Muscle Synergies

Beyond global movement control for pain and recurrence



GIVE YOURSELF  
THE BEST  
ADVANTAGE

HELPING YOU  
RESTORE  
QUALITY OF  
LIFE

MOVE  
BETTER -  
DO MORE

MOVE WELL  
TO LIVE  
WELL

### Course introduction

Hip, shoulder and spine recurrence impacts performance and function across the board. Despite the use of hands-on and movement interventions combined, symptoms often return. Global and local muscle retraining both have an essential role in the management of recurrence and regaining the best function for the individual. Deciding where to start, global or the local muscles retraining, to achieve the best outcome, can be guided by assessment. In the presence of recurrence, a finer resolution of movement assessment is required, guiding a more bespoke process of retraining.

This course gives clinicians the ability to identify exactly why, when and how to assess and retrain the local muscle synergists to manage translation control deficits within their patients. It supplies targeted retraining strategies to manage episodes of recurrence at the neck, shoulder, hip and low back. This course supplies contemporary clinical application of research, and questions many of long-held beliefs regarding the assessment, retraining and function of muscles possessing a ‘translation control’ role.

Practical skills will be gained in changing the impairments in local muscle recruitment to reduce recurrence and restore confident, sustained pain-free function with a particular focus on the hip, shoulder, neck and low back.

### Course outline

The global movements we observe during function are accompanied by the translations of slide, glide and roll. These translations are managed through the muscles synergists with local control role. In the presence of pain or a history of pain, this system can suffer impairments leading to recurrence of symptoms. The assessment and subsequent retraining of this system can significantly reduce the high incidence of musculoskeletal pain recurrence.

This course harnesses the wealth of knowledge and clinical mileage amassed over decades to deliver contemporary clinical tests, evaluating the recruitment efficiency of local stabiliser muscles, in addition to specific retraining strategies to recover their recruitment efficiency.

The course identifies how individuals can be identified who will respond to local muscle retraining, allowing for a more effective and time efficient rehab intervention. The course introduces specific cognitive retraining strategies to change local stabiliser muscle recruitment, emphasising the need to progress into day to day function. Reducing recurrence and restoring confident, sustained pain-free function through targeted retraining of the local stabiliser system is the underpinning aim of the course.

### KEY FEATURES

* Identifies individuals whose symptoms respond to local muscle retraining, improving clinical decision-making processes regarding who should start with early or late, local muscle training in rehab
* Supplies targeted retraining interventions, allowing clinicians to be increasingly time efficient in addressing patients’ recurrence risk
* Supplies therapists with clinical reasoning and skillset to manage the complexities of deficits within local stabiliser muscle synergists
* Develops skills to successfully use clinical tools and a movement focussed framework to change the mechanisms of movement impairment associated to local stabilizer muscle system
* Allows for integration of translation control retraining alongside other movement interventions

### LEARNING OUTCOMES

At the end of this course the participant should be able to:

* Demonstrate the ability to assess and retrain impairments in the local stabiliser muscle system related to a patient’s risk of recurrence
* Demonstrate an ability to employ a clinical reasoning framework to identify which patients require this approach and when
* Demonstrate enhanced skills of cueing and recruitment facilitation
* Demonstrate an ability to critically appraise the current employment of local stabiliser muscle assessment and retraining in light of the current body of evidence

### PROGRAMME OUTLINE

* Why movement matters to the local muscle system and vice versa. Review function of the local stabiliser muscles in providing protective control of inter-segmental displacement in functional movements
* Review anatomy and function of local stabiliser muscles of low back, hip, neck and shoulder
* Review roles of normal local stabiliser muscles and how they can be altered in the presence of pain and impairment.
* Examine the evidence for impairment of these muscles associated to pain and history of recurrent pain
* Principles of the clinical evaluation of recruitment efficiency of local stabiliser muscles
* Assessment and retraining of local stabiliser muscle system of low back, hip, neck and shoulder to reduce recurrence and restore confident, sustained pain-free function

We will cover

* Principles and strategies of retraining local stabiliser recruitment efficiency to control inter-segmental displacement and segmental translation at the hip, shoulder and neck and low back/pelvis
* Identifying optimal retraining strategies and progressions for local stabiliser retraining of low back, hip, neck and shoulder
* Applying motor learning strategies for cognitive recruitment efficiency of the local stabiliser muscles of low back, hip, neck and shoulder
* Matching recruitment efficiency retraining to the client’s / patient’s goals and priorities

### Programme

#### Day 1:

9.00 – 9.30 Evaluation of movement

9.30 - 10.30 Function and impairments in local muscle system

10.30 -10.50 Coffee

10.50 - 12.30 Principles of testing for recruitment efficiency of local muscle system

The process of testing recruitment efficiency of local muscle system

Clinical testing of cognitive recruitment efficiency of the local stabiliser muscles of the low back.

12.30 - 13.30 Lunch

13.30 - 15.00 Clinical testing of cognitive recruitment efficiency of the local stabiliser muscles of the low back.

15.00 - 15.20 Tea

15.20 – 17.00 Continue

#### Day 2:

9.00 – 10.30 Clinical testing of cognitive recruitment efficiency of the local stabiliser muscles of the hip

10.30 - 10.50 Coffee

10.50– 12.30 Clinical testing of cognitive recruitment efficiency of the local stabiliser muscles of the hip / neck

12.30 - 13.30 Lunch

13.30 - 15.00 Clinical testing of cognitive recruitment efficiency of the local stabiliser muscles of the neck

15.00 - 15.20 Tea

15.30 – 16.00 /17.00 Matching movement retraining solutions to the client’s / patient’s goals and priorities.

Where next?

(programme subject to change)