



Dem Bones

By Liz Koch

Author's note: this article is meant to simply evoke a conversation about how we as a culture think about our bones. It is not meant in any way to suggest or recommend manipulation of bones or the skeletal structure. As massage and bodywork practitioners, professional training and licensing determine the parameters of your work. However, your mind and heart are free to venture into rethinking bones in new and exciting ways and to realize that tissues—whether they innovate into bone, muscle, tendon, or ligament—all share a common cellular level of expression.

Emilie Conrad, pioneer and founder of Continuum Movement, and I combine fluid movement with energetic core awareness to awaken and inspire dem bones to jump up and dance. This article is about our approach.



*Toe bone connected to the foot bone
Foot bone connected to the leg bone
Leg bone connected to the knee bone ...*

The song “Dem Bones,” is an African-American spiritual often used to teach basic anatomy to children. In the lyrics, living breath inspires dry (*dem*) bones to come alive—providing an image of skeletons dancing. The word *skeleton* is rooted in the Greek *skeletos*, which means dried. For many, the image of bones is of those white remains found on a beach or reproduced as anatomical models. Rigid structures encased in a sack of skin. An isolated system, enticed to move by muscles.

It is not only language and images, but our mass media’s health warnings, that feed the cultural misperception of bones. Nutritional support and pharmaceuticals are often the only major recommendations for the silent killer osteoporosis. Curvatures of bone such as scoliosis, in the allopathic tradition, demand surgical correction. Yet bones are wildly alive; regenerative, malleable, dynamic, and responsive. Bone is living tissue; expressive of our genetic tendencies, ancient origins, and emotional wellness. Bones tell us about who we are, what we do, and what we stand for.

Origins of Bones

Why we have bones is as controversial as the origins of life itself and is beyond the scope of this article, albeit full of fascinating and dynamic suppositions. But for the sake of stirring up new ways of thinking, it is worth mentioning science writer Carl Zimmer. In his book *At The Water's Edge*, he tells a story of bones developing in water. Bones may have developed as a means of storing minerals as fish swam from salt to fresh water. It's also worth mentioning Michael Levine, professor of genetics and development in the Department of Molecular & Cellular Biology at the University of California, Berkeley. His studies include what may be the first evidence of the spine originating in a tiny animal called the "sea squirt," whose anatomical arrangement exhibits a major nerve axis, the notochord or first backbone.

Whether one considers the research fact or metaphor, water is our connection to the ocean and still remains within us. Fluid movement is a vital channel for accessing healthy bones. Shifting our perception from dry bone models to dynamic bone metaphors alters our way of communicating, touching, and working toward optimal health.

The Fluid System

Dancer turned human potential explorer Emilie Conrad developed much of her present method through her inquisitive approach to spinal cord injuries. She came to believe that what is called paralysis might in fact be inherent in the medical model, not actually in the spine of the human being. Making a distinction between what is called *functional movement*, which implies a body, and *biological movement*, in which the body is not a designated object and does not maintain a specificity of form, Conrad has let go of the biomechanical definition of movement. Instead, her exploration is an open engagement with the dynamic energies of a living process. From this perspective, paralysis is a compromise in function, but not in movement. She discovered that fluid bio-intelligent movement innovates new functions, including building resilient, healthy bone.

Using sound, breath, and micro- (maybe even nano-) movements, Conrad saw tissue move in far distant limbs. Fluid evokes waves, spirals, undulating swirls, and—like all water, having no boundary—flows into many systems simultaneously. Just as water moves form, fluid movement dissolves scar tissue, invigorates

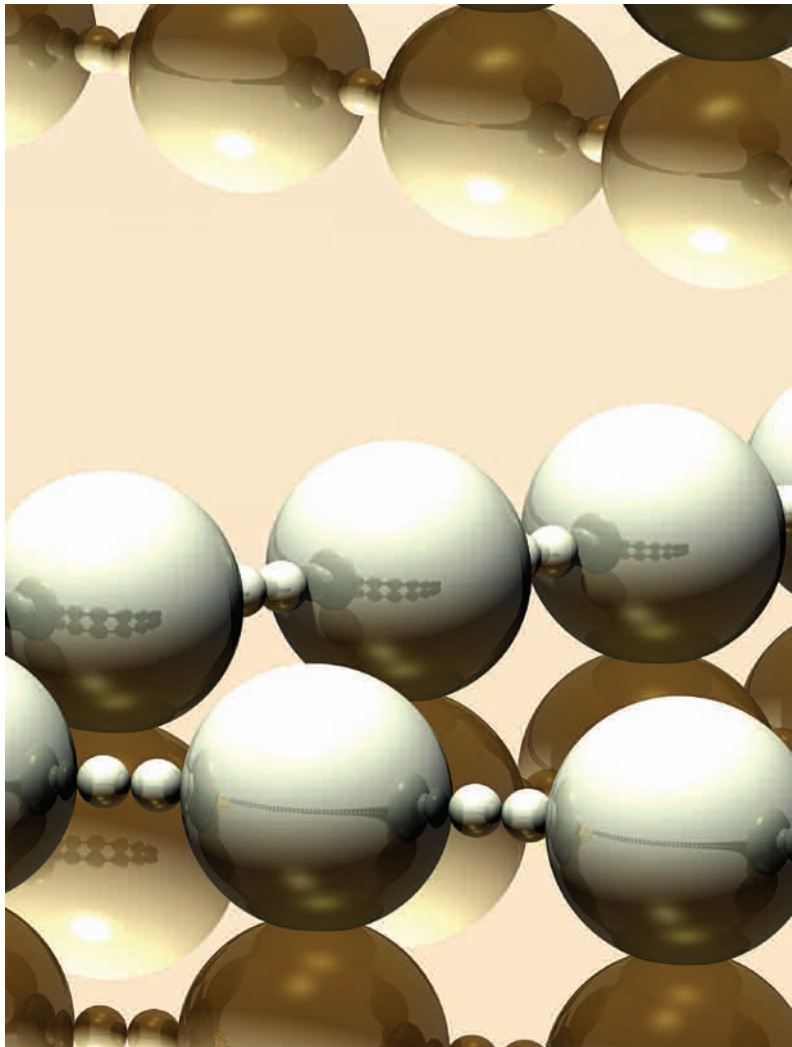
circulation, and innovates new pathways, stimulating flesh, blood, and bone.

The hard compact substance associated with bone has minute passageways filled with blood vessels that oxygenate and carry living nutrients; the top thin white skin layer is full of blood vessels and nerves; the deepest layer is a juicy living marrow forming white blood cells for fighting infection, platelets to stop bleeding, and red blood cells carrying oxygen. All three layers of living bone tissue reverberate to the tempo of oceanic movement.

What Conrad discovered was that the health of all connective tissue, no matter what function it serves, is enriched by the movement of fluid. Movement, sound, and breath are powerful forces for activating this ancient source.

All living processes
owe their lineage to the
movement of water.

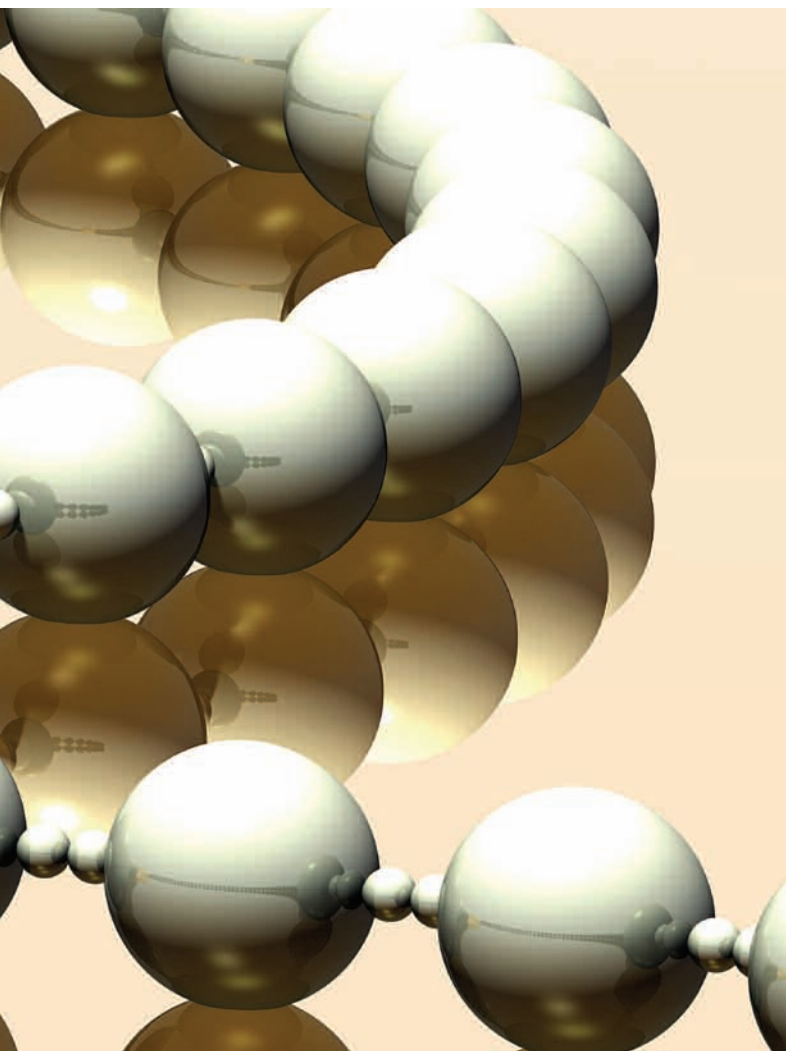
—Emilie Conrad



Sound & Wave Motion

Bone health is self-evident. It can be determined through touch. Conrad teaches that healthy bone, when stroked, will have a reciprocal bounce. Bone moves in relation to the stimuli of touch. The reverse is also true. Inert, densely hardened bone is impervious to stimuli and will remain unmoved to our fingertips, its vital vibration subdued.

From the electrons moving around the nucleus of an atom, to planets and distant galaxies moving around stars, everything is moving and, thus, in a state of vibration. This vibration can be perceived as sound. Sound is recognized around the world as a powerful healing tool. Today's pioneers, such as Jeffrey Thompson, a behavioral psychoacoustics and clinical neuroacoustic therapist who discovered how sound frequency patterns can induce brain wave entrainment, and Jonathan Goldman, an authority on sound healing in the field of harmonics, bring today's science full circle to ancient wisdom.



Conrad uses one's own sound to invigorate the fluid system. Working with specific sounds, each offering different attributes, stimulates tissue while it resonates with emotional desires, needs, and expression. With forty years of empirical observation, Conrad sees a strong connection between a woman with skeletal loss and a loss of voice.

When women inhibit emotional expression, it inhibits healthy skeletal structure. More often than not, skeletal disturbance is accompanied by very low vocal energy, where the voice becomes severely muted, as if the words escape the throat, rather than actually being voiced.

Sound, breath, and movement are suspended in all forms of trauma. Shock contributes to paralysis, but what is most striking is that although physical shock may wear off, emotional shock can go on for years.

When working with physical compromise, Conrad recommends a variety of sound breaths to activate the fluid systems and bring about novel intrinsic interactions. Stimulated by sound, in a profusion of ways, breath becomes uninhibited and intrinsic movements complexify, bringing warmth and flow to what once appeared to be frozen and unresponsive.

Dancing Bones

For bones to feel alive, activating fluid is key. Water is a conduit for the energetic pulse of life; bone, like all living tissue, resonates within this responsive electromagnetic field. Rich in minerals, bones are drawn to the call of gravity and thus resonate to the axis of the living, breathing, fluid planet.

No matter what its density, everything vibrates and has sound. Whether it is a chair, a rock, or bone, every molecule creates a vibration. This dynamic song and dance becomes very real for astronauts who contend without gravity during space missions. As soon as humans leave the force of gravity, there is bone loss. This problem tells us that the very nature of bone—its shape, density, sound, and vibration—is profoundly dependent on the earth's biodynamic atmosphere. When we move away from the earth's gravitational pull, bones begin dissolving. Gravity, as well as water, forms bone.

Proprioception is the term for this dynamic communication between gravity and bones. Proprioceptors, thought to be in the fluid joints, activate the organization of bones into alignment. Posture is the result of proprioceptive coherency. Skeletal proprioception informs us of our relationship with the earth's gravitational force every second of life; like a buoy in the ocean, we respond to its flux. When eyes are closed and ears covered, it is this internal compass that signals when we are right side up or upside down. We orient through proprioceptive perception.



Recommended Reading

Conrad, Emilie. 2007. *Life on land: the story of continuum, the world renowned self-discovery and movement method*. Berkeley, California: North Atlantic.

McHose, Caryn and Kevin Frank. 2006. *How life moves: explorations in meaning and body awareness*. Berkeley, California: North Atlantic.

Schwenk, Theodor. 1990. *Sensitive chaos: the creation of flowing forms in water and air*. London, England: Rudolf Steiner Press.

Suzuki, David and Amanda McConnell. 2006. *The sacred balance: rediscovering our place in nature*. Vancouver, British Columbia: Greystone Books.

Like a pearl necklace, all two hundred thirty joints create a perceptual network that forms a continuum. Every joint, like the individual pearl, is vitally important in creating this sense of wholeness. When one joint is hypertonic, another will be hypotonic. Metaphorically the string represents our energetic, electrical magnetic life force. When either the string (energy) or pearl (joint) is damaged or disrupted, dissonance echoes throughout all systems.

Core Disharmony

When proprioception is disrupted, we feel out of tune. We may try to rely on muscular proprioception to guide us back to harmony, but muscles alone can not offer what bones and joints are capable of providing.

A simple example of disruption can often be found in the shoe a client is wearing. A stiff-soled shoe, for example, limits movement within the toe joints, muffling the sense of the earth's rebounding support. Rather than sensing weight passing through bones into the earth and rebounding (like a ball bouncing) back up through a buoyant arch, a compromised system compensates by depending on eyes and external muscles for support. External armoring, rather than vital fluid energetic communication, results in inappropriate

muscle tension that cascades inward to deeper layers of dysfunction. Tight muscles yank on sensitive organs, viscera, joints, and bones.

Tension in the core, such as the psoas muscle, can be traced back to the midline and disruption in proprioceptive awareness. As primal messenger of the central nervous system, the psoas muscle conveys survival instincts of safety or fear, coherency or disconnect. Rather than focus on psoas as the problem or attempt to over stabilize the core through muscular control, an effective course of action is to return to the midline by reactivating proprioception. Many therapeutic and educational programs offer strategies for awakening proprioception—Ortho-Bionomy, Feldenkrais Method, Alexander Technique, Brain Gym, Continuum Movement, and Core Awareness, to name a few.

Working with the fluid system is a quick, effective method for generating congruency that reverberates harmony throughout all systems. It can moisten and invigorate an exhausted psoas muscle freeing the spine to again hum and vibrate with life's juicy song.

Enhancing Bone Health

Choosing the bio-intelligent paradigm where *body* is perceived as a living process imbedded in the larger *body* of earth's ever-changing process, moves both practitioner and client to an inclusive way of approaching tissue and healthy bone, empowering both human beings. As a bio-intelligent therapist, your awareness is a vital instructor; the exploration begins within.

Begin by exploring what it means to you to work with sound, movement, and breath. Determine how vital bones and vibrant proprioception can help relax muscles. Remember we are not attempting any form of manipulation. This is a change in perception and sensitivity that encourages an inclusive systems way of thinking about optimal health. Here are seven ways to begin stimulating healthy bone within you and, when applicable, within your clients.

1. Jacques/Zaques. Continuum works with a variety of sounds to stimulate tissue; the Jacques-Zaques sounds specifically stimulate and restore the resiliency of bone. Experiment with yourself. Place your fingers on any bone (the clavicles for example), and begin making the following sound: "Jacques-Zaques." The French *Jacques* is the sound of "juh." The alternate sound is a "zuh." When put together, there is a random shift from "juh" to "zuh," a bit like this: jijijijzzzzzjjij zzzzjjijzzzz jijijzzzzzjjij zzzzzjjijzzzzz. When making the sound, bring teeth together (which also helps the bones of the mouth and jaw-freeing muscles to relax) and visualize sending the sound into the specific bone being touched. Every time you take a breath, that is one round; repeat for six rounds. The rounds are important as it takes inundation to accumulate enough fluid activity within the bone to actually alter its character. The simplicity of the Jacques-Zaques exercise makes it easy to teach your clients how to work with themselves.

2. Applying Sound. To apply sound to a specific area, it works best when that area is being touched while inundated with sound. Individuals with a fragile skeletal structure or one that is excessively hard and dense both benefit from the Jacques-Zaques homework. (It's truly amazing how restorative this sound is for bringing about healthy bone.) The Jacques-Zaques exercise can also be beneficial for arthritic clients; again, it works best if they practice the sounds on a daily basis to maintain skeletal resiliency. For example, holding his or her own fingers, a client can direct sound and imagination into an arthritic joint.

3. Tapping Bone. Used in trauma recovery work throughout Europe, simple tapping of large bones (a

light drumming vibration—up, down, and around) invigorates proprioception and bone health. Try it on your own leg or thigh bones.

4. Awakening Feet and Ankles. With twenty-six bones, the foot has an abundance of proprioceptors. Shoes often interfere with this sense of resilient bones. Simple massage helps awaken proprioception, gaining flexibly in the feet and full range of motion in the ankle joint.

5. Massage. Gentle touch is a powerful tool for softening armor, fear, and defenses associated with disorientation, trauma, and skeletal dysfunctions. Sensitive touch provides a feeling of protection, value, and awareness essential for resolving trauma often associated with skeletal deformities. A gentle, small wave motion or rocking motion of the leg is much more beneficial than deep invasive techniques for bringing about resolution. Here, it is important to differentiate *release* (cathartic letting go and reactivation) and *resolution* (coherency, completion, and harmony). For real resolution and healing to occur, safety and integrity are essential.

6. Voicing. It is a very serious issue for clients with osteoporosis who may be facing life-threatening medications and who have no voice. The secret to their bone health is to actually say the words of healing (whatever they may be). Although you may not be skilled in emotional processing, you can simply witness clients speaking whatever needs saying or letting their voice be heard. This encouragement and simple recognition is very powerful. Do not respond with anything but a resounding yes.

7. Supporting Activities. Acting classes for men and women who have muffled their voices is a powerful recommendation for bone health. Working with a good acting teacher or coach can offer a safe alternative. Through the voice of the character, a person can ultimately give voice to the imploded forbidden territory so that the bones no longer hold the energetic inhibition and dem bones can move, possibly for the first time, with total abandonment. **M&B**

Liz Koch is an international teacher, writer, and author of The Psoas Book; Core Awareness: Enhancing Yoga, Pilates, Exercise & Dance; and Unraveling Scoliosis (CD). With three decades of experience working with the core muscle, she is an authority on the dynamic and emotionally expressive iliopsoas. Find more information on the psoas and Core Awareness by visiting www.coreawareness.com. Koch and Emilie Conrad (www.continuummovement.com) will be co-teaching a Dem Bones workshop January 2008.

A special acknowledgement is made to Emilie Conrad for her contributions to this article.