

Positional Release Therapy

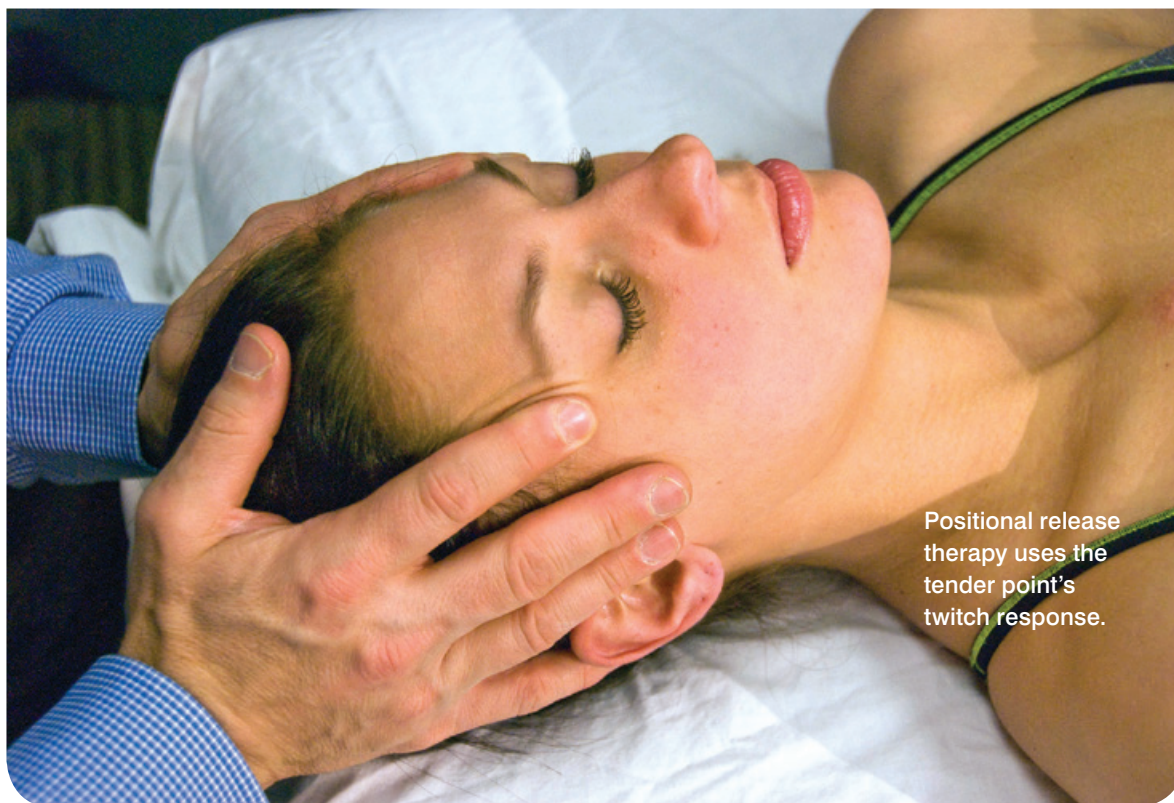
by Timothy E. Speicher, Ph.D., A.T., C.S.C.S., P.R.T.

Alleviate Somatic Dysfunction & Pain

Positional release therapy is an excellent adjunct to the practice of massage therapy, because it allows the massage therapist to first unwind tissue prior to manipulating it, making massage less painful, more effective, and its therapeutic effects

longer-lasting. Instead of forcefully compressing or stretching the knot or tissue, which may only engender short-acting endogenous pain relief, tissue is unknotted and then realigned with massage therapy, further facilitating tissue perfusion and structural alignment, much like removing a kink or knot in a garden hose.

I have found positional release therapy is best applied prior to massage, or as tender and trigger points are found during the course of a massage. Clients will often report decreased pain, increased warmth and tissue



Positional release therapy uses the tender point's twitch response.

relaxation, as well as a sense of overall relaxation during or after the application of positional release therapy.

Technique development

Positional release therapy has been evolving for more than half a century. The history of positional release therapy is common knowledge and found in several books and other sources, including *Positional Release Techniques*, by Leon Chaitow, N.D., D.O. In the early 1950s, Lawrence Jones, D.O., discovered that by placing his patients' painful tissues in a position of comfort for a period of time, typically 90 seconds, their pain often spontaneously resolved or significantly reduced, with subsequent treatments often completely obliterating their painful condition permanently. He initially termed his discovery positional release technique, later calling it strain-counterstrain, a name based on his theory of how pain often developed and how the technique worked to resolve pain.

Jones proposed that when an individual experienced a sudden and unexpected strain, the antagonist to the strained tissue resisted, or counterstrained, against the force in order to stabilize the associated joint, appendage or body, producing discrete areas of tissue tenderness. He also found that tender points were not often discernable to the patient unless palpated; that they were often located over tissue insertion and attachment sites; and that they required treatment before the primary area of complaint would resolve.

However, tender points were not commonly found in strained tissue, but in counterstrained tissue, or the antagonist. By simply folding counterstrained tissue over itself, the tender point and the pain it produced would resolve. Jones spent more than a decade mapping common tender point locations he observed among his patients, and developed specific treatment positions, which he associated with vertebral segments and their nerve roots, based on these tender point locations. Since Jones' foundational work, many practitioners and researchers have advanced his technique.

In 1997, in their text, *Positional Release Therapy: Assessment & Treatment of Musculoskeletal Dysfunction*, Kerry D'Ambrogio, P.T., and George Roth, D.C., N.D., advocated positional release therapy be utilized as a comprehensive, stand-alone therapy for treatment of somatic dysfunction and other painful ailments. While their treatment positions and approaches were similar to those of Jones, they provided a method by which to chart and record

tender point locations. They also proposed that positioning may have to be held longer than the 90 seconds previously advocated.

Leon Chaitow, N.D., D.O., has been instrumental to the formation of strain-counterstrain as a therapy, writing extensively on positional release therapy. Chaitow has provided additional guidance and emphasis on the role of touch in the application of the therapy, positing touch to



be as important as positioning. In 2006, I, along with David Draper, Ed.D., A.T.C., broke from the use of a specific time period for treatment and advocated in the paper, "Top 10 Positional Release Therapy Techniques to Break the Chain of Pain, Part 1 and 2," published in *Athletic Therapy Today*, the

Many studies have looked at how such a simple technique produces such profound pain relief.

use of the fasciculatory, or twitch, response of the tender point. We also did not recommend use of the mapping schematics developed by Jones, D'Ambrogio and Roth.

Rather, we contended that tender points could occur anywhere in the body, necessitating a thorough palpation exam. We also proposed that specific treatment time frames were not sufficient for a full release of tissue to occur, and that the fasciculatory response of tissue not only aided in guiding the positional release therapy practitioner in when to release the positioning, it also revealed to him the most appropriate treatment position, which I later termed the fasciculatory response method (patent pending).

A multitude of research studies have investigated strain-counterstrain and positional release therapy since Jones' first publication in 1964, "Spontaneous Release by Positioning," published in the *The DO*.

Two such studies are "Comparing the Effectiveness of Positional Release Therapy Technique & Passive Stretching on Hamstring Muscle Through Sit to Reach Test in Normal Female Subjects," published in 2011 in the *Indian Journal of Physiotherapy & Occupational Therapy*; and "Effect of Counterstrain on Stretch Reflexes, Hoffmann Reflexes, and Clinical Outcomes in Subjects with Plantar Fasciitis," published in 2006 in the *Journal of the American Osteopathic Association*.

While many of Jones' early propositions have not yet been fully examined, there now exists a greater understanding of how such a simple technique produces such profound pain relief.

Mechanism of efficacy

The primary mechanism of how positional release therapy works to alleviate somatic dysfunction and its associated pain is through manipulation of the muscle spindle. The source for this information is the book *Neuroscience: Exploring the Brain*, by Mark F. Bear, Barry W. Connors and Michael A. Paradiso.

The muscle spindle is a proprioceptor found inside the myofibril. It is a neurological component of the intrafusal fiber and responds to two primary types of stimuli: velocity of stretch and resting length.

When stretched, the muscle spindle produces a reflexive muscle contraction of extrafusal fibers, much like a stretched rubber band. When a rubber band is stretched, it exhibits the same response to the stretch

as when our knee is tapped by a reflex hammer: it bounces back. The recoil we observe is the result of the monosynaptic stretch reflex, mediated by stretch as well as painful stimuli.

The prevailing theory of why tender and trigger points develop and persist has been attributed to a dysfunctional muscle spindle—the spindle's ability to correctly register velocity change and resting length has been altered, resulting in aberrant neural discharge from the spindle, which in turn produces sustained contraction.

The most comprehensive theory to date for trigger point development and persistence has been offered by Robert Gerwin, M.D.; Jan Dommerholt, P.T., M.P.S.; and Jay Shah, M.D., titled "An Expansion of Simons' Integrated Hypothesis of Trigger Point Formation," published in *Current Pain and Headache Reports* in 2004, an expansion of David Simons, M.D.'s and Janet Travell, M.D.'s integrated hypothesis of trigger point formation, outlined in their text, *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual, Volume 1: Upper Half of Body*. Gerwin and colleagues' empirically based theory points to a multitude of factors at play, such as unaccustomed muscle contraction, tissue acidity, increased release of calcitonin gene-related peptide, central sensitization and hypoperfusion, rather than the muscle spindle alone as culprit.

I have also proposed a fusimotor mechanism in the development and persistence of both trigger and tender points. Neurochemical bonding occurs between the myosin and actin filaments as a result of either acute or chronic injury, producing an inefficient hydrolysis of adenosine triphosphate, which disturbs the normal coupling and uncoupling of the filaments. I termed this the mechanical coupling theory.

Regardless of how or why tender or trigger points develop, they are problematic for the practicing clinician, because they cause central sensitization; disturb normal tissue homeostasis; reduce strength and flexibility; and may even cause or contribute to chronic illness and disability by impacting the immune system.

Clients' pain release

Any massage therapist may have unknowingly practiced a variant of positional release therapy through the application of myofascial release, active release, applied kinesiology or many other techniques that attempt to manipulate the muscle spindle to produce

tissue relaxation. While some applications of these therapies, and others, shorten and relax tissues, most can be painful to the client. Pain may evoke the stretch reflex, as well as heighten the spindle's sensitivity to stimuli through increasing gamma gain at the brain stem.


The goal of positional release therapy is to produce absolutely no pain when manipulating the tissue and muscle spindle. There is no stroking; massage; forceful, direct manipulation; or induction of pain in order to fight pain and tissue dysfunction. Through positional release therapy, the body and its tissues are simply manipulated into a position to create an environment for the tissue to unwind itself in a nonpainful manner, making it an excellent therapy for clients who cannot—or do not want to—experience pain, or who have a condition where direct, forceful manipulation of tissues would be problematic, such as with osteoporotic patients.

Increase well-being

Jones initially proposed that in order to master application of this technique, it would take years and many hours of client care; however, today there are multiple experts who offer instruction to expedite proficiency in

positional release therapy, enabling the clinician to readily implement the therapy into daily practice. Although the technique is indirect in nature and appears from the outside eye to be easy to learn and apply, instruction is vital to ensure not only expedited proficiency, but also client safety, as there are some applications of positional release therapy that could cause harm if applied incorrectly.

Positional release therapy is, however, a safe and effective manual therapy for trained professionals who desire to deliver increased flexibility, strength and enhancement of well-being, as well as effective and profound pain relief to their clients.

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