



LIFE IN THE BONES

Exploring Zero Balancing's
Skeletal Side of the
Musculoskeletal Equation

By David Lauterstein

Years ago, a Rolfer friend of mine told me that after some years of working with the muscles and fascia, I would feel I was working on the bones. Sure enough, a few years after that conversation, it happened.



In our work, it is easy to see we are helping to relax and free our clients through the muscles and fascia and, since those tissues act like guy-wires that position and move the bones, we indeed help create new possibilities of skeletal alignment and vitality through bodywork.

This realization led me to study—and eventually teach—Zero Balancing, a form of bodywork that focuses on the skeletal side of the musculoskeletal equation and emphasizes contacting energy as well as structure.

TOUCH AND THE NERVOUS SYSTEM

As more research and critical thinking emerged over the years, we learned we are not directly changing the muscles, fascia, or bones. Indeed, the term used most commonly to define massage—*soft-tissue manipulation*—is not quite accurate. Muscles, fascia, and bones are not self-organizing, nor do they “release” themselves. Muscles don’t relax or tense up of their own accord any more than lights turn on or off without electricity.

It is more accurate to know our touch affects the nervous system (or energy, if you prefer) and, in turn, affects the relative tensions and relaxation of the musculoskeletal system. Thus, it would appear our therapeutic effects arise from communicating with the nervous system *through* the musculoskeletal system—not by directly manipulating it.

Just as we communicate *through* cell phones, but are not talking *to* the phones themselves, we are sending messages to the nervous system using the foundational language of caring, skillful touch. Similarly, when we play music, we are using the instruments to make the beautiful sounds. For example, you might *play* guitar, but you *make* music. Dan Siegel, MD, discusses these kinds of communications as interpersonal neurobiology and as “energy and information flow.”

TOUCH AND THE MUSCULOSKELETAL SYSTEM

What effects do our touch communications have on the nervous system, energy, and information flow? In 2015 and 2017, two Zero Balancing studies were conducted at the Lauterstein-Conway Massage School in Austin, Texas. The studies were sponsored by the Zero Balancing Touch Foundation and were conducted by James Strickland, a former researcher for the University of Texas and other organizations that specialize in physiological psychology, and Stuart Reynolds, PhD, a psychological diagnostician who specializes in applied behavior analysis. Both are directors of the Neuro Synchrony Institute.

Though the Strickland and Reynolds findings have not been independently verified, their results suggest what we might hope for and expect. Their unique and innovative technology allows for noninvasive physiological measurement under difficult circumstances that were previously impossible. For that reason, there are very few comparable touch studies by other researchers.

2017 Study

In March 2017, seven certified Zero Balancing practitioners (from the US and UK) performed sessions with 30 recipients. Both givers and receivers wore wrist sensors that measured electrodermal activity (EDA, a galvanic skin response), heart rate, movement, and temperature. All sessions were recorded on video, and participants filled out before-and-after well-being questionnaires.

The 2017 study also included an assessment of electroencephalogram (EEG), or brainwave, measurements during a Zero Balancing session. The initial results correlated well with the somatic measures and further studies are planned.

Zero Balancing is unique in that it focuses especially on the experience of the person as evoked through the skeletal system, as well as soft tissues. Rather than using high-velocity manipulation to address subluxations, Zero Balancing uses clear and gentle sustained tractions, distractions, rotations, and mindful touch to evoke experiences of release.

We know from the many varieties of massage and bodywork that there is a continuum of relaxation—from a delicious letting go of surface tension, to relieving tension held at a deeper level of muscles and psyche, to an experience of inner peace. Zero Balancing, because it focuses with mindfulness on the deepest layer, often can evoke this deepest relaxation and the sense of inner peace. Like a great yoga or meditation session, it can give rise to a sense of bliss, inner restoration, and a deeper contact with one’s essence.

In the study, 30-minute Zero Balancing sessions were either preceded or followed by 20 minutes of rest. In this way, the researchers were able to note the difference between the physiological responses of just resting versus receiving Zero Balancing.

In 12 of the sessions, where the rest period preceded the Zero Balancing, the measurements of reduced stress were 61 percent for the Zero Balancing session and 12 percent for the resting period. Also, study participants rated *themselves* at a 51.5 percent reduction of anxiety, stress, and tension in the questionnaires.

The 2017 study did find correlations between several Zero Balancing techniques and a release of stress. Thus, both objective and subjective feedback suggest what we might expect—there was significant stress reduction based on electrophysiological data and self-evaluation.

2015 Study

Interestingly, in a smaller 2015 study, the focus was on the correlation between the physiological measurements of the receivers and the same simultaneous measurements of the givers. Although the study had too small a sample to draw conclusions from, anecdotally there were fascinating physiological synchronies between the givers and receivers.

A NEW EXPERIENCE

So, what perspectives are unique to Zero Balancing that may enhance these positive autonomic states of both givers and receivers?

Autonomic/energetic impact depends on the modality, but perhaps even more importantly on the quality of touch and the therapeutic relationship of receiver and giver—both of which are explicitly cultivated in the teaching and practice of Zero Balancing. If, indeed, the musculoskeletal system is the medium, the instrument through which we communicate with the nervous system (if structure is the medium through which we affect energy), then it behooves us to understand our instrument.

There is a natural focus on muscles in most massage therapy education because of the mistaken assumption that we are primarily manipulating soft tissues. But muscles are only half of the musculoskeletal system. Without the articulating skeletal system, coherent movement would be impossible.

Here, we bump up against what may be the biggest fallacy of modern massage and bodywork. We can explain our effects by referring to the myofascia and the nervous system, but that's just an explanation, again, identifying the instrument with the music.

Music is an experience, as is the *experience* of Zero Balancing and other forms of body-mind work. We are in the business

of evoking new experiences that may result in learning and may, in turn, result in a change in one's body, mind, and/or spirit. Rolfers have called this process "somatic education," and that is quite accurate. Moshe Feldenkrais reportedly said, "A person can't change without a new experience."

Ultimately, we work with the body's tissues (structure) to communicate with the nervous system (energy/information). And, as the nervous system relaxes and sends new positive messages to all the tissues and organs, the energy flows more fully, bringing a new level of health to body, mind, and spirit, and causing a new inner experience—or interoception.

THE INNER EXPERIENCE: TOUCH AND INTEROCEPTION

A deeper question for massage and bodywork is: What is the inner experience (interoception) of the client? How might changes we can facilitate manifest in a new experience of the self?

Free nerve endings in connective tissue (bones, joints, ligaments, tendons, and fascia, in general) directly influence the parts of the mammalian brain that have to do with tone, meaning, context, self-recognition, and consciousness. The type of stimulation that affects these nerve endings is slow and steady touch.

Here, the interoception that arises from bones, ligaments, and joints becomes even more relevant. When we settle into it, the experience of the skeletal system is fascinating. Everyday language helps us see what experiences at the level of bone can be. For example:

- "I just know it in my bones"—deepest level of knowing
- "Bone deep"—at one's very core
- "Chilled to the bone"—bottom line of anxiety; when one is very cold

To learn more about:

- Zero Balancing studies, visit www.zbtouch.org
- Zero Balancing, visit www.zerobalancing.com
- Fritz Smith, MD, read *Life in the Bones: A Biography of Dr. Fritz Smith and Zero Balancing* (Palm Beach Gardens: Upledger Productions, 2017)

- “Bad to the bone”—bone as repository of essence
- “I feel it in my bones”—deepest level of intuition

The experience of joints, interestingly, is profoundly conveyed through the origin of the word *joint*, which comes originally from Sanskrit and is the same word that gave rise to “yoga”—*yugam* (or yoke), meaning to bind, join, or unite.

Bones and Joints: They’re Alive!

As a result of inadequately detailed teaching of the skeletal system, often we forget that bones and joints are alive. Every bone is an active, living organ within us. They, and the joints connecting them, are responsive tissues—just like the muscles, skin, fascia, and nervous system. Yet, we often think of bones as just rather dry, static things in us. Two-dimensional anatomy books don’t help; even wonderful 3D online learning tools depict bones only as inanimate structures. But bones and joints are wondrous, dynamic, and *living* within us! Consider that our bones:

- Produce all of our red blood cells, most of our white blood cells, and our platelets
- Continuously change shape and volume, depending on our body’s need for calcium, phosphorus, and other essential minerals
- Are active in the regulation of the endocrine system
- Store crucial nutrients and lipids
- Help regulate blood sugar and the deposition of fat
- Provide living support and protection for other organs

Resources

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- Enable us to move articulately
- Are living support for our postural alignment
- Convey the deepest, strongest energy currents through our body (according to Chinese medicine)
- Communicate with each other through their cells

The Zero Balancing studies appear to lead us to a corroboration that a therapy that aims at triggering energetic/neurological shifts (based on high quality of touch and movement) has a measurable and positive affect on the autonomic nervous system (energy). This can, as do therapies that help relieve the chronic stress of excess sympathetic dominance, have an effect on the health of all the organs and systems affected by the autonomic system.

So, through these studies—and the years of practice and teaching—Zero Balancing founder Fritz Smith and other Zero Balancing teachers and practitioners are developing a new picture of what we do as bodyworkers. It is this unique focus on the deepest structures and energy in the human body that places Zero Balancing, alongside others, at the very frontier of modern body-mind therapies. **m&b**



G David Lauterstein is the cofounder of The Lauterstein-Conway Massage School in Austin, Texas. He is the author of *The Deep Massage Book: How to Combine Structure and Energy in Bodywork* and *Life in the Bones: A Biography of Dr. Fritz Smith and Zero Balancing*. He teaches in Austin, as well as in workshops throughout the US, in Costa Rica, and in the UK.