A Case for the Human Stance
in Body Mechanics

Maryann Foster

During a class I teach at a local massage school, I watched an earnest student struggle to get into the horse stance. It was painful to watch this frustrated student's effort. It reminded me of the endless tossing and turning of a desperate insomniac looking for a position of rest **(Figure 1)**. She straightened her twisted knees, then her arches fell. She lifted her arches, then her thighs started to tremble. She shifted her thighs, then her back arched. So went the battle. Eventually I interrupted her circular efforts with an offer of help, and she sighed with relief. I suggested that she stand up and relax, letting go of any effort to get it right or correct what was wrong. Once she relaxed, I proposed that she place her hands on her client with a calm, receptive touch to connect with her client. Then when she was finally centered, I suggested she simply step forward and begin the massage **(Figure 2)**.

The student was surprised that massage could feel so easy when given from a standing posture and expressed gratitude for this new option. She explained that her instructors insisted students use the horse stance, but lamented, "Our teachers keep stressing how important it is to stay relaxed in your body while giving a massage, but then they ask us to get into a stance that is uncomfortable and creates more tension."

Figure 1 – A massage student

Since 1988, I have taught movement classes to many hundreds of massage students and often hear similar sentiments. They remark how in the horse stance they can move the upper body okay but the lower body becomes fixed. It becomes wide and immovable. As one student commented, "it is more like a *sawhorse* stance." Their consistent struggles make me wonder why this stance is so widely taught and if there is a relationship between the high percentage of massage therapists who suffer repetitive-use injuries and the widespread use of the horse stance in massage.

The Horse Stance

Also called the "warrior stance," the horse stance is one of the common and difficult stances taught in martial arts. Named after the position a rider takes on a horse, a student assumes this training stance by placing the feet parallel, at about twice the shoulder's width, while bending the knees and keeping the back straight **(Figure**

3).[1] The student holds the position for long periods to build strength and endurance, in preparation for powerful and rapid kicks. Advanced levels are marked by the ability to keep the thighs parallel to the ground and the body unmovable when confronted by attack.[2]

Many massage instructors teach the horse stance to center movement in the lower body and to emphasize the healing aspects of martial arts—being centered, taming aggression, blending with the client's energies, and being grounded. Surely these are helpful traits, but is the horse stance the best way to develop effective body mechanics for the massage therapist?

Martial arts and body mechanics are both broad and distinct subjects. Understanding body mechanics involves knowledge of joint range, muscle function, and postural analysis. These topics are studied in most massage programs so students will understand the underlying patterns of pain and injury that often bring people to massage therapy. Many schools also promote the philosophy of "healer, heal thyself" by having students study and improve their own postural patterns.

Figure 2 – The same student finding ease in the human stance.

The Horse Stance versus the Human Stance

If we are truly concerned for our students' postural health, why not take this approach further by replacing the horse stance with what I call the "*human stance*"? Everyone is familiar with the human stance. It's natural and simple. Just stand up, then walk, one foot in front of the other. The human stance predates the horse stance. Our ancestors stood and walked long before warriors took on the horse stance to fight each other. The human stance is rooted in our rudimentary neuromotor programs for survival. It is the ground of human kinesiology. The horse stance is rooted in the combative skills of hand-to-hand warfare. It is the ground of martial arts. How ironic it is that a posture cultivated for conflict and battle has become a norm in an activity that promotes relaxation and healing. Yet all too often does its confrontational nature manifest in the twisted knees, rigid hips, and poor mechanics of massage therapists struggling with the horse stance (**Figure 4**).

Figure 3 – The horse stance helps prepare the students for the practice of martial arts.

The value of teaching the human stance as a basis for massage body mechanics is multi-dimensional. First of all, we will be teaching students a deeper embodiment of what they innately know--the dynamics of our uniquely upright posture. Optimal posture leads to effortless strength and grace that may not move mountains but will surely allow us to glide through session after session day after day. This innate vertical posture extends our legs and spine, suspending our physical bodies between heaven and

earth, between rooting in our feet and reaching skyward with our perceptions. Standing upright is so natural that we only notice it when muscular spasms and chronic holding patterns grab our attention, pull us off-center, and force us to use excessive contraction. Some advocates of the horse stance would have us bend the knees and tuck the pelvis to correct these chronic tensions, yet repositioning merely bypasses the cause and can even exacerbate the symptoms.

Our massage clients often seek massage for relief from the painful myofascial tensions that prevent comfortable sitting and standing. When these clients ask massage therapists about how best to sit, stand, stretch, and exercise, they are looking for tools that promote balance in their bodies. What they are really seeking is *structural* and *functional integration*--return to the natural alignment and the spontaneous yet grounded movement abilities they had as children.[3]

Figure 4 – The horse stance positions the knees and ankles in different planes, placing torsion stresses on all the joints of the lower limbs.

Grounding

Many advocates of the horse stance use it to promote grounding, yet grounding can be more complex process than taking a stance lower to the ground. *Grounding* is also a term coined by psychiatrist Alexander Lowen to describe the psychological and energetic experience of connecting to the earth. Lowen, the founder of a body-based psychotherapy called *bioenergetics*, created grounding exercises to develop a body-based sort of trust, an openness and vulnerability free from the chronic muscular tensions that occur instinctively to protect children during traumas and emotional injuries. In this sense, grounding is a psychophysical process that releases what Lowen terms *muscular armor* and restores the flow of biological energy (or *chi*) trapped within psychological defenses.[4]

We all have defenses. We need them to survive. They become problematic when they lock our bodies into habitual patterns that work to suppress unmanageable emotions and unresolved issues. Eventually we accept the tensions of these holding patterns as normal. Then they become subconscious, wrapping our bodies like tight muscular outfits, restricting motion, degrading posture, and even leading to pain and injury.

Holding patterns can be good for business (as illness and injury keep many a doctor busy) but they reek havoc on practitioners. The muscular tensions inherent in holding patterns motivate many people to receive massage and make our businesses thrive. On the flip side, how miserable we are trying to help our clients let go of chronic tensions when we ourselves are in pain from our own bodily tensions. Fully embodying the human stance requires a release of holding patterns, both physical and psychological, which prevent us from standing in a truly upright posture. Without conscious release, we tend to carry holding patterns into all activities, including the horse stance.

The tonic contractions required to hold a bent-kneed position increase the compression forces on the knee from two to four times that of standing. It's far less stressful and more economical to move in and out of a lunge from a standing position than to remain in the horse stance while giving a massage.

The Remarkable Efficiency of Upright Posture

Besides grounding, another practical reason for practicing massage from the human stance is that ours is the most energy efficient posture of any mammal. Dr. John Basmajian, the prolific anatomist and researcher, verifies the remarkable economy of our vertical posture in his classic work *Muscles Alive*. This comprehensive text compiles 10 years of research on the electrical activity of every major muscle in the body, which was recorded with electromyography (EMGs) from models while standing, sitting, lying, and walking. Basmajian found minimal to moderate muscular activity in the standing posture, which he contrasts to that of four-legged mammals. "The posture of quadrupeds, which is maintained by muscles acting on a series of flexed joints, is highly dependent on continuous support by active muscular contraction . . . the same is true for the human being in any but the fully erect standing posture."[5] In other words, the farther our bodies stray from vertical, the harder our muscles work to keep us upright.

The horse stance requires not only more muscular exertion, it also increases joint compression. "The increase in muscle activity needed to maintain a flexed-knee posture subjects the tibiofemoral and patellofemoral joints, and the hip and ankle joints to greater-than-normal compressive forces."[6] In activities that require controlled movement and dexterity, such as massage it is more energy efficient and less compressive to begin in an extended posture. Gymnasts and divers do it, starting a routine from a neutral stance. And consider the typical posture when waiting in line at the grocery store or bank; are the knees flexed or straight?

In a standing posture, the joints of the lower limbs and spine are extended, being neither flexed, hyperextended, nor rotated. Extension places weight-bearing joints in a neutral alignment that balances one major body mass over another--the head over the ribcage over the pelvis over the feet. When the body's weight is balanced as close to the vertical axis as possible, the upright stance requires minimal energy to maintain, using less muscular activity from fewer and smaller muscles. This economy is achieved by the synergistic efforts of a small team of postural muscles working dynamically to continually rebalance the human body around its single vertical axis.[7] The more aligned our bodies are in extension, the closer to home we live, so to speak.

"The posture of quadrupeds, which is maintained by muscles acting on a series of flexed joints, is highly dependent on continuous support by active muscular contraction . . . the same is true for the human being in any but the fully erect standing posture."
- John Basmajain, M.D.

Positional versus Dynamic Postural Education

The usual approach to education in posture and body mechanics works with position and placement. Postural educators often have students standing in their underwear or bathing suits in front of a grid on the wall. They assess balance by checking the body's verticality and symmetry against the lines on the grid. This approach is helpful to look at structural balance and to determine what muscles may be pulling the body off-center, but it has huge shortcomings when used in postural education. It promotes positional rather than dynamic posture. When people are carefully observed and evaluated while standing in

their underwear, they become self-conscious and stiff. They also become tense because they usually work hard to stand in what they believe is good posture. As a result they subconsciously link "correct posture" with muscular holding and self-consciousness, a difficult pattern to break.

A dynamic approach to postural education is student-centered. It emphasizes self-awareness of full-body patterns. It recognizes the potential emotional and psychological roots of postural patterns, and the importance of releasing those holding patterns before adopting new patterns. It cultivates fluidity in a dynamic rather than positional postural balance. And it emphasizes the training of postural muscle control (control meaning to be able to contract and relax postural muscles at will). A dynamic approach also gives a student privacy because it can be done while fully dressed.

Postural Sway and Fluidity

The human stance is naturally dynamic and fluid. Postural mechanisms (such as head righting) and anti-gravity reflexes (such as tonic stretch reflexes) are free to do their work in the upright stance. As odd as it may seem, they create a subtle *postural sway* that makes standing still impossible. If you played statue as a kid, you may remember how it was impossible to stand completely still. Postural sway is the involuntary swaying that continually rebalances the body around its vertical axis. There is a large area over which the body can sway and still remain stable, 12 degrees front to back and 16 degrees side to side **(Figure 5)**.[8] Postural sway also assists circulation in the lower limbs; in its absence, as in the stationary posture of military formations, someone eventually passes out.

Figure 5 – The range of postural sway

Postural sway serves the bodyworker in a number of ways. First of all, sway is only possible in a fully extended posture. It is impossible to sway with bent knees, a tucked pelvis, or an arched back. Restrictions to a natural sway will highlight areas in our bodies that tend to lock or bend. Second, postural sway engages a subtle intrinsic motion that is relaxing. A practitioner can use postural sway to center and relax during the entire massage. Third, stiff posture usually translates to stiff touch, and vice-versa. By giving massage from dynamic postural sway, both our movement and touch qualities are more fluid and relaxed, and our clients can feel the difference.

Step into Massage with a Natural Gait

Postural sway is congruent with the kinesiology of walking, which initiates from a forward lean and subsequent loss and regaining of balance. Watch a baby learning to walk and this dynamic becomes obvious. The first steps occur when a baby accidentally tips over while standing and one leg reflexively steps out to stop the fall, starting a forward momentum into a pitter-patter of steps. These quick, light

steps evolve into the natural, yet more controlled pattern of adult gait. Since the human body has evolved for efficient bipedal locomotion, it seems logical that body mechanics taught in massage school would be based on modified gait mechanics. In this vein, a practitioner can simply step into the massage from a relaxed yet aligned natural stance, reducing overall effort by applying pressure through a combination of leaning and pushing **(Figure 6)**. The horse stance is incongruent with gait mechanics; rarely does a person walk with both knees bent and the hips abducted. Rather, our standing leg is always extended, using far less muscular effort than standing over a bent knee.

When stepping, it is only natural to place one foot in front of the other, widening the base of support in the direction we are moving. By stepping into the massage from the human stance, we use what Rolfers call the *rocker principle*, giving ourselves a wide base of support from which to step backwards and forwards. We can then rock between the back and front foot in a movement similar to walking. Also, when we step forward, an important postural muscle along the spine, the *multifidus muscle*, reflexively contracts. Contraction of this postural muscle stabilizes the lower back, which allows the larger muscles of the spine to relax. It is the unnecessary contraction of the larger and more powerful spinal muscles that often underlie patterns of chronic back pain.

Figure 6 – A student practicing leaning into her hands and finding the reflexive drop of one knee.

Postural Muscles, Joint Stability, and Injury Prevention

To achieve optimal posture in the human stance, first chronic muscular holding needs to be released, then postural muscle support must be activated. Somatic innovators such as Rolf, Feldenkrais, Alexander, and Pilates approached postural education using awareness, movement exercises, and hands-on work as tools to engage postural muscles. Although their methods are aimed in the right direction with a focus on intrinsic muscle use, a more complete picture of postural muscles is now emerging. This growing body of information stems from the research of a number of innovative physical therapists currently revolutionizing postural education in stability training. They have identified the muscles that maintain optimal joint stability during both stationary postures and active movements.

Stability training is spreading through rehabilitation programs where patients are learning to develop control of postural muscles in order to recover from injuries, to relieve chronic pain, and to improve motor control and athletic performance.[9] Although this information is slowly seeping into the healing arts, particularly in Pilates and Rolfing education, it has yet to be widely integrated into massage education and practice.

The value of learning postural muscle control is that the postural muscles stabilize our major weight-bearing joints, protecting them from pain and injury. In one study on postural muscles and low back pain, the researchers found that 87% of people suffering from

chronic low back pain were unable to control the *transversus abdominis muscle*. Conversely, nearly all subjects without low back pain could and did consciously control this important postural stabilizer of the lumbar spine **(Figure 7)**.[10]

A massage practitioner can gain several benefits from learning postural muscle control. First of all, the postural stabilizers have predominantly slow fibers that are fatigue-resistant. This means that if we use the right muscles for postural support, we will be able to work for long periods without the aches and pains of muscle fatigue. There is also evidence to show that when a person is in pain, the intrinsic postural muscles become inhibited.[11] Conversely, facilitating the postural muscles allows the prime movers to relax, which can alleviate pain. Third, by training postural muscles, we can avoid injury from unstable joints and eliminate chronic pain due to poor posture. This, in turn, will allow us to work more efficiently and embody the postural balance and ease that we strive to create in our clients.

To convert postural muscle education into practical table techniques for using with clients, you can have your clients lightly contract appropriate postural muscles while you stretch and release tight prime movers. This will not only makes your work more effective, it will help to reduce or alleviate your client's pain. It also provides clients with postural muscle re-education and self-help tools, all with them lying on your table and you working in a relaxed, natural stance.

As massage practitioners, we recognize how important it is to keep the fingers and wrists aligned repetitive-stress injury to the joints. Refining the human stance promotes optimal joint alignment along the spine and lower limbs. When aligned, more of our joints can absorb the stresses of pushing and pulling forces, which will protect any one joint from injury. From the aligned human stance, a practitioner can also press deep into the client's tissues simply by shifting weight onto the front leg, just like a normal step in walking. The back leg behaves like the push-off leg in gait, dissipating the compressive forces along the line of extended joints between the hands and back foot. By stepping into the massage, it could be said that the energy of the earth flows up through the practitioner's body into the client. This contrasts with the horse stance, where the idea is to sink into the earth rather than into the client.

The human stance also places you over your work, which is only natural. Consider how you lean over pots and pans to scour them, or stand over bread dough to knead it. Lowering the body's weight into the horse stance place the body beside the client rather than over him. This works great for quadrupeds, like the horse that pulls a load in the same plane in which its equine spine is oriented. But as humans, we are oriented in the vertical plane. To move in synchrony with our vertical posture we need to work from an upright posture rather than hunkering down into a flexed stance.

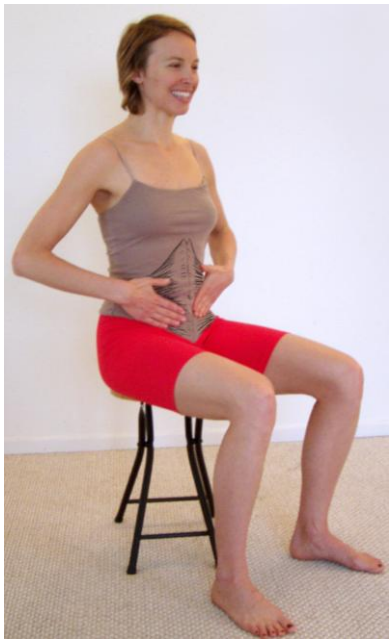

Figure 7 – A student learning to control her transversus abdominis muscle with a light, isometric contraction.

Scope of Practice

On a larger scale, the human stance provides a holistic paradigm from which to practice manual therapy in massage. Every stroke we apply in massage has the potential to reposition and move the client's body toward or away from optimal alignment. If we make the cognitive and experiential study of the human stance a standard in our schools, students can learn to use massage to move their clients closer to structural integration and to educate their clients about what optimal alignment feels like. Rolfing does this, using myofascial release to reorganize the alignment of the body. Each Rolfing stroke is deliberate, reorganizing the body toward a goal of balance in the entire body, a broader goal than the release of a specific area.[12] A few forward thinking massage schools now offer a holistic approach to myofascial release set in structural integration framework.[13]

Practicing within this holistic paradigm could also help clear up murky issues around scope of practice that are widespread in the massage profession. Although our scope of practice limits a massage therapist from the evaluation and treatment of specific problems, many massage instructors are teaching orthopedic evaluations and manual therapy techniques that do just that. While these techniques may benefit clients as well as therapists, they also cause many medical practitioners to frown upon the field of massage therapy because we are practicing outside of our scope. I propose that we promote the practice of manual therapy within a holistic and somatic paradigm, one based upon the dynamic alignment of human posture and gait, one that cultivates the client's somatic awareness of full-body movement patterns, and one that practitioners and teachers can embody as well. In this way, we will not only be practicing what we preach, but we will distinguish ourselves from medical practitioners and collectively clarify our scope of practice.

To conclude, as human beings, we are blessed with the most efficient and effortless natural posture in the animal kingdom. The human stance is our birthright. We do not have to be taught it because its neuromuscular pathways run deep in our physiology. We need only remove the restrictions to standing fully upright and more fully embody our heritage. Why practice the horse stance when we can work in synchrony with the natural design of the human body? Why not teach and practice massage from a stance that is not only our most mechanically sound posture, but is also one we have all practiced from the day we first stood up?

We are blessed with the most efficient and effortless natural posture in the animal kingdom. The human stance is our birthright. We do not have to be taught it because its neuromuscular pathways run deep in our physiology. We need only remove the restrictions to standing fully upright and more fully embody our heritage.

About the author:
The author, Mary Ann Foster, has been a massage therapist and movement educator since 1981. She has completed certifications in Rolfing Movement, Body-Mind Centering, and Hakomi, has studied many different types of somatic therapies. Mary Ann specializes in teaching movement skills to massage therapists. She has taught in

numerous massage programs. She currently teaches continuing education classes for manual therapists that focus on the integration of sound body mechanics and experiential kinesiology into hands-on work. She wrote *Somatic Patterning: How to Improve Posture and Movement and Ease Pain* (EMS Press), co-writes the "Talk about Touch" column for the *Massage and Bodywork Magazine,* and is committed to integrating body-mind patterning approaches into the massage field.

---

[1] American Wu Shu Society, (31, January 2005):<http://www.wusociety.com>,http://www.neokarate.net/ling/term/horsestance.asp>.
[2] "Horse Stance," (31, January, 2005):<http://www.4sceptor.com/horsestance.htm>.
[3] Rolfing, the somatic therapy that uses a ten-session recipe of myofascial release to realign and balance the body, was initially called "structural integration." Its founder, Ida P. Rolf, attempted to get the term "structural integration" service-marked, but was unable to when a judge ruled that the term was too generic. In contrast, Rolf's colleague and close friend, Moshe Feldenkrais, was able to get a service mark for the term "functional integration," which is the hands-on technique used in the somatic therapy he founded called the Feldenkrais Method.
[4] A. Lowen, Bioenergetics: The Revolutionary Therapy That Uses the Language of the Body to Heal the Problems of the Mind (New York: Penguin, 1975).
[5] J. Basmajian and C. DeLuca, Muscles Alive: Their Functions Revealed by Electromyography, 5th edition (Baltimore: Williams and Wilkins, 1985), p. 225.
[6] C. Norkin and P. Levangie. Joint Structure and Function: A Comprehensive Analysis (Philadelphia: F. A. Davis Company, 1992), p. 434.
[7] M. Foster, Somatic Patterning: How to Improve Posture and Movement and Ease Pain (Longmont, Colo.:Educational Movement Systems Press, 2004).
[8] K. Luttgens, H. Deutsch, and N. Hamilton, Kinesiology: The Scientific Basis of Human Motion, 8th ed. (Dubuque, Iowa: William C. Brown Communications, 1992).
[9] C. Richardson et al., Ibid.: M. Comerford, Dynamic Stability and Muscle Balance of the Upper Quadrant: Kinetic Control Movement Dysfunction Course, Class Tutor (Southamptom, United Kingdom: Self-published, 2001): M. Comerford, Dynamic Stability and Muscle Balance of the Lower Quadrant: Kinetic Control Movement Dysfunction Course, Class Tutor (Southamptom, United Kingdom: Self-published, 2001).
[10] C. Richardson et al., Therapeutic Exercises for Spinal Stabilization: Scientific Basis and Practical Techniques (London: Churchill Livingstone, 1999).
[11] C. Richardson et al., Ibid.
[12] I. Rolf, Rolfing: The Integration of Human Structures (New York: Harper & Row, 1977).
[13] A handful of massage schools offer advanced training in Kinesis Myofascial Integration, a system of structural integration developed by Tom Myers, author of Anatomy Trains.