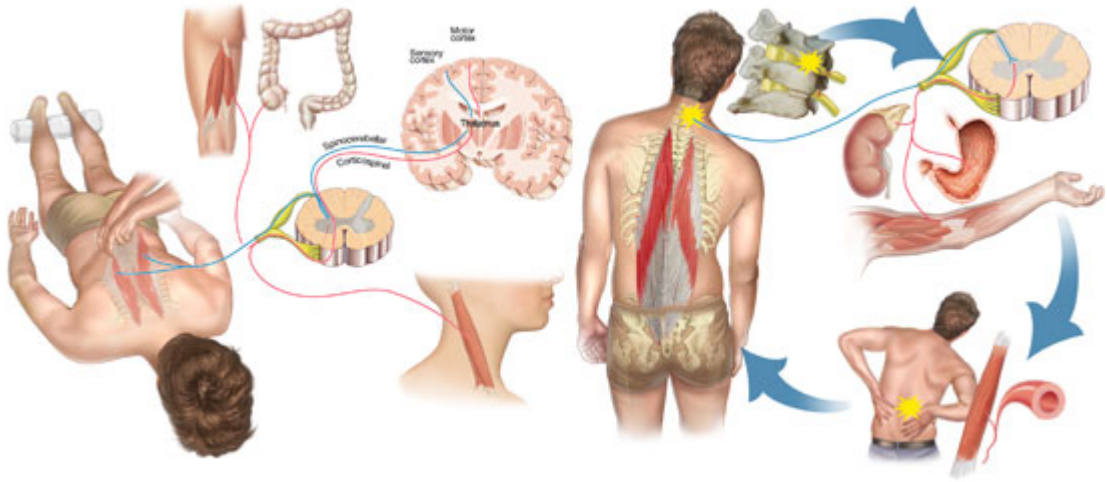
This approach ensures that systematic integration is restored with the LBP in focus. But this is just one simple example of observing and correcting LBP in a systematic fashion. Another simple example of the system being impacted from a source outside of the area of LBP is when a hamstring muscle is in a state of chronic tension.

Now, the cause of the tight hamstring may have been structurally induced via too much sitting, but it could also have been introduced via one of the visceral-somatic reflexes

that exist between the large intestine and the hamstring muscles.

Lets imagine that our patient who presents with LBP has had poor dietary habits for some time and is chronically constipated. They eat a lot of refined and processed food and a lot of meat. Their bowel movements occur once or twice a week or maybe less.

Put in very simple terms: A chronically restricted large intestine organ (smooth muscle) can have a strong reflexive effect on the hamstring and even quadratus lumborum muscles, both leading to LBP.



Visceral disturbance can quickly lead to tight muscles and lower back pain

Furthermore, the tight hamstring muscle acts as a tight cable on the ischial tuberosity and sacrum, preventing the pelvic girdle and sacrum itself from enjoying their proper motion of flexion and extension that occurs in response to diaphragmatic respiration.

The resultant effect is that a tensional myofascial train between hamstring, sacrum ligaments, gluteal, piriformis and erector spinae muscles is established, causing pressure on nerves either directly (e.g., sciatic nerve) or via lopsided vertebral bodies in the lumbar spine causing an intervertebral disc to bulge and apply pressure to root nerves exiting the lumbar spine.

Either way the result is LBP courtesy of a systematic imbalance. To resolve this particular scenario described above, an NST session lasting approximately 30 to 45

minutes would include, at the very least, adjustments for the lumbar, thoracic and cervical spines, sacrum, diaphragm, hamstring muscle, pelvis and viscera.

Choosing Procedures

With NST choosing which procedures to include that will resolve each patient's unique presenting symptom pattern is a simple matter of always including certain 'core' procedures such as the lumbar, thoracic, cervical spine, sacrum and diaphragm adjustments and then adding the procedures that correspond to other areas of tension or pain.

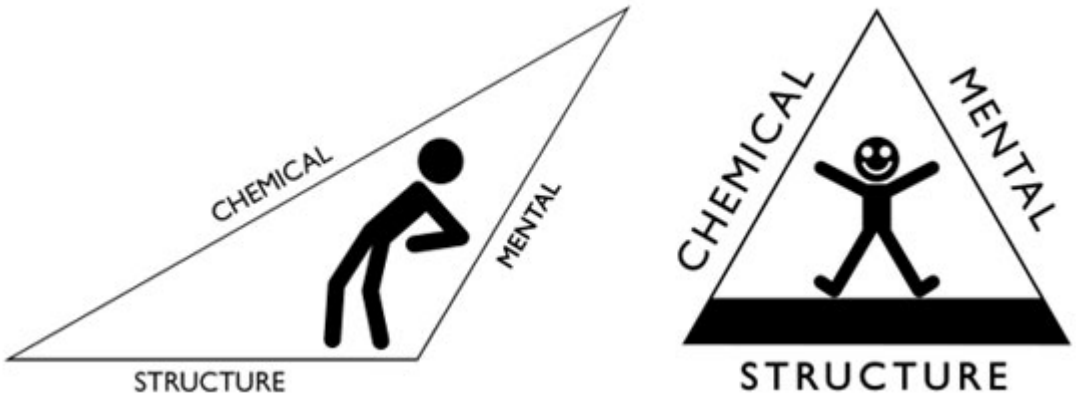
Therefore choosing the procedures to tailor an NST session for a patient is a straightforward process partly decided on before the session commences and partly decided on throughout the session as the practitioner discovers areas of tension and pain.

There are countless other examples of how acquired systematic imbalances can result in LBP or indeed myriad other local pain conditions neck pain, shoulder pain, knee pain, visceral pain, conditions of the ANS and much more.

Nor is it any surprise to not only see LBP conditions evaporate after a few sessions of NST, but a host of other comorbidities resolve as well. Of course it's always valid to discover what the patient has does or has been doing on a daily basis that might have contributed to this set of compromises within their organism.

Do they sit for long hours at a time whilst working on a computer? Clearly this can lead to a situation where poor posture combines with various stressors such as visual and emotional to predispose the patient to clenching and grinding causing the TMJ dysfunction in the first place.

Obviously diet and hydration play significant roles in this context as high levels of stress related sugar dependence for example may produce more irritation to viscera, nerves and emotions causing further predisposition to clenching and grinding and TMD issues.



All sides of the 'triad of health' are interactive and vitally important to keep balanced in attaining optimal health

And so the story with each individual goes. Regardless of the cause one thing is for sure — relieving chronic systematic imbalances not only rapidly relieves LBP and other symptoms, but it also ensures that patients are sensitized to making the best future choices in their lifestyles that will deliver prolonged daily balance and freedom from pain — should they choose to do so.

NST is undoubtedly a profoundly effective system of spinal and somatic adjustments that dependably deliver outstanding results. But at the same time it is also a process of discovery and education for the patient, whereby they ultimately grasp that the lifestyle decisions they make on a daily basis will ultimately place control of their health and longevity in their own hands.

As Edison put it back in 1903: "The doctor of the future will give no medicine but will interest his patients in the care of the human frame, in diet and in the causes and prevention of disease."

The only way that our population's health standards will improve in generations to come is by individuals assuming responsibility for their own health and prioritizing this above all else. Of course, we will always need physicians of all persuasions but there is much that can be achieved by the individual alone taking control of their health.

Restoring Systematic Integration to Remove LBP

NST employs a layered approach at every session that follows a particular model known as the Core-Extremities-Core approach where particular procedures are utilized to not only bring about dynamic integration of the pelvic girdle, spinal column and cranium as a unit, but indeed to provide specific release to particular parts of the body as required.

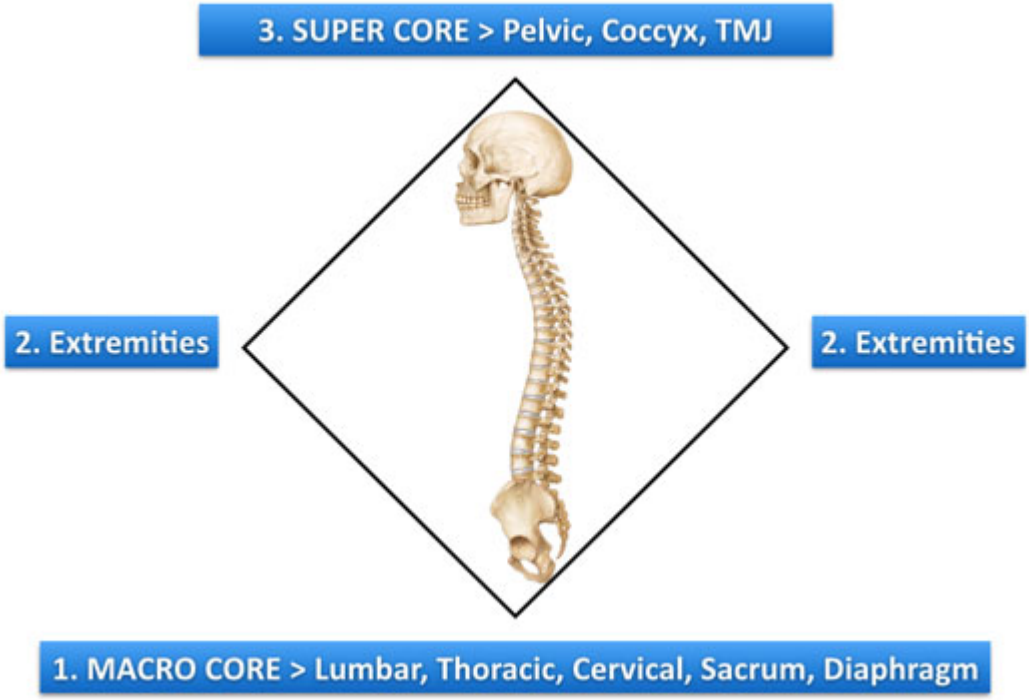
- **Core —** Includes corrections for the lumbar, thoracic and cervical spines, sacrum and diaphragm. This set of corrections is known as the "base core" and is the minimum any patient would receive regardless of their presenting symptoms. Base core corrections alone produce outstanding results.

- **Extremities —** Includes corrections for the upper and lower extremities that are added to the base core corrections as required to detail the session for particular presenting symptoms in the hips, hamstrings, knees, ankles, feet, shoulders, elbows, wrists and hands.

  When added to base core corrections, these targeted releases are extremely effective, providing rapid pain reduction in afflicted areas. Extremities corrections also prepare the way for deeper core corrections to work more immediately.

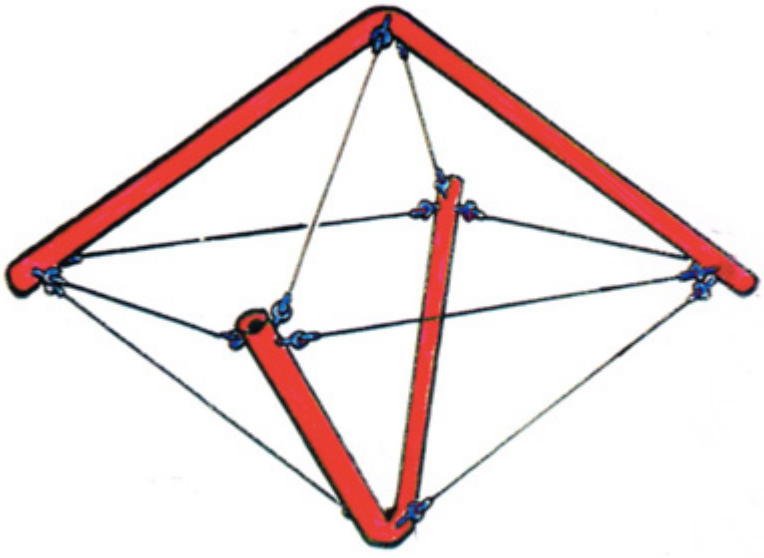
- **Super Core —** Includes corrections for the coccyx, pelvic girdle, temporomandibular joints, atlas and cranium. This set of corrections forms what is known in NST as "super core," corrections and not only provide for more thorough unlocking and integration of the pelvic-occipital system and body as a whole, but ultimately deliver sustainability of corrections for patients.

  Super core corrections are utilized only as required as determined by simple specific tests performed routinely throughout every session.



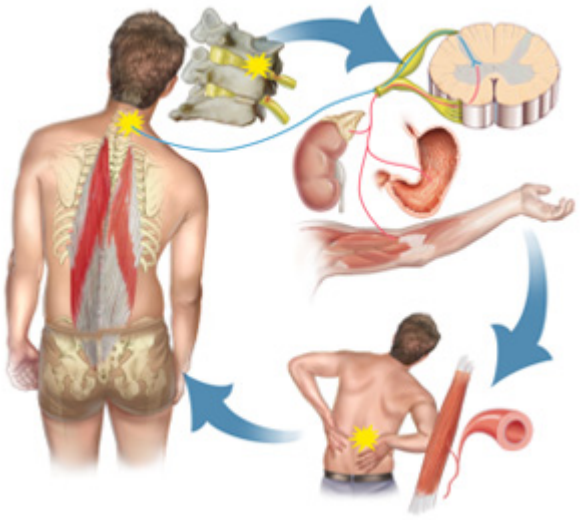
Regulating Muscle Tension Is the Key

If there is one fundamental principle around which NST is designed, and how and why it works so simply yet profoundly, it is the elimination of irregular "macro and micro" muscular and fascial "tensional patterns" throughout the body. Consequently optimizing "tensegrity" is the goal!

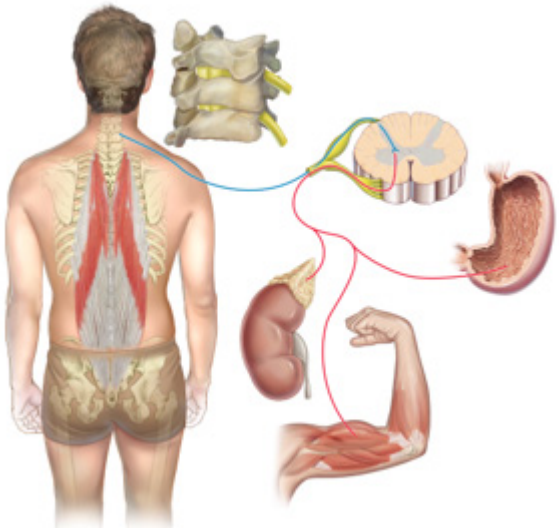


This simple tensegrity model shows that if the cables (muscles) are balanced the orange bars (bones) will follow and consequently nerve function and physiology are optimized

In a macro sense a typical muscular tensional pattern may involve a unilateral hamstring muscle, unilateral gluteus maximus and medius muscles, erector spinae muscles and diaphragm muscle. In a micro sense a typical muscular tensional pattern may involve a unilateral sternocleidomastoid muscle, hyoid muscles, masseter, lateral pterygoid and temporalis muscles.



Poor tensegrity = pain and dysfunction



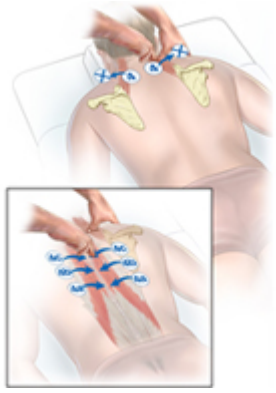
Good tensegrity = robust physiology and health

Although at first glance it may seem complex to consider the unlocking of such a muscle pattern, the job is made extremely easy by following the simple sequences of releases that relate to whatever part of the body has tension.

The sequences are tried and proven, having produced resolution from LBP and a broad variety of other conditions for millions and millions of individuals over the last 25 years in particular. As an example, the bilateral releases for the lumbar spine number nine in total, and although very straightforward, represent perhaps the most complex set of releases.

In other words there is nothing very complex at all about the sequences that are quickly learnable and immediately reproducible. The bilateral thoracic releases number five in total and the cervical, six. Following are a few images of typical NST releases or PRI-moves.

Lumbar spine PRI-moves



Thoracic spine PRI-moves

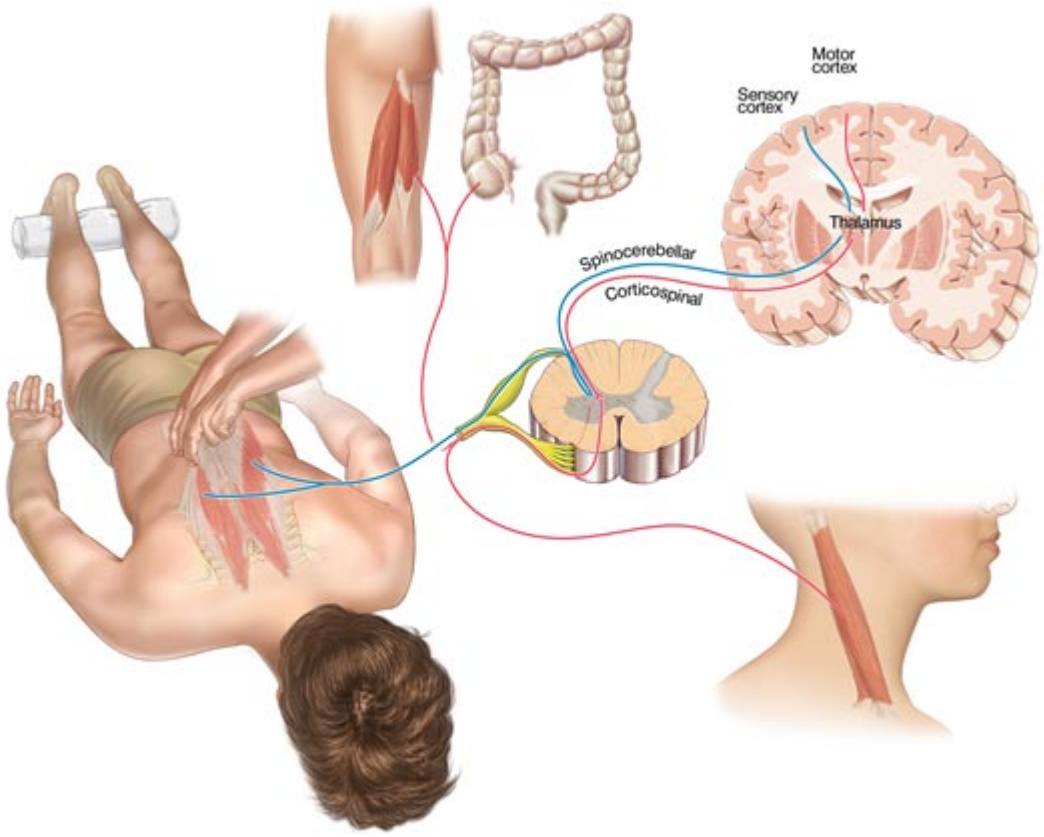
Cervical spine PRI-moves

The NST PRI-Move

The PRI-move is perhaps the golden key that makes the NST system of releases possible at all. It was firstly developed by a sports medicine specialist in Melbourne, Australia, by the name of Ernie Saunders (1880-1951) and later refined by the celebrated Australian osteopath Thomas Ambrose Bowen (1916-1982), whose work inspired much of the NST system of releases.

The PRI-move refers to every release performed in NST that all share the same common formula of stretching the skin and fascia over a designated underlying structure (muscle, nerve, tendon, ligament) contacting that structure with counter pressure, and then crossing the structure, causing it to bump or shift as a response.

The response causes a "discharge impulse reaction" in the structure that it is applied to and also other remote structures as well, hence giving rise to the PRI-move's name, which simply means Proprioceptive Rolling Impulse movement.



Pri-moves applied in the spinal region cause local tissue sedation and remote muscle and visceral release via reflex pathways

Sequences of PRI-moves appear to cause a "proprioceptive tipping point" of sorts, whereby groups of muscles rapidly recalibrate back to a normal neuromuscular status. The resultant effect is a rapid reduction in muscles tension and pain, accompanied by a sense of relation, clarity and improved energy levels.

Signs of Muscle Tension

Many patients who suffer from LBP will also have other myofascial and musculoskeletal issues that appear to be unrelated, but in fact are telltale signs that all is not well in the body's tensional system. Below is a list of symptoms sufferers of LBP report with, yet have not connected with their LBP:

General stiffness and aches and pains	Pain on doing bending or twisting movements

Pain or stiffness when walking	Pain when moving between sitting-standing-lying
Low energy, fatigue or heaviness	Depression and lethargy
Irritability and negativity	Headaches
Foggy thoughts and poor memory	Bowels and bladder not working properly
Breathing difficulty	Poor sleep
Low sexual drive	

After a few sessions of NST it frequently comes as a pleasing surprise to patients when they discover that not only has their LBP gone, but they are noticing that many of those other secondary symptoms have vanished as well.

Results Achieved With NST

Results achieved using NST in general clinical practice for LBP are genuinely outstanding and can be categorized as follows:

- 85% of patients will require one to three sessions to experience resolution
- 10% of patients will require four to six sessions to experience resolution
- 5% of patients will require ongoing sessions at seven to 14 days apart to remain pain free

While these have been my results over 30 years working with tens of thousands of patients in my clinics in Australia, France, Germany and Poland, they are also the same as our NST practitioners achieve.

To the best of my knowledge there are currently approximately 5,500 NST practitioners throughout the world who are actively practicing NST and, to a person, they would all

concur that results are predictably pretty much the same the world over.

Surprisingly few sessions (generally one to four) are required to bring about sustainable relief from LBP for their patients by using NST.

I also know this to be the case via thousands of case studies collected from these practitioners at hundreds of NST seminars that I have taught since 1996 and via equally as many personal testimonies throughout the same period of time.

Furthermore, between 2004 and 2006 I teamed up with doctors at a prominent psychosomatic institute in Milan, Italy, (Institute of Integrated Psychosomatics) to run a series of research studies into the effectiveness of NST for patients suffering from chronic LBP.

Two groups of 60 and then 39 patients were given five NST sessions producing an 81% success rate in the most severe sufferers of LBP and around 90% in the less severe sufferers. Previous medical intervention had been unable to resolve the LBP for the most severe sufferers.

Results were measured in pain scale reduction, ROM improvements, elimination of medication, avoidance of surgery and improvement in quality of life. The research was supervised Riccardo Scognamiglio and Michele Fortis at the Bergamo hospital with Alessandro Aloisi and other physiotherapists performing NST sessions.

The research was ultimately regulated by the Northern Italian government in cooperation with the WHO (World Health Organization).

Development of NST

I designed NST in Melbourne, Australia, between the years of 1991 and 1995, and since 1996, along with my band of teachers, have been teaching it exclusively to osteopaths, physiotherapists, chiropractors, doctors and other professional therapists via postgraduate seminars throughout Australia, Canada, the European continent, Russia, the United Kingdom and the USA.

The construction and underpinning philosophy of NST were significantly influenced by the osteopathic work of Ernie Saunders and Thomas Bowen, both Australians, and the chiropractic-osteopathic work of Dr. Major Bertrand DeJarnette, USA.

NST, or "neurostructural integration technique," refers to the manner in which the technique is applied and points to some of its underpinning philosophy. Said in reverse, NST is a technique for the integration of the structure via stimulation of the neurological and neuromuscular systems. Musculoskeletal and myofascial systems are implicit in this description.

Although NST utilizes absolutely no adjustments whatsoever to the skeletal system itself as in classical chiropractic or osteopathy, its sequences of specialized rolling movements called PRI-moves (proprioceptive rolling impulse movements) applied to the spinal column, pelvic girdle, cranium and extremities produce results that every chiropractor, osteopath and physiotherapist would be delighted with.

Conclusion

NST is a modern day osteospinal system that is easy to learn and reproduce instantly in the clinic for outstanding results in resolving lower back pain — LBP.

It would be a great injustice, however, to consider NST as an intervention only for LBP, as it is equally effective in resolving neck pain, all conditions of the articulations, visceral disorders, menstrual disorders, headaches, RSI, sporting injuries, motor vehicle injuries, autoimmune disorders and much more.

Most practitioners who attend the five-day osteospinal seminar quickly convert many of their patients over to NST, as it is very user friendly, requiring little physical effort by the practitioner; yet, it produces outstanding clinical outcomes for the vast majority of patients on a daily basis.

Seminars

NST is taught exclusively to professional postgraduate practitioners via intensive hands-on seminars. There are four seminars that round out complete NST training, namely, Osteospinal, Advanced, Proto Plus and Deep Cures.

Osteospinal is the only mandatory level, while Advanced, Proto Plus and Deep Cures are all optional electives but highly recommended.

Osteospinal

The first of the NST seminars is the five-day Osteospinal seminar that includes the all-important "NST Operating System" that is fundamental to the functioning of NST. Corrections for the spinal column, pelvic girdle, cranium, diaphragm and extremities are included.

Much can be achieved with the operating system, and many practitioners are completely satisfied to remain with this body of work such is its completeness and effectiveness.

Advanced

The second of the NST seminars is the four-day Advanced Osteospinal system that provides a host of new strategies for the shoulders, elbows, hands, feet, hips, TMJ cranium and more. These strategies seamlessly dovetail into the basic Osteospinal system.

The practitioner will also learn many time saving "clinical tricks" to accelerate the work learned at the Osteospinal seminar.

Proto Plus

The third of the NST seminars, Proto Plus is a three-day seminar showcasing 24 sublimely effective mini-protocols and procedures that again dovetail seamlessly with the work covered in the previous two seminars.

The mini-protocols have the effect of accelerating results and providing practitioners with alternative strategies for particular chronic or challenging cases.

Deep Cures

The final NST seminar is a three-day journey beyond the spine into the realms of chemicals and emotions.

With the aid of a specialized radionic test kit and laser, practitioners will learn a series of ways to test if their patient is being affected by any one of a number of blockages that may act as an impediment to the proper function of autoregulation that typically takes place after receiving an NST session.

Practitioners will also learn how to test for toxicity and biochemical and nutritional deficiencies. The final day of the seminar is dedicated to a trilogy of emotional corrections from the world of Erickson, Kinesiology and EFT that will be a godsend for patients who have an emotional history to their physical condition.

About the Author

Dr. Michael Nixon-Livy is the CEO of www.nsthealth.com and a practicing NST-osteopathic physician and psychotherapist specializing in natural integrative medicine for sustainable pain relief and health. He is based in Australia and tours the world yearly teaching and lecturing.

Founder and developer of the highly acclaimed NST Osteospinal system, he is also an author and the leading lecturer for NST post-graduate seminars worldwide since 1996. He has personally introduced and taught the NST system in no fewer than 20 countries around the world including the USA and developed various live and digital education systems.

Michael is a passionate advocate for the education of individuals, groups and communities about intelligent lifestyle management to achieve optimal health and

longevity.

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