

Peper, E. & Booiman, A.C.(2009). The hipbone is connected to the thighbone; the thighbone is connected to...Lessons learned from a somatic treatment session that significantly reduced severe chronic hip and leg pain. *NFP, Tijdschrift voor Psychosomatische Fysiotherapie*, 14(4), 13-17.

## **The hipbone is connected to the thighbone; the thigh bone is connected to ...**

### **Lessons learned from a somatic treatment session that significantly reduced severe chronic hip and leg pain<sup>1</sup>**

Erik Peper, Ph.D.,<sup>2</sup> and Annette Booiman, MRT,

San Francisco State University  
San Francisco, USA

Praktijk for Biofeedback and Remedial therapy  
Wormer, The Netherlands

After experiencing your guided exercises on the gym floor, I slept comfortably and without any pain for the first time in four years. This morning when I went grocery shopping, I could walk straight with a normal stride and again without pain. I feel great.

--Paul Maassen

The rapid successful resolution of pain occurred as the result of a spontaneous teaching moment with a person in the gym. This success is not just a case of magical/spontaneous healing but the integration of multiple factors that promote healing and underlie somatic awareness practices and successful biofeedback training. In this clinical note, we describe how the educational treatment began, the educational/clinical coaching sequence, and factors that therapists may want to consider in their treatment.

#### **How the educational treatment began**

Two therapists were working out in a fitness room. They were jogging fluidly and smoothly on the treadmill. Regardless of their ages (49 and 65 years old), they moved relaxed and effortlessly. After running on the treadmill for twenty minutes, they sat on the wooden floor and practiced a few simple Mobilizing Awareness® exercises (Mes, 2009). While performing fluid movement exercises that loosen the hips, pelvis and lumbar regions of the body, the two therapists were exchanging self-observations and the implications of how these practices affected the body. Then, a 58 year compact looking man wearing bicyclist clothing who initially was working out on a

stationary bicycle came over and wondered if he could also do these practices to regain some hip flexibility. He was very doubtful because he had burning pain down his thigh and reduced hip flexion following an arthroscopic hip joint surgery (joint cleansing). While talking, he demonstrated his movement limitation.

He talked about his frustrations with his inability to regain his fitness as the chronic burning pain down his leg interfered with his sports and movement.

He also observed that his walk had become irregular and off balance. His sleep was affected and he felt that his quality of life to enjoy nature and being alive was significantly reduced. He felt totally frustrated with his therapists and his treatments; even though, he faithfully did the prescribed strengthening, stretching and aerobic exercises. In the last four years he had not improved and after exercising he felt stiffer and experienced more pain.

He finally had made the decision to start a new investigation trajectory for his hip problems. He was on the waiting list for an MRI and eventually expected to receive hip or knee surgery.

### **The educational/clinical coaching sequence**

We listened with attention to his story. At the spur of the moment (and without any attachment to a possible outcome) we taught him two simple somatic pelvic/hip exercises from the “the Cat Stretch Series” from the Mobilizing Awareness® method (Mes, 2009; Hanna, 2004; Feldenkrais, 1991): (1) the Muscles of the Waist movement pattern and (2) the Psoas movement combined with the neck rotation. The teaching process was dynamic. We listened to his story as we began to teach him the first exercises.

He laid down on the floor to do the practices and the therapist felt his muscles of his waist and leg and provided ongoing feedback on what he was doing. He was asked to place his own hand on the muscles to feel the muscles tightening and relaxing. The major components of the practice included:

- Learning through imitation (mirror neuron learning) by observing the therapists doing their movement exercises (Billard & Arbib, 2002).
- Providing detailed explanation of what was expected while performing the exercise.
- Giving ongoing verbal and tactile feedback from the therapist to guide him through the movements.
- Teaching him to feel/sense his own muscle contractions and relaxation by feeling his own muscles with his hands and sensing the sensations inside, while reminding him to slow down the movements so he could feel and sense.
- Learning to differentiate isolated movements from whole-body movement patterns and developing a sense of where parts of the body are to move or where they are being held in tension.
- Teaching him to relax completely before he starting with the next movement sequence (this knowledge is based on research using SEMG Biofeedback and described in Peper et al, 2008). Like most clients and therapists, he thought he was relaxed even though his muscles remained slightly contracted.
- Incorporating diaphragmatic breathing in phase with the movement patterns-- inhaling during trunk extension and exhaling during trunk flexion.
- Describing how he could do these practices at home.

We shared the possibility that from our perspective, **use develops structure and structure limits use**. It could be possible that he was misusing himself while doing his strengthening, stretching and fitness exercises since he probably compensated with bracing and sensory motor amnesia after the initial surgery. From this perspective, if he could use himself differently, he may improve his movement patterns and reduce his pain.

The teaching/coaching focused on how to attend with passive attention to the sensations instead of focusing on how quickly, how much strength or distance could be attained. The somatic learning focuses

on feeling the sensations internally without judgment. This is often the opposite of how therapists teach or people practice their physical movements: distractions are common in the world of fitness and rehabilitation. Patients tend to go on the treadmill and focus on the speed or distance, the TV program or their iPod music and disconnect to their body. An example of an experiential Mobilizing Awareness® movement practice is *Loosen the neck* in which increased rotation usually occurs without effort or striving.

**Experiential mobilizing awareness movement practice: *Loosen the neck*.**

Sit on the edge of a chair with your hands on your lap and your feet beneath the knees. Rotate your head to the right and look at a spot on the wall as far to the right as you can. Remember that spot. Rotate back and look straight ahead.

Bring your left hand to the left side of your neck with your elbow pointing forward. Gently rotate the elbow to the left as you rotate your head to the right, then rotate your elbow to the right as you rotate your head to the left. Keep alternating moving your elbow in the opposite direction of your head. Do about seven or eight times.

Stop and drop your left hand on your lap and rest and relax for about fifteen seconds while breathing in the abdomen.

Now bring your left hand to your left ear while your elbow points straight ahead. Move your elbow forward and backwards so that the shoulder and shoulder blade move forward and back and allow the hand to slide forward and back over the ear. Repeat about ten times. Then stop and drop your left hand onto your lap and relax for fifteen seconds.

Now rotate your head to the right and look at a spot on the wall as far to the right as you can and then come back to center.

Most people observe that they can rotate and look much further to the right than before. This mobilizing movement exercise illustrates that significant change and flexibility can occur without forcing and striving (adapted from an exercise taught by Servaas Mes, 2008).

The specific movement practices were only a small component of the actual teaching process. Underlying the teaching of the practice were the qualities which provided a moment of safety, hope and acceptance. The therapist/teacher is totally present with and accepting of the participant. The teaching process continuously focuses on improving what is possible and being open to change and the possibility that health could improve. These components of the teaching process include:

- Being totally present with the participant.
- Timelessness during the teaching and there was no time limit—In this case the session took over an hour.
- Developing hope through the actual felt experience of movement and flexibility.
- Building from simple movements to more complex integration without evoking a striving or startle response.
- Guiding the participant to be present within his soma (body experience) while doing the movements with the appropriate mental, emotional and attentional attitudes and again learning to trust his body.
- Slowing down movements so that co-contractions/bracing, could be felt and experienced and the felt subjective experiences shared with the therapists.
- Relaxing after every contraction and extension, reducing co-contractions and dysponesis, and integrating the developmental movement reflex patterns--aiming to disengage previous patterns of movement disturbances.
- Providing an openness for him to talk about his previous experiences (frustrations how his pain limited and constricted his general daily activities as well as an openness and desire to learn).
- Reframing of his symptoms from a structural perspective (he was contemplating potential hip surgery) to a functional perspective. The function of the hip was limited and while practicing the somatic exercises his limitations became less.
- Making the learning process fun for the therapist and student. It was a spontaneous progression that developed sequentially as skills were acquired.
- Holding an implicit belief that improvements were possible **“there is always room for improvement.”**

## Results

After the session in the gym and without prompting he spontaneously said that his ongoing burning pain was totally gone--a pain which he had had every day for the previous four years. We then checked his hip flexibility and it had increased by 20 degrees; in addition, his leg movements appeared more fluid. We discussed with him the concept that if his pain could disappear than most likely it was not a structural issue but how he used his body and how he himself, albeit unknowingly, restricted his movement. We suggested that it was HIM who did the exercises and that he could do these also at home. He felt a significant improvement and requested an appropriate referral for continuing treatment/education. He emailed a few days later and said:

I am very happy that I met the two of you!!! Because of you, I have re-thought whether I need an operation. I rather not have the operation. I have shared my experience of the exercises with my personal physician. She was very impressed. I told her that I will continue with the exercises. Again thank you very much from me and also my wife.

--Paul Maassen

The success was not only for that moment, but continued thereafter. Two and a half weeks later, he realized that he needed to listen to his body's limits--when he does, he is pain free. By listening and respecting his body limits, he is slowly extending these limits and continues to improve his physical functioning.

## Factors that therapists may want to consider in their treatment

It is hubris to claim that we know exactly why he truly got better. It could be the somatic exercises, it could be timing/synchronicity; however, there are some common themes that appear to underlie this type of successful recovery. Ironically, some of these well known components, such as tender loving care, is often forgotten or eliminated in the drive for efficiency and cost containment. It is no wonder that patients consult more and more with alternative practitioners for treatment and report significant benefits (Barnes, Bloom, & Nahin, 2008). It may be more economical in the long term to include some of the following concepts in the treatment/teaching process.

- Many symptoms are the result of incorrect use and patients do not know what is going on and relate to the process of learned disuse, dysponesis, substitution, and sensory motor amnesia (Whatmore and Kohli, 1974; Cram, 2003, Hanna, 2004).
- Provide the experience of hope and success in the first session. So often the initial session makes the person feel worse as the focus is on taking the history and insurance information. Remember that in the process of telling their personal history, the negative feelings are often re-experienced and the patients feel worse. Orchestrate the first session so that the patient actual feels and senses a positive change which creates the non-verbal experience of hope.
- Create a learning environment that maintains the focus of the client in present time within his own body.
- Focus in the beginning more on the attentional and emotional processes of how the movements are done and less on strength and range of motion exercises.
- Training a movement means teaching small achievable steps with ongoing verbal and tactile feedback that the patient understands and feels—this takes time. The patient (it should really be student) needs to learn to sense and perform the intended movements in small bites. (Balm 2000).
- Movement needs to be done safely and very slowly with attention/awareness, openness and without judgment instead of will or mechanical repetition.
- Patients need to learn to let go of their patterns of tightness that were created in the past and learn to trust their body again in present time. Provide an atmosphere of safety so that the patient can learn. They need to be touched and nurtured to help themselves mobilize their own healing process.
- Relax muscles completely after each contraction—most people and therapists are not able to sense whether a muscle is relaxed or slightly tensed. Or whether other muscles or other biological systems are activated (Booiman & Peper, 2008).
- Work with emotional factors, mental images, and/or attentional style that are part of the healing

and learning process. Touch with a caring attitude directs the patient's attention and reframes the subjective experience how to sense that part of his body: *that* leg shifted to *my* leg.

- Listen to the patient and respect them as a person; since, many patients unfortunately experience that they are being treated as machine or a number. Tender loving care (TLC) is one of the major reasons why patient seek alternative and complementary medicine/holistic health approaches.
- Have enough time to teach a skill until it is mastered. It is almost impossible to teach a skill to a person in a 30-45 minute session. Remember how long it took to learn skillfully to ride a bicycle, to ski, or a baby to learn to walk. Our simple session took more than an hour, with two therapists- what he learned in this hour was life changing and shifted his perspective.
- Protocols should be a background theme that are dynamically adapted and changed for every person moment to moment. At the same time provide ongoing feedback of the learning process. In many cases therapists and patients are unaware of subtle or gross processes that are very important and beyond the "technical scope" of the treatment or exercise.
- Therapists need to become more aware of the difference between healthy movement patterns and movement patterns that create pathology. They need to remember that the hip bone is connected to the thigh bone; the thigh bone is connected...: in other words, how local movements are part of whole body movement patterns.

In private practice it is not always possible to work and teach spontaneously as described about this treatment session. Yet, this case does illustrate some of the important factors that are important to achieve clinical success and can be integrated in normal treatment sessions. Changing the treatment perspective from therapy to education may be beneficial. If therapist can see the patient as a student and the patient can see the therapist as the teacher then, if the student is not mastering the skill, it means that the teacher is not teaching correctly. In addition, if a patient perceives the therapist as a consultant, then he/she can hire and fire the therapist instead of being dependent upon him or her. While working with clients, the client is **a person first with a disorder not a disorder with a person attached to it.**

## References

- Balm M.F.K., *Gezond bewegen kun je leren.* (2000). Utrecht: Lemma
- Barnes, P.M., Bloom, B. Nahin, R. *CDC National Health Statistics, Report #12.* Complementary and Alternative Medicine Use Among Adults and Children, United States, 2007, December 2008.
- Billard, A. & Arbib, M. (2002). Mirror neurons and the neural basis for learning by imitation: Computational modeling. In: Stamenov, M.I., Gallese, V. *Mirror Neurons and the Evolution of Brain and Language.* Amsterdam, Netherlands: John Benjamins Publishing Company, 344-352.
- Booiman, A.C & Peper, E. (2008). Het gebruik van Biofeedback door oefentherapeuten. *Beweegreden.* 4(2), 34-38.
- Cram, J. (2003). The History of Surface Electromyography. *Applied Psychophysiology and Biofeedback,* 28 (2), 81-91
- Feldenkrais, M. (1991). *Awareness through Movement.* New York: HarperOne.
- Hanna, T. (2004). *Somatics.* Cambridge: De Capo Press.
- Mes, S. (2008). Self Hidden in Present Time. In House, J. (Ed.). *Peak Vitalità.* Fulton, CA: Elite Books, 44-52.
- Peper, E., Tylova, H., Gibney, K.H., Harvey, R., & Combatalade, D. (2008). *Biofeedback Mastery-An Experiential Teaching and Self-Training Manual.* Wheat Ridge, CO: AAPB.
- Whatmore, G., & Kohli, D.R. (1974). *The Psychophysiology and Treatment of Functional Disorders.* New York: Grune and Stratton.