An Interview with Diane Lee of Discover Physio - What is your driver, Diane Lee?

Who is Diane Lee?

Diane Lee BSR, FCAMT, GunnIMS is from Vancouver, Canada and is a physiotherapist and Fellow of the Canadian Academy of Manipulative Therapists (FCAMT) with more than 35 years of clinical experience, multiple publications including books, articles and chapter contributions and over 20 years of experience teaching courses and collaborating with health professionals, physiotherapists and medical doctors. Together with Linda–Joy (LJ) Lee BSc, BSc(PT), FCAMT, GunnIMS, PhD candidate, School of Health and Rehabilitation Sciences, University of Queensland Canadian Institutes of Health Research (CIHR) Fellow, she co-founded an educational company called Discover Physio (2007) and co-developed The Integrated System Model; a model that aims to help the clinicians organize their knowledge and become more efficient and effective when treating patients. Diane’s book The Pelvic Girdle was first published in 1989 and Linda-Joy (LJ) was a major contributor in the recently released 4th edition (2011 Elsevier).

Diane Lee’s course in Levi

I attended the Discover Physio course “Discover the Role of the Pelvis In Whole Body Function, Treating the Whole Person with The Integrated Systems Model” with Diane Lee in Levi. The course was arranged by SMLY. This article briefly describes some things I learned during the course, which had a strong focus on assessment and how to choose the right area to treat with the right technique (how to find and treat ‘the driver’ or the primary impairment regardless of the site of pain). I had the opportunity to talk individually with Diane during this course about the evolution of the Integrated System Model and to ask her about her own ‘driver’.

Highlights of the course in Levi

The first lecture of this course gave us an overview of the principles of The Integrated System Model for Pain and Disability (ISM) and the key features that differentiate it from other approaches. These include ‘meaningful task assessment’ and ‘finding the primary driver’. Diane introduced us to a graphic developed by Discover Physio called ‘The Clinical Puzzle’ that was used as a reflection tool, much like a map to record key subjective and objective findings to facilitate critical clinical reasoning. She emphasized the importance of hearing the patient’s story in order to determine what has meaning for them with respect to their problem so that the assessment can be individually directed to finding solutions to their problems.

The relevant research evidence pertaining to each test used was presented (e.g. the one leg standing test and the active straight leg raise test) and the logic and clinical theories for those for which there is not yet evidence was discussed (SIJ joint mobility techniques, thoracic ring assessment and correction techniques (LJ Lee – see below)). A unique feature of this model is the
consideration of the thorax as being comprised of a set of rings and the impact that malalignment and non-optimal biomechanics for a task can have on function of the whole body. A thoracic ring is comprised of two ribs of the same number, the two vertebrae to which they attach and their anterior attachment (Lee D 1994). The Thoracic Ring Approach was developed by Linda-Joy Lee (2002) and is a key component of their collaborative Integrated Systems Model approach. The pelvis was also assessed as a functional ring (as opposed to individual bones and joints) and Diane referred us to more information in the latest edition of the book – The Pelvic Girdle, 4th edition published in 2011 by Elsevier (lead author – Diane Lee, main contributor – Linda-Joy Lee). Briefly, we learned how to assess if the pelvis was ‘giving way’ or unlocking at the SIJ and whether the cause was due to a problem within the pelvis or from a problem elsewhere that was overloading the SIJ. We learned how to look for timing of failed load transfer between regions (i.e. a specific thoracic ring, pelvis, hip, knee, foot) to determine which region should be treated first (finding the primary driver when there are multiple impairments). The whole body can be assessed very quickly with the ISM approach and when the primary driver is found and treated properly, changes in pain and function can be immediate. We saw this during the course with many of the course participants getting their bodies and persistent pain and problems figured out!

The principles of treatment in the Integrated Systems Model encompass a wide variety of treatment techniques taught in OMT and physiotherapy. This approach encourages that every treatment session consist of techniques and movement training to Release, Align, Connect and Move with the goal being to change the strategies that the patient is using that are non-optimal for their meaningful task (sitting, skiing, throwing). Diane introduced a release technique called Release with Awareness, which is a positional manual release technique that uses imagery so that the patient’s higher brain centers are involved in the technique thus facilitating learning and rewiring of the neural networks. These techniques were used to release muscles that through vector analysis were determined to be affecting the joints, body positions and movements of the primary driver.

Split down the middle?

Diane has recently been investigating the behaviour of the linea alba in a subgroup of women disabled by a separation of the rectus abdominis as a consequence of pregnancy. This condition is called Diastasis Rectus Abdominis and the research aims to determine if treatment and training can help or whether a surgical repair is necessary. She has received a grant from the Clinical Center of Research Excellence (led by Prof. Paul Hodges) to further these studies and hopes to publish two papers in the next year on the topic.

We also reviewed how to determine if the recruitment pattern of the abdominal wall (transversus abdominis (TrA), internal oblique, external oblique), erector spinae and the deep and superficial multifidus were optimal and the impact of the thorax on non-optimal recruitment of these muscles. It is important to assess the TrA at many points (from the rib cage to the pelvis) and to analyse it in relationship to the other abdominals, the pelvic floor and deep fibres of multifidus. Ultrasound imaging video clips were shown during the Diastasis Rectus Abdominis lecture to
highlight how ultrasound imaging is used to identify function, or not, of TrA, during different cues for activation and during a curl-up task. It is important to analyze the deep and superficial muscle functions individually, because of their individual changes, both can have augmented activity. It is important to examine what is the driver for disturbed muscle work to find the needed correction.

How was the Integrated Systems Model developed?

Diane and LJ coined the term ‘The Integrated Systems Model’ while writing the 4th edition of the Pelvic Girdle (2007-8) after multiple discussions that aimed to describe the approach they developed together. This approach comes from a combined 50 years of clinical expertise (Diane & LJ treating patients and teaching physiotherapists while simultaneously reviewing the scientific and clinical literature) and 8 years of scientific research (LJ has just submitted her PhD thesis which focuses on motor control and the thorax). Early models that influenced The Integrated Systems Model include those of Cyriax, Janda, Sahrmann, Kaltenborn, Maitland, Fowler, Lamb and more recently the work of Hodges, Hides, Jull, Richardson, O’Sullivan, Butler, Snijders, Mens, Vleeming, Melzak, Siegel, Doidge, Brazier etc. Both Diane and LJ are very physically active and have done many sports. Diane continues to train in Pilates and Yoga (Anusara) and LJ runs, rows, and also does Anusara Yoga. This personal experience in movement adds to the model as they deal with their own physical impairments and challenges. Proper nutrition was also highlighted during the course and is a topic of increasing interest to both. I asked Diane who has influenced her work (and continues to influence her work) most and she replied that there have been many people along the way but that recently it is Linda-Joy Lee, Andry Vleeming, Paul Hodges and Dan Siegel.

What is The Integrated Systems Model (ISM)?
The following is from the Discover Physio website www.discoverphysio.ca and is written by Diane & LJ

The Integrated Systems Model is a multi-modal model developed by Diane Lee & Linda-Joy Lee that is evidence-based (patient centered and considers both content knowledge and clinical expertise) and addresses the interplay of multiple systems (articular, myofascial, neural and visceral) and how they impact pain and strategies chosen for function and performance. In this model there are no recipes; each patient is considered individually. This approach requires the clinician to be skilled in clinical reasoning, which is a strong focus of The Discover Physio Series. Extensive use of case studies are used throughout the Discover Physio courses to demonstrate how a clinician can become a reflective practitioner and ultimately an expert in their field. Two key features of the ISM include Meaningful Assessment and Finding the Primary Driver for the patient’s problem(s). Treatment techniques/protocols integrated in this model include:

• manual therapy - techniques involving many different kinds of touch (i.e. direct vs listening), mobilization, manipulation (peripheral joints only) and a technique developed by Lee & Lee called Release with Awareness
• exercise instruction both for facilitation of optimal muscle patterning (rewiring neural networks and training neuroplasticity) and progressions into functional tasks
• patient education - how to know what information is important for individual patients (how do you explain their problem, their pain and what is most important to discuss?) In addition, ultrasound imaging for both assessment of core muscle function and biofeedback during re-education as well as dry needling techniques are covered.

**How did you choose the company name – Discover Physio?**

Diane & LJ chose the name of their company, Discover Physio, because they wanted to empower physiotherapists to re-discover how profoundly effective our profession can be when excellent clinical skills and knowledge are attained. Their mission statement is to ‘Move Physiotherapy Forward’ with an integrated approach for facilitating change. There is a lot of information that comes our way every year and this approach, The Integrated Systems Model, aims to help physiotherapists to organize and access all of the knowledge gained from the scientific research, clinical expertise and personal experience. She says: “You cannot separate the therapist from the therapeutic intervention”. We are human beings connecting with and helping other human beings. There is much more to therapy than what is physically done.

Diane: This is a modified quote from Isaac Newton (1675) “We stand on the shoulders of those behind us, alongside of those that are with us and are the shoulders for those who come after us. Knowledge is never developed by someone alone.” We are grateful for the past, appreciate the present and look forward to the future of our profession – Orthopaedic Manual Therapy & Physiotherapy.

**Diane Lee´s driver**

I asked Diane “Who or what is your driver? What is it that drives you to continue to do this work?” To which she replied: “The passion and enthusiasm of clinicians who attend our courses inspires me to continue to teach and travel to share this model”. She says it is rewarding to witness clinicians become more excited and passionate about physiotherapy as well as become more effective knowing that this can only improve the quality of life for the patients they treat. After all, all of this (the scientific research and accumulative clinical expertise) is supposed to be about just that; helping to restore a better quality of life for those who live with us in our communities.

**More information:**

For more information on this approach as well as Diane and LJ’s teaching schedule see their website [www.discoverphysio.ca](http://www.discoverphysio.ca).

There is the 3th edition of the book “The Thorax” coming. It will feature the Integrated Systems Model and the Thoracic Ring Approach and the lead author will be Linda-Joy Lee with contributions from Diane Lee.

When buying the book The Pelvic Girdle, 4th edition, you will have access to over 240 video clips and further case studies online at [www.thepelvicgirdle.com](http://www.thepelvicgirdle.com) (this website is currently being improved).
For information on Diane Lee’s clinic website and the Com-Pressor SI belt visit www.dianelee.ca

For information on Linda-Joy Lee’s clinic website visit www.synergyphysio.ca