
Clinical Perspective

From the Birdhouse

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The following started out as a reaction to the previous issue dedicated to Breathing (May/June 2003). However, the writer decided to take a different angle by also exploring a bird's eye view on the research and development of our profession. It is in the interest of all to be aware of innovative philosophies within our profession that might help us create less confusion and better results for our patients.

When you watch someone move, you are watching their neurophysiology in action.

I was very pleased to read the latest issue on 'The Diaphragm and Breathing', from the excellent quote by F.M. Alexander to John Oldham's insight on this often very neglected but fundamental area of human functioning. Just as Oldham explored a route outside the traditional realm of physiotherapy (studying existing research on breathing from the field of psychotherapy), I have explored another route outside the traditional world of physiotherapy. This is the field in health care that has not 'zoomed in' and specialized in one piece of the puzzle, but here we 'zoom out' and combine existing specialized knowledge within the realms of fully embodied human potential. This is the field where body and mind are truly integrated from a first person perspective and where the goal is to help our clients to become self-regulating within its means. 'Self-regulating' can be defined as being functionally independent.

A quick look in the history books explains the process of specialization within the health care system. After Descartes had created the split between mind and body in the 17th century, the western society in general became less interested in the actual experience of our own human body. With the advancements in technology we became even more interested in how our body looked on a picture, how it shows in a test or how other people will tell us what is wrong with our body. And when that is needed it sure is a blessing. The world of rehabilitation has moved right along by not only being the one who can tell you what is wrong with your body, but also being the one that is going to fix that body. But why is it that often we do not have any structural pathology going on but still we become dependent on others and technology to heal us? Health care systems can not keep up anymore fighting simple pathologies like back pain with an armamentarium of scientific research and technological gadgetry that is a drain on the financial budgets and often only leaves a trail of mysterious confusion, inconsistency and...the need for further research.

In the 1920's, F.M. Alexander was one of the first modern pioneers who started working with the body as a whole by regaining control over his own neuro-physiology. The works

of other pioneers such as Elsa Gindler, Ida Rolf, Moshe Feldenkrais and Thomas Hanna explored the previous understandings even further by creating 'movement & awareness' programs that are not based on specific injuries but based on human potential. The body does not lie when you become able to look from the inside out, and you will be amazingly surprised to find many dysfunctions within your own being that you never knew about. Dysfunctions that immediately explain your process of pathology in ways that cannot be discovered by modern technology. This fundamental skill of becoming aware from a first person perspective mobilizes and unites our muscles, bones, movements and emotions (and came for free when we were born). Because the intent of these awareness programs is on increasing human potential it becomes explainable why the same programs can often be used pre-injury (preventatively) as well as post-injury (rehabilitation). Mobilizing our own awareness is the most fundamental skill we all have to control movement within our body but due to the earlier mentioned mind-body split this dominant characteristic of human potential has not been integrated yet within the field of physiotherapy.

It is the beginning of the 21st century: we are living in a time where an integration is taking place between the traditional views and understandings of the health care system and the field of holistic human potential. Having gone through this (ongoing) process myself, I can only encourage you to do the same. The demands on our profession require us to provide the best care to our clients. However, that is not good enough anymore. You, as a researcher or as a therapist, will have to retrain your own neuro-physiology to understand the difference between, for instance, organic and pathological movement patterns. *This process can not be learned by reading a book or studying research but will only develop by dedicated practice of your own movement potential.* Unfortunately, scientific medical research that combines human movement potential in coordination with certain injuries or certain activities from a first person perspective has not been done yet. However, innovations and expanded views on existing treatment models are often the trigger to develop new scientific research, resulting in a potentially new evidence-based understanding and skill for all to be used.

Recent developments in scientific research describing the transversus abdominis muscle has been the catalyst that has revived the interest in the process of breathing within the field of Physiotherapy: researchers and therapists had 'zoomed in' and discovered a significant relation between a dysfunctional transversus and back pain. The next step was

taken in solving the mystery of back pain by developing a treatment protocol that enhances the function of the transversus in coordination with the other muscles of the abdominal cylinder: the muscles of the lower back (esp. multifidus), the pelvic floor and the diaphragm. Unfortunately most researchers and therapists were so focussed on the core that they omitted an in-depth investigation of how the core is integrated within organic human functioning. 'Organic' is here defined as the way we are designed to move, based on movement patterns that we develop from our early childhood, before the stress response has had a chance to alter our motions and emotions at a subconscious level. 'Core strengthening' exercises or 'core stabilization' exercises became the latest hype, often not embodying at all the concept of how the core moves in a real natural environment. Following this trend, fitness and exercise programs based on this model suddenly became incredibly successful and have even become integrated within the field of rehabilitation. And yes, many people have been helped by this approach, regaining control over their injuries and over their lives. But does it really make sense what we are doing to our clients? When we look at the natural movements of little children, have you ever witnessed anybody who is holding their core tight while moving other parts of the body? When a child reaches out with an arm, the rest of the body automatically reorganizes and realigns itself. When they arch backwards, their abdomen releases to lengthen even further. When they twist their head to the right, their hips counter-rotate to the left. Those are examples of organic movement patterns of the human being and these patterns are deeply rooted into our neuro-physiology.

The pelvic floor was next on our mystical journey to clarity in the world of rehabilitation. Once more, everybody zoomed in and found impressive ways to understand more about another piece of the puzzle. I have had the privilege to have worked with many women suffering incredibly severe Post Partum Pelvic Dysfunction at Dr. Andry Vleeming's Spine & Joint Centre in Rotterdam, The Netherlands and realised that the field of Physiotherapy is stretching its boundaries by challenging complex health issues like pelvic instability while it is restricting itself by its very specialised and very physical nature. At this day and age, the profession of physiotherapy is only in its infancy of development to understand that the physical appearance of emotional trauma and the emotional appearance of physical trauma are one and the same, and affect not just the pelvic region but of course affect the whole system. Let us leave it at that for now.

Following a logical route in the abdominal cylinder, the time had come to highlight the diaphragm and its function. In addition to its function in the breathing mechanism the diaphragm is also a stabiliser of the torso and we are exposed to research that confirms that all muscles are connected and every muscle will have to pull its share to balance the center of gravity. Paul Hodges demonstrates from a 'zooming in' point of view some interesting views on the function of the diaphragm. However, from a 'zooming' out point of view you can wonder why this research tested the

normal response of the diaphragm during a non-functional movement pattern. His conclusion of a possible instability of the spine during strenuous exercise is not taking into account the way the human being really moves as a whole and potentially creates confusion amongst everybody who is involved in sports activities. Athletes who embody muscular freedom are as strong as their full body pattern of motion allows them. When researching only a link of this pattern while not looking for alterations in normal human movement patterns, do we really get a true view on the function of the diaphragm? And more related to our daily practice: does a local strength test show if there is weakness in an organic movement pattern? It is only when 'zooming out' that these patterns become available for detection. The way our health care system is functioning now, these patterns go largely undetected, while they are at the foundation of explaining simple 'pathological' movement patterns that sabotage the intricate balance within joints and other structures and of course directly affect the way we breathe. It is these subconscious contractions that will pull our 'center of gravity' out of its equilibrium, 'surprisingly' creating a limp or a distorted posture. When moving a distorted body we can easily start feeling symptoms of physical and or emotional stiffness: the neck doesn't rotate as far, blood pressure rises, people start holding their breath (fear), their back stiffens up resulting in a tennis elbow or carpal tunnel, pelvic issues become more chronic and from a behavioural point of view: many discussions become one-sided. Our organic movement pattern has made way for a compensating pattern of movement that you are often not aware of yourself until it finally will have crossed the threshold of discomfort.

Karel Lewitt explains a beautiful test that demonstrates organic movement principles while bending forwards (stooping test / weight lifting test) in his published article on page 21 -24 of the last ODR. But also he 'zooms in'. The observation that the abdominals are not firing is the recognition of only a partial pathological movement pattern. Creating a better abdominal function is only a piece of the puzzle when you approach the situation from a 'zooming out' perspective. By not just working towards the rehabilitation of one piece of the puzzle but actually able to see all the pieces at the same time, we now understand that we have a new intent in our philosophy of treatment. Fundamental treatment programs can be created that will lead us to better and faster results by creating more organic intelligence within the client. The philosophy would be based on the model of disengaging the pathological pattern of movement while facilitating the neuro-physiology of the natural organic pattern of movement. The benefits of awakening one's neuro-physiology are tremendous: not only will there be a better abdominal function but many other functions will immediately benefit as well. From an increased strength within the abdominal cylinder to better breathing, from better core intelligence to better spontaneous movements in the extremities and neck, from better neck control to better posture and from better posture to a clearer and brighter person that is suddenly able to happily live up to its fullest potential. It is a different

intent and a different understanding of treatment but isn't this the intention behind rehabilitation?! And...maybe deep inside, isn't that what we signed up for when we started our physiotherapy training years ago? How would it be if physiotherapists only give exercises that are directly related to the ability to stand upright and move with ease? Exercises that have the prime intent to disengage the damaging effects of a pathological reflex pattern that is apparent throughout the whole body? With the technique and skill we have today it is often possible to upgrade someone's neuro-physiology within several hands-on sessions. The changes happen right in front of your eyes. You will realize that muscles need not only be trained in conscious movement patterns, but more importantly in subconscious movement patterns. Maybe it is a weakness in

these subconscious movement patterns that actually created a weakness in the transversus in the first place? Or maybe it was just a weakness in your awareness?!

These new developments are exciting, stimulating and very promising for the future of rehabilitation. It is only when we begin to realize that a 'dis-ease' like back pain, shortness of breath, heart attacks, RSI or a stroke is nothing more than a symptom of non-successful human existence that it becomes clear that we are at the beginning of a new era in rehabilitation. With our existing knowledge and ongoing developments of 'zooming in', the time has come to revisit 'zooming out' and develop new health programs that can be easily implemented into main stream society. The creation of health programs that recognize, reverse and resolve existing myths, confusions and complications... 