

SYMPTOM DRIVEN THERAPY VS. REMOVING THE CAUSE: WIDENING THE PERSPECTIVE OF MODERN MEDICINE

Dieter M. Meier*

MD, DO, Ulm, Germany, Baden Wuertemberg.

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*Corresponding Author: Dieter Matthias Meier

MD, DO, Ulm, Germany, Baden Wuertemberg.

ABSTRACT

Background: Within the past century, modern medicine has evolved to a high-tech industry, consisting of complex standards of care. The often-expressed criticism that medical doctors only treat symptoms without searching for the root cause seems to be gaining traction in recent years. This article examines the origin of symptoms and the results of over 1000 patients with a wide variety of diagnoses that were treated holistically as opposed to an allopathic approach. **Methods:** Over 1000 patients with a wide variety of diagnosis were examined with a spinal X-ray and a scan of the autonomic nervous system. The structural changes of spinal biomechanics were correlated to the patients' symptoms. Using this as a baseline, spinal manipulations were performed according to the spinal structural changes to correct biomechanics and balance the autonomic nervous system. **Results:** In 100% of the patients, the structural misalignments in the spine were located at the vertebral segment of the origin of the nerve root that innervated the location of symptoms. In 100% of the patients the symptoms were reduced or disappeared if the structural changes could be reversed, resulting in an improvement of autonomic nervous system function. **Conclusions:** The results of this study strongly suggest that misalignments of the spine and, accordingly, change of autonomic function, are, at least in part, responsible for the rise of symptoms in all chronic diseases. Understanding the root causes and removing them to stimulate self-healing uses functional physiology and demonstrates the importance of translational medicine in the treatment of chronic disease.

KEYWORDS: Holistic Medicine, Autonomic Nervous System, Spinal Manipulation, Chronic disease.

INTRODUCTION

An increasing number of chronically ill people and an increasing number of chronic diseases have been noted worldwide, especially in the developed countries within the past century.^[1] This has led to a health industry with high tech diagnostics, pharmaceuticals and therapeutic interventions and a complicated system of standards for treatment of various diseases that all have the goal of symptom reduction. As alternative treatments have been shown to approach diseases in a more cause-related way, an increasing number of patients raise the concern that modern medicine is a solely symptom-driven enterprise, not engaging in the attempt to remove the root cause of symptom development. Understanding the body as one entity with a central nervous system that controls the metabolism of all tissues can give rise to treatments that improve the structure and function of the body and thus lead to improved health, no matter the diagnosis or the specialty that the diagnosis relates to.

The key to health, as has been described numerous times, is a well-functioning and balanced autonomic nervous system.^[2] The autonomic nervous system is the part of the nervous system, which enables humans to adapt to their environment. The two antagonistically acting elements are the sympathetic and parasympathetic nervous system. They are essential for survival through adaptive responses in our physiology but are also the cause of chronic disease if there is a chronic imbalance within the system.^[3] Typical sympathetic stress responses include an increase in heart rate and an inclination towards arrhythmias, increase in blood pressure, blood sugar, LDL-cholesterol, stimulation of the adrenal glands with the release of norepinephrine, epinephrine, and cortisol, widening of the airways and dilation of the pupils, and also increasing the tone of the segmental spinal muscles. The sympathetic nervous system also diminishes gastrointestinal and thyroid activity, downregulates the immune system, and interferes with deep sleep. The parasympathetic nervous

system does the opposite. An imbalance of the autonomic nervous system can result from emotional, chemical, or physical stress: physical stress being a deviation of cranial, spinal and pelvic skeletal structures, as the nervous system is encased by bone and displays reduced function if misalignments are present.

If it were possible to measure autonomic stress and decrease it, and by that balance the nervous system, it should be possible to improve metabolic function of all tissues, organs, joints, blood vessels, and hormone glands and by this, reduce symptoms of all kinds and increase health overall. The use of manual spinal manipulation is known to effectively improve autonomic function and balance.^[4] There are several devices available to measure both. For decades lie detector tests have been used to measure emotional stress reactions triggered by an increase of sympathetic tone created by lying. Measurements have also been increasingly used by elite athletes to monitor training status and alert the athlete in the early stages of overtraining, to reduce overall training load to maximize the effectiveness of training.^[5] Psychologists use measurements to assess overall stress status and as objective analysis of stress reduction after therapy.^[6] This approach is also valid for all other health issues as autonomic imbalances have been implicated with a variety of chronic diseases.^[7] In this report, the autonomic nervous system was scanned by measuring heart rate variability. Heart rate variability measures the change of the time interval between two heartbeats. It is an expression of the adaptability of the body to cope with environmental changes. Any kind of stress be it emotional, chemical, or physical will enforce a sympathetic response and reduce the variability of the heart rate.^[8] The autonomic control of the heart is

achieved by the vagus nerve parasympathetically, its origin lying in the medulla oblongata, just above the C1 nerve root. The sympathetic nerve fibers originate in the sympathetic ganglia, typically from the T1 to T4 segments with the predominant fibers coming from T2. As structure and function are physiologically dependent on each other ubiquitously in the body, misaligned vertebrae will have an influence on the nerve function of that segment as well as overall autonomic function.^[9]

Another key factor however is the segmental innervation of organs, muscles, hormone glands, bones, and joints. In pre-med education, the anatomy of spinal nerve roots is discussed including the transport of sensory, motor, and autonomic nerve signals. But the segmental autonomic innervation is not included in a standardized diagnostic or therapeutic regimen, neither in further education in medical school, residency, nor in the daily medical practice of doctors worldwide. This seems odd, as the imbalanced or reduced metabolism is the source of symptoms in all chronic diseases, which are classified in thousands of diagnoses and then categorized so that specialized doctors can treat the symptom according to their guidelines. The improvement of segmental autonomic nerve signaling and the autonomic nervous system as a whole should improve metabolism at the symptom site, so that tissue regeneration becomes possible and thus reversal of chronic disease takes place rendering medication, and in many cases, surgery, unnecessary. As the signaling of nerve signals is dependent on spinal structure, it only makes sense to look at the structure surrounding the nervous system and try to improve misalignments to increase function. Diagrams of segmental innervation have been published and can be used for reference.

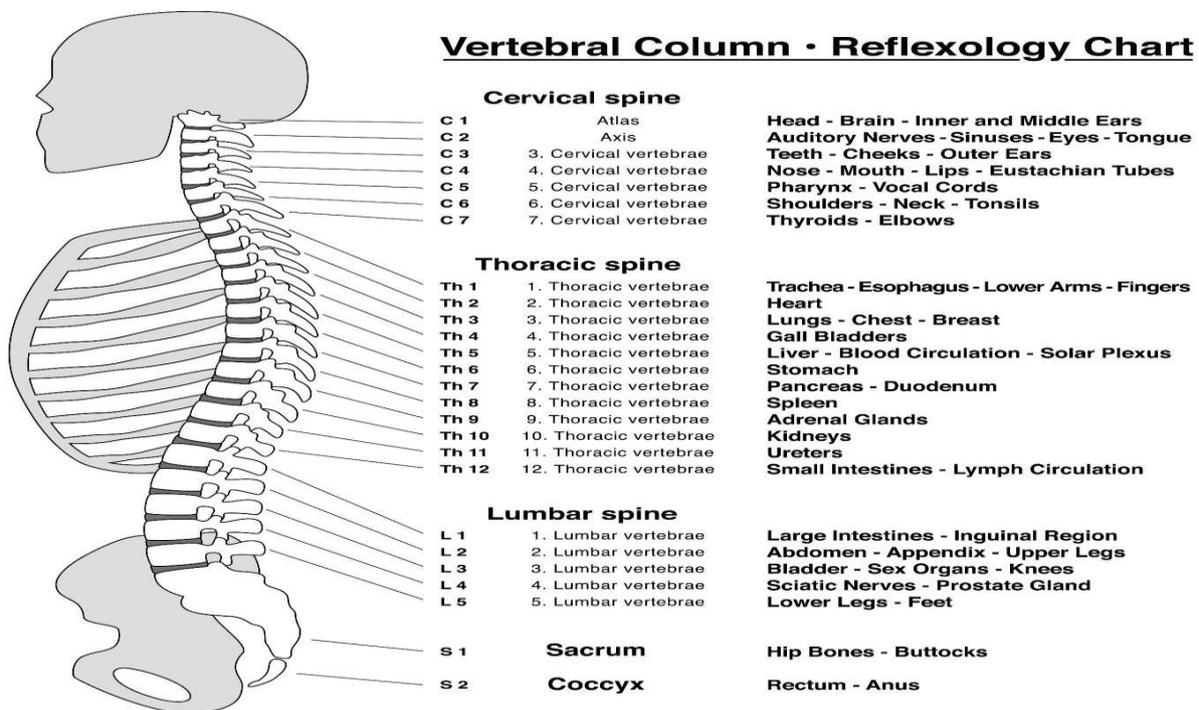


Fig. 1: Segmental Innervation of Organs, Joints, and Hormone glands.

Source: Adobe Stock (Peter Hermes Furian)

In this article, the results of over 1000 patients undergoing diagnostic X-ray of the whole spine and pelvis and a scan of the autonomic nervous system, and subsequently a series of spine and pelvis manual manipulations are presented. The patients were diagnosed with a variety of chronic diseases, including:

Achalasia, Achilles tendon inflammation, Acne, Acromegaly, ADHS, Allergies, Alopecia, Amenorrhea, Aneurysms, Anorexia, Arthritis/Osteoarthritis, Asthma, Atherosclerosis, Autism, Azoospermia, Back pain, Bipolar Dysfunction, Bladder inflammation/infection (recurrent), Bruxism, Bunions, Burnout, Bursitis, Cardiac dysrhythmias, Carpal tunnel syndrome, Chronic Fatigue Syndrome, Ulcerative Colitis/Crohn's Disease), Constipation, Cramps, Cystic fibrosis, Degenerative disc disease, Dementia, Depression, Diabetes, Diarrhea (recurrent), Dissociative Motor Disorder, Dyslexia, Dysmenorrhea, Ear pain, Emotional instability, Endometriosis, Enuresis, Epilepsy, Fibromyalgia, Flat feet, Flatulence, Frozen Shoulder, Gallstones, Ganglions, Glaucoma, Golfer Elbow/Tennis Elbow, Growth retardation, Headaches (migraines, Cluster pain etc.), Heat flashes, Heel spur, High blood pressure, High Cholesterol, Hyperthyroidism, Infertility, Irritable Bowel Syndrome, Irritable Cough, Hip dysplasia, Impotence, Incontinence, Knee pains, Narcolepsy, Nausea, Neck pain, Neuralgia, Obesity, Ovary cysts, Panic attacks (recurring), Parkinson's Disease, Prostate enlargement, Psoriasis, Restless Legs Syndrome, Rheumatic Disease, Sciatic pain, Scoliosis, Shoulder pain, Skin disorders, Sleep disorders, Sleep apnea, Snapping finger, Spina bifida, Spinal canal stenosis Stomach aches, Swallowing Dysfunction, Thyroid Dysfunction, Tinnitus, Tooth pain, Tremor, Vertigo, Vision Dysfunction, Warts and others.

MATERIALS AND METHODS

Diagnostics were performed using digital X-rays of the spine and pelvis, a scan of the autonomic nervous system using a heart rate variability measurement.

The X-ray machine used is a: Philips Digital Diagnost V.4.2. The X-rays were performed on a standing patient ap and lateral.

The diagnostic tool for the autonomic nervous system was the CLA INSIGHT™ System for heart rate variability.

The spinal manual adjustments were performed by safe practice guidelines after informed consent by the patient. The adjustments were made according to X-ray misalignment, and palpation result in the order: skull, cervical spine, thoracic spine, lumbar spine, and pelvis. After each adjustment leg length was measured supine and sitting. The number of appointments varied greatly from patient to patient, as the therapy was offered within a private practice setting. In some patients, the diagnostics were repeated after 30 adjustments to

document changes.

RESULTS AND DISCUSSION

Of 1000 patients with a variety of diagnoses and symptoms examined with a spinal X-ray, 100% showed a misalignment of the vertebrae at the level at which the nerve controlling the area of symptoms is released by the spinal cord. After a series of spinal manipulations aiming at the reconstructing the biomechanics of the spine and pelvis, including the misalignment at the level of symptom origin, the symptoms decreased in over 90%, and even vanished in over 65% of cases that presented back after the first therapy session. The exact percentages cannot be determined, as not all patients presented back after the first treatment, and therefore the result remains unknown in some cases. The prerequisite for success was the ability to change the biomechanics of the spine. Patients receiving a treatment series intended to change the structure of the spine (i.e., 30 spinal manipulations between 2 times a week and 3 per day) were subject to a spinal X-ray before and after the series of treatments to show the change of structure and thus, an improvement of the function of biomechanics and the nervous system. In all these cases, the autonomic nervous system was also measured before and after the treatment series. In all patients receiving treatment of spinal structure, the symptoms improved independently of diagnosis.

Overall improvement of nervous system function was measured with the CLA INSIGHT™ System for heart rate variability.

As the result of this scan is determined by emotional, chemical, and mechanical stress, the improvement of function by treating the spine is dependent on what proportion of overall stress is contributed by the spinal misalignment: the more distinct the improvement of autonomic function, and the more improvement of autonomic function the better the result concerning health overall as well as local symptom reduction.

Example 1

A 64-year old woman complained of pain in the left hip when getting out of bed in the morning, inability to walk for more than 20 minutes or walk upstairs, muscle cramps in both legs, lower back pain, heart arrhythmias, sleep discontinuance twice per night, and high cholesterol blood levels. The X-ray exam of the spine revealed osteoarthritis of both hips, with the left being affected more, a misalignment in the upper thoracic spine of 3° and the lower lumbar spine of 12.1°. There was pronounced degeneration within the cervical spine with a forward head carriage of over 62mm. Autonomic function was measured with the heart rate variability and showed a sympathetic dominant state (85.57% autonomic balance) with decreased overall activity (53.79%tile). After 30 full spinal manual manipulations the misalignments had been reduced at the thoracic spine level from 3° to 1.2°, at the lower lumbar level from

12.1° to 2.9°. The forward head carriage was reduced from 62mm to 28.6mm. Autonomic function had improved as well: a slight parasympathetic tone was measured (84.58%ile), the activity had increased to the 82.85%ile. Clinically, this resulted in a reduction of symptoms. The patient had no more cardiac arrhythmias,

80% less lumbar pain, she could walk for several hours on hikes, no more muscle cramps in the legs, and she could sleep through the night. The osteoarthritis of the hips was unchanged on the second X-ray, but displayed no clinical symptoms.

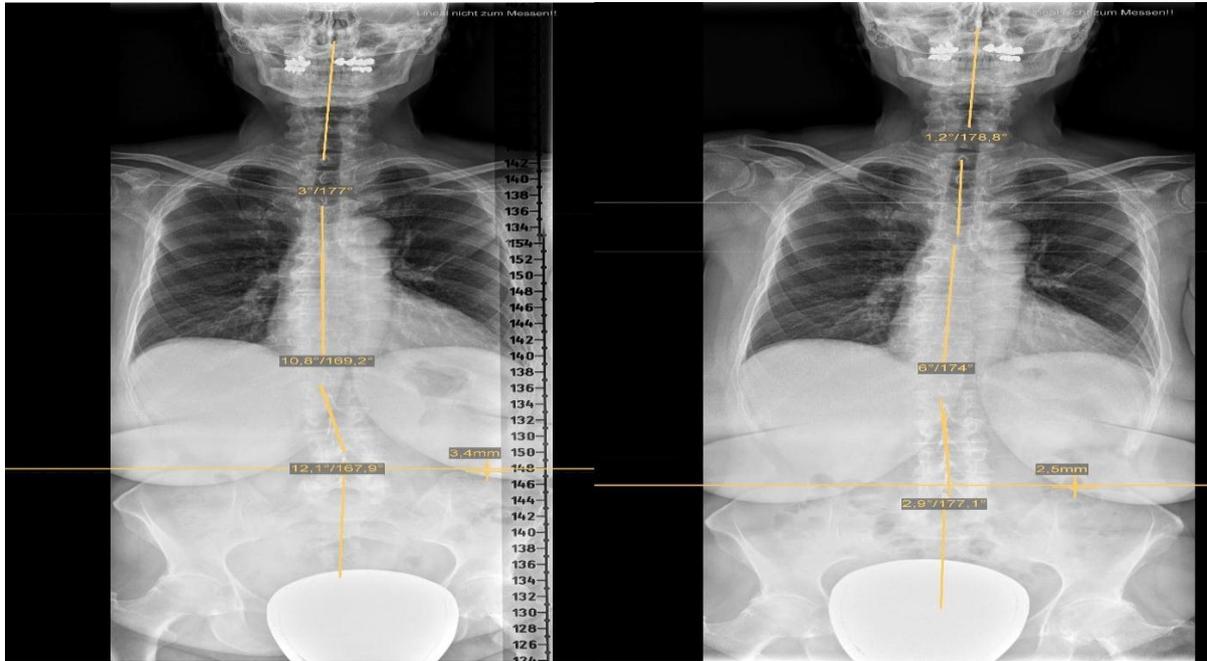


Fig. 2: Pre and post pa X-ray showing improvement of misalignments, especially in the lumbar spine.

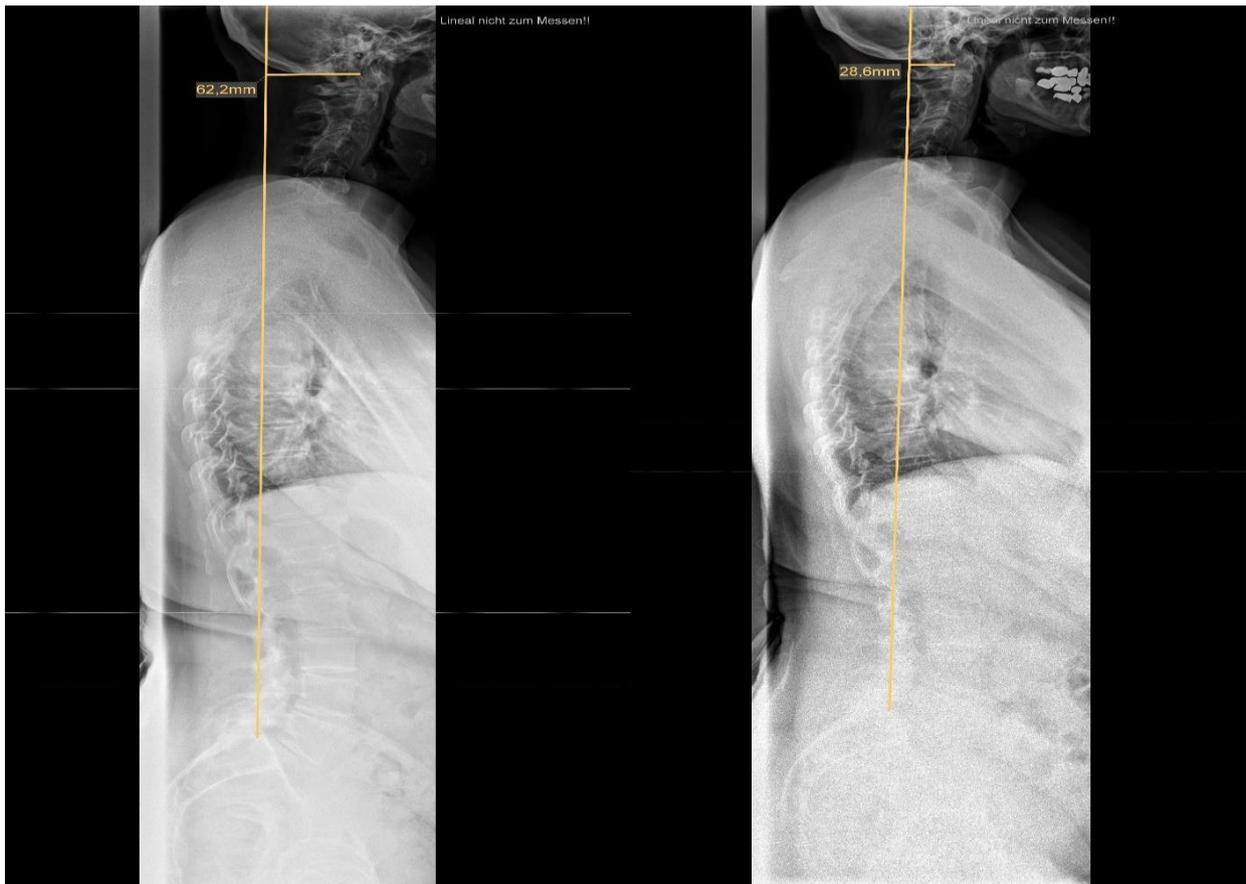


Fig. 3: Pre and post X-ray showing improvement of axis with a decrease of forward head carriage of over 3cm.

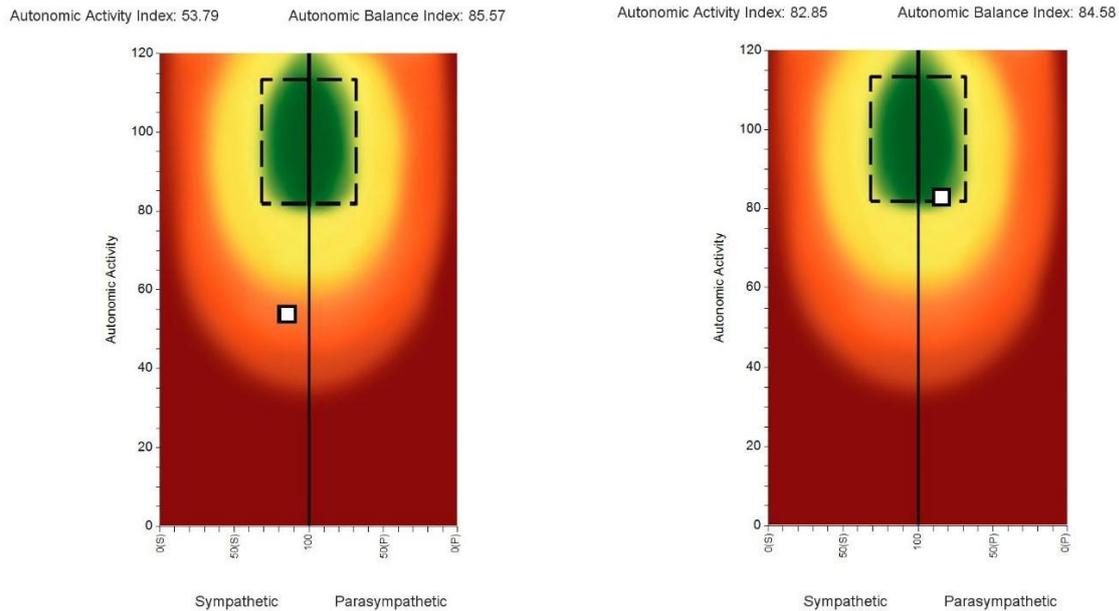


Fig. 4: Pre and post measurement of autonomic function showing an increase in activity and a change from a slight sympathetic dominance to a slight parasympathetic dominance.

Example 2

A 39-year-old woman complaining of lumbar pain radiating into both legs to the heel, paresthesia in both legs when pain is intense, neck pain, gastroesophageal reflux (heartburn), severe menstrual cramps, one bowel movement every 2-3 days, and manic-depressive episodes. The initial X-ray revealed a 7.5° misalignment in the mid cervical spine, a shoulder tilt of 16mm, 14.2° misalignment in the mid-thoracic spine, 23.3° in the upper lumbar, and 10.5° in the lower lumbar spine. The cervical spine showed a reversed curve with 13.4° kyphosis instead of a physiological $30-40^\circ$ lordosis. These misalignments represent a massive biomechanical deviation from the norm. The autonomic function showed a parasympathetic stress response with an activity index of 62.68th percentile and a balance of 89.23rd percentile. After 30 spine manual manipulations, the diagnostics were repeated. The X-rays showed an improvement in all misalignments from an ap view: reduction of the shoulder misalignment from 16 to 10.9mm, in the mid-thoracic spine from 14.2° to 11.7° , in the upper lumbar from 23.3° to 19.4° , and in the lower lumbar from 10.5 to 5.7° . Most pronounced, however, was the improvement in the cervical spine showing the change from a reversed curve with 13.4° kyphosis to a lordosis curve with 13.2° representing a difference of over 26° . Autonomic activity increased from 62.68 to 76.97%. Clinically, this was reflected by no more lumbar pain, no radiation into the legs, no paresthesia, mild muscular tension in the neck, no reflux, only mild menstrual discomfort, daily bowel movements, and (to date) no more manic-depressive episodes, albeit while still taking medication.



Fig. 6: pre and post-X-ray showing a massive improvement of the cervical curve of over 26.

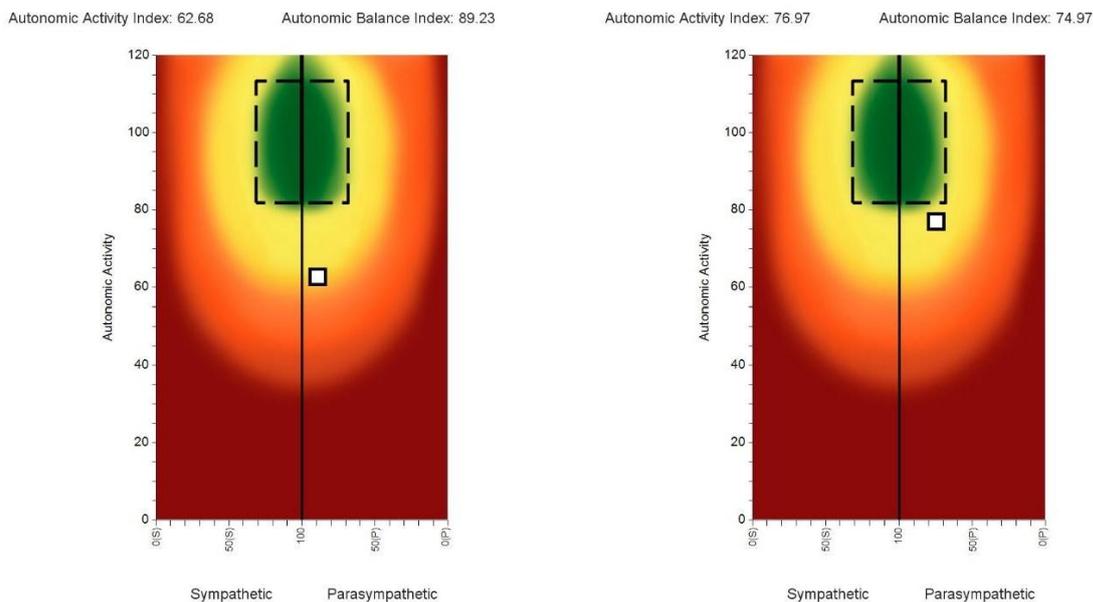


Fig. 7: Pre and post measurement of autonomic function showing an increase in activity.

Example 3

45-year-old man, who presented with lower back pain with a score of 4 out of 10 on the NRS (Numerical rating scales), especially during exercise, without radiating or peripheral neurological deficits. The patient also suffered of profuse sweating during the day, and a higher blood sugar level had been found. The full spinal X-ray showed a deviation in the p to a image of approximately 10.6°, left-convex, at the level of L2/L3, degeneration of the disc L5/S1 resulting in a decrease of the angle between L5 and S1 in the lateral image, which was approximately 5.2° initially and a pelvic tilt with an asymmetry of

9.2mm (right higher than left). Range of motion was decreased in both right and left rotation and pain while flexing forward. The structural changes of the spine after 30 treatments included a reduction of the pelvic misalignment from 9.2 to 2.9mm, improving the symmetry of the ossa ilium, a reduction of the lumbar left-convexity from 10.6° to 3.7° in the longitudinal axis, and an increase in the angle of the disc of the level L5/S1 from 5.2 to 12.5, which is a sign of regeneration of intervertebral disc tissue as described previously.^[10] This coincided with a free range of motion and no pain whatsoever including during rigorous exercise. The

autonomic function of the patient improved significantly in both balance (from 53.0 to 77.4) and activity (from 56.96 to 81.65). In addition to the improvement of spinal structure and autonomic function, the patient also had

noticed a significant improvement with hyperhidrosis. The diagnostic tests, which had been done because of the raised blood sugar showed normal values after treatment.

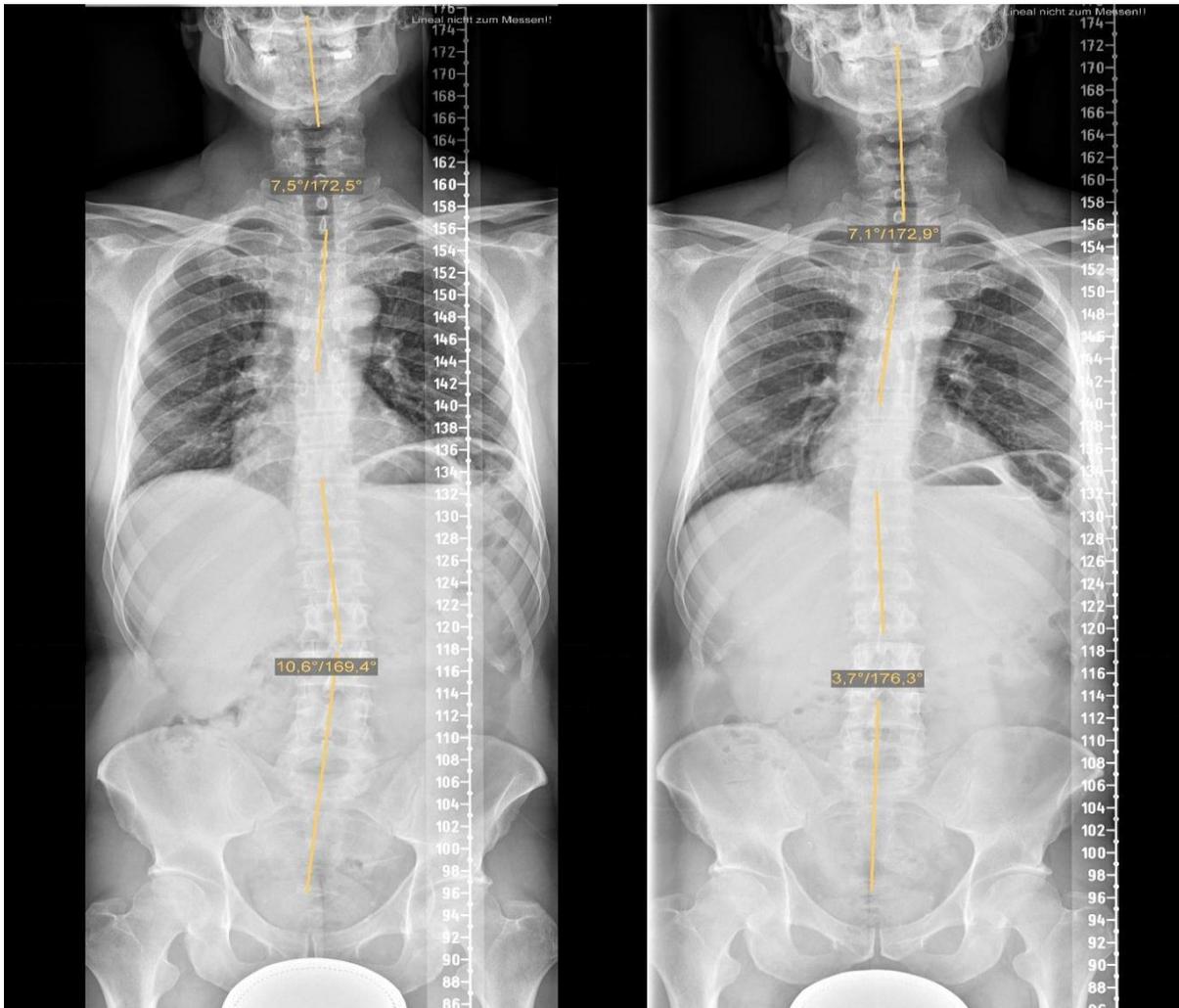


Fig. 8-10: pre and post-X-rays showing a reduction in the lumbar and pelvis misalignment resulting in intervertebral disc tissue growth.



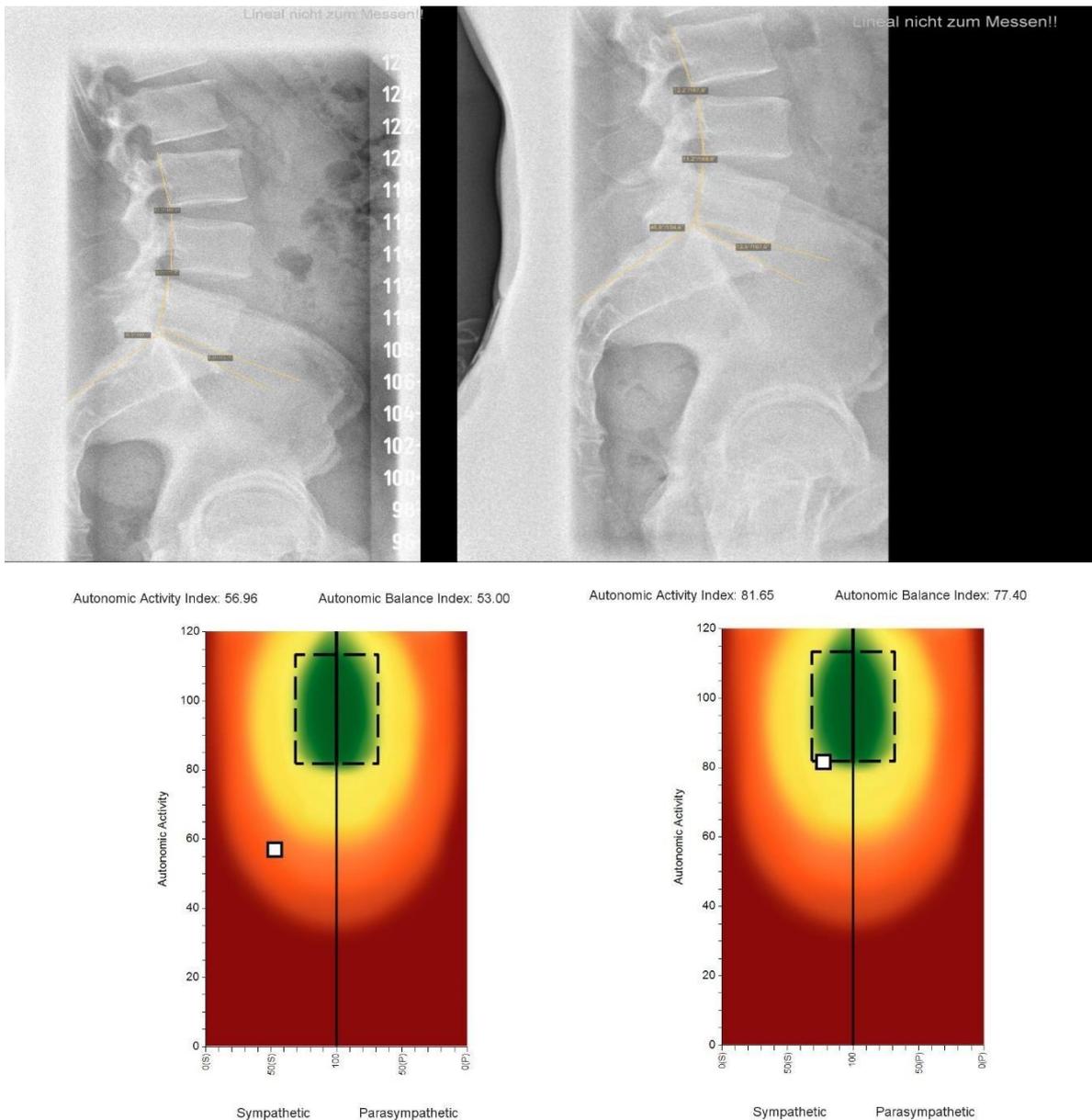


Fig. 11: Pre and post measurement of autonomic function showing an increase in activity and balance.

CONCLUSION

Chiropractic adjustments have been utilized for thousands of years but have never been incorporated as a structural element into allopathic modern medicine to reverse chronic disease. It has been well documented, that the function of the autonomic nervous system is a vital component in the development of chronic diseases of all sorts. If this is the case, it is also the key component to reversing chronic diseases of all sorts. As tissue lives and has a metabolism its cells must also be able to heal and regenerate. It stands to reason, that increasing autonomic function will also increase the body’s ability to self-regulate and self-heal. In this study, there is a clear correlation between misaligned vertebrae and the function of the nerves within. Decreasing pressure/tension from the spinal segments results in an improved function, not just of the biomechanics of the spine itself, but also of the nerves that exit this segment

as well as autonomic function overall. This is the reason, why patients with different diagnoses benefit from the same type of treatment, even without addressing the site of the symptom itself. Taking medications and utilizing surgery to alleviate symptoms both do not take advantage of the body’s natural ability to heal and regenerate tissue. To understand what is the component that limits the self-healing properties it is important to find the cause of autonomic dysfunction. The cause can be either emotional, chemical, or physical/mechanical, usually a mixture of the three. If the nature of the stress compromising autonomic function is mainly physical/mechanical, manual full spine manipulation appears to be the best way of improving function and balance. To identify the main stress component a thorough patient history should rule out any chemical or emotional stressors, and a full spine X-ray will be able to show misalignment of vertebrae and/or the pelvis as a means of depicting the cause of autonomic dysfunction.

The frequency of treatment varied greatly from patient to patient. In those who were treated two times per week or more, structural change of spinal biomechanics could be shown on the post X-ray. It seems that the central nervous system can restructure the spine given space, which can be accomplished by manual manipulation. This in turn will stimulate inflammation initiated by the autonomic nervous system. Inflammation, by definition, is an increase in perfusion leading to a rise in temperature, swelling, reduction of function and pain. This is an orchestrated event commanded by the autonomic nervous system to regenerate tissue and not in principle detrimental to tissues.^[11,12] This realization should initiate a new discussion about how treatments in modern day medicine try to reduce inflammation to minimize symptoms and thus, reduce healing capacity of the body.

The implications of this study are that to achieve tissue regeneration, inflammation is necessary, even if uncomfortable for the patient, and triggering inflammation and stimulating the central and autonomic nervous system may be a feasible way to achieve this. The reduction of the mechanical stress via full spinal manipulation will reduce sympathetic stress, strengthening the parasympathetic tone, balancing out the autonomic nervous system leading to a higher degree of healing and a better overall health, independent of diagnosis or specialty of medicine that is usually engaged with the diagnosis. This observation lends support to the rationale for further studies to validate these results and evaluate further possibilities of the treatment options of all chronic diseases that plague an increasing number of people in today's society. Supporting natural and endogenous healing may be of more value for much of the population than trying to inhibit the body's innate drive towards health via medication. Understanding physiology from a self-regulating and self-healing perspective gives new insights to how the body functions and how health is managed autonomously and should be the beginning of rethinking functional human physiology. It also stresses the importance of translational medicine, which needs to include autonomic function, biomechanics of the spine, nutrition, emotional evaluation, and sleep quality to be complete from a holistic perspective.^[13]

Limitations of the study: Autonomic function is determined by the amount of emotional, chemical, and physical/mechanical stress. An improvement doesn't necessarily prove a reduction of mechanical stress. An improvement of emotional and/or chemical stress will also show an increase and/or balancing of autonomic function. Although a wide variety of diagnoses were presented, there are many which were not included in this study and therefore further investigation is warranted. Even in patients with the same diagnosis the result was not always the same. The ability to change function is linked to the ability to change structure, and this is dependent on the duration and severity of

symptoms, and muscle tone at the spinal segment. Age per se was not a limiting factor. Another limitation is the intake of hormones or hormone interfering drugs with psychiatric diagnoses. Side effects can be strong and may not be overcome by increasing hormone synthesis through spinal manipulation. A good communication with the treating psychiatrist and the willingness to co-treat is a prerequisite.

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