1

Move in Mind™

Adapting Rolfing® SI to the Needs of Neurologically Impaired Clients

An Interview with Monica Canducci

By Monica Canducci, Certified Rolfer™ and Rolf Movement® Practitioner and Jeff Castle, Certified Rolfer

Beginning in 2009, Certified Rolfer and Rolf Movement® Practitioner Monica Canducci found herself treating clients with severe neurological injuries such as stroke and spinal-cord damage. Monica adapted her Rolfing Structural Integration (SI) technique to their circumstances by using memory and imagery within the principles of the Ten Series. After having considerable success in her own practice, she began teaching her technique, which she calls Move in Mind, first in Italy in 2012, and then in spring 2013 in Boulder, Colorado as a fundraiser for fellow Rolfer Michael Mathieu. The interviewer, Jeff Castle, first consulted Monica as a client. He was so impressed with her work that he attended her Boulder class.

Jeff Castle: How did you first begin to work with clients with neurological injuries?

Monica Canducci: I had been working with memory and imagery in connection with hypnosis when my client Claudio came to me after a spinal injury that had left him a quadriplegic. He was unable to sit upright in his wheelchair and had to be strapped into it so as not to fall over and suffocate. Initially, he asked me to hypnotize him so he wouldn't be afraid of falling over; but because his issue was functional, I invited him to try Rolfing SI and movement work. My idea was to use with Claudio certain techniques I had already tried with athletes. By evoking memories of movements and sensations Claudio had had prior to his injury, I hoped to re-engage his tonic function and help him reestablish some control of his torso. After a great deal of work on both our parts, Claudio did regain enough torso control to be able to sit upright in his wheelchair without the aid of restraints. After this initial success, I began working specifically with clients with neurological damage.

JC: Explain the thinking behind Move in Mind.

MC: In Rolfing SI, even with neurologically normal clients, we use perception to engage tonic function. For example, when we ask our clients to feel their feet connect to the ground, we are engaging their senses to build images they can use to make a physical and functional connection. We then establish new connections through the body by building on awareness of these sensations. The same thing can be done with what we remember or imagine – even if we cannot actually sense it – because our brains react to memories and images as if they were current and real. So, when we recall a powerful emotion, for example, our physiology changes just as it would if we were to live that experience in a present moment. The same is true of what we do not recall, but can imagine.

JC: Why does Move in Mind work so well with neurologically impaired clients?

MC: It works well with these clients for the same reasons its components work well with other clients. But it's potentially key for neurologically impaired clients to the extent their injuries leave them unable to experience sensations in the ordinary way, meaning that our ability to use our hands to start a conversation with a client's body is limited with the neurologically impaired. Our psychophysiological functioning depends on how we relate to stimuli from our environment, including first of all the field of gravity. Though some of these functions – such as heart rate, blood pressure, and other autonomically regulated aspects – can't be well-modulated by force of will because they are not entirely voluntary, they do respond to imagery.

We also know that before we actually execute any action, we consciously (or mostly unconsciously) imagine it. When we imagine a movement before executing it, we are using most of the components of the movement brain, leaving out just the neurons that activate the muscles that would perform the actual movement. That's why imagery lets athletes improve the coordination of a movement sequence without putting physical wear and tear on their bodies; but it also lets anyone with a neuromotor dysfunction experience the neurological equivalent of sensed movement. First, the brain reacts to the recollection of a past sensation as if the sensation were current. As I help clients to build some sense of self-support, I integrate mental images that allow the client to access memories of past sensations of self-support. In Claudio's case, we started with recalling his sensations of feet and ischial tuberosities with the hope that his nervous system could use the recalled sensations to help restore some part of his gravity control system. Second, the brain reacts to an imagined movement as if it were really happening. This allows the neurological equivalent of movement even to a person who has forgotten how the actual movement felt.

JC: In class, you discussed recreating a sense of balance in movement through *memories* of proprioception and interoception. Isn't it difficult for someone who has lost these faculties due to neurological injury to re-experience lost movements?

MC: Yes, of course it's much more challenging to work with a neurologically impaired client. The short circuit in the flow of information through the nervous system eliminates many of the resources we commonly rely on, and the deficiencies in the client's internal communication system impede communication with the outside too. We have all had clients with difficulty understanding their bodily sensations, but to have a client where sensation is cut off altogether is quite a challenge. That's one reason I add tactile and other sensory imagery to the motor imagery. For someone who has lost the ability to move, the use of sensory information can be very helpful – first to recall memories of movement, and perhaps to actually repurpose available neurons. The imagery can relate to any

of the senses, so long as it enhances the client's perception of movements. We must build each client's perception of movement through whatever senses are most available to that person.

JC: Are there specific ways to help evoke sensation in these clients?

MC: Definitely. I want to help the client who can't *feel* what I'm doing to *see* what I'm doing, so I like to position a large mirror to let the client see me better. It also helps for me to describe what I'm doing, especially while working in the areas where the client has lost tactile or proprioceptive sensation. Practitioner communication becomes another way the clients either recall or imagine the sensations we are evoking, which seems to give the client the opportunity to rewire his system in some way. It's really amazing to witness the shift from an imagined sensation to a real one, that lets your client first feel, and then actually move, a body part that seemed completely paralyzed! With clients who have difficulty recalling sensations – especially memories of movement – I use a different kind of 'mirror': I serve as a model so the client can watch my movement, and then imagine it happening inside his own body. This is based on what we know about the mirror neuron system.

JC: What's the mirror neuron system?

MC: We learn motor skills by watching others. Neuroscientists have discovered special neurons in primates, which fire both when an animal acts and when the animal observes the same action performed by another. These are called 'mirror neurons' because they cause the observer to mirror the behavior of the other, as though the observer were the one acting. In humans, the mirror mechanism seems to be that each time the observer watches an action done by someone else, a set of neurons that code that action are activated in the observer's motor system. I have found this very helpful in difficult situations. It is important to find a bridge that helps the client to recall something from the past that's useful for recreating the sense of whatever has been lost, and the client might have difficulty with recall. For example, Claudio's accident had happened so long ago that he had forgotten what it felt like to walk or even feel his legs and feet. We had to build a bridge to help him remember these senses, and mirroring worked. At first, I became his model and had him watch me doing some very clear and slow movements with my feet. I also suggested he observe carefully the foot movements of people around him. It was great luck that around that time his girlfriend wore gym shoes very similar to the gym shoes he used to wear before his accident. One evening, she sat on the sofa and took off her shoes in front of him, and in that moment he felt suddenly and very clearly the sensation of this – like it was happening to him! After that, it was much easier for him to recall sensations in his feet, and it became really easy to work on it. He could own his own feet again – fifteen years after his accident!

I have created specific steps to bring clients from observing a movement done by me or someone else to the feeling of doing the movement themselves. We need to show the movement in a way to make each client's observation effective. Because mirroring is a memory aid, it's important to make the movement a simple one that the client would have done in the past. At the same time, we need to remember that the mirror mechanism is always working in all of our clients, so we'd be wise to make ourselves consistent models of the good function we want to transmit to our clients.

JC: How do you physically support a paralyzed client while you're working?

MC: First, I prefer to begin by working on the floor. This tends to be the most comfortable for the client because nearness to the floor lessens the client's fear of falling. It also gives me more opportunity to move around and to use my own body weight for support. If the client can't sit on the floor by himself, I get behind him – using my knees to stabilize his pelvis – and allow him to rest back into my chest (see Figure 2). This way, as I synchronize my breathing with the client's, the client can sense the entrainment and amplify his own movement. It also allows me – by way of my own movement – to carry the client's torso, arms, and head into positions and through ranges of motion the client cannot yet find on his own. This gives to the client's brain motor feedback sensations the client can't produce yet through his own movement. But every practitioner must experiment with how best to work. Because I'm small and very flexible, these techniques work well for me. Others will find positions that work better for them. The important thing is to consider your own comfort and endurance, as well as the client's.

JC: Do you use the Ten Series with these clients?

MC: I work very closely within the Principles of Rolfing SI and the logic of the Ten Series. But, in these cases even more than usual, we need to adapt the work to the person and the resources he has available. I begin working wherever the client senses clearly. I might start by having him sense his breath, or have him find his sense of just sitting upright. Once he gains that sense, I make him aware of what it is I'm doing in a place where he has less sensation – or even none at all – and ask him to imagine in the body area he can't feel the sensations he felt elsewhere. In my experience, it's essential to go to the midline as soon as possible to give clients the sense of self-support. It doesn't matter if it is only the *sense* of self-support and not a true *function* of self-support. This – combined with some sense of autonomy, a sense of being able to do things for themselves – begins to reestablish a sense of torso control; and with quadriplegics and hemiplegics, this is what I go for first. Regaining at least a sense of a self-supported torso with stability and balance opens the doors to the possibility of real functional improvement. It seems that when we recall or imagine something, our nervous system does it's best to make it real. To at least some degree, we begin to rewire to reestablish lost functions. Once we achieve torso support, we can look for other possibilities, always staying within the Principles of Rolfing SI.

JC: How do you even begin?

MC: Traditionally, the Ten Series begins with the sleeve sessions. But with these clients, the work goes more smoothly if from the very beginning we give them a sense of their inner space, even while working on the sleeve. The idea is to help their internal and external worlds to meet again. I start by touching my clients where they can actually feel my hands, maybe the face or neck. Even then, we search with the breathing for a sense of torso volume. Then we find the most effective images to recruit breathing as a tool for reconnecting the internal space with the surfaces of the body, and the hands and feet through the limbs.

JC: Are there certain images you find especially effective?

MC: To begin building a new sense of self-support, we typically create the image and the feeling of the front of the spine. I ask the client to send the breath up along the

front of the spine during *exhalation*. If the client is seated, the instruction includes thinking about grounding through the feet and ischial tuberosities. The breathing helps the client to direct attention to this area, and hopefully over time to re-establish the sense of support through the spine. In each session I go a little deeper with it, using imagery to create connections and communication between the core and the sleeve. Then we can begin to connect the sleeve work inward.

JC: Are there any particular cautions specific to working with neurologically impaired clients?

MC: One possible difficulty relates to the emotional aspect. When we ask our clients to recall memories of times prior to their injuries, it highlights the emotional dimension. I take plenty of time in the beginning to set up lines of communication with the client and create a safe environment, and proper use of language is essential. We have to respect how the client has already processed, integrated, and even accepted the loss of sensory and motor abilities. For example, with Claudio it became clear that he was keeping himself disassociated from his loss. He didn't integrate it well at the deepest emotional level. Of course this might have been a good defense mechanism; but as our work progressed, Claudio needed to restore his emotional connection to his body. After he got some help from a psychologist with expertise in trauma and took EMDR (Eye Movement Desensitization Repatterning) treatments, Claudio started to grieve the accident that had happened fifteen years earlier, and then we began to make steady progress.

JC: It seems like having a goal would be an important part of the process. How do you explain to the client the limits and possibilities?

MC: This whole process depends on the client's desire to work toward a goal. I explain from the beginning what is known about the neurosciences that relates to the client's situation at a level he can understand. I make sure to not promise anything, but only to make him curious as to what may be possible. This education continues throughout the process, and we continually revise our goals as things change. I aim to have something new happen with each session, whether it's part of the goals or even a new way of looking at the process. But it's just as important to recognize limits. We walk a fine line to elicit curiosity without creating expectations that will, even unintentionally, put too much in the Rolfer's hands.

JC: It seems that Move in Mind has had many influences. What were the main ones?

MC: To be honest, my main influence has been my husband – a neuropsychologist who works with biofeedback, neurofeedback, and cognitive rehabilitation. He is very open to all that is movement, being my husband of course, and he knows that you cannot separate the world of words, cognition, and movement. In 2008 he worked in Dublin, at Headway Brain Injury Services and Support, in collaboration with a neuropsychologist who studied with Professor Jan Robertson, author of *Mind Sculpture* (Robertson 1999). I found that book very inspiring; in it Robertson discusses the use of imagery with athletes and musicians, and about applying it to rehabilitation.

Later I was inspired by the work of V.S. Ramachandran (2000, 2009) on the mirror system, along with the work of Gallese (2011; also Gallese and Sinigaglia 2011) – one of the Italian scientists working on the same topic. My husband and I collaborated also with psychologist Luca Fornia, who did his PhD in Gallese's team at Parma University. Dr. Fornia gave me great information and inspiration about what they were discovering and developing in these fields.

I also took a lot from my previous study of hypnosis. Because he was a real pioneer in discovering how language can literally sculpt the brain, Milton Erickson's life and work and constructivist hypnosis are huge sources of inspiration to me. Erickson had polio as a teenager, and he recovered his abilities to move and speak through imagery, by recalling his sensations and perceptions of movements. Of course I found great inspirations among my instructors and fellow Rolfers – including Robert Schleip, Hubert Godard, and Pedro Prado – and their work on fascia, movement, and how Rolfing SI fits into the biopsychosocial frame.

JC: What kinds of neurological impairments have you worked with?

MC: Many different kinds, including paralysis following physical trauma (Claudio was a quadriplegic from an automobile accident); functional, postural and behavioral deficits following stroke or cerebral hemorrhage; and even obstetric paralysis. I've helped clients with old injuries and new ones, from young adults to the elderly.

JC: How much functional improvement have your clients been able to achieve?

MC: Of course, it varies from client to client, but on the whole the improvements are substantial. Claudio, for example, couldn't even sit up in his wheelchair and had to be tied in to keep from falling. He had no

Figure 1: Supporting the client while working on the floor.

control of his trunk, or of the frequent and painful spasms in his legs and abdomen. These spasms were dangerous, especially when he was driving his specially adapted car. He could not drive faster than 70-80 km/hr, and could only drive for about a half-hour before the spasms increased, making things very uncomfortable and dangerous. It took three months to begin to see results, but by eighteen months he had regained enough sense of his feet that he no longer needed to be tied into his chair. The intensity and frequency of the spasms decreased, and with imagery, he developed a sense of control over them. He could drive at speeds of 100-120 km/hr over long distances, and eventually could drive for a whole day, about 800 km, without no ill effects: no spasms, no leg rigidity, no pain! His quality of life is better because daily activities – eating, washing, using the computer at his desk – are much easier. He even started to ski again with the help of a special device.

Another example is my client Carmen, a lady of sixty-nine who had suffered a stroke. Even after rehabilitation, she had great difficulties with gait and posture, as well as cognitive and behavioral impairments (deficits in orientation to time and place, attention, verbal fluency, episodic memory, apathy, and perseverative behaviors). She couldn't stand up from sitting or walk; had trouble with balance and motor planning; and her left side seemed weaker and slower than her right. After twenty-two sessions (the first seven of the Ten Series, followed by fifteen Rolf Movement sessions), she kept her balance and walked without support; she could plan to change position – such as arising from sitting; and could walk up and down the stairs.

JC: What about Carmen's cognitive and behavioral difficulties? Did you see a benefit there?

MC: Well, she did get better over time, but I worked as part of a team, along with my husband (who did cognitive rehabilitation), her home-care aid, and a social worker (who assisted her with life skills). It's hard to isolate the effects of my contribution, but probably my continually calling her attention to her body parts and breath – and giving her the sessions in her home where I could address the work to her daily needs – helped her to recover more quickly. I also asked the home-care aid and social worker to use with their own interventions the metaphors and images that seemed to work best for Carmen. Actually, we just received an update from Carmen's son. He says she now goes to the grocery store by herself, and all the doctors who saw her for a recent check-up were shocked to see how well she is doing. Now she looks like a "normal" lady – unbelievable!

JC: When a person like Claudio regains that much postural function, can it positively affect physiologic function?

MC: Absolutely! For example, because Claudio had about zero muscle tonus in his abdomen, he also had very shallow breathing, no power in coughing, and huge problems with defecation. In order to defecate, he had to be assisted in using 15-18 micro enemas (liquid glycerin) every two days, and it took around five hours. After our work together, his breathing was much better, which also meant he could cough. He had far less trouble defecating, and used only 5-6 micro enemas each time for only about three hours.

JC: It stands to reason that the clients are happier once they can do more – but are there other emotional benefits?

MC: For sure. My client Susanna, who was fifty-eight when I met her, suffered from obstetric brachial plexus palsy – meaning that her brachial plexus had been damaged at birth, so her left arm and hand stayed underdeveloped. The left arm was partly paralyzed, and able to feel and move only a little. For years she had received physical therapy, osteopathy, and various other bodywork, but she came to me with pain throughout her body – mostly in her back and neck but also in her pelvis and legs – and told me that Rolfing SI was her last hope. At the start of her Ten Series, it seemed to me that her structure had been built around the limits of her left arm, with various postural compensations and a kind of emotional rejection of her whole body. We worked a lot 'filling' her left arm and side with her breath, and used specific imagery to restore her sense of balance. Step by step, she started to 'feel' and accept her left arm, integrating it into her sense of herself. Over time, she noticed a great change in her body image, energy level, and self-esteem; and she even overcame her body shame and started to attend some movement classes. She said she was amazed and surprised not only about the physical benefits – her pain had lessened, and had even disappeared in many areas – but especially about how much better she felt about herself, her life, and the world around her.

JC: You got great results with Claudio, but you did work with him for eighteen months. What about clients who don't have the resources for such a prolonged course of treatment?

MC: It's amazing how even a little of this work can sometimes go a long way. Chiara was a model for the 2012 Move in Mind class in Italy. At that time she was in her late thirties and had suffered a left cerebral hemorrhage in 2004, which left her with right hemiparesis and global aphasia. Though she had recovered her abilities to speak, walk, and move her right arm and hand, she had painful spasms in her right limbs and a dorsal kyphosis that was bad and getting worse, which was especially pronounced when she spoke. At the workshop, after three sessions from students, she seemed more relaxed and balanced and the kyphosis appeared normalized. But after the workshop, here is what she wrote to me:

> Upon [coming] back home, even at the computer my back is straight, shoulders are "straight straight," my pelvis is balanced, when I stretch my right arm I feel no more pain, the body feels the need to load on both legs and then the muscles of my right leg are stimulated. When I spoke with someone I usually [curved my shoulders in and increased] the kyphosis, closing the chest, but now [it] is perfect and I can keep straight. The dorsal hyper-kyphosis had GONE and the curves are re-normalized (before the hemorrhage, when I was 29 years old, my back was perfect, then the posture was changed). I'm happy! I spent some days of relaxation, I did not take drugs to get these results and the course was magical.

JC: Wow! Were you surprised?

MC: Yes – but no. Of course, I'm constantly surprised at what becomes available in situations where improvement might have seemed impossible. But no, I'm not so surprised any more at what the adaptable human nervous system properly stimulated can do. And from what I've seen happen in many different situations already, I believe there is much more we can do with this work. Hopefully there are many more surprises to come!

5

Monica Canducci is a Certified Rolfer and Rolf Movement Practitioner currently based in Montreal, Canada. She is also trained in craniosacral therapy and Beamish Bodymind Balancing®. To learn more about Move in Mind, see related videos, and learn about classes, visit www.moveinmind.com.

Jeff Castle is a Certified Rolfer who practices in Erie, Pennsylvania.

Bibliography

Gallese, V. 2011. "Gallese on Mirror Neurons," video-recorded lecture available at http://vimeo.com/22968671.

Gallese, V. and C. Sinigaglia 2011. "What is so special about embodied simulation?" *Trends in Cognitive Sciences* 15(11):512-519.

Ramachandran, V.S. 2000. "Mirror Neurons and imitation learning as the driving force behind 'the great leap forward' in human evolution," video-recorded lecture available at www.edge.org/3rd_culture/ramachandran/ramachandran_p1.html.

Ramachandran, V.S. 2009. "The Neurons that Shaped Civilization," video-recorded lecture available at www.ted.com/talks/vs_ramachandran_the_neurons_that_shaped_civilization.html.

Robertson, I. 1999. *Mind Sculpture: Your Brain's Untapped Potential.* London: Bantam Press.

The Being of Rolfing® SI

Why You Can't 'Rolf' Your Car

By Jeffrey Maitland, PhD, Advanced Rolfing Instructor

Editor's Note: Dr. Maitland was the keynote speaker at the 2013 membership conference of the Rolf Institute®. This was his presentation.

In a world so dangerously out of balance as ours, the order that Rolfing SI bestows upon the body is a necessary and precious gift.

Posing the Question

Do you remember that glorious moment when you decided to become a Rolfer™? Can you recall the excitement, feelings of elation, and trepidation brought on by your decision? Since becoming a Rolfer, no doubt you have also performed inspired sessions that have left you breathless in the face of what can be accomplished. Go back to those wondrous moments. If you try to put into words what it was about Rolfing Structural Integration (SI) that put you under its spell, you will be taking a first step toward answering the question: "What is the 'being' of Rolfing SI?" The question is not asking for a definition of Rolfing SI. Nor is it asking for the essence of Rolfing SI. Accordingly, it is not seeking that unique quality or property that makes Rolfing SI distinctly Rolfing SI and distinguishes it from all things not Rolfing SI. After all, there is nothing unique about being unique. As we shall see, the power lies elsewhere.

I want to explore with you what Rolfing SI aspires to. For what it aspires to is what makes it the powerful and profound intervention that it is. What is going on in those magnificent moments when the compassionate and numinous power of Rolfing SI – its ability to affect the whole person by organizing the body in gravity – manifests in your work with inspired all-encompassing clarity? I am not interested in third-person descriptions in which an observer describes your behavior. I am mostly only interested in first-person descriptions – in your experience of truly understanding the being of Rolfing SI. Stated a different way, we are asking about the way of being of Rolfing SI or, what comes to the same thing, the way of being a Rolfer. We are in search of the numinous formative core of Rolfing SI – both in its formative power (which is capable of transforming a life by transforming the body) and in its seemly unlimited capacity to generate a variety of never-before-seen individual sessions. In seeking the way of being of Rolfing SI, we are also attempting to clarify, in experience, the compassionate power that makes what we do more than unwinding myofascia or just mechanically pushing flesh.

To further clarify our approach, we need to distinguish the being of Rolfing SI from what might be called the 'doing' of Rolfing SI. The doing of Rolfing SI is what we accomplish with our hands and elbows and words. It also includes the application of techniques and the creation of treatment strategies. In contrast, the way of being of Rolfing SI is the power to do Rolfing SI – to profoundly transform the body by embodying the principles of Rolfing SI. When you compare a Rolfer's touch to that of a deep-tissue therapist, you discover an entirely different vector of intent that puts the release of tissue in the service of facilitating higher bodily order, not just getting rid of symptoms. You also find a distinctive way of seeing and evaluating the body. These discoveries mean that the being of Rolfing SI is also a way of seeing.

I

The Tao of Rolfing SI

To one degree or another, all of us have experienced the numinous power of Rolfing SI. Typically, especially in the beginning stages of our career, it shows up in our sessions now and then in varying degrees of intensity and depth. But, if we really want to explore the contours of the experience of getting the being of Rolfing SI, we need to explore it where it most clearly manifests – in those all-encompassing, creative moments when our work becomes more like an inspired performance of a piece of music than just applying a technique or dutifully following a recipe. During such grand moments, your work unfolds with an uncanny clarity of knowledge and intent that makes your every intervention