**The Thorax – An Integrated Approach for Restoring Function, Relieving Pain**

*with*

**Diane Lee**

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**Course Description**

The effective management of back pain has received much debate and research due to the economic impact of this common condition. Research in the last decade has greatly increased our understanding of how muscles and joints function, leading to the development of new models such as The Integrated Model of Joint Function (Lee/Vleeming, 1998). This model highlights the interplay of form closure, force closure, motor control, and impact of the emotional state in affecting optimal function. Clinically, specific tests have been developed to evaluate each of these components. Some of these tests have been scientifically validated and have formed the basis for inclusion criteria for clinical research. In this course, the assessment tests as well as the treatment programs follow this scientific model and are therefore evidence-based. The ultimate goal is to restore articular mobility as well as the coordinated action of the muscle systems (both local and global) such that there is mobility as well as stability without rigidity of posture and without episodes of collapse: “Stability with Mobility”.

Whereas low back and pelvic pain have received considerable research in the last decade, functional research on the thorax remains limited. The principles which have been developed for the Integrated Model of Joint Function as it applies to the lumbar spine and pelvis can be applied to the thorax and although not yet based in scientific research, is a starting point for the clinician.

**The Thorax – An integrated approach for restoring function, relieving pain** (Level 1) is a 2 day introductory course that focuses on the clinical application of the integrated model to the thorax particularly as it pertains to articular mobility/stability and segmental thoracic mobilization and stabilization techniques. This course is an important prerequisite to the Level 2 course “Motor Control & Exercise – Thoracic Stabilization and the Functional Upper Limb”.

**Course Outline**

This Level 1 course will:
- review the principles of Integrated Joint Model developed by Lee & Vleeming
- review the anatomy of the thorax with a focus on the articular anatomy
- present the current knowledge of the biomechanics of the thorax
- practice palpation and surface anatomy of the thorax
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- discuss and practice the clinical tests which examine the function of the thorax (segmental position, regional movements, breathing)
- discuss and practice the clinical tests which examine specific articular mobility and stability tests for the spinal and costal joints of the thorax
- introduce a clinical test (prone arm lift) which examines load transfer through the thorax. This will be covered in greater detail in the companion course “Motor Control & Exercise – Thoracic Stabilization and the Functional Upper Limb”.
- discuss the differentiation of articular from myofascial causes for restricted mobility (when to use a joint mobilization technique vs. a myofascial release technique)
- teach specific mobilization techniques for the zygapophyseal and costotransverse joints of the thorax and discuss the indications for their use
- introduce the chemistry of breathing (ventilation and hypocapnia)
- practice techniques which restore optimal breathing patterns which help to facilitate mobility of the thorax
- introduce techniques to retrain a neutral thorax alignment in sitting
- introduce cues and techniques for isolation and training of the segmental muscular stabilizers (local muscle system) to prepare the thorax for additional loading (adding the functional upper limb)

**Learning Outcomes**

At the conclusion of this two day seminar, the participant will have an understanding of the “Integrated Model of Function” and how to use the clinical tests to

1. reach a diagnosis of impairment of the thorax – differentiate joint problems from the neuromuscular system
2. formulate and execute a treatment plan which includes basic mobilization techniques (passive and active) for the thorax as well as an introduction to some home exercises for segmental stabilization training (muscular segmental stability)

**Course Preparation**

To get the most from this course it is advised that the participant review the anatomy of the thorax. A detailed knowledge of the joint shapes and how they vary throughout the thorax will be helpful for learning the specific assessment and treatment techniques.

**Course Requirements**

Wear comfortable clothing including a top which is suitable for examination of the thorax (bathing suit top, sport top). DO NOT WEAR A T-STRAP TOP. These tops cover the spine and make it very difficult for your partner to do lab.
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Course Instructors – Diane Lee & Linda-Joy Lee

Diane Lee BSR, FCAMT, CGIMS
Diane Lee is a Physical Therapy graduate from the University of British Columbia, Canada, 1976. She qualified with distinction as a Fellow of the Canadian Academy of Manipulative Therapists in 1981 and went on to instruct and examine in the Canadian Orthopaedic post-graduate education system for 18 years. Currently, Diane is the owner as well as an education and clinical consultant at Diane Lee & Associates in White Rock, British Columbia, and is well known both nationally and internationally for her clinical work on pelvic dysfunction. She has integrated the recent scientific research on lumbopelvic function into a clinical model for assessment and treatment. This model was developed in conjunction with Dr. Andry Vleeming. She is currently collaborating with Linda-Joy Lee on the clinical application of this model. In addition to lecturing internationally on this topic, Diane is an editorial advisor for the journal Manual Therapy as well as the Journal of Manual and Manipulative Therapy and a Scientific Committee member for the Interdisciplinary World Congress on Low Back and Pelvic Pain.

Linda-Joy Lee BSc, BSc(PT), FCAMT, MCPA, PhD Candidate
Linda-Joy is a Physical Therapy graduate from the University of British Columbia, Canada, and UBC Wesbrook Scholar (1996). “LJ” became a Fellow of the Canadian Academy of Manual and Manipulative Therapists in 1999 with distinction and completed her certification in Intramuscular Stimulation (IMS) in July 2001. LJ is a clinical and education consultant at Synergy Physiotherapy in North Vancouver, BC. LJ has co-taught with Diane Lee since 2000, and is currently collaborating with Diane on several projects relative to the Integrated Model of Function. She developed the “Training the Trainers” course to complement Diane’s Postpartum Health for Moms educational program. LJ published a chapter on “Restoring Force Closure/Motor Control of the Thorax” in the book “The Thorax: An Integrated Approach” by Diane Lee and co-authored two chapters in the 3rd edition of “The Pelvic Girdle” by Diane Lee. In addition, she co-produced, along with Diane, a 4.5 hour DVD titled “An Integrated Approach to the Assessment and Treatment of the Lumbopelvic-Hip Region”. Passionate about new challenges, LJ is also pursuing a PhD investigating motor control of the thoracic spine and its relation to the lumbopelvic region at The University of Queensland with Professor Paul Hodges.