Workshop Title
The Fascial Manipulation© Technique and its Biomechanical Model -
A Guide to the Human Fascial System

Workshop Outline

1) Outline the anatomical research that has verified and modified the anatomical basis of the biomechanical model currently applied in Fascial Manipulation©.

2) Introduce and explain the basic principles of Fascial Manipulation© (myofascial unit, centre of coordination, centre of perception).

3) Explain the specific clinical assessment process via illustration of the Assessment Chart and the objective examination for the analysis of movement on the spatial planes.

4) Demonstrate the application of this technique in a clinical setting.

Presenters
Luigi Stecco, Physiotherapist, inventor of the technique Fascial Manipulation
Antonio Stecco MD, Ospedale Civile, Padova, Italy

Workshop coordinator: Thomas Findley MD PhD

Date
Saturday July 3, 2010

Location
Moving Body Resources
112 West 27th Street, 4th floor
(W. 27th Street between 6th and 7th Avenues)
New York, NY 10001

A Source for Hotel Accommodations
Considering where to stay… quick transportation around Manhattan is readily available from virtually all locations in the city.

Workshop Description
This workshop will illustrate new studies of the gross and histological anatomy of the human fasciae, and explain the biomechanical model for the human fascial system currently applied in the manual technique known as Fascial Manipulation©. The model represents a three dimensional interpretation of the fascial system. Its hypothetical foundations are fruit of more than thirty years of analysis of anatomical texts and clinical practice. More recently, dissections of unembalmed bodies have provided anatomical verification of numerous hypotheses including the fascial continuity between different body segments via myotendinous expansions and the possible distribution of tensional forces. This workshop will also propose new studies concerning the histological characteristics of superficial and deep fasciae (fibre content, structural conformation, and innervation) and debate the role of deep fascia in proprioception. The Fascial Manipulation© technique is based on the concept of myofascial
units (mf units) united in myofascial sequences, and involves manual friction over specific points (called Centres of coordination and Centres of fusion) on the deep muscular fascia. This underlying rationale and the resultant analytical process guides the therapist in the combination of points to be treated and allows therapists to work at a distance from the site of pain, which is often inflamed due to non-physiological tension. Musculoskeletal disorders commonly treated include low back pain; tendinitis, sprains, peripheral nerve compressions, and neck pain syndromes, whereas visceral dysfunctions can include gastritis, irritable colon syndrome, constipation, and dysmenorrhoea.

Program Schedule

9:00 Arrivals / Sign In
9:30 Introduction: A brief history of Fascial Manipulation (10 min)
   - Highlights of anatomy of the human fascial system (1 hr)
     - Gross anatomy of the fascial system
     - Histology - layered conformation
     - Myofascial/myotendinous expansions
     - Innervation
   - Questions (10 min)

Biomechanical model - Myofascial Unit, Centre of Coordination, Centre of perception. Sequences, Centres of fusion, diagonals, and spirals. (1 hr)

Questions (10 min)

12:00 Lunch

1:30 Assessment process - Clinical rationale and Assessment Chart (1 hr)
   - Demonstration of a treatment (45 min)
   - New directions in research: (15 min)
     - the role of the Visceral fascia in internal dysfunctions
     - the role of the superficial fascia in venous return mechanisms
   - Questions and Discussion concerning the Fascial Manipulation technique and its relevance to conference findings (30 min)

4:00 Adjourn

Short presentation of the Fascial Manipulation technique©

Fascial Manipulation© is a manual therapy that has been developed by Luigi Stecco, an Italian physiotherapist from the north of Italy. This method has evolved over the last 30 years through study and practice in the treatment of a vast caseload of musculoskeletal problems. It focuses on the fascia, in particular the deep muscular fascia, including the epimysium and the retinacula and considers that the myofascial system is a three-dimensional continuum. In recent years, via collaboration with the Anatomy Faculties of the René Descartes University, Paris, France and the University of Padova in Italy, Dr. Carla Stecco and Dr. Antonio Stecco have carried out extensive research into the anatomy and histology of the fascia via dissection of unembalmed cadavers. These dissections have enhanced the pre-existing biomechanical model already elaborated by Luigi Stecco by providing new histological and anatomical data. This technique presents a complete biomechanical model that assists in deciphering the role of fascia in musculoskeletal disorders. The mainstay of this manual technique lies in the identification of a specific, localised area of the fascia in connection with a specific limited movement. Once a limited or
painful movement is identified, then a specific point on the fascia is implicated and, through the appropriate manipulation of this precise part of the fascia, movement can be restored. In fact, by analysing musculoskeletal anatomy, Luigi Stecco realised that the body can be divided into 14 segments and that each body segment is essentially served by six myofascial units (mf units) consisting of monoarticular and biarticular unidirectional muscle fibres, their deep fascia (including epimysium) and the articulation that they move in one direction on one plane. Numerous muscle fibres originate from the fascia itself and, in turn, myofascial insertions extend between different muscle groups to form myofascial sequences. Therefore, adjacent unidirectional myofascial units are united via myotendinous expansions and biarticular fibres to form myofascial sequences. While part of the fascia is anchored to bone, part is also always free to slide. The free part of the fascia allows the muscular traction, or the myofascial vectors, to converge at a specific point, named the vectorial Centre of Coordination or CC. The location of each CC has been calculated by taking into consideration the sum of the vectorial forces involved in the execution of each movement. The six movements made on the three spatial planes are rarely carried out separately but, more commonly, are combined together to form intermediate trajectories, similar to the PNF patterns. In order to synchronize these complex movements other specific points of the fascia (often over retinacula) have been identified and, subsequently, named Centres of Fusion or CF. Deep fascia is effectively an ideal structure for perceiving and, consequently, assisting in organizing movements. In fact, one vector, or afferent impulse, has no more significance to the Central Nervous System than any other vector unless these vectors are mapped out and given a spatial significance. In human beings, the complexity of physical activity is, in part, determined by the crossover synchrony between the limbs and a refined variability in gestures. Whenever a body part moves in any given direction in space there is a myofascial, tensional re-arrangement within the corresponding fascia. Afferents embedded within the fascia are stimulated, producing accurate directional information. Any impediment in the gliding of the fascia could alter afferent input resulting in incoherent movement. It is hypothesised that fascia is involved in proprioception and peripheral motor control in strict collaboration with the CNS.

**Therapeutic implications**

The fascia is very extensive and so it would be difficult and inappropriate to work over the entire area. The localisation of precise points or key areas can render manipulation more effective. An accurate analysis of the myofascial connections based on an understanding of fascial anatomy can provide indications as to where it is best to intervene. Any non-physiological alteration of deep fascia could cause tensional changes along a related sequence resulting in incorrect activation of nerve receptors, uncoordinated movements, and consequent nociceptive afferents. Deep massage on these specific points (CC and CF) aims at restoring tensional balance. Compensatory tension may extend along a myofascial sequence so myofascial continuity could be involved in the referral of pain along a limb or at a distance, even in the absence of specific nerve root disturbance. In clinical practice, cases of sciatic-like pain and cervicobrachialgia without detectable nerve root irritation are common. This technique allows therapists to work at a distance from the actual site of pain, which is often inflamed due to non-physiological tension. For each mf unit, the area where pain is commonly felt has been mapped out and is known as the Centre of Perception (CP). In fact, it is important to place our attention on the cause of pain, tracing back to the origin of this anomalous tension, or more specifically to the CC and CF located within the deep fascia.
# Abbreviations Used in Fascial Manipulation

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>+++</td>
<td>Maximum benefit obtainable</td>
</tr>
<tr>
<td>1 x m</td>
<td>Once a month the symptom aggravates</td>
</tr>
<tr>
<td>An</td>
<td>Ante, antemotion</td>
</tr>
<tr>
<td>An-la-</td>
<td>Motor scheme of ante-latero-...</td>
</tr>
<tr>
<td>An-ta</td>
<td>Antemotion talus, dorsiflexion</td>
</tr>
<tr>
<td>bi</td>
<td>Bilateral, both right and left</td>
</tr>
<tr>
<td>Ca</td>
<td>Carpus, wrist</td>
</tr>
<tr>
<td>CC</td>
<td>Centre of coordination of a mf unit</td>
</tr>
<tr>
<td>Cl</td>
<td>Collum, cervical region</td>
</tr>
<tr>
<td>Cont.</td>
<td>Continuous, persistent pain</td>
</tr>
<tr>
<td>cp</td>
<td>Caput, face and cranium (head)</td>
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<tr>
<td>CP</td>
<td>Centre of perception of a mf unit</td>
</tr>
<tr>
<td>Cu</td>
<td>Cubitus, elbow</td>
</tr>
<tr>
<td>Cx</td>
<td>Coxa, thigh-hip</td>
</tr>
<tr>
<td>d</td>
<td>Day, 1 or more days since trauma</td>
</tr>
<tr>
<td>Di</td>
<td>Digiti, II°-III°-IV°-V° (hand)</td>
</tr>
<tr>
<td>dist.</td>
<td>Distal, away from the centre of body</td>
</tr>
<tr>
<td>Er</td>
<td>Extra, extrarotation, eversion</td>
</tr>
<tr>
<td>Er-ta</td>
<td>Extrarotation talus, eversion, supinat.</td>
</tr>
<tr>
<td>Ge</td>
<td>Genu, knee</td>
</tr>
<tr>
<td>Hu</td>
<td>Humerus, distal part of the shoulder</td>
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<tr>
<td>Ir</td>
<td>Intra, intrarotation, inversion</td>
</tr>
<tr>
<td>Ir-ta</td>
<td>Intrarotation talus, inversion, pronat.</td>
</tr>
<tr>
<td>It</td>
<td>Left, limb or one side of the body</td>
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<tr>
<td>La</td>
<td>Latero, lateromotion, lateral flexion</td>
</tr>
<tr>
<td>La-ta</td>
<td>Lateromotion talus, lateral deviation</td>
</tr>
<tr>
<td>Lu</td>
<td>Lumbi, lumbar</td>
</tr>
<tr>
<td>M</td>
<td>Month, period of time since pain onset</td>
</tr>
<tr>
<td>Me</td>
<td>Medio, mediomotion, medial</td>
</tr>
<tr>
<td>Me-ta</td>
<td>Mediomotion talus, medial deviation</td>
</tr>
<tr>
<td>Mf</td>
<td>Myofascial: unit, sequence, spiral</td>
</tr>
<tr>
<td>Mn</td>
<td>Morning, morning pain and/or stiffness</td>
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<tr>
<td>Nt</td>
<td>Night, period in 24 hr. when pain is worst</td>
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<tr>
<td>P</td>
<td>Posterior</td>
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<tr>
<td>PaMo</td>
<td>Painful Movement</td>
</tr>
<tr>
<td>Par.</td>
<td>Paraesthesia, pins and needles</td>
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<tr>
<td>Pes</td>
<td>Foot, tarsus, metatarsus and toes</td>
</tr>
<tr>
<td>Pm</td>
<td>Afternoon, time period when pain is worst</td>
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<tr>
<td>Prev.</td>
<td>Pain(s) previous to present pain</td>
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<tr>
<td>prox.</td>
<td>Proximal, nearer to the centre of the body</td>
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<tr>
<td>Pv</td>
<td>Pelvis, pelvic girdle</td>
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<tr>
<td>Rt</td>
<td>Right, limb or one side of the body</td>
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<tr>
<td>Re</td>
<td>Retro, retromotion, backwards</td>
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<tr>
<td>Rec.</td>
<td>Recurrent, pain which recurs</td>
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<tr>
<td>Re-la-</td>
<td>Motor scheme of retro-latero-...</td>
</tr>
<tr>
<td>Re-ta</td>
<td>Retromotion talus, plantarflexion</td>
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<tr>
<td>Sc</td>
<td>Scapula, proximal part of the shoulder</td>
</tr>
<tr>
<td>SiPa</td>
<td>Site of pain as indicated by patient</td>
</tr>
<tr>
<td>Ta</td>
<td>Talus</td>
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<tr>
<td>Th</td>
<td>Thorax</td>
</tr>
<tr>
<td>y...10y</td>
<td>Year, 10 years since pain began</td>
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All of the abbreviations of each of the segmentary mf units and the mf units of fusion have not been included because the various combinations can be inferred from the examples given.
ABBREVIATIONS FOR BODY SEGMENTS
Segment = combination of the motor part (muscles and fasciae) and articular part

HEAD and TRUNK
Head Caput CP
(3 Subunits: eye, ear, TMJ)
• Neck Collum CL
• Thorax Thorax TH
• Lumbar Lumbi LU
• Pelvis Pelvi PV

LOWER LIMB SEGMENTS
• Hip: coxa (CX)
• Knee: genu (GE)
• Ankle: talus (TA)
• Foot: pes (PE)

UPPER LIMB SEGMENTS
• Scapula: scapula (SC)
• Humerus: humerus (HU)
• Elbow: cubitus (CU)
• Wrist: carpus (CA)
• Fingers: digiti (IDI)

SAGITTAL PLANE SEQUENCES
ANTEMOTION
RETROMOTION
HORIZONTAL PLANE SEQUENCES

Myofascial Sequences terminate in the extremities
This information is purely indicative and is intended only as a general guideline.

Therapists must evaluate each individual case, correlating symptoms with movement tests and palpatory verification.

1. Symptoms related to sagittal plane alterations are generally bilateral.

2. Symptoms from horizontal and frontal plane problems can appear:
   a) only on one side
   b) Alternating between the two sides
   c) Simultaneously on both sides

1. Vertigo:
   - When rotating from prone → HORIZONTAL P.
   - When in side lying → FRONTAL P.
   - Looking up/down, in supine → SAGITTAL PLANE

2. Headache:
   - Cephalgia → SAGITTAL P
   - Lt/rh hemicrania → HORIZ/FRONTAL P

3. TMI problems:
   - Bilateral → SAGITTAL P
   - Unilateral on opening mouth → HORIZONTAL P
   - Unilateral on closure → FRONTAL P
<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Date of Birth</th>
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<tr>
<th>Occupation</th>
<th>Sport</th>
<th>Diagnosis</th>
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<th>SI-PA</th>
<th>PA-MO</th>
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<th>PA CONC</th>
<th>PA-MO</th>
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<tr>
<th>PA PREV</th>
<th>OPER./FRACTURES/VISCERAL</th>
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<th>Paraesthesia : CP</th>
<th>DI</th>
<th>PE</th>
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<th>Posture:</th>
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**HYPOTHESIS**

<table>
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<tr>
<th>Planes</th>
<th>Segments</th>
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**MOVEMENT VERIFICATION**

<table>
<thead>
<tr>
<th>Seg</th>
<th>Sagittal Plane</th>
<th>Frontal Plane</th>
<th>Horizontal Plane</th>
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<th>Diag</th>
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**PALPATORY VERIFICATION**

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<th>Seg</th>
<th>Sagittal</th>
<th>Frontal</th>
<th>Horizontal</th>
<th>CF</th>
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From the paper:


**Abstract**

Classical anatomy still relegates muscular fascia to a role of contention. Nonetheless, different hypotheses concerning the function of this resilient tissue have led to the formulation of numerous soft tissue techniques for the treatment of musculoskeletal pain. This paper presents a pilot study concerning the application of one such manual technique, Fascial Manipulation©, in 28 subjects suffering from chronic posterior brachial pain. This method involves a deep kneading of muscular fascia at specific points, termed Centres of Coordination and Centres of Fusion, along myofascial sequences, diagonals, and spirals. Visual analogue scale (Vas) measurement of pain administered prior to the first session, and after the third session was compared with a follow-up evaluation at three months. Results suggest that the application of Fascial Manipulation© technique may be effective in reducing pain in chronic shoulder dysfunctions. The anatomical substratum of the myofascial continuity has been documented by dissections and the biomechanical model is discussed.

**The biomechanical model of the Fascial Manipulation© technique**

The myofascial system is a three-dimensional continuum so, like others, (Busquet L 1995; Godelieve Denys-S 1996; Myers T 2001) the manual therapy technique known as Fascial Manipulation©, presents a biomechanical model to decipher the role of fascia in musculoskeletal disorders. The body is divided into fourteen segments: head, neck, thorax, lumbar, pelvis, scapula, humerus, elbow, carpus, digits, hip, knee, ankle, and foot. Each body segment is divided into six myofascial units (mf units) consisting of monoarticular and biarticular unidirectional muscle fibres, their deep fascia and the articulation that they move in one direction on one plane. A new functional classification is applied to body movements to facilitate analysis of motor variations. All movements are considered in terms of directions on spatial planes and are defined as follows: antemotion (AN), retromotion (RE), lateromotion (LA), mediomotion (ME), intrarotation (IR) and extrarotation (ER). Within each mf unit, in a precise location of the deep muscular fascia a specific point, termed Centre of Coordination (cc) is identified. Each cc is located in the point of convergence of the vectorial, muscular forces that act on the body segment during a precise movement. Biarticular muscles link unidirectional mf units to form mf sequences. One sequence is considered to monitor movement of several segments in one direction on the three planes. Sequences on the same spatial plane (sagittal, frontal, or horizontal) are reciprocal antagonists, considered to be involved in the alignment of the trunk or limbs. Other points, termed Centres of Fusion (cf), located on the intermuscular septa, retinacula, and ligaments, monitor movements in intermediate directions between two planes and three-dimensional movements. Cf can interact either along mf diagonals or in mf spirals, according to the executed movement. Musculoskeletal dysfunction is considered to occur when muscular fascia no longer slides, stretches, and adapts correctly and fibrosis localises in the intersecting points of tension, known as cc and cf. Subsequent adaptive fibroses can develop as a consequence of unremitting non-physiological tension in a fascial segment.
Based on this functional classification, a systematic objective examination together with an analysis of three-dimensional movements of the implicated segments can pinpoint dysfunctional cc or cf. Comparative palpation then determines the selection of points requiring treatment in each individual case. The manual technique itself consists in creating localised heat by friction by using the elbow, knuckle, or fingertips on the abovementioned points. The mechanical and chemical stress effects on connective tissue are well known and a local rise in temperature could affect the ground substance of the deep fascia in these specific points. Tensional adaptation can then propagate along an entire mf sequence, diagonal, or spiral, re-establishing a physiological balance. A fundamental element of this method lies in the fact that the myofascial sequence is not only a functional concept but has an anatomical substratum of fascial continuity and muscular expansions onto the fascia itself.

From the paper:

Treating patellar tendinopathy with Fascial Manipulation: a pilot study.

By Pedrelli A, Stecco C, Day JA (JBMT, 2009)

Abstract

According to Fascial Manipulation theory, patellar tendon pain is often due to uncoordinated quadriceps contraction caused by anomalous fascial tension in the thigh. Therefore, the focus of treatment is not the patellar tendon itself, but involves localizing the cause of this incoordination, considered to be within the muscular fascia of the thigh region. Eighteen patients suffering from patellar tendon pain were treated with the Fascial Manipulation technique. Pain was assessed (in VAS) before (VAS 67.8/100) and after (VAS 26.5/100) treatment, plus a follow-up evaluation at 1 month (VAS 17.2/100). Results showed a substantial decrease in pain immediately after treatment (P<0.0001) and remained unchanged or improved in the short term. The results show that the patellar tendon may be only the zone of perceived pain and that interesting results can be obtained by treating the muscular fascia of the quadriceps muscle, whose alteration may cause motor incoordination and subsequent pathology.

... In Fascial Manipulation, a map of over one hundred fascial points exists, that, when treated appropriately, are believed to restore tensional balance. In order to select the points to be treated the fascial system is first divided into basic elements, or Myofascial Units. Each Myofascial Unit (MFU) includes all of the motor units responsible for moving a joint in a specific direction and the overlying muscular fascia. Hence, movements of single body segments are considered to be governed by 6 MFUs, responsible for movements in the three spatial planes (Sagittal, Frontal, Horizontal). All the forces generated by a MFU are considered to converge in one point, called the Centre of Coordination (CC); each CC has a precise anatomical location within the muscular fascia. If the fascia in this specific area is altered, or “densified”, then the entire MFU contracts in an anomalous manner resulting in non-physiological movement of the corresponding joint, which can be a cause of joint pain. According to the Fascial Manipulation model, the area where the patient perceives pain is called the Centre of Perception (CP), thus, for each MFU one CP is described. In patellar tendinopathy, the MFU of extension of the knee, called MFU of antemotion genu (AN-GE), is the more frequently implicated. It is formed by the knee joint, the monoarticular muscular fibres of vastus medialis, intermedius and lateralis, the biarticular muscular fibres of rectus femoris and the relative muscular fascia. The patella and the anterior region of the knee are considered as the CP of this MFU, while the CC is situated over the vastus intermedius muscle, halfway on the thigh (Fig 1, Fig 2). The location of this CC overlaps with the acupuncture point ST32 (Bossy, 1980), and with one of the trigger points of the quadriceps group, as described by Travell (Travell & Simons, 1999). In the Fascial Manipulation model, the CC is considered a point of vectorial convergence for muscular forces or the point of the muscular fascia where altered myofascial traction concentrates. Thus, for each segment, we can identify six CCs, one for each direction on the three planes of movement. A pathological CC can be pinpointed by a specific clinical exam (movement tests), and not only by palpation, which differs somewhat from the procedure for trigger point identification. Hence, a CC could be considered as a type of “key trigger point”...
The aim of the Fascial Manipulation therapy is to restore gliding between the intrafascial fibers. Raising the temperature of selected areas of the fascia (corresponding to the CC points), via manual pressure, could allow for transformation of the ground substance, transforming it from a pathological status of GEL (dense fascia) to a physiological status of SOL (fluid fascia). This variation in density probably allows for two events. Firstly, during the application of manual pressure, the connective tissue adapts and the intrafascial free nerve endings may slide within the fascia more freely, which could explain the sudden decrease in pain during massage in the treated area. The second event could evolve over the following days: with enhanced fluidity of the ground substance, physiological tensioning of the fibers within the fascia during muscular contraction could allow for correct deposition of new collagen and elastic fibers according to the lines of applied force. Subsequent restoration of gliding between connective tissue layers of the fascia would enable tensional adjustments during muscular contraction, resulting in appropriate tensioning of periarticular structures such as tendons and capsules. This restitution of elasticity to the fascia could also explain the satisfactory results maintained over time.

Interview of Luigi Stecco by Massimo Ilari

For disturbances ranging from headache to post-traumatic recovery in athletes, the secret may lie in the treatment of a membrane that connects all parts of the body. One of the pioneers of this method explains just how in this interview.

"Manus sapiens potens est: only a knowledgeable hand is powerful. The more knowledge one has the easier it is to localise and identify the causes of pain and joint dysfunction. "It has nothing to do with magic", says Luigi Stecco a physiotherapist from Vicenza, Italy (Diploma in Physiotherapy, scholar of articular mobilisation, connective tissue massage, acupuncture and author of "Manipulation of the Fascia" (Piccin, Nuova Libraria). In this book, Stecco highlights the importance of fascia in the treatment of musculoskeletal dysfunctions. Through having treated thousands of patients in his 30+-year career, initially in the hospital of Arzignano (VI) in Italy, and subsequently in private practice, as well as conducting training sessions for physiotherapists and physicians, Stecco has developed the technical foundations of a new rehabilitative method. The essence of this method lies in the fascia which, when treated appropriately, can resolve many common disturbances such as headaches, joint and muscular dysfunctions such as lumbalgia, in post-operative cases, post-traumatic recovery in athletes, and some visceral disorders. The interview with "Vita & Salute" (Life and Health) proceeded as follows.

Can you give us a simple explanation of exactly what fascia is?

"I'll try. It is an extensive, membranous continuum composed of connective tissue, which connects all parts of the body, enclosing yet at the same time separating muscles. It is a membrane, which extends over the whole body just below the skin. While our skin is a perceptive organ that repairs and protects, the fascia has the function of connecting, coordinating one joint with another, as well as the body in its entirety. It is possible that the fascia synchronises the activity of each part of the body with the whole. Fascia is that whitish elastic membrane that surrounds muscles, easily identifiable in the meat one buys at the butchers. This membrane is made of white, collagen fibres. It is sometimes known as the investing fascia because it surrounds muscle.

What role does it have in our bodies?

"In medicine, it has always been considered to have a mere function, or role, of containment or restraint, a type of packing material. In recent times, this view has changed somewhat. Fascia actually extends within the muscle, via the perimysium and the endomysium. This continuity means that the contraction of each single muscle fibre transmits to the deep fascia, or the outer most layer of muscle compartments. It is now thought that the fascia could be considered as a conductor of an orchestra playing a symphony of movement, where it synchronises the crescendo of some muscles and the diminuendo of others. The result is harmonious motion.
What is so innovative about all this?

"Up until now, this role of synchronisation of movement was exclusively attributed to the nervous system components. However, at a certain point, neurophysiologists began to question how the brain alone was able to control all of the variables involved in a motor gestures. The control of movements in the periphery had to be more complex than initially thought. Through careful study, it was observed that due to the tensioning of the fascia by many muscular fibres that insert into it, it was likely that the fascia might coordinate many of these variables. If this normally very slippery membrane becomes rigid, stuck or densified then the inevitable loss of a valuable coordinating element could result in inappropriate, badly tuned movements. Due to traumas, overuse (such as tennis elbow or repetitive stress injuries), heavy work, and bad eating habits, a lack of sliding within the fascia can occur. In fact, we can say that the densification of this membrane depends principally on three factors: mechanical (overuse), chemical (alimentation) and physical factors such as cold and wind, which reduce the fluidity of the membrane and the circulation of blood”.

What do you mean exactly by “densification”?

"Densification forms where there is an excess of new collagen fibres, which are produced by the fascia itself in an attempt to repair a lesion caused by, as I said before, excessive mechanical, chemical or traumatic irritation of some kind. However, this type of repair provides a rather precarious equilibrium for the body because it is not like the normal physiological condition, and this causes functional and structural changes and pain often ensues.

In other words, what are the consequences of fascial “densification”?

"I suggest that when the fascial membrane is less elastic and less slippery, it loses its ability to coordinate muscles efficiently so movements are less free, more rigid. You get up one morning feeling unusually stiff. Why? Probably the day before a joint has been used in a nonphysiological manner, unnaturally, so at first you feel the stiffness, and then a little later the pain starts. I need to repeat myself here, just to emphasise that I think the cause is not to be sought in the joint itself, but in the fascia. This of course is an advantage from a therapeutic point of view because the fascia can be manipulated whereas bone, muscle, or nerve does not have the same degree of malleability as the fascia.

Do you think you could call this approach “a new paradigm in physiotherapy”?

"Yes. The originality of this method lies in the fact that the focus is not on the joint itself but on the mechanisms that move the joint, in which the fascia has an important coordinating role. This is why, in this technique, therapeutic points located within the fascia have been called Centres of Coordination, because I suggest that they coordinate those muscle fibres involved in a specific movement, or a specific action”.

Can you be a bit clearer?

"In the fascia, there are different Centres of Coordination that, incidentally, often coincide with acupuncture points. These centres are probably involved in the coordination of joint movements. When, or if, they become "densified", pain results in the associated joint. In order to re-balance the various body structures the densifications need to be slowly dissolved. Not by chance, manipulation of the fascia can play a role in preventing dysfunction”.

Therefore, that means you can have treatment even when you are feeling fine....

"Not exactly. Treatment is effectuated when the body sends out an indication of distress. We need to have a minimum of distress, which could be stiffness or pain, indicating that something is awry. Often pain is the alarm bell. It is not wise to take analgesics, just to cover up the symptom, as this can be an obstacle to the healing process, obscuring the body’s cry for help. In the end, if no effective therapy is performed then one can end up on the operating table. Let’s say, if the pain signal from a hip, knee, or
ankle is ignored then, in time, uncoordinated movements can lead to arthritis, a broken meniscus, a deformation in the hip and so forth”.

**What is the difference between this method and others?**

“We don’t intervene directly on the painful joint. Treatment is carried out on the fascia, covering the muscle fibres, which has determined inflammation at the joint”.

**How is this manipulation actually carried out?**

“The characteristics of the specific body region have to be taken into account. For example, fingers or fingertips may be used to treat the neck region, whereas the elbow can be used for the trunk. Positions vary according to the depth of the fascia to be treated. In other regions, knuckles can be used, let us say in the lower part of the legs, or in the feet. Whenever resistance is detected in a well-defined point, that is, as indicated by the assessment process, then mobilising pressure applied in that point does not exceed ten minutes. Variable pressure is applied at differing angles. The aim is always to create localised heat to modify the density of the ground substance of the fascia, which is, as it sounds, the basic gel that holds the cells of the fascia together. By restoring fluidity to this ground substance, it will help gliding between the muscles and the individual muscle fibres. In fact, physiological movement is impeded whenever this gliding component is lacking, and joint damage can occur. We can say that fascial manipulation has a sort of dissolving effect or, in scientific terms, it normalises the hydration of the ground substance. With this normalisation, an obvious improvement in muscular and articular function is achieved because the correct contraction of the muscular fibres allows for the ailing joint to recover its physiological range of movement”.

**How long does the therapy last?**

“Sessions are initially weekly and each session lasts about a half an hour in all. We need to understand perfectly where the precise point that is causing the pain is situated in order to have an effective result. Symptoms indicate the point requiring treatment without the need for X-rays. X-rays only show us the bones, the joint, and not the fascia. Our aim is to trace back to the cause of the blockage in the fascia, which is not visible with common X-rays. It can, however, be seen with Cat scans or RMI’s. Movement tests are always carried out prior to any treatment. For example, if a patient complains of backache then I will examine their ability to bend forward, sideways and to turn to each side, in order to evaluate how they move in the three spatial planes and from there I formulate a functional diagnosis of fascial limitations”.

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**Interview with Luigi Stecco and Julie Ann Day** / Terra Rosa E-mag No. 4, December 2009

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