



# Neurostructural Integration Technique Spinal Integration – a better way to good health!

*Michael Nixon-Livvy.*

## INTRODUCTION

One the most famous and prolific inventors in the last one hundred and fifty years *Thomas Edison*, and to whom we owe thanks for the invention of the electric light bulb in 1879 (among other things like the phonograph and technical telephone transmission) had something very wise things to say about the future of medicine. His famous statement can be found in many a health practitioners clinics but perhaps none more typically so than Chiropractors and Osteopaths.

He said: „*The doctor of the future will give no medicine but instead will interest his patients in the care of the human frame, in diet, and in the causes and prevention of disease.*“

The implication in his statement so far as chiropractors and osteopaths are concerned, is of course, the part about the human frame. They have used it as their catch-cry for decades now, to give validity to their work and to also make the subtle connection that if Edison was smart enough to invent the electric light bulb, then his theories about health warrant at least more than passing consideration. Good point!

I happen to agree with what Edison said and in fact I fully subscribe to the whole statement including the parts about diet and causes and prevention of disease too, because in many cases without these, the part about the human frame is left a little impotent.

Even further back in time, 2500 years ago, Hippocrates the famous Greek father of medicine adopted similar approaches and practice of medicine as Edison proposed. His four pillars of health are a stark reminder that the human body is in fact a self regulating mechanism and must be attended to on the basis of its intrinsic organic needs. Structure, Diet and indeed the causes and prevention of disease.

Hippocrates first approach if someone was ill was to change the diet and if this did not work after some time, continue with it and then go to the next phase, therapeutic herbs, therapeutic touch, psychology etc. Stay with all of this for some time and if the problem persisted, then go to the next phase, which was to use pharmaceuticals. Stay with these 3 phases for some time also, but if they fail to eradicate the disease or symptom, then you had better go to the last and final step of surgery.

Stop and consider for a minute however the wisdom in this approach if the person did in fact need surgery. They were well prepared from the point of view of all the other aspects of the organism having being supported beforehand and therefore the recuperation after surgery would be optimized and reaction minimized. The same thinking applies to all the four phases; one prepares the way forward and backwards for the next step. Very ingenious indeed!

Hippocrates was also the first person as far as history is concerned, to propose the concept of a self regulating capacity of the body which he called *Physis*, and from which the word *Physician* hence came. He claimed that the body had an innate intelligence that would do what was right to bring things back to balance through *physis* or self-regulation given the appropriate context.

Self regulation as far as the sacrum, spinal column and cranium are concerned means specifically, the innate and automatic capacity for this ordinarily integrated system to resume its intrinsic motility (as opposed to fragmented functionality) via dural membrane connectivity, muscular integration and the osseous rhythms of the sacrum and cranium, to the extent that it positively physiologically influences all external systems dependent on its integration.

Indeed when we start to compare the ideas of Edison and Hippocrates we discover great similarities in their proposals. When we combine their ideas, we come up

with a self regulating organism concept that is importantly underpinned and supported by specific nutritional needs and an adherence by the individual, to remain vigilant to the things that could disturb the organisms balance to the point where it manifests disease.

Nothing could be closer than this summary to the underpinning philosophy of the Neurostructural Integration Technique.

## BASIC PRINCIPLES

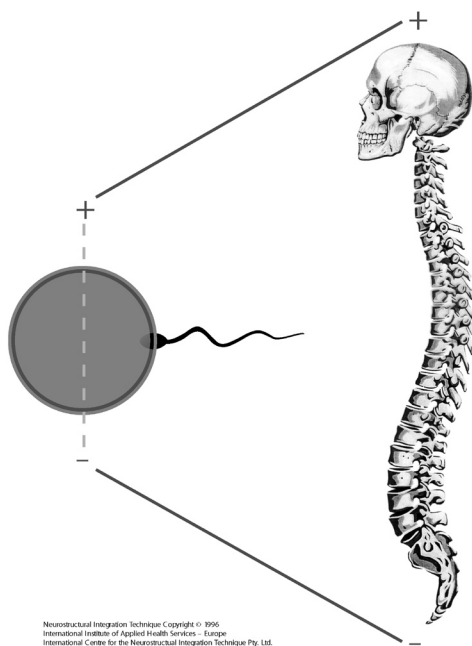
The Neurostructural Integration Technique (NST) was born out of these concepts and with the help of its original Australian inventor; Thomas Ambrose Bowen 1916 - 1982 very practically embraces both the principles of Edison and Hippocrates.

The basic principles that govern the structure and application of NST are that the body is indeed a self regulating mechanism that has needs to be balanced in the structural, chemical and mental arenas if it indeed is going to manifest a robust physiology and consequently deliver health.

Like chiropractic, osteopathic and craniosacral work NST heavily subscribes to the integration of the sacrum, spinal column and cranium as a fundamental starting point for the resolution of almost all symptoms.

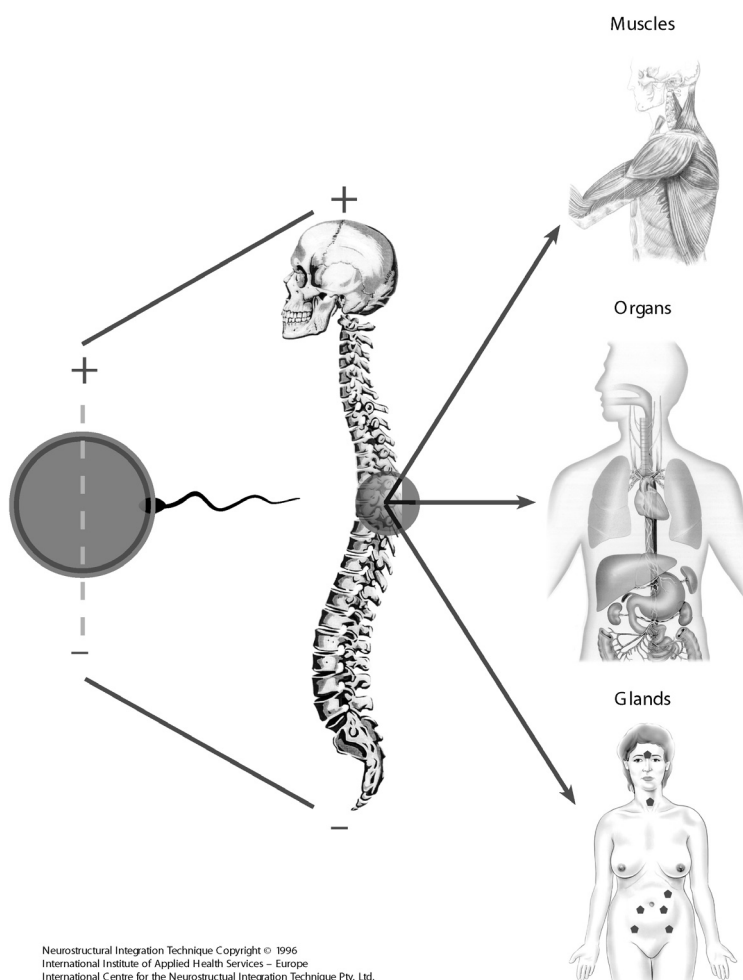
In other words, if the sacrum spinal column and cranium are balanced all systems belonging to or passing through these important structures will be free to function unimpeded.

*Unfolding of the Central Core*



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*The Central Core controls the Body*



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NST is often described as Soft Tissue Osteopathy or Neuromuscular Osteopathy with a Naturopathic supporting philosophy.

Where NST differs from all other modalities sharing the same philosophy is in its unique application.

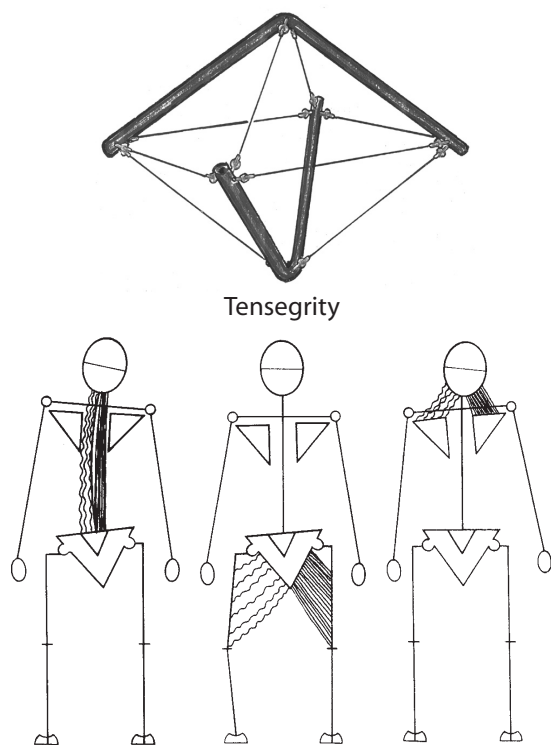
### IMPORTANCE OF MUSCLES

NST is applied to the neuromuscular system and in a way that is totally unique to NST. Muscles move bones after all and generally not the other way around!

Tom Bowen the original developer of the method uncovered the secrets that permit the rapid unlocking and systematic re-integration of the human body through the musculoskeletal system.

He insisted that in order for the structure/cranio-sacral motility or 'cycle of the body' as he put it to come back into balance, muscle tensions throughout the body had to be even both sides. This was his singular goal in applying his work.

This means not only do leg muscles have to have equal bilateral tension, but erector spinae muscles, and upper body muscles as well. Even the finer muscles of the hyoid system if left unbalanced can wreak havoc throughout the structure via the temporomandibular joints and their associated control system the stomatognathic system! (detailed below)



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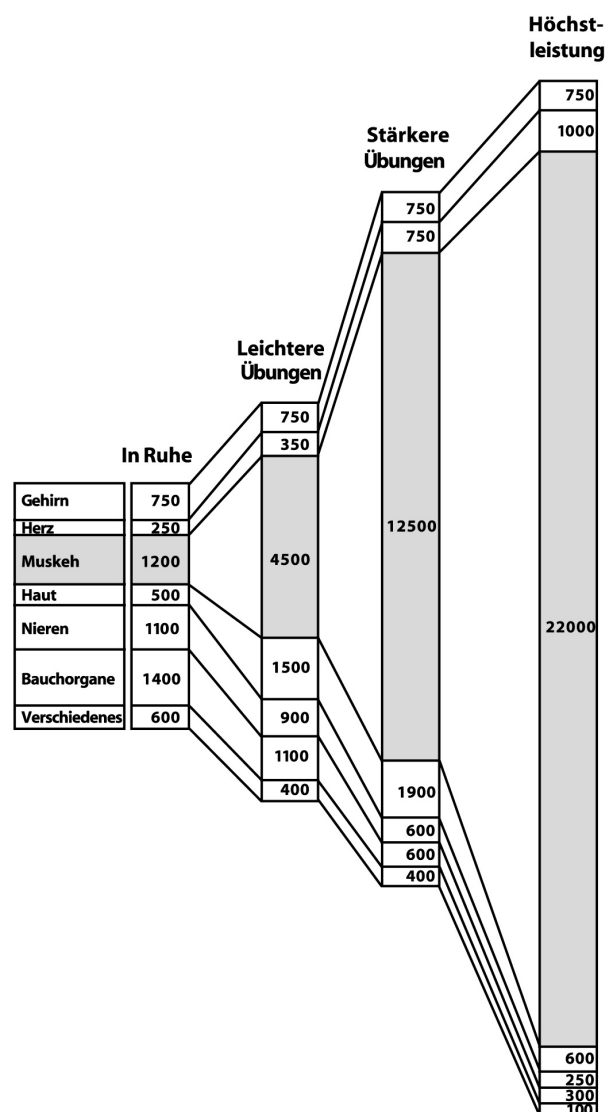
Furthermore muscles are the most primary tissue of animal life making up about 80% of our bulk. They are also the largest consumer of energy in the body and therefore blockages (neuromuscular compensations)

in the muscular system can have dire consequences for our health and indeed the predisposition to and causes of diseases.

A muscle that is blocked is using just as much energy as a muscle that is actively engaged in appropriate work. Additionally, the secondary consequences of reciprocal vertebral subluxations and inhibition of blood supply to other muscles must not be overlooked.

Moreover it is the organs that must produce energy for the function of the muscles and not the other way around. Consideration of this implication therefore opens up another important relationship between muscular blockages, visceral function and health.

Blocked muscles can and do therefore impede the function of organs directly through energy stagnation and spinal reflex arc association! (see spinal reflex arc diagram below)



Fenn-Effect

## APPLICATION

Regarding the application of NST; typically sequences of pre-designed and specific neuromuscular movements or 'moves' are applied to the Lumbar, Thoracic and Cervical spines as a starting point for every individual. This is designed to integrate the body from the central core (sacrum, spinal column and cranium) outwards to the periphery and to ensure that pathways from the periphery to the central core remain clear.

The significance of the central core being balanced before other parts of the body are attended to cannot be overstated, as it is indeed the central core through which all other systems are obliged to pass!

It is this feature alone which creates the appropriate neuromuscular context for other more exterior symptoms to be so effectively removed and remain so.

Other sequences that then relate to particular presenting symptoms (e.g. shoulder problems, ankle problems etc) are added to the base core sequences to ultimately build a session that is tailored for the person's needs on the day.

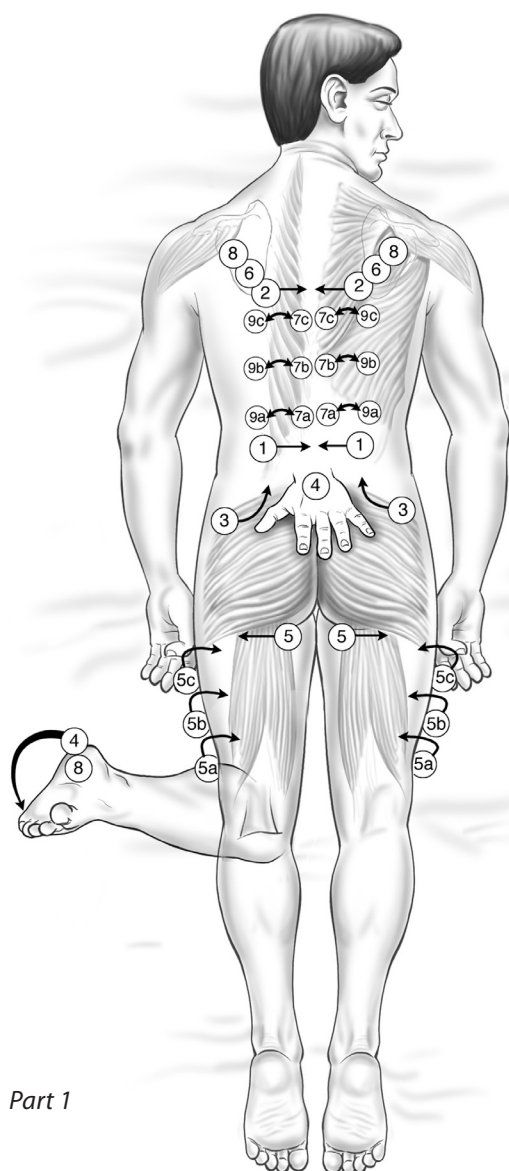
A session is then completed via an investigation and where necessary balancing of the Pelvic and Temporomandibular Joint complexes.

Bowen himself offered very unconventional and anecdotal explanations when asked how his work could be better understood however his most common response was that "explanations are not important if people are getting well".

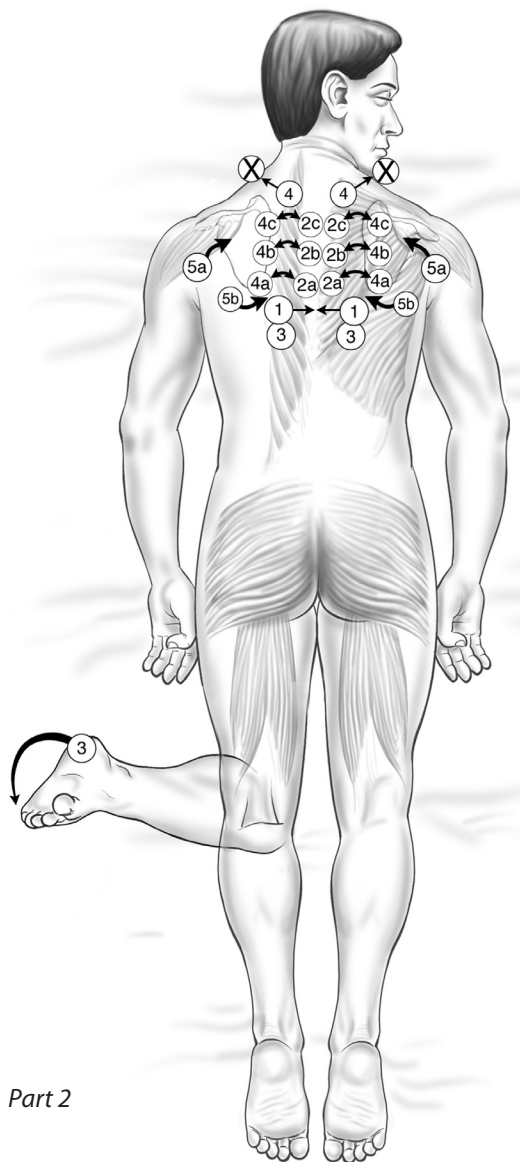
Bowen preferred to give rules to the usage of the work as opposed to try to explain what was going on and in this way he operated very contextually which is deeply compatible with the early Hippocratic methods of therapeutic application.

Lack of explanations from Bowen however has not dampened enthusiasm from practitioners around the world to decipher what is really going on with the work when a session is performed.

One of the most popular explanations as to why the work functions so effectively is the spinal reflex arc model which basically operates according to the rule



Part 1

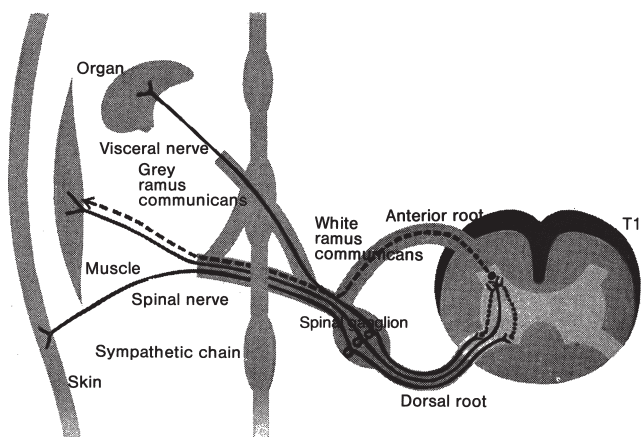


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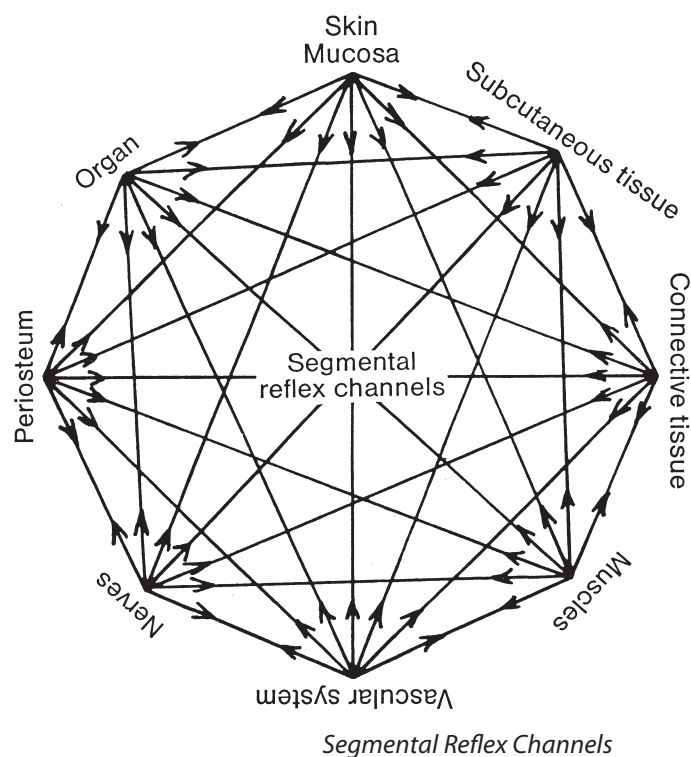


that whatever is stimulated in a spinal reflex arc will provoke all members (muscles, organs, nerves, glands and skin) of the arc to respond equally and simultaneously. This model is often what makes the use of neural therapy so effective as well.

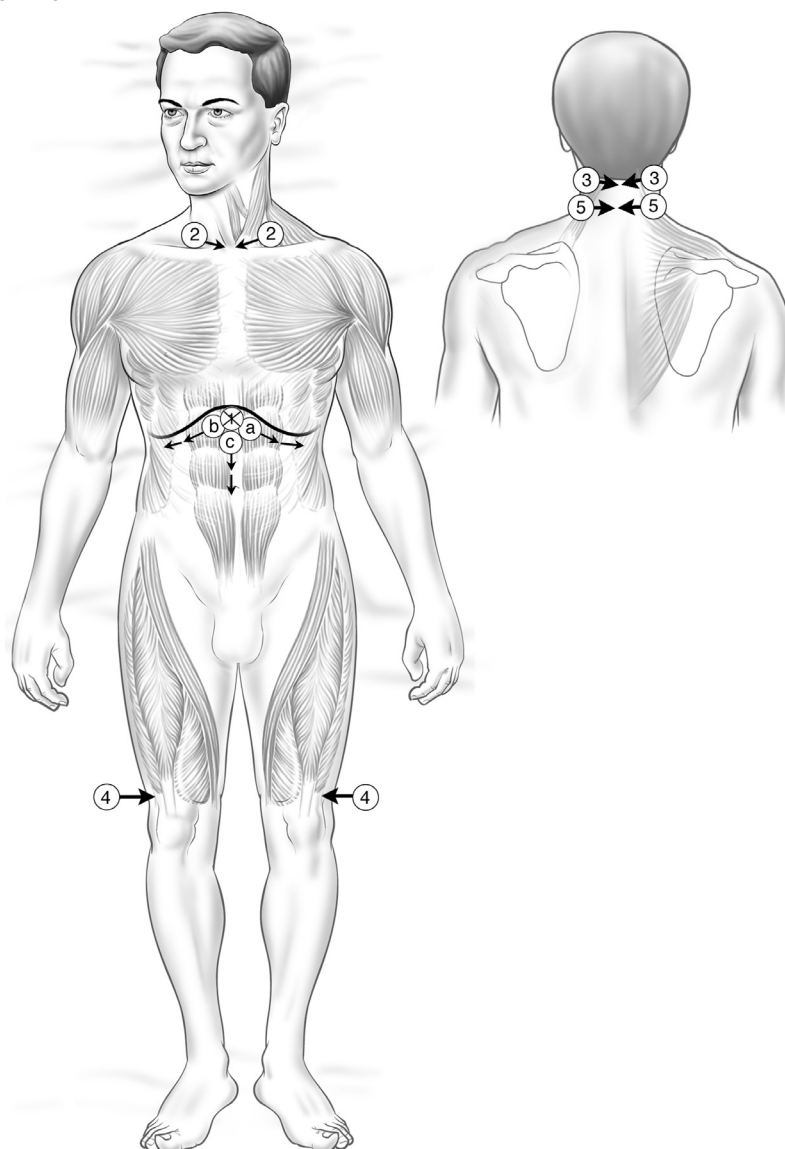
Bowen however took the spinal reflex arc model and used it much like a musical composer would, harmonising the individual notes to design a beautiful piece of music!



*Spinal-Segmental Reflex Arc*



*Segmental Reflex Channels*



## RESULTS

Whatever the explanation the outcomes to NST are unique. The resultant responses are deeply self-regulatory in a multi-dimensional sense, evidenced by profound changes not only in the skeletal system but in the muscular system, nervous system and endocrine system.

The bottom line, for a staggering 80-85% of people who receive NST therapy, is that they require just 2-3 sessions with approximately a week in between sessions, to resolve their presenting symptoms. For individuals who still have symptoms after 3 sessions almost all of them will respond favourably with the application of another 1-3 sessions.

Therapeutic success is synonymous with NST as the work consistently produces remarkable results in these short time frames, and in some cases results it must be said, are close to miraculous!

I must also emphasise here that more chronic and degenerative diseases such as many congenital disorders and cancer for example, typically require ongoing therapy using a multifaceted approach to keep things in check and NST may become a tremendously important part of the overall treatment strategy.

### Conditions

Although there are no specific conditions that NST cannot be safely applied to for any age group (babies to the elderly) the following list of symptoms are typical of those that most frequently 'disappear' in response to an NST session.

- All spinal, Cranial, Temporomandibular Joint (T.M.J.) conditions
- All neck conditions including whiplash
- Head injuries and headaches including migraines and visual conditions
- Back conditions including pelvic, lumbar, thoracic and sciatica
- Shoulder, elbow, wrist and hand conditions
- Leg conditions including hamstrings, knees, ankles and feet
- Digestive and intestinal conditions
- Respiratory conditions including asthma, sinusitis, bronchitis
- Musculoskeletal and joint conditions, rheumatism, arthritis, fibromyalgia
- Kidney and urinary problems
- Menstrual, reproductive and menopausal conditions
- Baby colic, gastric reflux and feeding problems
- Acute and chronic fatigue
- Stress conditions, emotional depression and structurally related learning difficulties

## CASE STUDIES

1) A 38-year-old woman P.C. presented with Meniers Disease and the typically associated symptoms of nausea, dizziness and sickness on a cyclic basis. Additionally she experienced hearing difficulties and frequent panic attacks.

Her condition had persisted for almost 20 years. On evaluation it was discovered that she had chronic TMJ and pelvic dysfunction.

After her first session she felt extremely tired ( a classical NST response ) and started to feel the beginnings of a combined nausea and panic attack. However after a few hours the sensations had abated and she started to feel a new sense of "wellbeing".

After three sessions she remains symptom free, a response, which has puzzled her doctors. She has also completely stopped the usage of all medication.

2) An 8 year old girl M.J. presented with impaired co-ordination, scoliotic pelvis, perception disorder of the muscles, and heavy binocular strabismus (especially when tired).

The child had previously received the best possible medical care available. After the first application of NST the child said she "felt different"; after the second application of NST she was able to ride her scooter and walk up and down the stairs, an activity she was previously unable to do without the help of somebody else.

For the first time in her life she felt pain after muscular exertion. After the third application of NST her physiotherapist asserted that the scoliotic pelvis was now straight, as were relevant points on the scapulae as well.

At the same time the co-ordination and perception of the muscles had improved so much that even a forward somersault was possible.

After the fourth application of NST – incredible but true – the ophthalmologist asserted that the child squinted no longer. In fact this test was carried out when the child was quite tired, having come straight from school. She continues to improve.

3) A 67 year old man presented suffering from chronic Parkinsons Disease which he had been afflicted with for over 18 years. He was able to walk only with the assistance of his wife and a walking stick, and displayed strong trembling almost consistently in both arms.

On sitting, the trembling worsened added to which his already small stature was made to look smaller, as he was severely hunched as a result of a progressively worsening kifosis.

Psychologically, he was depressed and disheartened with life generally, a condition which was exacerbated by the side effects of medication he was taking, that caused him to hallucinate and scream at imaginary images.

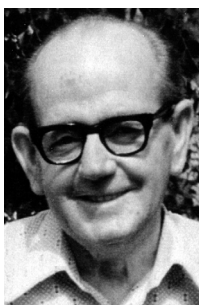
At the end of the thirty-minute session he was able to leave the table with a noticeably increased sense of comfort, and it was obvious that his trembling had diminished significantly. That night at home he sat up straight for the first time in many years and was able to maintain this new posture for the following two days.

After five sessions he no longer needs his walking stick, and the trembling only reappears for short periods, from time to time. The kifosis has completely disappeared and according to his wife, he has become the person that she used to know some ten years earlier.

He now receives fortnightly sessions to keep his condition stable, and has taken himself off his medication completely.

### **TOM BOWEN - THE ORIGINATOR**

The NST work was originally developed as previously alluded to by Thomas Bowen from Australia. Bowen was a self proclaimed osteopath who started work a bit like Thomas Edison did, i.e., in the basement of his home using his natural talents and a simple system of trial and error.



*Tom Bowen*

Bowen had the rare gift of being able to clearly feel where nerves and energy were blocked in the muscular system. In fact his hands were so sensitive that during his experiments when he moved energy the wrong way in the body he would receive a burning sensation so hot that he would have to quickly leave the room shaking his hands to cool them off before finally finding some cool running water to put them under to get the heat out of them.

Luckily it's not at all necessary to have such a hypersensitivity to perform the work. Providing one follows the sequences and rules the results are good for every body. A child could be taught to do this work and it would be instantly effective!

Bowen was credited with having worked on about 13,000 people per year amounting to approximately 350-400 thousand people in his clinical career which spanned about 30 years. His own conservative estimate for his success rate was 88%.

Throughout his career he taught only six people the finer points of his work and some of these people are still practicing today in Australia.

Four years after his death in 1982 an interpretation of his very early original work was created by his first student Oswald Rentsch and is now well known around the world and is used by many semi-professionals and professionals as well. Its name is the Bowen Technique.

### **DEVELOPMENT OF NST**

My first contact with Tom Bowen's work was in the late 1980's after which I had the pleasure of working with and then teaching for Oswald Rentsch (Bowen's first student) in the early 90's before then consulting with Bowen's two last students on his later quicker work and then ultimately developing a truly technical interpretation of this later work which is now called NST.

The emphasis therefore in the development and design of NST was to make it in particular representative of his later work and importantly quick to apply and user friendly for practitioners in busy clinics who need to find rapid solutions in a timely manner.

It is consequently taught at a technical level and as such is only available to practising health professionals.

Its sequenced design also makes it easy and practical for health professionals to learn in a few intensive bursts. The basic level workshop which comprises the core of the work can be learned comfortably in five days. The advanced combining many rapid and potentizing strategies in four days and then the ultimate fine tuning, chemical and mental aspects of the work in a three day workshop.

NST has expanded Bowen's work to the extent that these days it is a very well integrated system adhering largely to principles based on the concepts for creating health of both Edison and Hippocrates.

### **OPERATIONAL SYSTEMS - OVERVIEW**

Some fundamental systems in the human body that we seek to integrate via our usage of NST are the Primary Respiratory Mechanism, The Secondary Respiratory Mechanism and the Stomatognathic System.

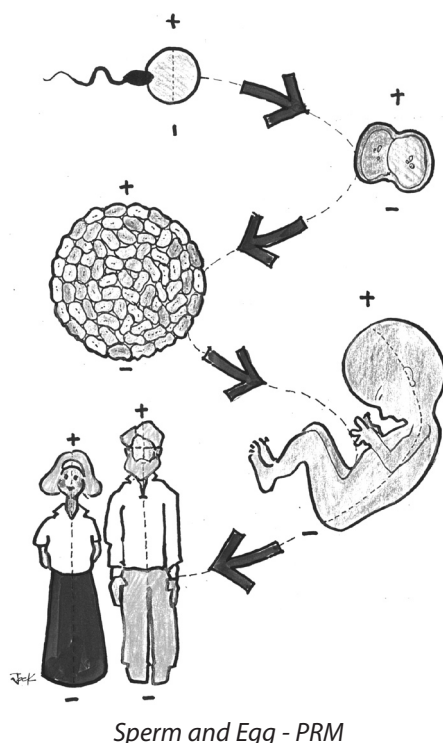
#### **The Primary Respiratory Mechanism**

For decades now we have known much about the unique physiological outcomes when a sperm and egg get together and initiate the process of biological life.

Shortly after the sperm buries its head into the egg an electrical impulse is measurable across the egg. It has a positive aspect and a negative aspect and a very direct line of communication along an invisible axis.

This pulse rather than being just a random event is said to play the role of stimulating cell development and multiplication and as the first egg splits and divides into two and then four and then clusters of cell we discover that the pulse is ever present oscillating somewhere between two cycles per minute up to eighteen cycles per minute.

For this reason it has been given the name primary respiratory rhythm as it presides over the rate at which cells take in oxygen and nutrients and give off waste products. With out this cycle we would die. Sutherland the father of Craniosacral work referred to this pulse as being the most fundamental of all bodily pulses referring to it as the pulse of life!



### The Secondary Respiratory Mechanism

Once the baby reaches its full nine months of gestation and comes into the world taking its first breath, another life supporting cycle is initiated known as the Secondary Respiratory Mechanism and is more connected with pulmonary respiration per se.

As the baby gasps in its first breath of air, the diaphragm is distended compressing the visceral organs into the pelvic floor causing it to have a flaring response in the Ilii in an anterior-lateral direction. As a consequence of the sacrum being connected to the Ilii through the Iliosacral joints, the sacrum itself is also obliged to move, its distal aspect moving forward.

The resultant effect of this is for the cranium to flex in response to the tugging it receives at the sphenobasilar junction from the Dura Mater which is connected firmly to the anterior portion of the second sacral segment

and then the upper cervical vertebrae (C3 and C2) and the cranium itself at the foramen magnum.

The flexing of the cranium is sufficient to provide sufficient movement within the cranial sutures provoking intra suture receptors to send an impulse to the mid brain and ultimately an impulse via the phrenic nerve to relax the diaphragm ready to take another breath.

The significance of the Secondary Respiratory Mechanism cannot be overstated in NST as it is indeed the mechanism around which the NST core bodywork has been designed. The core body balance in NST includes sequences to integrate lumbar, thoracic and cervical spines and the diaphragm.

### The Stomatognathic System

After the central core has been attended to in an NST session and individual symptoms dealt with, the emphasis then shifts from gross to subtle as an evaluation and if necessary balancing of the Stomatognathic system through the Pelvis and Temporomandibular joint complexes commences.

Attending to these important structures as an overlay or fine-tuning strategy to support the core NST work has been what has given NST the high degree of success it enjoys and more importantly the capability for the practitioner and the client to journey together in a process of discovery as to what is really disturbing the organism at a more organic and perhaps psychosomatic level.

Although the Stomatognathic system at its basic level of function controls the functions of chewing, biting and swallowing its components to some extent are the same components of the Secondary Respiratory Mechanism and therefore exert a tremendously important influence on structure itself!

For example they share the innominate bones, sacrum and coccyx, dura mater and cranial bones, however the Stomatognathic System goes further to include the atlas, temporomandibular joint, the hyoid bone, the seven cervical vertebrae, first three thoracic vertebrae, two clavicle bones, two scapulae and sternum and then all the muscles, tendons, ligaments, nerves and blood vessels that enable the system to function.

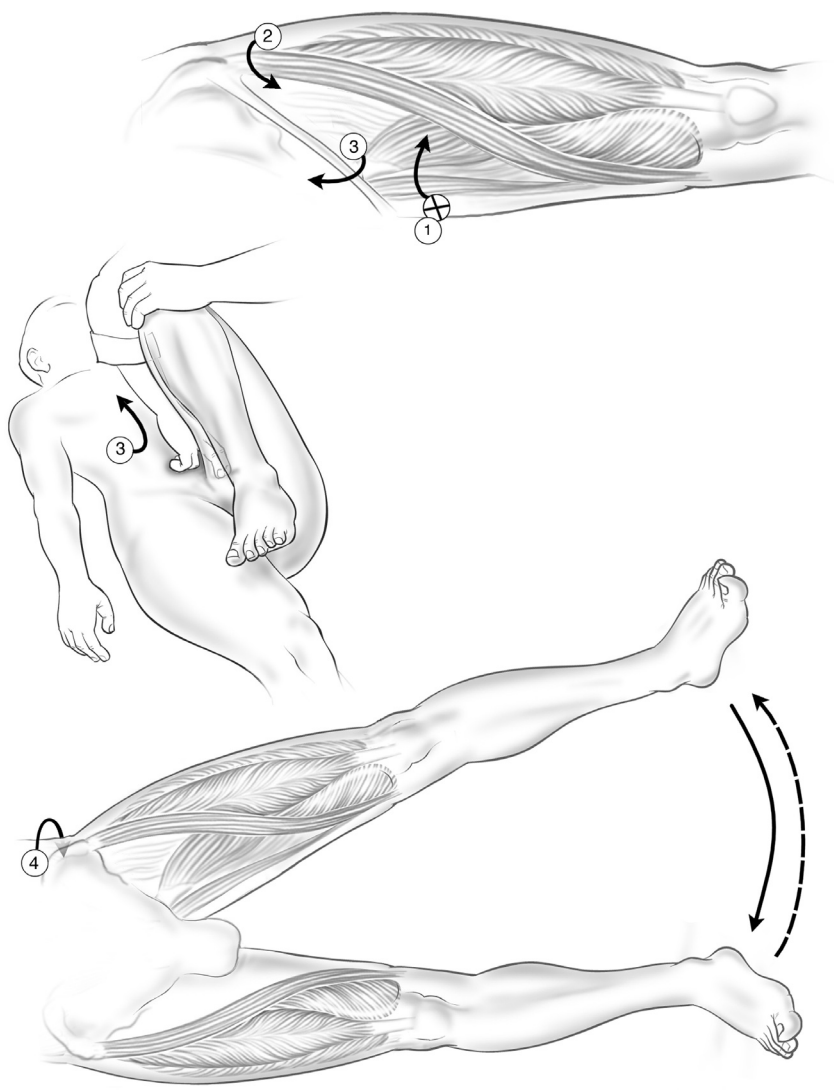
The basic concept with the Stomatognathic System is that it functions as a closed system meaning that every time any of the functions of chewing, biting and swallowing are performed the components of the whole system are obliged to move as one unit.

As with all closed systems, any unstable component or faulty part will tend to disturb the entire system or perhaps better stated will determine the systems absolute integrity. A chain is only as strong as its weakest link after all!

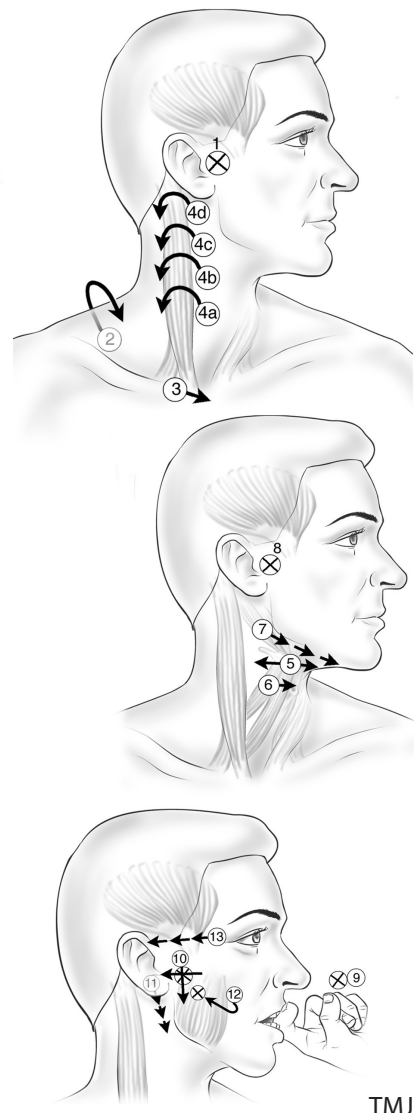


Indeed when we consider such important components as the TMJ and the Pelvis its little wonder that neglect to detect imbalances with them and then balance them

effectively, will wreak havoc, in terms of maintaining appropriate ongoing structural integrity.



Pelvic



TMJ

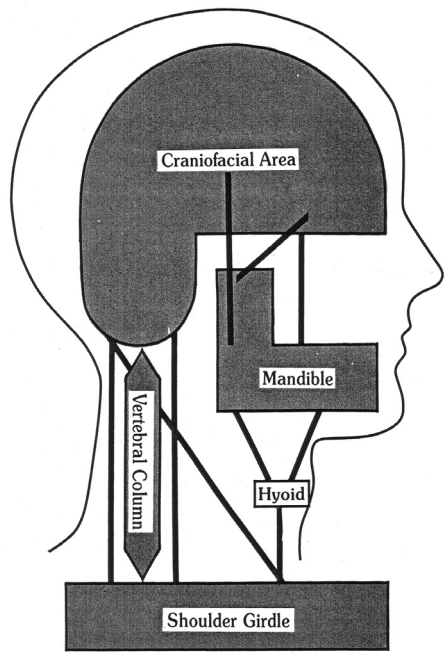


Diagram Showing Balance Of Head On Vertebral Column And How Muscles Stabilize The System

## SUMMARY

In summary, the Neurostructural Integration Technique is a unique and powerful neuromuscular spinal integration technique designed to elicit changes from deep within the human organism that will quickly remove pain and a myriad of symptoms thereby ultimately creating the starting point from which vitality and good health can be attained through the principles of healthy living.

**Michael Nixon-Livy** is an internationally renowned lecturer, teacher, author and health practitioner who was born in Australia in 1954. He holds qualifications in Human Relations, Psychology, Kinesiology and Bowen Spinal Therapy. He is the founder of the highly acclaimed Neurostructural Integration Technique and travels the world teaching to groups of professional health practitioners.

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