

Wake Up Your Feet

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Frequently, after working with multiple sclerosis (MS) patients using the Trager® Approach on their feet, I hear the comment, “I can feel my feet again.” By making the feet more flexible, my goal is to improve the patient’s sense of balance and timing, standing and shifting, and muscle strength. When you have MS, the signals coming to the brain are impaired. Thus, it is critical to awaken the sensory system so that it will start responding more normally, eliciting change in the muscles and reducing rigidity.

Because MS is a neurological condition that affects movement patterns—the very process of how people walk and move—therapy seeks to address their functioning and mobilization. While it is true that individuals have different kinds of MS and each person displays unique symptoms, the majority of patients do have balance problems. Most people are helped by releasing their habitual patterns of movement, which affect their balance or gait.

The more you can feel in your toes and in your feet, the better you will move and walk. Even people in braces can benefit from increased awareness to their feet. Feet that are mobilized and awakened with enhanced feeling may also delay progressive weakness.

What we refer to as the foot is a complex, mechanical structure of both the foot and ankle, including 26 bones, 33 joints and over a hundred muscles, tendons and ligaments. This amazingly designed foot not only bears the weight of the body, but allows all of the interlocking parts to work together with one primary purpose—to let us stand, balance and walk.

What then do I do, as a physical therapist trained in the *Trager* Approach, to awaken the feet with enhanced feeling? I provide gentle, rhythmic, oscillating motions of touch that increase the sensations and mobility to the whole foot. Using light, non-threatening movements to the joints and muscles, I create a positive, relaxed feeling that feeds into the nervous system to effect change in the tissues and to increase one’s range of motion. Through this communication, I also engage the unconscious mind to be more aware and to enhance feedback from body to brain. In essence, by using this approach, I am stimulating the sensory-motor feedback loop and subtly giving suggestions to the nervous system about what movements are possible.

In the words of Dr. Milton Trager, the originator of this work, “It is the manner in which I work, not necessarily the movements I do, that brings about the change. Every move, every pressure of my hands, every thought is directed toward bringing new feeling experience to the unconscious mind of how the affected areas should feel.”

This *Trager* Approach gives the body options so it has freedom to explore movement in those affected areas and to break out of the set, habitual patterns. As Dr. Trager explains, “The purpose of my [body] work is to break up those sensory and mental patterns which inhibit free movement that cause pain and disruption of normal function.”

Sensory feedback, then, is the key to breaking out of the limited, habitual movement patterns which hold us prisoners of rigidity and stiffness. It is recognized that feedback receptors which sit in the joints get degraded and decrease in number with the normal aging process. A neuromuscular problem like MS causes further degeneration of these receptors. If we can increase the range of motion in these tight and weakened areas, we are improving the receptor input into the brain.

One of the most susceptible areas for decreased receptor input is the joints of the feet, often times leading to numbness in the feet. Through small accessory motions and passive range of motion, patients will experience a more complete repertoire of movement. The receptors will be stimulated and enhance movement awareness. In addition, there will be improved circulation of blood through arteries and nerve flow. As a result, patients will feel more relaxed, use more of their feet, and move their muscles more effectively.

The *Trager* Approach increases sensory feedback in the constrained areas. This encourages the weak or sedentary muscles, nerves, and arteries to participate in the foot in a new way. When the foot is stiff and continually held in the same position (when standing or walking), it is not capable of the numerous adjustments that have to take place to walk effectively.

While sensation to the feet is critical, painful feelings in the feet created by an over-stimulated nervous system can impact negatively on mobilizing. Desensitizing these sources of pain is essential before trying to improve the overall functioning of the feet. Innately, the *Trager* Approach works for de-sensitizing hyper-stimulated areas.

In addition, osteopathic techniques can be employed to further reduce spasticity and sensitivity in the feet. Spasticity here is defined as resistance to stretch with varying degrees of intensity. In many cases, prolonged stretching of the heel cord and tight calf muscles in the back of the feet helps the weak muscles in raising the toes and feet. This enables the muscles to participate more fully in the gait cycle.

For the MS patient, of equal importance to sensation is balance. Signals coming to the balance center are impaired, so people with MS not only have problems with sensation, they also have problems knowing what they are doing with their feet--with timing their movement. When do they push off? Do they push off with their toes? How do they land? When do they put their foot down? How are they sequencing their movements?

Balance primarily depends on three operating systems: sight (eyes), the vestibular system (inner ear) and proprioception (the ability to identify where the foot is in space). It is very difficult to compensate for balance if more than one of these systems is impaired. Balance exercises, such as standing on one foot, are useful in themselves, but are especially beneficial if used as an adjunct to the hands-on work. Balance exercises, identified below, that increase proprioceptive input are particularly important for people

with MS. These exercises activate the receptors that respond to movement and stretching in the joint. They give constant input to the brain as to where the limbs are in space.

Dr. Trager encourages performing simple exercises, which he termed *Mentastics*®. These activities help to recreate the positive feelings of relaxation experienced on the therapist's table. They also develop increased body awareness. This is part of re-education and relearning the natural way the body can move. Ideally, these exercises are integrated into a person's daily life.

Some of these exercises are based on replicating the developmental sequence of a child learning to walk. Babies first crawl to a stationary object like a chair or table, hold on to it and gently rock back and forth. This is part of awakening receptors which tell them where they are in space. Then, they begin to let go occasionally while they continue to rock back and forth. Once babies master these skills, they begin to take steps and, eventually, walk naturally. In essence, my therapy work with MS patients starts at a level where we can begin to stimulate the inherent plasticity of the nervous system. New pathways can be formed to carry sensation to the brain.

Below are simple, everyday exercises to relax, stimulate, and strengthen muscles and to enhance proprioception. The exercises are not meant to be part of a formal program, but can be performed anywhere, at anytime, by yourself. I encourage patients to hold on to something when first trying to do the exercises below.

--Shifting your weight from side to side or rocking back and forth;

--Using your mind and focusing on your toes, feel each toe on both feet;

--Shaking your leg gently as if you are brushing off snow from your boot.

Can MS patients improve their walking? The answer is most likely "yes." However, because MS is variable, the support needed may differ from time to time. When the gait is compromised, the individual may require an assistive device. At some other time, different fitting shoes may be necessary. But working around those variables, as a physical therapist, I believe that people with MS can improve their ambulation through increased sensory feedback, balance exercises to increase proprioceptive input, and Trager *Mentastics*.

There are other familiar ways of exercising that assist individuals to better manage their MS symptoms. These exercises also help the person to get grounded and increase focus, balance and freedom of movement. I recommend tai chi, yoga, and dance because they allow people to explore more options in movement. Of course, one chooses the activity which is most rewarding and provides the most pleasure. In conclusion, the goal is freedom and ease of motion—leading to regaining the joy of movement through the feet. Simply put, the key is to wake up and feel your feet.