Fascial Distortion Model

Introduction to FDM
• Matt Booth, DPT
• Outpatient private practice with Therapeutic Associates Physical Therapy
• FDM International Certificate
• FDM Instructor
• FDM Academy co-Founder
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Thanks to:

• Todd Capistrant, DO,MHA
• Family Practice Physician
  • Full time Osteopathic Manipulative Medicine
• FDM Instructor
• FDM Academy co-Founder
• Foundation Health Partners in Fairbanks, Alaska
• Regional Dean Pacific Northwest University
Disclaimers

Teaching – FDM Academy
Fascial Distortion Model

• Anatomical perspective in which most musculoskeletal injuries and certain medical conditions are envisioned as consisting of one or more of six principal fascial distortion types - each of which have signature clinical presentations.

Module 1

• Introduction
• Ankle
• Knee
• Shoulder
Module 2

• Introduction
• Sacrum and Pelvis
• Lumbar Spine
• Thoracic Spine and Ribs
• Cervical Spine
• Inversion
Module 3

- Introduction
- Head
- TMJ
- Face
- Hands
- Feet
- Everything else
Different Model

• This is a powerful model that provides a practitioner with another set of tools when evaluating and treating patients.
Pattern recognition
What is a model?

A description or analogy used to help visualize something that cannot be directly observed
“Stay in the Model”

• Learning the model is best achieved if you try and visualize what we are teaching as a complete system describing the intricate movements of Fascia, their changes, and how to treat them.

• If possible do not try to fit the model into what you already “know”.
“Stay in the Model”

FDM

previous knowledge/practice patterns
Stay in the Model

• If you open your mind to the model you will find that your patients’ symptoms and their description of those symptoms will guide you towards successful treatments.
Primary Goals

• Introduce you to the FDM

• Perform FDM Triggerbands safely
Primary Goals for Course Participants

• Be able to recite the six principal types of Fascial Distortions.
Tobacco Smoke Enema (1750s-1810s)
The tobacco enema was used to infuse tobacco smoke into a patient's rectum for various medical purposes, primarily the resuscitation of drowning victims. A rectal tube inserted into the anus was connected to a fumigator and bellows that forced the smoke towards the rectum. The warmth of the smoke was thought to promote respiration, but doubts about the credibility of tobacco enemas led to the popular phrase “blow smoke up one’s ass.”

Courtesy of David Nash, MD
Founder
Steve Typaldos, DO

• Continued to refine the model until his untimely death in 2006.
• Published in AAO Journal 1994 and 1995.
• 4th edition Textbook published 2002  *FDM: Clinical and Theoretical Application of the Fascial Distortion Model Within the Practice of Medicine and Surgery*
Star Triggerband
Fascial Distortion Model

• Based on simple principles of personal experience and observation
• Patients intuitively know what needs to happen to feel better
• Patients communicate this through consistent verbal and body language
• This system of knowing and communicating is inherent in the Fascia, and is universal.
Fascial Distortion Model

• Why use it?
  • Simple assessment
  • Patient-centered
  • Immediate results
Fascia
Fascia

• A continuous sheet of tissue that extends from the head to the toes.

• Every cell is wrapped with the fascial material.

• The fascia is under tension and supports the internal structures such as bone, ligament, and vessels.

• Fascia is sensory, proprioceptive, supportive, conductive, and contractile.
Fascia

Courtesy Dr. Jean-Claude Guimberteau
With permission - Dr. Jean-Claude Guimberteau, “Muscle Attitudes”
Courtesy: Fascia Research Society; Fascial Net Plastination Project
The fascial network serves as a sensory organ

“this fascial net can be seen as our largest sensory organ. It is definitely the richest sensory organ for the so-called sixth sense, the sense of proprioception.”

Fascia can be a source of nociception

“the epimysial fascia of the affected musculature plays a major role in the generation of DOMS [Delayed onset muscle soreness] related pain symptoms.”

The human lumbar fascia as potential generator of low back pain

A single trauma or cumulative microtrauma causes subfailure injuries of paraspinal connective tissues and their embedded mechanoreceptors, thereby leading to corrupted mechanoreceptor feedback and resulting in further connective tissue alterations and neural adaptations.

Fascial Distortion Model

So what is the model?
Fascial Distortion Model

Anatomical perspective in which most musculoskeletal injuries and certain medical conditions are envisioned as consisting of one or more of six principal fascial distortion types - each of which have signature clinical presentations.

Fascial Distortion Model

• In the manual practice of the FDM, each condition is envisioned through the model:
  • the subjective complaints
  • body language
  • mechanism of injury
  • objective findings

These are woven together to create a meaningful diagnosis that has practical applications and guides treatment.
The Model

Treatment is kind of like this, only it just *feels* like a laser beam.
And it’s coming out of your thumb.
Universal Body Language
Universal Body Language

• Patients communicate fascial symptoms through a universal language.

• This language is made up of a consistent body language and verbal description.

• These factors drive the diagnosis of distortions or patterns in the FDM.
Learn to read the body language
Six Principal Types of Fascial Distortions

- Triggerband
- Herniated Triggerpoint
- Continuum Distortion
- Folding Distortion
- Cylinder Distortion
- Tectonic Fixation
Results of Treatment in the Fascial Distortion Model

• Immediate
• Measurable
• Objective
• Obvious
• Predictable
• Reproducible
Efficacy of Fascial Distortion Model Treatment for Acute, Nonspecific Low-Back Pain in Primary Care: A Prospective Controlled Trial.


Abstract
Context • Low-back pain (LBP) is a prevalent and potentially crippling condition for which treatment is often unsatisfactory from the perspectives of physicians, patients, and payers. The application of the fascial distortion model (FDM), an integrated concept for the diagnosis and manipulative treatment of musculoskeletal disorders, is conceptually promising for LBP but has not been investigated systematically. Objective • The study intended to provide proof of concept to establish the noninferiority of the FDM treatment as opposed to the therapy recommended by the German National Disease Management Guideline (NDMG) for acute LBP. Design • The study was a prospective, nonrandomized, controlled, parallel-group trial. Setting • The study took place in a private practice for surgery and orthopedics. Participants • Seventy-seven outpatients with acute LBP with an average age of 42.6 ± 13.5 y, 50.6% of whom were male, took part in the study.
Twenty-eight participants received two FDM procedures. Compared with baseline, improvement on the FHSQ Foot Pain (33.8–23.6 points) and Foot Function (23.9–19.8 points) subscales and VAS (44.7–27.7 points) at 16 weeks was statistically significant (all p's < 0.001) and clinically important representing large effect sizes. Relative to baseline, 16-week ultrasound demonstrated reduced average plantar fascia thickness (0.6–0.9 mm [p = 0.001]).
**BACKGROUND:**

Frozen shoulder is a common problem and difficult to treat. The present prospective randomised single-blind controlled trial evaluates the efficacy of the 'fascial distortion model' according to Typaldos as a remedy for the 'frozen shoulder'.

**MATERIALS AND METHODS:**

A total of 60 patients were randomised to receive either the FDM-guided treatment (FDM, n = 30) or a 'conventional' manual therapy (MT, n = 30). The primary endpoint for the treatment effect was the shoulder mobility, and secondary endpoints were pain (measured on a VAS), raw force and function as expressed by the Constant-Murley and DASH scores.

**RESULTS:**

Before therapy, groups were well comparable in terms of all outcome parameters. All endpoints showed a substantial and significant improvement in both treatment groups. Improvement was significantly more marked in the FDM group as compared to the MT group, and the effect occurred significantly faster. During post-treatment observation, there was no further improvement and the achieved benefit in mobility in the FDM group decreased. However, the abduction ability of 150.2 ± 37.2° continued to be substantially better than in control patients (124.1 ± 38.6°, p < 0.01), and the ultimate improvement in abduction was 59.4° (64 % more than baseline) as opposed to 25.9° (27 %) in controls. Secondary outcome parameters (raw force, functional handicap, and pain) showed a significant improvement in both groups but a significantly better result in patients treated according to FDM guidelines. However, patients in this group experienced pain during the treatment more frequently (21/27 vs. 10/27, p < 0.01).

**CONCLUSION:**

Frozen shoulder treatment according to the FDM is an effective modality with swift onset of action and acceptable side effects that is superior to conventional manual therapy. Long-term effects and modes of action need to be investigated.
Six Principal Types of Fascial Distortions

- **Triggerband**: Distorted banded fascial tissue *(TB)*
- **Herniated Triggerpoint**: Abnormal protrusion of tissue through fascial plane *(HTP)*
- **Continuum Distortion**: Alteration of transition zone between ligament, tendon, other connective tissue and bone *(CD)*
- **Folding Distortion**: Three dimensional alteration of fascial plane *(FD)*
- **Cylinder Distortion**: Overlapping of cylindrical fascial coils *(CyD)*
- **Tectonic Fixation**: Alteration in ability of fascial surfaces to glide *(TF)*
“TB”
Triggerband
Triggerband

• Etiology - distorted fascial bands (twisted fascial fibers)
• Body language - sweeping motion with fingers along painful linear pathway
• Symptoms - *burning, pulling*
• Tx - Triggerband Technique
  • use thumb to untwist the twisted fibers and iron out the wrinkled tissue.
Triggerband
Triggerbands
Zip-Lock Analogy
Relative Contraindications*

- Infectious arthritis
- Open wounds
- Osteomyelitis
- Phlebitis
- Poor provider/patient rapport
- Pregnancy (treatment of abdomen and pelvis)
- Previous strokes
- Skin Wounds
- Vascular diseases
- Aneurysms
- Arteriosclerosis
- Bleeding disorders
- Cancer (with bony Metastasis)
- Cellulitis
- Collagen Vascular Disease
- Edema
- Hematomas
- Infections

*Each provider should use his or her best judgment before employing these (or any other) treatment modalities
“HTP”
Herniated Triggerpoint
Herniated Triggerpoint

- Abnormal protrusion of tissue through fascial plane
Herniated Triggerpoint

• Etiology - protrusion of tissue through fascial plane
• Body language - pushes thumb, fingers, or knuckle into protruding tissue
• Symptoms –
  • ache between neck & shoulder (SCHTP)
  • aching pain in buttock (bull’s eye)
  • flank aching/renal colic (flank HTP)
• Tx - Herniated Triggerpoint Therapy
  • push tissue back through fascial plane
Herniated Triggerpoint
SCHTP

Supra-clavicular herniated Triggerpoint

#1 cause of loss of:
✓ Shoulder abduction
✓ Shoulder internal rotation
✓ Cervical rotation
“CD”
Continuum Distortion
Continuum Distortion

- **Etiology** - alteration of transition zone between bone and ligament or tendon
- **Body language** - points to *spot of pain* with one finger
- **Symptoms** - hurts in one or more spots
- **Tx** - Continuum Technique
  - apply force with thumb to force transition zone to shift
Continuum Distortion

- Alteration of transition zone between ligament, tendon, or other fascia and bone
Continuum Distortion
Common CD sites

- Anterior ankle
- Popliteus
- Acromion/clavicle
- Patella
- Lateral ankle

- Spinous process
- Sacral edge
- Medial scapular edge
- Iliac crest
- Ischial tuberosity
Finger to a spot
CD Treatment

• Tip of thumb applied with direct pressure to the small palpable tissue change

• Feels like grain of rice or grain of sand

• Pressure increases until it feels like there is no more give. Then pressure with resulting “squish”
“FD”
Folding Distortion
Folding
Folding Distortion

• Etiology - three dimensional alteration of fascial plane

• Body language –
  • places hand over affected joint, or
  • pushes fingers into intermuscular septum or interosseous membrane

• Symptoms - aches deep in joint or injured folding fascia

• Tx - Folding Technique (compression/traction)
Road map analogy
Folding Distortion
General Body Language

• Cupping the joint with the hand(s)

• Holds joint with the palm of the hand

• Squeezes the joint with the hand(s)

• Digs fingers into interosseous or intramuscular septum
Folding Distortion
General Symptoms

• Pain “deep in the joint”, “it’s somewhere in there”
• Pain in joint without major loss of motion
• Remains unchanged over a long period of time, “my usual pain”, “I’ve always had it”
• Impression of instability, “it feels unstable”
• Sometimes with effusion
Foldings
Unfolding and Refolding Distortions

- **Unfolding** - Subtype of folding distortion in which folding fascia has unfolded, contorted, and can’t refold completely.

- **Refolding** - Subtype of folding distortion in which folding fascia is over-compressed and can’t unfold completely.
• **Unfolding**: pain worsened with compression and lessened with traction
  • Tx: Modified traction with traction/thrust
    • Inversion therapy for stubborn cases

• **Refolding**: pain worsened with traction and lessened with compression
  • Tx: Modified compression with compression/thrust
“CyD”

Cylinder Distortion
Superficial Fascia
Cylinder Distortion

• Etiology - tangling of cylindrical coils of fascia

• Body language - repetitively squeezes affected body part, sweeping motion with palm over symptomatic area

• Symptoms - often bizarre; patients have difficulty pinpointing source of pain and pain jumps from one location to another; numbness or paresthesias

• Tx - Cylinder Technique
  • Thumbs, hands or suction cups are used to untangle cylindrical coils, or provide a neural input to reduce tone of the fascia
“TF”
Tectonic Fixation
Tectonic Fixation

- Inability of fascial surfaces to glide
Tectonic Fixation

• Etiology - inability of fascial surface to glide

• Body language - stiff joint movement (or no body language)

• Symptoms – stiffness, “feels like it needs to pop”

• Tx - Tectonic Technique
  • pump fluid through joint and force fixated surface to slide
Relative Contraindications*

- Infectious arthritis
- Open wounds
- Osteomyelitis
- Phlebitis
- Poor provider/patient rapport
- Pregnancy (treatment of abdomen and pelvis)
- Previous strokes
- Skin Wounds
- Vascular diseases

- Aneurysms
- Arteriosclerosis
- Bleeding disorders
- Cancer (with boney Metastasis)
- Cellulitis
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