

“UNDERSTANDING OUR CONNECTIVE TISSUE”

COURSES AND WORKSHOPS PRESENTED BY:

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We offer three basic, LEVEL 1, courses/workshops to physiotherapists and other healthcare professionals:

COURSE 1:

Understanding our Connective Tissue System:

THE SHOULDER GIRDLE

COURSE 2:

Understanding our Connective Tissue System:

THE LOWER LIMB

COURSE 3:

Understanding our Connective Tissue System:

COMPLAINTS AFTER BREAST CANCER TREATMENT

All three of the above courses introduce the participants to the anatomy, evaluation and treatment of the connective tissue and fascial systems.

Courses are run over 16 hours (2 days) and because of the intense mix of theory and practical, we limit the number of participants to maximum 18 per course. Following is a brief outline of the basic course content and a typical two-day program. (These programs are changed for the specific course or workshop to be presented).

PROGRAMME:

Our course goal will be to share with you how normal day-to-day function is changed by interference with the fascial and connective tissue anatomy. By understanding how various systems interlink to determine function, we can explore new and integrated treatment strategies as a tool in relieving the distress of the painful upper limb in **course 1**, and the lower limb in **course 2**.

After these two-day workshops, participants should have a clearer understanding of:

- The functional anatomy and biomechanics of the shoulder girdle (course 1), and the hip/knee complex (course 2).
- The structure of connective tissue, its classification, and its role in normal musculoskeletal function (To be covered on both courses).
- How this system is damaged by trauma, surgery, overuse, or habit, and ultimately the body's postural responses with functional adjustments leading to later complaints – even in non-related areas of the body.
- How to evaluate the connective tissue/fascial system.
- How all the above guides you, the therapist, through the most appropriate personalized treatment strategy for every individual patient.

Our courses will be an intense mix of theory and practical work, and will therefore only allow a limited number of participants.

ELEMENTS AND SUBJECTS COVERED DURING COURSES

PART 1 - ALL COURSES

1. BODY DESIGN:

The principle that all structures are involved in movement quality is expanded on. Seeing the body as a “tensegrity” structure using self-assembly into a hierarchy of systems from microscopic to macroscopic, full system pre-stress and minimum pathway (geodesic) principles for musculoskeletal function are explained. This expands our traditional view of linear biomechanics in explaining human movement into a more realistic view of the body functioning as a non-linear system where small changes can produce a disproportionately large output.

2. CONNECTIVE TISSUE:

One of the main aims of the course is to bring connective tissue as a largely microscopic subject taught as a basic science in the introduction to anatomy into the macroscopic domain where it becomes a living tissue that has been described as our “organ of form” that can be assessed, moved and manipulated. In this section we look at

- a) The structure of connective tissue
- b) The classification of connective tissue with the emphasis on connective tissue proper (this includes tendons, ligaments, fasciae and aponeurosis).
- c) Vessels and nerves of connective tissue where it's role in fluid transfer within the extracellular matrix and its role in proprioception and sensation are highlighted
- d) Connective tissue architecture. In this we highlight design differences on a macroscopic level in different parts of the body with special reference to function and movement quality. Different fascial layers encountered therapeutically i.e. skin/epidermis, superficial fascia/hypodermis, deep fascia

and myofascia (epi-, per-, and endomysium) are explained and evaluated within their functionally important contributions to movement.

- e) Functions and roles of connective tissue with the emphasis on the fascial components of the connective tissue.
- f) Physiological changes that occur in tissue (especially connective tissue) during injury, immobilization and remobilization. Connective tissue is both *plastic* and *malleable*. The wound healing process is explained and how tissue responds to manual therapy during all stages of healing. The role of fibroblasts and the laydown of collagen during healing and immobilization are highlighted. Finally, how manual therapeutic interventions contribute to the repair and restoration of connective tissue and fasciae are explained.

3. **CONTRIBUTORS TO “PROBLEM JOINTS”:**

Factors contributing to changes in the movement patterns and movement quality of joints and limbs are discussed. These factors could be muscle imbalances, surgery or trauma. We also explore how a “local” tissue dysfunction can contribute to a “global” body response. How a local loss of tissue gliding and mobility through thickening or scarring changes movement patterns elsewhere in the musculoskeletal system is discussed.

4. **MANUAL ASSESMENT AND TREATMENT OF THE CONNECTIVE TISSUE:**

Assessment and grading of the depth of touch and palpation of tissue are practically demonstrated and practiced. Palpation and assessment are carefully performed from the least invasive level on the superficial structures – skin and superficial fascia, to the deeper fascia/myofascia and myofascia/periosteum layers. These layers are:

- a) Evaluation of the skin. Its quality of movement and mobility, contour of the body part, areas of superficial changes and temperature are evaluated.
- b) Mobility of the skin as a unit on the superficial fascia, its mobility and gliding quality are evaluated.
- c) The deep fascia and myofascia of the superficial layers of muscles are evaluated.
- d) Deep fascial relationships to other deep fasciae and myofascia on bone interfaces are evaluated.

We palpate for tissue mobility, flexibility and freedom of tissue glide. We are teaching to identify areas of compromised tissue glide, tissue hypomobility and inflexibility, as well as to identify the position and direction of tightness.

This concludes **part 1** where connective tissue as a therapeutically responsive tissue is introduced.

PART 2 – DEPENDING ON THE COURSE TITLE

Part 2 of the teaching module/course is more area or joint specific. In these sections three main areas are covered. These are:

- The Shoulder Girdle.
- The Lower Limb.
- Complaints after Breast Cancer Treatment.

In all three these modules, the emphasis is on basic **functional anatomy** of the part under discussion, the detailed **biomechanics** of the part or joint, and how soft tissue changes could potentially change normal joint biomechanics, leading to pathology, pain or dysfunction.

In “The Shoulder Girdle” module, the problem shoulder is emphasized and how soft tissue changes may lead to impingements, rotator cuff dysfunction, changes in scapulothoracic rhythms and problems in the cervical spine.

In “The Lower Limb” module, soft tissue tightness and scarring contributions to the development of lumbar spine, hip and knee dysfunction are investigated.

The “Complaints after Breast Cancer Treatment” module investigates the role played by damage to anatomical structures on the chest wall by surgery, reconstruction and radiotherapy to short, medium and long term dysfunction in this patient group. These dysfunctions could be classified as post mastectomy pain syndromes, varying degrees of shoulder or upper limb dysfunctions, lymphoedema or weakness and any combination of the above. Evaluation of soft tissue contributions to these problem areas and the planning of individualized treatment strategies are emphasized throughout.

“UNDERSTANDING OUR CONNECTIVE TISSUE”: LEVEL 2

For participants who have done a basic level 1 course, we offer a more in depth one day follow-up LEVEL 2 course. This course is run over 8 hours and may be extended to a two-day course in future. The ideal number of participants for this course is normally 12.

The program will be informal with no timed presentations. Our goal will be to consolidate theory and treatment of the myofascial dysfunction of the upper quarter (or lower limb). We will mix theory and practice throughout.

Basic topics to be covered are:

- Update on the developments in fascial understanding.
- The implications of changes in fascial anatomy to wider dysfunction of the body.
- Introducing the myofascial unit as an extension of what we covered in Level 1.
- Taking a wider look at the anatomy involved, and problem solving on other parts of the body.
- We aim to improve skills in clinical examination and introduce treatment of the deeper layers of connective tissue.

You should bring your notes from the previous course, and read through the anatomy of the upper quarter and lower limb. If you have a patient ‘case study’ for discussion please bring this along too.

The day will be interactive with lots of practice and fun.

Course objective - The aim is to improve skills in clinical examination and introduce treatment of the deeper layers of connective tissue.

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