

The Tendon Guard Reflex

- by Sher Smith RN, RPP, RCST

In the 1960's, when I first attended Dr. Carla Hannaford's neurophysiology seminar, I was intrigued by the explanation Dr. Hannaford Phd gave the Tendon Guard Reflex (TGR) as elucidated in the work of Dr. Paul Dennison Phd (founder of Brain Gym®). The more I listened, the more the dots in my biocomputer started to connect. Dr. Hannaford reported such outstanding results of tendon guard release that I set out to further explore the topic. It has since become a passion of mine and I would like to share some of the knowledge I've gained and its impact on my work.

As a nurse, a holistic health practitioner, teacher in the field of Educational Kinesiology (Edu-K) and now Canadian Faculty for the Educational Kinesiology Foundation in Ventura, California I use this material frequently. I have seen great results from including my deeper understanding I have gained over the years of working with this material. I now included this knowledge and application in my teachings and private sessions. Wherever I go, I talk first about this reflex, and my students around North America often request that I present on the TGR to groups in other fields. I've been told that it's very useful for helping people doing all kinds of work and especially for those experiencing any kind of trauma, such as after the 9/11 tragedies. All the feedback I've received demonstrates the potential for releasing the whole nervous system, and thus for one's learning through the releasing of the TGR.

An Automatic Response For Survival

The Tendon Guard Reflex (TGR), also known to old-time Chiropractors as the Shock Reflex, is an automatic response by the body to messages transmitted by the brain stem. . The oldest part of the brain, responsible for survival instincts and reflexes. It is believed to have evolved from the time when people were under constant physical stress of fighting for survival in their world. When the body encounters a real or a perceived threat, this reflex automatically activates and causes the tendons at the back of the ankles to contract.

The TGR serves two purposes:

1. it prepares the body to face danger by holding us back until we are neurologically organized to move.
2. It facilitates the decisions to stand and fight or turn and flee, protecting the legs and enabling them to perform efficiently regardless of the response chosen.

Although these survival needs many not be so pronounced in modern society, other forms of stress remain that trigger the TGR response. Nowadays there is often so much stress in people's lives that the TGR can be constantly called forth, the tendons remaining locked in a contracted position without a person's awareness. Though this might seem of little importance, it can have a significant systemic impact.

How This Reflex Works

As you read this simplified overview of the TGR., you may wish to notice, in your own body, the points mentioned. The TGR is a reflexive process that travels and spreads throughout the body. Deepening our knowledge of it is a useful way to deepen our ability to focus and learn or perform. The knees, sacrum and occiput are most often affected, which are some of the areas pre-checked when working with the focus dimension part of Brain Gym. When these areas are tensed, the body is held back in an attempt to withdraw and create safety, making it a challenge for one to attend to matters at hand such as school and work. When using the information the Indepth course from Brain Gym, we reach a deeper knowledge about the interplay between Centering and Focus, both of which are linked to the Cranial Dimension.

When the tendons at the back of the neck tighten, a chain of events such as the following may occur:

- the lower leg muscles contract
- the tendons at the back of the knee contract
- the knees lock
- the muscles, of the upper leg and thigh contract
- the lower back tenses and contracts
- the entire spine becomes stressed
- the neck muscles tighten and shorten
- the head being pulled back.

The vestibular system allows a person to maintain balance. In order for it to function effectively, the head must remain free to move in all directions, with the horizontal plane as a reference point for our relationship to gravity. When the neck muscles tighten and shorten, the head tilts back, triggering a counter reflex called the oculomotor reflex. This, in turn, exerts a counter pressure through certain muscles, some of which are the facial temporomandibular joints, to assist the return of the head to its proper position. This impacts the vestibular system which is directly related to ease of learning and working.

This simplified overview illustrates a systemic pattern that happens and that can be explored during the use of Brain Gym and other modalities. Having a balanced TGR enhances the ability of the system to sustain attention and comprehend meaning – two vital aspects of learning and performing. From one neurological impulse response, the whole body's physiology can become involved – from the top of the head to the feet and back again. It's just like that old song: "The knee bone is connected to the thigh bone, the thigh bone is connected to the....."

When tendons tighten, the resultant on the cerebrospinal fluid (CSF) found in the sacrum, spine, and brain. We know the importance of having free-flowing CSF for the brain and the rest of the body; it bathes the brain and the spinal cord, bringing them many nutrients. When the tissues surrounding the spine contract, the system must work harder to keep pumping the CSF in order to maintain its own balanced rhythm.

Effects of Releasing the TGR

In her book *Smart Moves: Why Learning Is Not All in Your Head*, Dr. Hannaford discusses the far-reaching effects of releasing the TGR. She provides examples from her work with non-talking school-age children who spoke for the first time after their release of the tendon guard.

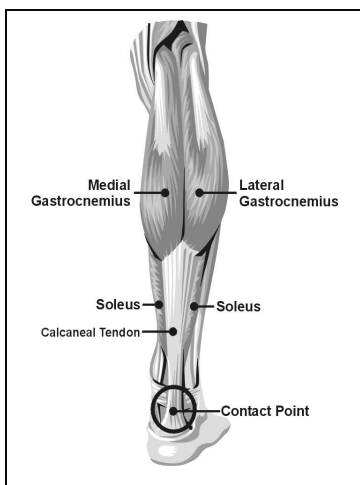
The research of Paul and

Gail Dennison shows the important relationship of the TGR to reading comprehension and creative writing. In the revised edition of *Brian Gem: Teacher's Edition*, the Dennison's discuss the use of the Lengthening Activities from Grain Gym, such as the Footflex, to release the TGR contraction. They write that the tendency to contract is lessened as individuals experience a feeling of "participation readiness", as when they do Pace, set an intention, or otherwise enter a learning "comfort zone". This is one of the reasons that Edu-K

According to the Dennison's, an individual focused on such a motivating intention or objective has freer access to the frontal area of the brain, known as the frontal lobes – the area governing the skills of comprehension, motor control and the rational behaviors necessary for social interaction. In fact, the discovery of an appropriate intention often results in a spontaneous release of the TGR.

Children with learning difficulties are often toe walkers, that is, when they walk they teiptoe, the ball of the foot striking the ground before the heel. When the TGR is released, such children often begin to walk more normally and their language abilities improve. Dr. Hannaford teaches parents how to apply pressure to the tendons to release them, and encourages moms and dads to flex and extend a child's feet while the child sleeps. Good results have been reported following the use of this technique.

This simple application of TGR release has a wide systemic influence, and the results described by my clients continue to amaze me. I find that when I explain the TGR in greater detail during a receptive Brain Gym activity such as the Footflex, my clients are able to experience even greater positive results. My encouraging them to notice their own body gives them a lot of added personal awareness. Some clients immediately report a relaxation of their TMJ muscles, or state that they are aware of a loosening of their lower back, their knees, their neck or the area between their shoulder blades. They will often exhale with a deep sigh as their whole system relaxes, releases, and unwinds.



.One way for physical therapists and other licensed body workers to assist the system to release the TGR on a deeper level is to ask the client whether he would like to lie down and have the needed pressure applied for him. The therapist can then grasp each ankle and firmly apply pressure to the Achilles tendon in an anterior direction, always within the client's comfortable tolerance. While applying this pressure to the tendons, it's important to keep the thumbs on the

lateral sides of the lower calf muscles, just above the anklebones. Throughout the process, encourage the client to breathe slowly. (for children this technique may be taught to the parents as a home activity.)

Some clients may make loud sighs, groans, or toning sounds on exhalation. Making such sounds can assist the movement of energy so much that, when certain feelings that have been repressed are released with the tendon guard, clients have been known to weep with relief. They then notice that their body feels much lighter, and later see that they can think more clearly and attend to work more completely. During a session, there may be a tremor in the legs as energy held there is released. Flexing and extending the foot after applying pressure to the tendons elicits more release, as does applying a lengthening movement to the toes in a downward motion. The TGR is often, the body system, what a valve is to a pressure cooker.

Noticing

Prior to beginning, and throughout the process of working with the TGR, I always explain the concept of noticing. As a pre-activity, I ask clients to notice their level of tension or relaxation in the areas of their knees, sacrum, and occiput. I invite them to share any other noticing along the mentioned pathway – before, during and after the TGR work.

Spending a little more time informing clients about the process allows them to both self-educate and discover their “aha” moments. I feel that the deeper education on the implications of this automatic reflex enhances the balance. They now know what they might be looking for and have a clearer intention around using this information. The results seen in such areas as posture, comprehension, and the ability to communicate are greatly encouraging.

Whether as an application in private practice or a home activity for clients, this technique can have very dramatic results. With a clear intention, visualization of the tissues as relaxed, and the ability of the instructor/consultant to be fully present with client, a safe space is created within which the client can unwind, release and let go.

Brain Gym is a registered trademark for Educational Kinesiology in Ventura California.

Sher Smith, is a Registered Nurse, Registered Polarity Practitioner, Registered Cranial Sacral Therapist and Educational Kinesiology Instructor who has been involved in the holistic health field since 1979. As a metaphysical graduate, the ancient rituals, esoteric teachings and healing practices of the ages continue to be ongoing areas of study and interest.

Her professional training is varied and comprehensive (including studies in Cranial Sacral Therapy with Franklyn Sills and the Upledger Institute), and certification in Neuro-Linguistic Programming, Educational Kinesiology, Reiki and Touch for Health.

Sher was the founding President of the Ontario Polarity Therapy Association, is a member of the American Polarity Therapy Association (having served as Past-Vice-President of the Board of Directors), is a member of the Craniosacral Therapy Association of the United Kingdom and is the Director of the

Realizing Your Potential School of Polarity Therapy.

Sher is the Canadian Faculty for Brain Gym® with the Educational Kinesiology Foundation in Ventura, California and is an EnKA Certified Practitioner, having attained Level 3 standing (highest level) with EnKA (Energy Kinesiology Association) in the United States.