

W O N D E R W H Y ?

Effective Treatment of Chronic Pain by the Integration of Neural Therapy and Prolotherapy

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ABSTRACT

Chronic pain is a major problem in our society. Neural Therapy, like Prolotherapy, is an injection method of healing. Developed in the early 1900s by Ferdinand and Walter Huneke, Neural Therapy is one of the best known natural healing methods in Germany, and is now also practiced in Europe and the U.S. Neural Therapy is designed to repair and restore normal function to the Autonomic Nervous System (ANS), that part of the nervous system responsible for the “automatic” functions of the body such as immune function, circulation, and the production of hormones. As early as 1905, researchers noted that illness and dysfunction are almost always preceded by a dysfunction of the ANS. Neural Therapy, when correctly done, repairs ANS dysfunction, restoring the body’s healing capacity, allowing Prolotherapy, if still needed, to work more effectively. This article explores the history and science behind this fascinating treatment.

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the time. I would go through the algorithm as I had been taught, but most of the time the patient would be only slightly improved, if at all, and sometimes they would even get worse! I began to realize that what I had learned was at best incomplete, and at worst, wrong. I then began a long quest for more knowledge by attending numerous conferences, seminars and workshops all over the country that had to do with pain treatment. Some of these techniques were as ineffective as the algorithms, or worse. Some techniques worked, but were very labor intensive and inefficient, but occasionally I encountered information that was stellar. I have woven these different stellar techniques into a treatment protocol, which I have found in my practice to be much more effective in permanently resolving chronic pain problems. Two of the most effective treatments I found were Prolotherapy and Neural Therapy. When used together, Prolotherapy and Neural Therapy are incredibly effective in resolving even the most complex pain issues.

INTRODUCTION

Chronic pain, especially musculoskeletal pain, is a major problem in our society.¹⁻⁴ The annual cost of chronic pain in the United States, including healthcare expenses, lost income, and lost productivity, for low back pain alone is estimated to be \$85.9 billion,⁵ with arthritis costing \$128 billion.⁶ In fact, pain is the second leading cause of medically related work absenteeism, resulting in more than 50 million lost workdays each year,⁷ with headache, arthritis, back pain and other musculoskeletal conditions costing \$61.2 billion per year.⁸ It is a major problem not just because of its prevalence, but also because of the general lack of effective treatment for patients afflicted with chronic pain.⁹⁻¹¹ When I was in medical school learning how to treat these patients, diagnosis and treatment was reduced to an algorithm or “recipe.” These formulas supposedly guide the doctor through the proper diagnosis and treatment of various pain complaints. I dutifully memorized these algorithms and when I began practice, I applied them just as I was taught. The problem is that they do not work most of

WHAT IS NEURAL THERAPY?

Neural Therapy, like Prolotherapy, is an injection treatment that stimulates healing.¹² Neural Therapy is one of the best-known natural healing methods in Germany and is now also practiced in other countries in Europe and the United States. Neural Therapy is designed to repair dysfunction of the autonomic nervous system, that part of the nervous system responsible for the “automatic” functions of the body, including the immune system, circulation, hormone release, and thus healing ability. Richter, a German scientist, did animal experiments to study the relationship between the nervous system, circulation, and healing, and noted in 1905 the profound and senior influence of the autonomic nervous system. He concluded that illness and dysfunction, were always preceded by a disturbance of the autonomic nervous system, which disturbance then adversely affected the circulation to the particular tissue, limiting healing and predisposing the individual to the problem.¹³ This is especially important in the musculoskeletal system since

proper blood supply to injury is so important in healing.^{14, 15} An example would be if there was an injury to the autonomic nervous system that caused it to restrict blood flow to the low back, then day to day healing of that area would be diminished. Normal “wear and tear” which should heal, doesn’t, and eventually that individual could develop back pain that did not resolve. Prolotherapy could, of course, help the injured ligaments and tendons, but if blood flow is poor because of that prior injury and damage to the lumbar nerve plexus, Prolotherapy treatment might be slow or reach a point and plateau, or not work at all, until that blood flow was restored with correctly placed Neural Therapy injections.

HISTORY OF NEURAL THERAPY

Two German physicians practicing in the early 1900s, Ferdinand and Walter Huneke, are considered the founders of Neural Therapy.¹⁶ Neural Therapy evolved and developed along with the discovery of local anesthetics. The first local anesthetic, cocaine, was discovered to have anesthetic effects by the famous Sigmund Freud. Dr. Freud shared his knowledge with his friend ophthalmologist Koller, who was the first physician to perform eye surgery using a cocaine solution in 1884.¹⁷ Because of the addictive and toxic qualities of cocaine, a search for a safer local anesthetic ensued and resulted in the discovery of procaine (introduced under the trade name “Novocain”) in 1905 by Einhorn.¹⁸ In 1906, Spiess and Schleich discovered that infiltration of procaine into a wound greatly enhanced healing. This healing lasted much longer than the duration of action of the actual anesthesia.¹⁹ In 1925, the great French surgeon, Leiche, was the first to successfully treat a migraine headache with a local anesthetic nerve block injection and observed healing reactions produced by local anesthetics administered before an operation, sometimes avoiding the need for that surgery.²⁰ Leiche called procaine (a local anesthetic) “the surgeon’s bloodless knife.”²¹

In 1925, the brothers Dr. Ferdinand and Walter Huneke, both sons and grandsons of physicians, without any prior knowledge of the work of Spiess, Schleich or Leriche, discovered the healing aspects of procaine. This occurred by accident when, in 1925, Ferdinand Huneke gave his nurse, who he had been treating for rheumatism, an infusion of procaine and her previously therapy-resistant migraines disappeared. This “lightening reaction” impressed Dr. Huneke and he realized he may have found a new therapy for pain. He named this new therapy “Healing Anesthetics.”

Neural Therapy involves the injection of local anesthetics into scars, peripheral nerves, autonomic ganglia (deep grouping of nerves), glands, acupuncture points, trigger points, and other tissues.²² Ferdinand Huneke, along with his brother, Walter, first reported the results of their research into the healing properties of local anesthetics with the publication of “Unknown Distant Effects of the Local Anesthesia” in 1928.²³ The Hunekes reported that reaction to the injections could help organs at a distant site and described this phenomenon as a reflex. It has been stated that “a correctly applied Neural Therapy injection can often instantly and permanently resolve chronic long-standing illness and chronic pain.”²⁴ While usually more than one injection is needed to this end, this instance of a “lightening reaction” has been noted by researchers and physicians over the years.²⁵

THE AUTONOMIC NERVOUS SYSTEM

Another way to understand why Neural Therapy can have such a profound effect is to understand how the autonomic nervous system is “wired.” The autonomic (involuntary) portion of the nervous system regulates internal body functions such as blood pressure and circulation, digestion, body temperature, heart rate, breathing, and affects all the internal organs, without a person’s conscious effort. It is always working to maintain normal internal organ functions. In times of danger it gives the “fight or flight” response, and in nonstressful times it will “rest and digest”. (See *Figure 1*.) As you can see in *Figure 1*, the autonomic nervous system is divided into two sections sympathetic and parasympathetic, both of which work on a “subconscious level” to affect the function of organs including the blood vessels, stomach, liver, kidneys, bladder, genitals, lungs, pupils and muscles of the eye, heart and digestion. If the autonomic nervous system is not functioning correctly, the health of the individual may be affected adversely.²⁶ For example, if suddenly a person all alone in their house on a dark, dreary evening, hears a prowler entering through a window, the sympathetic portion of their autonomic nervous system feeding into their adrenal gland dumps a load of adrenalin into that person’s blood stream and he or she feels fear, agitation and heightened awareness to protect themselves. If this person lives in Texas, they will likely go for one of their weapons. If he or she lives in California, they will run to their phone and dial 911. Either way, the person is able to react and protect themselves because the input from the autonomic nervous system to their adrenal gland is functioning correctly. Imagine if the signal to the adrenal

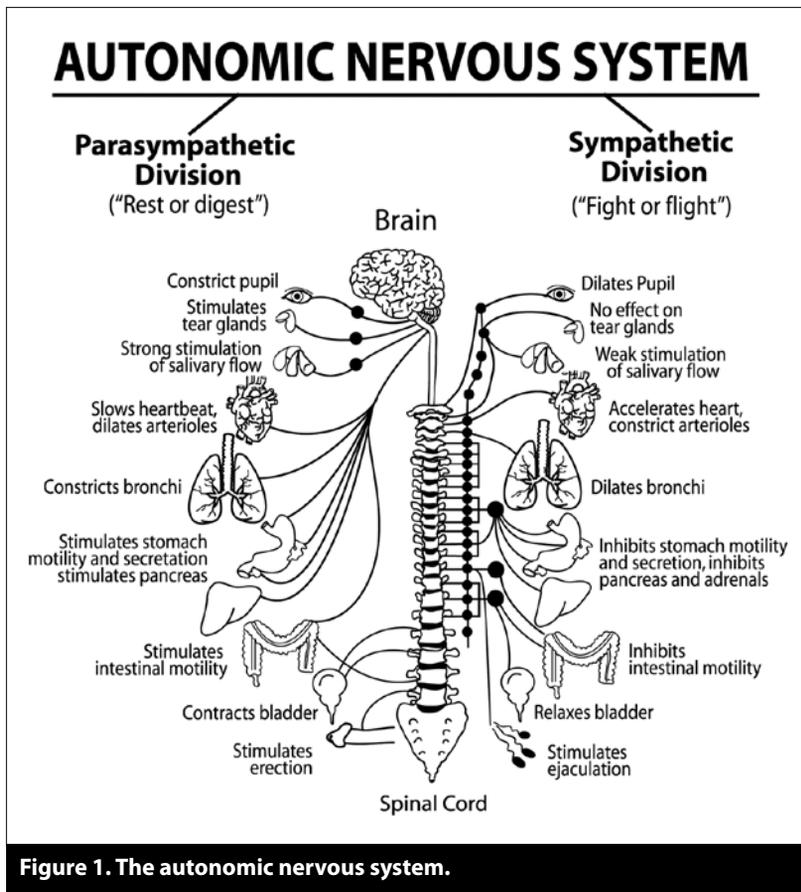


Figure 1. The autonomic nervous system.

gland wasn't working, and no input went to the adrenal gland. Then instead of reacting, the person just ignored the sound, and the prowler entered and harmed them. Or if the autonomic nervous system was too sensitized, then even the mild sound of wind blowing outside might send a person for their gun, putting them in a position to accidentally hurt someone. You get the idea. We need our autonomic (automatic) nervous system working correctly to protect us and allow normal function and adequate healing. Another interesting fact is that nerve pathways often supply distant organs or locations, as seen in *Figure 1*, so a correctly placed Neural Therapy injection can have benefits distant to the site where the injection is made.²⁷

HOW NEURAL THERAPY WORKS

Neural Therapy is based on the theory that any trauma, infection, or surgery can damage a portion of the autonomic nervous system and produce long-standing disturbances in the electrochemical or electromagnetic functions of these tissues.²⁸ These disturbances are also known as "interference fields" because they interfere with normal function and healing. When these "interference fields" persist and the autonomic nervous system is

injured or not functioning correctly, various consequences can result such as incomplete healing,²⁹ including incomplete healing of soft tissue injuries and chronic pain. In my experience, these interference fields and resulting dysfunction can last indefinitely unless repaired.

The theory of how it works is quite interesting and logical. Local anesthetics reversibly block pain and other sensory input.³⁰ In the case of Neural Therapy, when correctly placed injections are done, the therapeutic effect always goes far beyond the short-term anesthetic effect.³¹ This observation leads to the conclusion that anesthesia of pathologically disturbed tissue is able to induce a lasting change of nerve function towards normality, and that there is a basic difference between simple anesthesia and the neural-therapeutic effect.³²

Recall from basic physiology how a nerve cell functions: there is a membrane resting potential (MRP) for nerve cells. This is the electrical potential (how much potential energy) a cell has when they are resting (not firing off signals). For a healthy nerve cell it is -90 mV. If the cells are stimulated (i.e. person falls, a needle goes through them, etc.), the nerve cell will lose some of its potential energy and the resting membrane potential will increase. Somewhere between -50 and -70 mV a threshold is passed and the cell fires off a pain signal ("action potential"). After the stimulus is gone, a healthy nerve cell returns to its former level of -90 mV.³³ An unhealthy cell, however, will chronically be starting at a lower membrane resting potential, for instance -60 (instead of -90), and therefore a weaker stimulus (less input) would cause the cell to pass the threshold and fire a painful action potential. (See *Figure 2*.) Research done by Steinhäusler showed that there is a difference in the MRP of cells, depending on their level of health, with unhealthy or ill cells having a higher MRP which is closer to the threshold of firing.³⁴ In this condition, a person would experience chronic pain because their nerve cells would be firing off pain signals with very little stimulus. The temporary introduction of the local anesthetic raises the membrane potential threshold of that cell. That is why the area goes numb and the person cannot perceive pain input for that short time. But during the

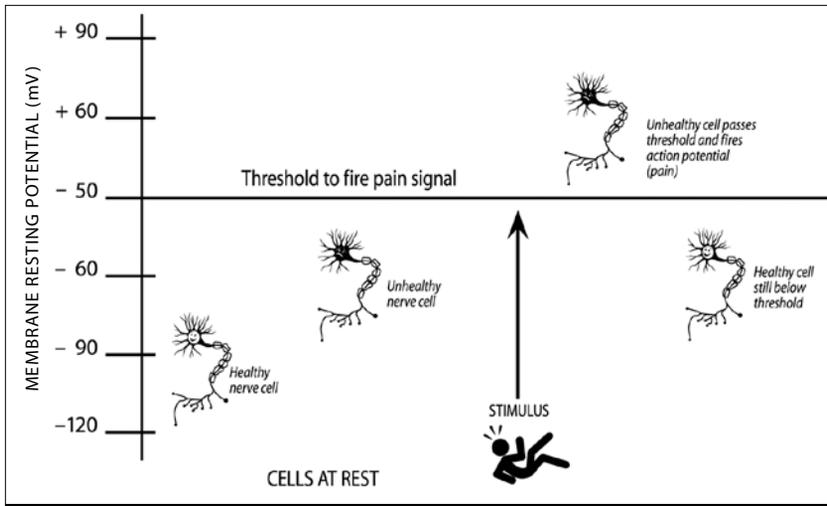


Figure 2. Healthy versus unhealthy nerve cell membrane resting potential and what happens when stimulated.

time when pain input is blocked, the cell has increased membrane potential (more energy given to it), thus the cell has improved metabolism and the sick cell succeeds (hopefully) during this time of getting rid of metabolic waste and toxins, allowing the previously sick cells to shift back towards normality.³⁵ (See Figure 3.) This can happen instantly with one treatment (lightening reaction), or more commonly after a series of treatments, each treatment restoring the regulating function as far as possible, and with each repetition allowing the cell to increasingly build up its energy potential.³⁶ Doing the injection in the correct site is important because this neural-therapeutic normalizing effect upon the autonomic nervous system can only be produced if the injection reaches previously damaged tissue that can no longer recover by its own efforts.³⁷

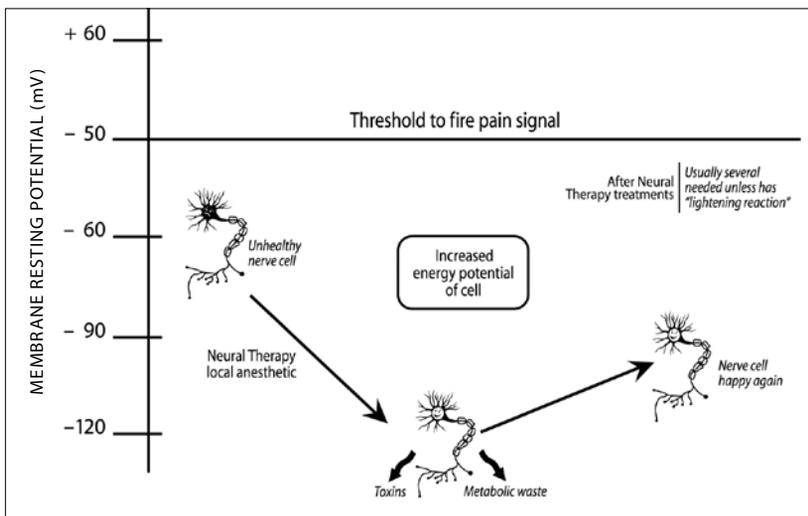


Figure 3. Proposed mechanism of how Neural Therapy helps sick cells heal.

INTERFERENCE FIELDS

A very important part of Neural Therapy treatment is the identification and treatment of “interference fields.” Interference fields are areas where the autonomic nervous system is functioning below par. These fields thus “interfere” with optimum healing. Interference fields can be found almost anywhere in the body and are often far from the part of the body that is experiencing symptoms. Typical locations include scars of all types (trauma, surgical), deep autonomic ganglia (grouping of nerves) and internal organs. An interference field has also been defined as local tissue irritation with the potential to cause destabilization of the autonomic

nervous system (ANS) either locally or systemically. Interference fields generally arise in locations where there has been an injury, either from sharp or blunt trauma, local infection or inflammation, or mechanical strain injury, dental work, a gland, and frequently surgical scars.³⁸ (See Figures 4 & 5.)

There is also the phenomena of interference fields affecting areas at a distance. This was demonstrated when in 1940, Ferdinand Huneke injected procaine into the shoulder of a patient with a severe and therapy-resistant frozen shoulder. No immediate relief was noted by the patient however several days after the shoulder injection the patient developed severe itching in a scar on her leg. That itching scar was injected and within seconds the patient obtained full, painless range of motion in the previously frozen shoulder. Review of history revealed the patient had previous surgery on that leg because of osteomyelitis. The surgery had been considered successful, but shortly after the surgery the patient had developed the frozen shoulder. Huneke recognized the therapeutic importance of this “lightening reaction,”^{39, 40} with the scar on the leg being the site of the actual interference field.

HOW TO LOCATE INTERFERENCE FIELDS

There are several different approaches the doctor can use in the identification of interference fields. One is by history of



Figure 4. Neural Therapy of a surgical scar.



Figure 5. Neural Therapy of sphenopalatine ganglion by Jurgen Huneke, MD, of Germany, at Neural Therapy conference.

trauma, and correlation of symptoms to that trauma. There is the empirical method: treating all trauma sites and watching for the result. There is the proximity method: treating scars and trauma sites that are situated in close proximity to the areas of symptoms as those are more likely causative (but not always). Another popular method is Autonomic Response Testing (ART). Based on applied kinesiology, ART, when properly done, appears to be the most accurate method to detect interference fields. ART is based on the theory that a muscle will become weak when an interference field is palpated. While the actual “how” of ART still remains controversial, an individual who is tested and treated based on the interference fields located by this method, often gets well. Several studies have documented the accuracy of this method, without explaining the how.⁴¹⁻⁴³

TREATMENT FORMULAS AND CHOICE OF LOCAL ANESTHETIC

Neural Therapy is performed with local anesthetics, usually procaine or lidocaine, and occasionally carbocaine if allergy problems are encountered. These anesthetics should **never** contain epinephrine. The standard solution I use for superficial infiltration (scars) is 1% procaine or 1% lidocaine with a small amount of sodium bicarbonate to buffer the pH and decrease the pain of the injection, although the sodium bicarbonate is optional. I will generally do autonomic response testing to determine whether lidocaine or procaine is the best anesthetic for a particular patient. Much of the early research by Huneke and others was done using procaine because it was the first local anesthetic discovered. Either procaine, lidocaine or carbocaine are considered appropriate local anesthetics for Neural Therapy treatment.⁴⁴ Lidocaine was first synthesized in 1943 by Swedish chemist Nils Lofgren, but not marketed until 1949,⁴⁵ so Procaine is sometimes favored by the Germans because historically it has been used the most. It also biodegrades into PABA, a naturally occurring and needed B vitamin. However, it is also more prone to allergic reaction than lidocaine.⁴⁶ The choice of the local anesthetic is thereby personal to the practitioner. Whichever anesthetic is chosen, however, the practitioner should take care not to exceed the maximum dose per procedure, for lidocaine: 4.5 mg/kg not to exceed 300 mg, for procaine: 7 mg/kg not to exceed 350-600 mg; and for carbocaine: 7 mg/kg not to exceed 400 mg.⁴⁷

CONDITIONS APPROPRIATE FOR TREATMENT WITH NEURAL THERAPY

In Dosch’s textbook on Neural Therapy, there is a long list of conditions and indications for Neural Therapy.⁴⁸ This makes sense because of the underlying nature of the autonomic nervous system. Of particular interest to me is the use of Neural Therapy in chronic pain and in normalizing and restoring the musculoskeletal system. I have found it helpful for any type of chronic musculoskeletal pain not responsive to other treatments, including low back pain, neck pain, headaches, and any other joint pain. Painful, sensitive or keloided scars are particularly responsive. Chronic pelvic pain is frequently responsive to Neural Therapy, as are dysmenorrhea and menstrual irregularities. What are deemed “regional pain syndromes” are frequently secondary to autonomic dysfunction and amenable to treatment with

Neural Therapy if initiated soon enough. Trigeminal neuralgia can often be effectively treated if combined with treatment of dental infections, Raynaud's will also frequently respond to Neural Therapy. There are also references to these conditions as appropriate for Neural Therapy in Dosch's text, where he goes in detail and offers his personal experience using specific protocols for each condition.⁴⁹

Jurgen Huneke, MD, nephew of Ferdinand and Walter Huneke, and president of the International Association for Neural Therapy, spoke and demonstrated at the 1999 Caring Medical conference on Neural Therapy. (See Figure 6.) Dr. Huneke summarized a list of conditions for which he considers Neural Therapy useful:

1. Acute and chronic pain (including headaches of different origins)
2. Inflammatory responses
3. Poor circulation
4. Multiple chronic conditions, caused by interrupted interference fields (such as rheumatism)
5. Diseases of the motor system (sciatica, arthritic joint conditions, shoulder or arm syndrome)
6. Internal diseases such as prostate, female, allergies, kidney
7. Sports injuries where it assists in healing.⁵⁰

SEQUENCING OF TREATMENT: THE THREE LAYERS OF MUSCULOSKELETAL PAIN

So we have Neural Therapy, and we have Prolotherapy. Where should the doctor start in his/her treatment? To understand that answer, I will explain how I developed my own treatment protocol. After years of study and treatment of patients, I concluded that there are three layers of musculoskeletal pain.

First Layer: The first layer is that of muscle spasms. The important thing to remember about muscle spasms is that they are usually only a symptom, not a problem in and of themselves. When the body is injured or unstable, it will tighten the muscles around the unstable, weak or injured area in an attempt to stabilize it. Unfortunately, the muscles are not designed to remain in a constant state of contraction for prolonged periods. They are designed to flex and relax as one goes about daily activities. When the muscles are tightly contracted for prolonged periods, waste products such as lactic acid start to accumulate in the muscle and they will begin to cramp and hurt. So, other than the fact that the muscle spasms indicate areas



Figure 6. Jurgen Huneke, president of the International Association for Neural Therapy, demonstrating injection of the inferior hypogastric plexus at a Neural Therapy conference.

where the body is detecting something wrong, I generally do not waste too much time on them to begin with as they will usually resolve spontaneously once the underlying problem is treated.

Second Layer: The second layer below muscle spasms, and the first layer where you have real pathology, is the connective tissue layer. Connective tissue refers to ligaments, tendons, and fascia. Basically, the “gristle” that holds the body together. The connective tissue is tough and difficult to damage; however, once it is damaged, it heals slowly during a window period of four to six weeks, and often does not heal 100%.^{51, 52} Incomplete healing is common in the ligament and tendon connective tissue and makes the area prone to re-injury. Injured connective tissue also frequently refers pain so that often times where one feels the pain is not where the problem originates.⁵³ For example, a problem in the lumbar spine can cause sciatica pain down the leg, or a problem in the upper cervical can refer into the head causing headaches. So it is important to do a good musculoskeletal and connective tissue exam and history, as well as have an understanding of ligament and tendon referral patterns which can be found in several books and texts discussing this issue.⁵⁴⁻⁵⁶

Third Layer: The bottom layer of the three is the layer of autonomic nervous system (ANS) dysfunction. Once the ANS is disrupted, from whatever cause, there are several effects that result. One is pain. Pain from the ANS can go on as long as the dysfunction persists. My record

so far is 60 years in one patient. The second effect of ANS dysfunction is that function is altered, usually in respect to decreased blood flow to the area of the body that is controlled by that part of the ANS. This causes chronic under-nourishment of the affected body tissues, and results in progressive weakness, especially in connective tissue. The third effect of ANS dysfunction is tightening of the connective tissue around the area of ANS dysfunction. This is significant because although the connective tissue will bend and twist easily, it does not stretch much at all. Since the connective tissue cannot stretch and absorb this pull, it will transfer the force down its entire length to whatever bone it connects to. This results in restrictions or tightness in certain ranges of motion, and if present long enough or if the patient sustains some sort of high-energy trauma, it can cause the connective tissue to begin to tear loose from the bone. This will then result in a “second layer” (connective tissue) problem.

So how does the doctor chose which treatment to start with? In my practice I start at the “third layer” (ANS) and work up. I first check and repair ANS dysfunction with Neural Therapy, then any connective tissue weakness or instability with Prolotherapy, followed by physical therapy to rehabilitate the muscles. While I practice in this order, other orders of treatment can also be effective. For instance, treating a straight forward soft tissue injury with Prolotherapy first. However, if healing with Prolotherapy injections is slow or pain remains, then this is an indication that an underlying autonomic nervous system issue is present and that Neural Therapy would be appropriate.

Once the ANS dysfunction is corrected usually a large percentage of the patient’s pain will subside, and sometimes virtually all their pain will be gone. In many cases, however, the connective tissue damage will be so bad that even with normal ANS function the body is unable to completely repair it. In these cases we move up to the next level of treatment, the connective tissue layer. Connective tissue damage is treated with Prolotherapy.

Once the patient’s pain level has decreased to low levels from either the Neural and/or Prolotherapy, then the patient is placed into a progressive physical therapy and rehabilitation program. This reconditioning is essential to prevent re-injury, because the patient’s body is usually very weak and deconditioned because of their restricted physical activity and inability to exercise.

EMOTIONAL RELEASE

A phenomena well recognized by the Neural Therapy practitioner is emotional release after Neural Therapy injections which is typically unpleasant emotions associated with the trauma sites being injected.⁵⁷ This release can start during a treatment and last for a few days afterwards, or may not occur at all. Warning the patient of this occurrence is usually sufficient to prevent misinterpretation of this expected phenomena or the patient assigning these unpleasant emotions to something in the patient’s current environment.

CONTRAINDICATIONS TO NEURAL THERAPY

Absolute: Neural Therapy injections are not done into an area where there is an active cancer or active infection.

Relative: Disease states resulting from severe nutritional deficiencies or genetic illness because it will not help. Unstable diabetes, because it can cause instability in blood sugar. Of course, pregnancy anywhere near the uterus, because of possibly triggering a miscarriage. Also, severe psychological disorders are a relative contraindication because the emotional releases can destabilize the psychological state.

WHERE TO GET TRAINING IN NEURAL THERAPY

Training for doctors is available through the American College of Osteopathic Sclerotherapeutic Pain Management, a group which teaches both Prolotherapy and Neural Therapy. I routinely lecture at the ACOSPM spring conference (check www.acospm.com for details). Workshops specific to Neural Therapy and Autonomic Response Testing are also given by Dietrich Klinghardt, MD, PhD, of the American Academy of Neural Therapy, www.klinghardtacademy.com. Other workshops and seminars are given by Dr. Robert Kidd, www.neuraltherapybook.com. Dr. Kidd has also written a book on the subject available on the website.

CONCLUSION AND CASE REPORTS

The effective treatment of chronic pain can be a challenging, but rewarding, activity. The pain practitioner is advised to become proficient in any treatment which may help him/her interpret and treat even the most difficult patients. Neural Therapy, when needed, can be integrated with Prolotherapy. This combination can be

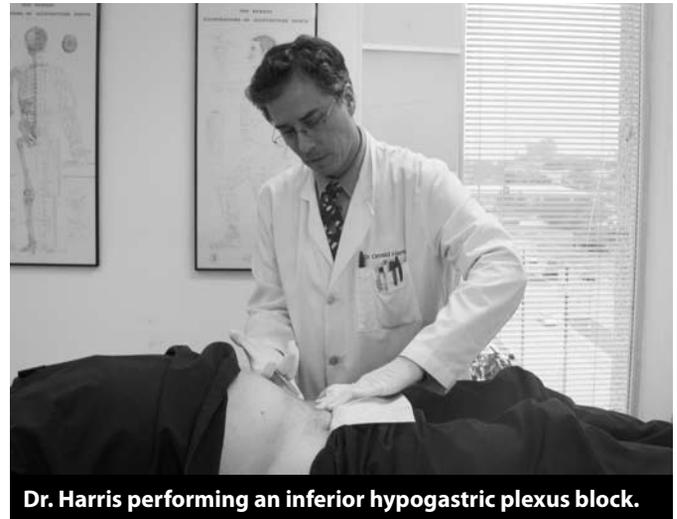
very effective in the treatment of chronic musculoskeletal pain because it increases healing capacity and allows Prolotherapy to work even more effectively.

CASE REPORT 1

71 year-old male who presented with a chief complaint of low back pain for 46 years. His first episode at age 25 was sudden onset treated with bed rest and chiropractic. The episodes continued to occur four to five times per year, and increased in duration and frequency until they were virtually continuous. Eventually, the patient received a surgical consult, told there was no surgical pathology and sent for physical therapy which provided little benefit. At the time he was seen at my office he had continuous low back pain, only varying in intensity. His only surgical history was ganglion cyst removal on his left wrist, surgery on his right wrist for unknown reasons, removal of a calcified saliva gland with complications of a “numb spot” on his lower lip that was slowly improving, as well as two wisdom teeth removals in his 20’s and multiple root canals. Autonomic response testing was done and the patient was found to have interference fields at the wrist scars bilaterally, at the inferior hypogastric plexus, and inferior cervical plexus. Testing also revealed a correlation between the inferior hypogastric plexus, the right wrist scar, and his low back pain. Treatment was initiated with Neural Therapy to all found interference fields. The patient returned three weeks later for follow-up and reported significant improvement in his low back pain. The patient was treated three more times with Neural Therapy at two to three week intervals before Autonomic Response Testing revealed all interference fields to be resolved. At this point, the patient stated that his pain was occasionally gone, but that he had some intermittent areas in his low back which still caused pain. Prolotherapy was then commenced. A total of four Prolotherapy treatments were done at three to four week intervals. When the patient presented for his last treatment four months after his first visit, he stated that he had no more noticeable pain at all. He was discharged from treatment.

CASE REPORT 2

35 year-old female with history of low back pain for 10 years following a motor vehicle accident. Chiropractic adjustments did not resolve the pain and, in fact, aggravated it. The patient was also diagnosed with cervical cancer and had a complete hysterectomy approximately five years ago. At that time lymph node resection done on



Dr. Harris performing an inferior hypogastric plexus block.

her right side removed 20 inguinal lymph nodes and left the patient with loss of feeling and numbness in her right pubic area and right side of thigh. After healing from surgery, the patient suffered musculoskeletal low back pain and leg pain. A lumbar spine MRI was negative for radiculopathy. The patient received several Prolotherapy treatments which gave her 75% improvement, as well as a Platelet Rich Plasma (PRP) injection treatment which gave her much more strength and further reduction of pain to 90%. This intense improvement lasted six months after which improvement went back to 75-80%, with low back pain after certain types of physical activity. During this time, the patient went on a hiking trip and hit her head on the inside of a camper shell, after which she was diagnosed with facial neuralgia and had recurrent episodes of burning facial pain, only partially helped with Neurontin. When seen at the time of her first Neural Therapy evaluation, patient was still improved in her low back (75% overall) but was getting recurrent flares of low back, and still suffering almost constant episodes of intense neuralgia facial pain. Autonomic Response Testing was positive for interference fields in the patient’s upper molars, inferior hypogastric plexus, the hysterectomy and left knee scars, and the tattoo on the patient’s low back. These regions were then treated with 1% procaine. The patient had good pain relief, and almost complete resolution of her facial neuralgia pain, as well as emotional release manifested in unexplained episodes of grief during the week following her first treatment. The second treatment addressed these similar areas as well as adding the hypogastric nerve plexus. The patient then had complete relief of her facial neuralgia pain, but low back pain remained. For the third treatment, Autonomic

Response Testing showed that the interference fields treated in the second treatment had returned. For this reason, a more thorough search was done for any missed fields and a region in between the two halves of large tattoo on the patient's low back was discovered. This new region was injected with 1% procaine. The patient had profound improvement of her low back pain after this treatment, with continuation of no facial pain, and also has begun to experience return of feeling in the previously numb areas of her right pelvic region and thigh that had been affected previously after the lymph node dissection.

CASE REPORT 3

75 year-old male with chief complaint of bilateral foot pain for several years. He reported a long history of running, including marathon running, and that he had been unable to participate in this sport for the last several years because of this foot pain. Surgical history included a compound fracture with open reduction of his left forearm and wrist, and left inguinal hernia repair with mesh placement. Evaluation of his autonomic nervous system by Autonomic Response Testing showed autonomic interference fields at the inguinal hernia and surgical scar, the inferior hypogastric plexus and at all his left wrist scars. The patient elected to do Prolotherapy before doing Neural Therapy. His foot pain improved greatly with the Prolotherapy, however, plateaued at the eighth treatment. Neural Therapy was then done on all interference fields which retested positive, at one week intervals. After six treatments, the patient reported all his foot pain had resolved, and has been able to return to running. His final exam showed no remaining interference fields present. ■

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Prolotherapy is a treatment technique used for chronic myofascial pain, back pain, osteoarthritis, or sports injury. It involves repeated injections of dextrose solution or other irritating substances into the joint, tendon, or painful tissue in order to provoke a regenerative tissue response. Similar techniques have been used for about a century, but the first formal publication describing prolotherapy dates back to 1956, by Dr. George Hackett. He wrote: Within the attachment of weakened ligaments and tendons to bone, the sensory nerves become overstimulated by abnormal tension to become not Neural Therapy, like Prolotherapy, is an injection treatment that stimulates healing.¹² Neural Therapy is one of the best-known natural healing methods in Germany and is now also practiced in other countries in Europe and the United States. Neural Therapy is designed to repair dysfunction of the autonomic nervous system, that part of the nervous system responsible for the "automatic" functions of the body, including the immune system, circulation, hormone release, and thus healing ability. Sequencing of treatment: the three layers of musculoskeletal pain. So we have Neural Therapy, and we have Prolotherapy. Where should the doctor start in his/her treatment? To understand that answer, I will explain how I developed my own treatment protocol. Prolotherapy is also referred to as sclerosant therapy, sclerotherapy, regenerative injection therapy, "proliferative" injection therapy, and nonsurgical ligament reconstruction. Watch Injection Videos. Prolotherapy has been used in pain management and treatment of numerous conditions, including back pain and neck pain due to spine related conditions such as: Degenerative disc disease. Sacroiliac problems. Sciatica. Whiplash. A theory behind prolotherapy is that back pain is related to activation of pain receptors in tendon or ligament tissues, which are sensitive to stretching, pres