

*Dr. Alison Grimaldi*

www.dralisongrimaldi.com

## MASTERING MOVEMENT OF THE HIP & PELVIS

*Do you have a clear understanding of when, why and how to assess and address muscle dysfunction around the hip and pelvis, in order to optimise and expedite patient outcomes?*

*Do you find yourself prescribing the same exercises for every hip & groin pain patient, regardless of their presentation?*

*Do your patients perform the same program for weeks or months without progressions or an understanding of what they are attempting to achieve and why?*

*Would you like to Fast Track your hip and groin Rehab?*

Movement patterning and muscle function around the hip and pelvis are key considerations for any lumbopelvic or lower limb problem and may even impact on upper limb function. Assessment and retraining in this region require a specific and targeted approach that should consider the multifaceted requirements for optimal function and the limitations of an individual's musculoskeletal system. With respect to current practices around muscle testing and exercise prescription, often strength is the only consideration. While this is an important consideration, normal results on strength testing may be returned from a muscle synergy within which significant dysfunction exists. If weakness is not the primary deficit, generic strengthening may worsen rather than improve the situation by reinforcing poor recruitment strategies or imbalance in the contribution of muscles within a movement synergy e.g., TFL within the abductor synergy. In exercise literature, often maximal EMG is the sole indicator used for exercise selection. EMG levels are not reflective of force generation and high levels of EMG may simply reflect active insufficiency where the muscle is not at an optimal range to generate force efficiently. This premise also assumes that maximal recruitment is optimal for muscle retraining and musculoskeletal health. While higher EMG levels may be required for enhancing strength or more particularly for hypertrophy, other factors should be considered.

Choosing an exercise with highest %MVC

- in a disadvantageous length-tension relationship
- while encouraging poor recruitment patterning and efficiency
- with high load imposed on underlying joints or soft tissues

may not be in the best interests of achieving optimal or painfree function.



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### **This course aims to:**

- Enhance clinical reasoning, and skills for development of therapeutic exercise for the hip & pelvis
- Challenge participants to re-examine their own clinical practiced in the light of the presented evidence base
- Stimulate new thought & provide direction for those who may be interested in contributing to the research base that is shaping contemporary clinical practice in this field.

### **Learning Objectives:**

*Upon completion of this course, participants should be able to:*

- Perform a multifaceted assessment of muscle function for each group of synergists around the hip – hip flexors, abductors, extensors, external rotators and adductors, using standardised, objective measures
- Determine the most appropriate exercise approach to target specific impairments in:
  - a. Muscle size & strength
  - b. Muscle endurance – global or regional
  - c. Power, rate of force development, plyometric ability, agility
  - d. Neuromotor function - kinematic and muscle recruitment patterns
- Progress an exercise program in an appropriate & timely manner, using key markers for exercise effect & tolerance.

## **ONLINE LEARNING COMPONENT**

The substantial theoretical component of this course is presented in an online learning format for your flexibility and optimal learning experience.

- 4 hours of PowerPoint lectures with printable notes.
- Learn anywhere, at your own pace, in your own time.
- Rewind and revise as many times as you like.
- Self-assessment quiz.
- 3 months of unlimited access to video content

The content of this online component covers:

- Detailed review of functional anatomy of hip & pelvic musculature
- Changes in muscle function associated with joint pathology & unloading
- Implications for prescription of therapeutic exercise

## MASTERING MOVEMENT OF THE HIP & PELVIS

### PRACTICAL WORKSHOP (1.5 Day)

The practical workshop will provide opportunity to develop skills in:

- Assessment of the different aspects of muscle function for each group of synergists around the hip – hip flexors, abductors, extensors, external rotators and adductors, using standardised, objective measures
- Development of a therapeutic exercise program that addresses specific dysfunction within a muscle synergy while considering
  - Optimal efficiency and load-sharing within a muscle synergy and across the kinetic chain
  - Impact on health of musculoskeletal tissues such as the underlying joint, local tendons and transiting nerves
  - Specific needs of the individual
  - Individual morphology or pathology
- Day 2 will include participant development of exercise interventions for specific cases. This is a group activity that uses case-based learning to consolidate understanding of principles and ability to apply techniques within specific clinical applications.



## About the Presenter

With over 30 years of clinical experience and particular expertise in the management of hip, groin and lumbopelvic pain and dysfunction, Dr Alison Grimaldi is Principal Physiotherapist at Physiotec and an Adjunct Senior Research Fellow at the University of Queensland.

Dr Grimaldi completed a Bachelor of Physiotherapy at the University of Queensland in 1990, a Masters of Sports Physiotherapy in 1997, and her Doctorate in Philosophy in the Field of Physiotherapy (PhD) in 2008. Her PhD studies were concerned with improving our understanding of hip muscle function and the relationship with hip joint pathology and weightbearing stimulus. These studies involved research collaboration with the European Space Agency.

Alison continues to be passionate about extending our understanding of why we develop problems around the hip and pelvis, and what we can do to most effectively prevent and manage these problems. She has been a key investigator on the LEAP gluteal tendinopathy randomised clinical trial conducted through the University of Queensland and University of Melbourne and is involved in ongoing research in this and other fields.

Due to her voluntary contributions to research at the University of Queensland, Alison Grimaldi has been awarded the title Adjunct Senior Research Fellow in the School of Health & Rehabilitation Sciences. Alison has co-supervised a number of PhD students and has pioneered the use of Real Time Ultrasound technology for the assessment and retraining of muscle function around the hip and pelvis.

It is one of Alison's core beliefs that research should be relevant to clinical practice and helping the patients we treat every day, and that physiotherapists in the community should have access to this valuable information to allow them to transfer this knowledge into clinical practice as quickly as possible. To this end, Alison continues to publish, present and provide practical workshops for other health professionals.

Alison has authored or co-authored over 30 peer-reviewed scientific papers, contributed to three leading clinical texts, conducted over 100 clinical workshops and presented over 50 keynote, invited or podium conference presentations around the globe. Alison also runs a Hip Academy with online learning and live mentoring at [www.dralisongrimaldi.com](http://www.dralisongrimaldi.com)