

# **Somatic Education as an Easier Way to End Muscular Spasticity and Pain**

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Thomas Hanna coined a term to describe a condition of residual muscular hypertonicity and loss or distortion of voluntary muscular control: Sensory-Motor Amnesia (SMA). The term indicates a break between a person's sense of self and their experience. The experience of sensory-motor amnesia (SMA) fits the description given of Kinesthetic Dystonia. It may be that the two are one in the same condition.

In his book, Somatics: Re-awakening the Mind's Control of Movement, Flexibility, and Health (Perseus books, 1988), Hanna defined SMA as a condition resulting from the habituation of certain reflexive responses to stress and/or the pain of injury. He wrote,

“[The] relentless repetition [of these reflexive responses] guarantees that the muscular contractions of [these reflexes] will be constant and habitual. The action response is so steady that, eventually, we cease to notice it. It becomes automatic, fading into oblivion. This is sensory-motor amnesia, and once it takes over, we can no longer control [those reflexes]. (Hanna, 1988)

Dr. Hanna's work developed from the “platform” created by Moshe Feldenkrais, F.M. Alexander and other pioneers in the somatic field. Himself trained by Feldenkrais, his own research and work in that field gave rise to a number of fundamental insights that extended the work of his predecessors. One of those insights was the recognition of Sensory-Motor Amnesia (SMA) in his clients.

In brief, SMA may arise from

- an injury, in which one disowns the experience of injury, in a desire not to feel it -- and thus disowns the injured area, losing sensory awareness and muscular control. Another name for this state may be “Denial.”
- overconditioning oneself into repetitive movements or states of being - in which one ignores the sensations of strain and fatigue such overconditioning produces. “No pain, no gain,” and ignoring signals of fatigue or injury lead to chronic stress and repetitive use injuries.

- long-term states of nervous tension of emotional origin, to which one becomes accustomed and habituated. Another name for this condition, at the psychological level, may be “Post Traumatic Stress Syndrome”.

In all cases, SMA is a state of *dissociation* or of *disintegration* of ones sense of self from their experience, rather than of integration of self and experience -- hence, the term, “amnesia”.

This kind of disintegration has long been recognized in relation to emotional or psychological shocks -- and it has been the subject of many movies and works of fiction. It is the result of an unwillingness to experience something that leads to forgetting, while the disturbing symptoms of the experience persist.

Thomas Hanna wrote and spoke of a physical manifestation of amnesia in relation to physical injuries, emotional distress, and self-abuse: a habitual response that involves heightened muscular tonus in the act of guarding, self-protection, or over-effort. We see this withdrawal as a physical pulling away of the injured part from the source of injury, as a shrinking into oneself, or as a substituting of sustained, heightened effort for economical/natural action (i.e., working *harder*, not *smarter*). When such heightened tonus becomes chronic, the term, Kinesthetic Dystonia, is sometimes applied, but sensory-motor amnesia (SMA) is very often involved.

In my experience, people with SMA usually report chronic pain along with a sense of mystery as to where it came from.

## **How SMA forms**

In cases of injury, the origin of *chronic* pain is often a person’s simultaneous withdrawal from the pain (or shock) *of injury* combined with a physical movement away from the source of pain (or shock). When maintained long enough, the shock reaction becomes *habitual*. In other words, a *tension habit* forms when, during recuperation from injury or during a lengthy period of stress, the person maintains their guarding reaction until their brain becomes conditioned to maintain it, automatically. Then, it’s a habit. In some cases, the sensation at the moment of injury (the shock of injury) is sufficiently intense that the habit of reflexive guarding begins immediately, controlled by involuntary levels of the nervous system. Dr. Hanna’s term for this response was “Trauma Reflex”.

All SMA produces distortions of posture and movement and irregularities of muscular control, usually with attendant pain and increased likelihood of re-injury.

Dr. Hanna identified two other responses that, when either strongly or repeatedly triggered, lead to SMA --the "overstress reaction" associated with the stress of "I gotta" (the Landau Reaction) and the withdrawal reaction associated with fear and anxiety (the Startle Reflex). These neuromuscular reflexes of stress, which are commonly the origins of stress-related disorders such as back trouble, headaches, decreased or shallow breathing, and certain types of circulatory disorders, such as high blood pressure and heart trouble, also sometimes account for facial tics and digestive disorders. They are illuminated and clearly discussed at length in Dr. Hanna's book, *Somatics: Re-awakening the Mind's Control of Movement, Flexibility, and Health*.

To these responses (Trauma Reflex, Landau Reaction, and Startle Reflex), we also add habituated muscular tension from overuse, which includes carpal tunnel syndrome, tennis elbow, writers cramp, and similar conditions resulting from self-abuse and maladaptation.

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Fortunately, Dr. Hanna's discovery went beyond recognition of the condition to a practical way to recover from it. He called his approach, "Hanna Somatic Education." He wanted to call it, "Somatic Education," leaving the term generic, but he learned that he could not legally register the generic term (and thus differentiate it from other methods), so he added his name to satisfy legalities.

This paper presents the case of one individual who developed SMA following a fall, whom we shall call Mrs. B. Mrs. B's SMA began with a bone fracture, was compounded by surgery, and was perpetuated by subsequent postural actions done to guard against pain and the possibility of falling.

## **The Case of Mrs. B**

Mrs. B. was eighty-three years old at the time of her fall and fracture of the neck of her left femur. Most people are getting stiff at that age, and Mrs. B was also scoliotic; her fall had resulted from a lack of balance and adequate mobility. Surgical repair of the fracture and installation of a hip joint prosthesis repaired the bone break, but it did nothing to reduce the shock of injury and its effects on her movement. Nor did it restore her sense of balance. Consequently, about a year later, she suffered a second fall and fractured her other femur. Prosthesis number two was installed. The surgery left her with legs of unequal length.

When I met her, she said she was in such pain that she told me she wasn't sure she wanted to live. Physical therapy wasn't helping and pain medication wasn't enough. Upon examination, it became clear to me that her pain originated from muscular spasticity surrounding the fracture. Her gluteus muscles (minimus, medius and maximus), external rotators of the thigh, quadriceps muscles, and adductors were all spastic and painful, more on the right side (her second surgery) than on the left. This made sense, as she had favored the left side (her first fracture) by shifting her weight to the right side, conditioning those muscles into a heightened state of tonus. When the second fracture occurred, those muscles contracted with a vengeance. At the time, she could barely get around, using a walker. I assured her that all she was suffering was muscle spasms and that we could end them.

Hanna Somatic Education proceeds on the premise that muscular activity that has shifted to involuntary levels of the central nervous system (by habit formation) can be returned to voluntary control by voluntarily doing what is otherwise being done involuntarily. The act restores sensory awareness to the disowned (injured) area and recovers voluntary control of the involved muscles. Sensory awareness is voluntarily reintegrated with motor control. Oddly enough, the process can be done with little or no discomfort to the client - although their full participation is necessary.

In Mrs. B's case, the easiest first step was to integrate, and thus free, her quadriceps muscles. As their natural function is to extend the lower leg (straighten the knee), and secondarily to perform hip flexion (via the rectus femoris muscle), I had her do just that, in a sitting position, as I provided matching resistance to the action with my hand at her ankle. The purpose of the matching resistance is to increase the amount of kinesthetic feedback (feeling) from doing the action. Then, I had her relax the effort of straightening her knee, very slowly, as I provided continuous resistance and feedback, to enable her to sense her movement and position throughout the entire range of motion.

The cascade of neural impulses that results from such an action is sufficient to activate nerve pathways necessary for sensory awareness and voluntary control. Control shifts from involuntary to voluntary levels of the central nervous system. A few, slow repetitions are usually sufficient to get a very substantial, if not total, return of natural muscular control. With that, pain and spasticity end.

Mrs. B's case was a bit more complicated, owing to her limited stamina and caution about using the afflicted area, so we did no more than ten to fifteen minutes at a time. With people in better shape, sessions of thirty to forty minutes are common. Dealing with the other areas of the musculature required using movements and positions that replicated the actions of those areas. In a

few sessions over about two weeks, each of which produced some improvement, her pain was gone.

But the story was not over. Her injuries had shaken her confidence in her balance; she was constantly afraid of falling and so walked somewhat stooped over, as if to minimize the distance she might fall, if she were to fall. Soon, thereafter, she caught her walker on the edge of a carpet and did fall. I happened to be visiting and was able to attend to her within minutes of her fall.

After ascertaining that no physical injury was involved, we got her on her feet again. But now, she had a new problem: sciatica. Her scoliosis, originating in part from spasticity of her lumbar spinal extensors, and in part from uneven leg length following orthopedic surgery, had predisposed her to entrapment of her sciatic nerve at its roots.

To get to the point, her sciatica disappeared in three sessions of ten to fifteen minutes and has not returned. To get the results, we had to address the muscular component of her scoliosis, with the result that her balance and walking substantially improved. A bit of guided exploration in the effects of posture on balance convinced her that her balance was more secure if she was fully upright, and some instruction in the use of stairs in developing balance (going up and down stairs forward, backward, and sideways -- holding the banister behind her), developed a sufficient improvement in balance that she abandoned the walker for a cane and abandoned the cane at home, using it only for going about town. She has her mobility back and, through she complains of being stiff, the pain of her injuries is gone.

## **A Comparison to Proprioceptive Neuromuscular Facilitation (PNF)**

For some, these descriptions of Hanna Somatic Education may sound like the methods of Proprioceptive Neuromuscular Facilitation (PNF).

There are significant differences.

One difference I have discerned from reading the 13th Edition of the book by that title and observing PNF in action in a Physical Therapy setting. PNF seems to have been designed from an analysis of biomechanics, rather than by kinesthetic explorations that reveal which movements combine to produce innately familiar sensations of strength, coordination, and balance. If that is so, PNF is reductionistic, not integrative: it reduces muscular conditions to physical anatomy (biomechanics) seemingly without regard for the mind-body connection to muscular tension.

Another difference has to do with the regulation of the speed at which the movements are performed; PNF "stretches" are done statically, in "stop action", in a series of positions, sometimes followed by hard, vigorous, repetitive movements (again, from my observations of the technique in a Physical Therapy setting); HSE maneuvers are done slowly and smoothly in motion for the sensations they produce, with occasional pauses to enhance kinesthetic awareness. Rapid movements, when used, are brief and enable the participant to sense and control the "opposite and complementary" actions of the agonist and antagonist muscles involved in a movement.

Yet another difference is the mood of PNF. From my reading and observation, the mood of PNF seems to be more one of mechanical performance of the therapist's instructions than of exploration of the sensations of movements.

With certain basic changes of technique and certain added insights into the psycho-physical, as well as neuro-physiological origins of neuromuscular maladaptations, PNF would be virtually identical to Hanna Somatic Education. But, in their present forms, the two are different.

### **SMA or Kinesthetic Dystonia?**

In my experience, persons with certain conditions did not respond to the methods of Hanna Somatic Education under my ministrations: torticollis, fibromyalgia, and spasmodic dysphonia. For these conditions, identified as forms of Kinesthetic Dystonia, more than regaining cortical sensory-motor functioning may be involved. It may be that other factors, including psychological factors outside the easy reach of HSE, are involved. Kinesthetic Dystonia may include conditions that fall into a different category than those most effectively addressed by HSE. Or it may be that I simply lacked the necessary expertise for these conditions.

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### **Summarizing Hanna Somatic Education**

In Hanna Somatic Education, SMA is dispelled by voluntarily reclaiming control of actions (movements) that are occurring involuntarily. As a practical matter, Hanna Somatic Education involves the client's application of attention and intention to regaining muscular control in the involved areas and then integrating those areas into whole-body patterns of coordination.

Hanna Somatic Education has about it both theoretical and empirical aspects. Its theory is consistent with the findings of neurophysiology, neuroanatomy, and kinesiology, as regards nerve pathways, reflex loops, postural reflexes, and voluntary muscular control. However, its application relies heavily upon empirical discoveries as to which of the vast range of movement patterns and muscular actions are synergistic and integrative, leading to a more complete sense of wholeness and of self.

## **Application to a Massage Practice**

Existing clients of massage practitioners often prefer more to be “done to” than to participate actively in their own recovery; indeed this passivity is part of the “healer’s mystique,” a mythic structure that appeals to people at a certain stage of personal development. For such people, responsibility for their own condition and their own recovery is more of a responsibility than they are willing (or perhaps feel able) to accept. To convert existing passive clients to active participants is therefore sometimes a challenge.

Some Hanna somatic educators who come from a massage background have found it possible to “infiltrate” maneuvers of Hanna Somatic Education into sessions with their massage clients.

From my point of view, it is highly desirable to do so, as Hanna Somatic Education is a way to work “smarter,” rather than “harder” in freeing clients from their habitual patterns of pain and restriction.

## **Training Options**

At present, certification as a practitioner in Hanna Somatic Education is available only through the three-year course of training conducted by members of the Association for Hanna Somatic Education in conjunction with Eleanor Criswell-Hanna, currently director of The Novato Institute for Somatic Research and Training, which Thomas Hanna founded.

One and two-day workshops are occasionally offered by individual practitioners who have training experience. These trainings give a direct experience of the potency of the work and teach specific applications of certain of the methods of Hanna Somatic Education.

However, it is helpful for people to understand that more than *knowledge* of techniques is necessary to be a highly skilled practitioner; personal *embodiment* of the fruits of this approach (e.g., in superior balance, coordination, and

regulation of effort), sensitivity to the internal processes going on in the client and in oneself (heightened perceptiveness), and an understanding of the conditions that lead to sensory-motor amnesia are essential for a skilled application of the methods of Hanna Somatic Education to the unique needs of each client. These developments of body, mind, and feeling-intuition (in a sound marriage of the subjective and objective dimensions of experience) distinguish somatic education from traditional, manipulative methods of bodywork, generally take time to develop, and do not often exist “ready to go” in those newly acquainted with the work.

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