



## Restoring Form and Function of the Abdominal Wall After Pregnancy

Instructor: Linda-Joy (LJ) Lee  
Physiotherapist

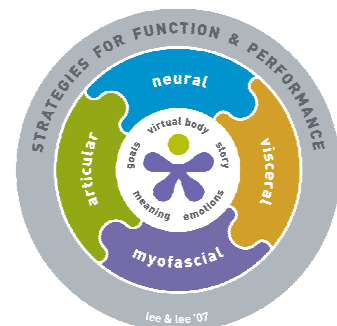
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It is well known that the abdominal wall plays a key role in how loads are transferred /controlled between the trunk and the extremities during all tasks. Pregnancy and delivery can have a significant, and long lasting, impact on the abdominal wall ultimately affecting both the form and function of the trunk and thus performance across multiple tasks (walking, running, continence, breathing etc). Scars in the skin from C-Section deliveries often connect deep into the fascial layers and viscera and can have an impact on neural mobility through the inguinal canal as well as recruitment and extensibility of the abdominal muscles during various tasks. It is common to see non-optimal muscle synergies after pregnancy and delivery (e.g. absent or delayed activation of transversus abdominis, over-activation, or inappropriate activation, of either internal or external oblique (neural system deficits)) that can perpetuate poor trunk motion/control and prevent the attainment of a woman's postpartum goals (to run, jump, exercise etc). In addition, widening of the linea alba and separation of the recti (diastasis rectus abdominis - myofascial deficits), while less common, may require surgical correction before training is successful.

This course, Restoring form and function of the abdominal wall after pregnancy presents a protocol for assessment and treatment of the abdominal wall based on The Integrated Systems Model (ISM), an approach developed from the collaborative work of Diane Lee and Linda-Joy (LJ) Lee. The ISM, which is fully described in the 4th edition of The Pelvic Girdle (Lee 2011), provides a framework for the clinician to organize knowledge gained from both research and clinical experience. The approach is highly individual (patient-centered) and evidence based (integrates the best available science and clinical expertise), and facilitates clinical reasoning and development of clinical expertise.

In this course, The Integrated Systems Model and Clinical Puzzle will be used to differentially diagnose and treat the neural and myofascial system deficits that commonly occur in the abdominal wall during pregnancy and delivery. Restoring form and function of the abdominal wall after pregnancy requires knowing how to release any restrictions within the abdominal wall and how to specifically train optimal recruitment strategies for all of the abdominal muscles. This training is highly specific since there are a multitude of non-optimal patterns that postpartum women present with - there are no recipes in this approach. In addition, it is important to know when to refer for surgical repair of the linea alba, know how to determine



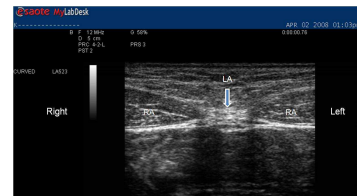
which patients will successfully recover full function with trunk training and who will not.

This course will focus primarily on these aspects of postpartum rehabilitation.

All Discover Physio courses combine lecture, interactive discussion, and practical lab sessions for an integrative educational experience that will provide evidence based assessment and treatment skills you can start using immediately, and move your clinical practice forward.

### **This course will cover:**

- The Integrated Systems Model (ISM) for Pain & Disability (Lee & Lee) as a framework for clinical reasoning and treatment planning along with the evidence that supports it.
- The current research pertaining to the abdominal wall and pregnancy/delivery (including diastasis rectus abdominis).
- Assessment - How to perform and clinically reason the findings from the following aspects of the objective examination (complete the Clinical Puzzle)
  - Strategies for function & performance
    - postural screen of the trunk in standing (low thorax, lumbar spine and pelvis),
    - load transfer tests to determine if strategy chosen is optimal or not for the joints of the low thorax, lumbar spine and pelvis (one leg standing task, curl-up task, active straight leg raise task).
  - Myofascial system tests
    - mobility of nerves within the inguinal and obturator canals (external approaches only) (clinical tests).
    - structural and functional analysis of the linea alba (myofascial system) (clinical and ultrasound imaging)
  - Neural system tests (clinical and ultrasound imaging)
    - for recruitment patterns of the abdominal wall during key meaningful tasks (standing posture, one-leg standing, curl-up)
    - for response to a verbal cue which should isolate a contraction of the transversus abdominis from the superficial abdominals.
- Hypothesis development - How to use clinical reasoning (reflection and interpretive reasoning) to develop sound hypotheses that explain the patient's pain and disability and facilitate the development of a prescriptive treatment plan (how to use the Clinical Puzzle for metacognition).
- Treatment - How to use the principles of the ISM approach for treatment (release, align, connect and move). Specifically, how to:
  - Release - apply fascial and nerve release/mobility techniques throughout the abdominal wall, inguinal canal, and external obturator foramen.
  - Release/align - apply "Release with Awareness" (Lee & Lee) to the over-active muscles of the abdominal wall.
  - Connect - determine the best position to begin to retrain optimal recruitment patterning of the deep and superficial abdominal muscles.



- Connect - determine the best cues/images to 'wake up and train new brain maps' for optimizing better strategies for function of the abdominal wall.
- Move - teach patients how to consolidate new brain maps for automatic function of the abdominal wall; using the principles of neuroplasticity to change strategies for function and performance in meaningful tasks for postpartum women.
- use the Com-pressor SI belt prescriptively to support this training in the early postpartum period.
- refine current training techniques ('exercises') for the abdominal wall to optimize strategies for function such that the musculoskeletal, continence and respiratory systems are supported across multiple and meaningful tasks necessary for postpartum women and early childcare.



Discover Physio is an educational company founded in 2007 as a result of several years of individual effort and collaboration between Diane Lee and Linda-Joy (LJ) Lee. Their joint passion in Discover Physio is to help people – both patients and therapists – to explore the possibilities and reach their potential through innovative, high-quality educational experiences. The 4th edition of The Pelvic Girdle (released December 2010) is testimony to the fruit of this collaboration.