




Soft Tissue Interventions

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1

Soft Tissue Interventions

Introduction



Skilled hand movements intended to produce any or all of the following effects: improve tissue extensibility; increase range of motion of the joint complex; mobilize soft tissues; induce relaxation; change myofascial function; modulate pain; and reduce soft tissue swelling, inflammation or movement restriction.

2

Soft Tissue Interventions – Introduction

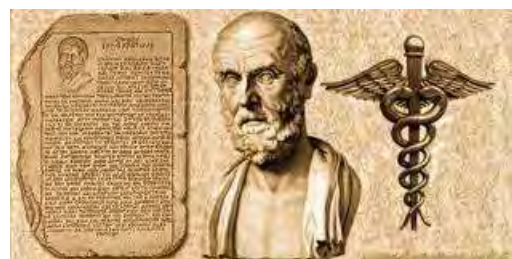
- Sports Chiropractic is not ONLY about adjusting. There are numerous tissues in the human body that we as sports chiros can, and absolutely must be able to influence in order to help our athletes recover and heal from injuries and to reach their optimal performance.
- Where to start? With so MANY techniques and approaches it can seem overwhelming
- Mix and match techniques, use what works, mix things up to best suit each patient
- What is the correct soft tissue modality and how do you know which one to use?
- Cost / Return on Investment
- New and Shiny Techniques – Are they worth your time?



3

Ancient History of Manual Soft Tissue Therapies

- Biblical Laying on of Hands
- Hippocrates 5th Century BC – Prone Traction with Manipulation
- Galen 2nd Century AD – Massage and Joint Manipulation to Spine and Extremities
- Ali ibn Sina – 1st Century AD – Arabian Physician Authored Text on Manual Medicine
- Ambrose Pare - Renaissance Surgeon – Traction With Ropes and Manual Pressure over Vertebrae



4

A World of Soft Tissue Techniques

- Cyriax
- Connective Tissue Manipulation
- Skin Rolling
- Fascial Unwinding
- Balanced Ligamentous Tension Technique
- Active Release Technique
- Neuromuscular Technique (NMT)
- Muscle Energy Technique
- Positional Release
- Rolfing Structural Integration

The 30,000 ft (9000m) view

You could dedicate years or even your whole life to one soft tissue method.

Search, try and pick those that resonate with you.

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Our Favorites

01
Therapeutic Dry Needling



02
PNF/PIR

03
Fascial Manipulation

04
Trigger Points

05
IASTM

06
Cupping

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Therapeutic Dry Needling

The exact mechanism of action underlying the effects of acupuncture and dry needling is still not fully clarified

- Dry needling is a manual therapy in which fine needles are inserted into myofascial trigger points, tendons, ligaments, or fascia with a goal of increasing blood flow in an injured region and stimulating a healing response in painful musculoskeletal conditions.
- Dry needling is NOT Oriental Medicine Acupuncture, that is, it does not have the purpose of altering the energy flow ("chi") along traditional Chinese meridians for the treatment of disease.
- Therapeutic Dry Needling IS a modern, science-based intervention for the treatment of pain and dysfunction in musculoskeletal conditions.

- Inhibition of Nocioceptive Input
- Alteration of Sympathetic Outflow
- Changes in Motor Output
- Serotonogenic and Noradrenergic Descending Inhibitory Pathway Theory
- Diffuse Noxious Inhibitory Pain Theory



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Therapeutic Dry Needling



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Therapeutic Dry Needling



Indications

Dry needling is used for pain and dysfunction of the musculoskeletal system of various origins. TDN is used primarily to treat myofascial trigger points and centers of coordination.

Further indications include restricted range of motion, multi-layer adhesions, functional limitations, insertional tendinopathies.

In my experience almost ALL MSK conditions can benefit from properly and safely applied TDN



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Therapeutic Dry Needling



Absolute Contraindications

Medical Red Flags

- Pregnancy
- Acute Systemic Infection
- Uncontrolled Hypertension
- Peripheral Neuropathy
- Anti-coagulant and Coagulant Dysfunction
- Acute Skin Conditions / Infections
- Bleeding Disorders

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Therapeutic Dry Needling

Cautions

Yellow Flags

- Cancer – Primary or Secondary
- Generalized Infection / Viruses
- Acute Inflammatory Conditions
- Scars and Burns
- Varicose Veins
- Hematomas

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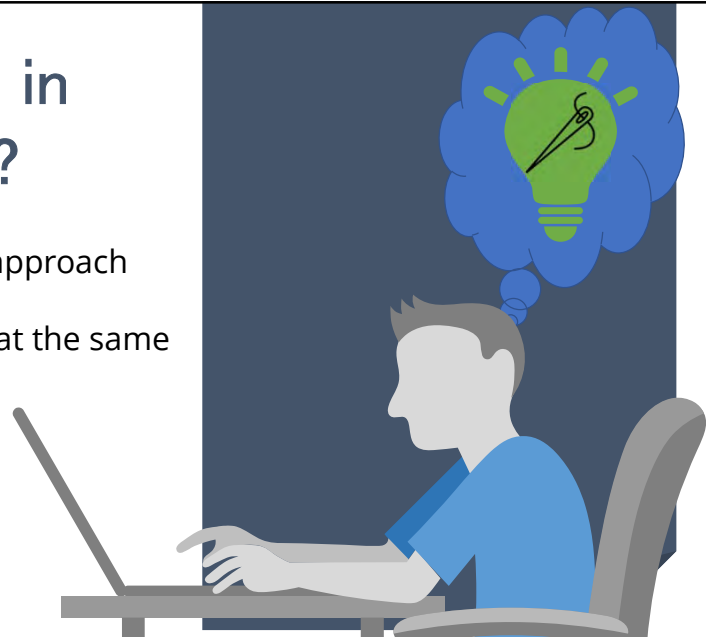
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Why Use Needles in Your Treatments?

- Light force alternative treatment approach
- Can treat multiple areas/patients at the same time
- Preserve your hands
- Ultra focused therapy



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Soft Tissue Interventions - IASTM

- **Types: Graston, Gua Sha, FAKTR**

- Lots of different tools and devices available on the internet.

- **Indications:**

- Lower back muscle strain or sprain
- Achilles tendinosis
- Carpal tunnel syndrome
- Cervical sprain/strain
- Plantar fasciitis
- Rotator cuff tendinosis
- Shin splints
- Tennis/golfer's elbow

- **Contraindications:**

- Open wounds
- High blood pressure
- Cancer (consideration of type and location)
- Pregnancy (over spine, pelvis, abdomen or certain meridian points)
- Unhealed fractures
- Patients undergoing Anticoagulant therapy
- Some kidney disorders



Soft Tissue Interventions - IASTM

- Evidence to support

- [The efficacy of instrument assisted soft tissue mobilization: a systematic review – Cheatham et al, Sept 2016](#)
- [The effects of instrument-assisted soft tissue mobilization compared to other interventions on pain and function: a systematic review – Lambert et al., March 2017](#)
- [Effects of instrument-assisted soft tissue mobilization technique on strength, knee joint passive stiffness, and pain threshold in hamstring shortness – Kim et al., November 2018](#)

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PNF / PIR

- PNF stretching was developed by Dr. Herman Kabat in the 1940s to treat neuromuscular conditions including polio and multiple sclerosis
- While there are multiple PNF stretching techniques, all of them rely on stretching a muscle to its limit. Doing this triggers the inverse myotatic reflex, a protective reflex that calms the muscle to prevent injury.
- Proprioceptive neuromuscular facilitation (PNF) stretching relies on reflexes to produce deeper stretches that increase flexibility.

PNF - Proprioceptive Neuromuscular Inhibition

PIR – Post Isometric Relaxation

“PNF causes the brain to say, ‘I don’t want that muscle to tear’ and sends a message to let the myofascia relax a little more than it would normally”



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PNF / PIR



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PNF / PIR Stretching



Indications

- Increase Flexibility
- Increase Range of Motion
- Improved Neuromuscular Control
- Increase Strength
- Improved Running Mechanics*
- Does not increase exertion significantly (BP)



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PNF / PIR Stretching



Contraindications

- Bony block on end of range (EOR) on passive assessment
- Unstable/recent fracture
- Acute soft tissue injury
- Infection/hematoma
- Post surgical repairs e.g, skin grafts, tendon repair
- Hypermobility
- Client refusal

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Soft Tissue Interventions - Cupping

Types: Dry/wet cupping, sliding cupping, fire cupping, moxa cupping
Devices: glass, plastic, silicone, horn

Indications:

- Cupping helps to reduce pain and inflammation
- Improves blood flow
- Used for relaxation, wellbeing, and deep tissue massage
- It is safe and non-invasive treatment
- Rejuvenation of body organs
- Facilitates healing process and may strengthen immune system

Contraindications:

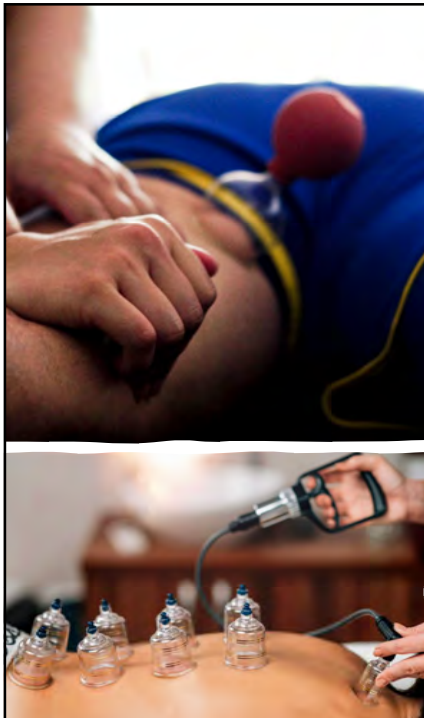
- Excessive dry or cracked skin
- Open wound or ulcer
- Fractured bone
- Dislocated joint
- Bleeding disorders
- Severe anaemia
- Muscle dystrophy
- Infants and Children under 7
- Abscess
- Excessive swelling



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Soft Tissue Interventions - Cupping

- Evidence to support:
 - [The Evidence for Common Nonsurgical Modalities in Sports Medicine, Part 2: Cupping and Blood Flow Restriction – Trofa et al., January 2020](#)
 - [Effects of Cupping Therapy in Amateur and Professional Athletes: Systematic Review of Randomized Controlled Trials – Bridgett et al., November 2017](#)
 - [Dry Cupping Therapy for Improving Nonspecific Neck Pain and Subcutaneous Hemodynamics – Stephens et al., June 2020](#)

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Soft Tissue Interventions – Trigger Points

- Types

- Ischaemic compression
- PIR
- Passive Stretching / Foam Roller
- Massage
- Strengthening
- Postural Correction / Activity Modification
- Taping
- Laser treatment
- Ultrasound treatment
- Muscle Energy Techniques
- Neuromuscular Techniques
- Dry needling / Acupuncture
- Trigger Point Injections - Pharmaceutical Management

• Indications:

- Pain, Restriction of ROM

• Contraindications:

- Bleeding Disorders: haemophilia, thrombocytopenia
- Anticoagulant drugs (warfarin, heparin etc)
- Systemic or local infection
- Acute muscle trauma

Soft Tissue Interventions – Trigger Points

• Evidence to support

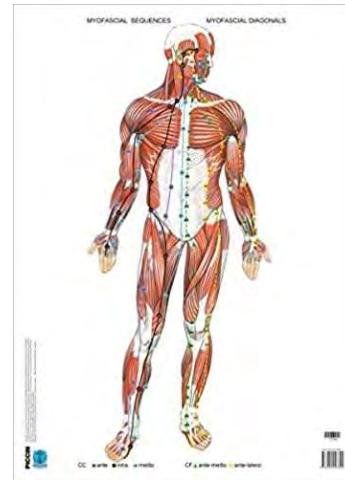
- [Myofascial Trigger Points: An Evidence-Informed Review – Dommerholt et al., October 2006](#)
- [Chiropractic Management of Myofascial Trigger Points and Myofascial Pain Syndrome: A Systematic Review of Literature – Vernon and Schneider, January 2009](#)

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Fascial Manipulation©

- Fascial Manipulation© is a manual therapy that has been developed by Luigi Stecco PT, in collaboration with his children Carla Stecco and Antonio Stecco (both MDs, PhDs), over the last 40 years. Focusing on fascia and in particular the deep muscular fascia. FM considers the myofascial system as a three-dimensional continuum
- The mainstay of the manual method lies in the identification of specific, localized areas of the fascia in connection with specific limited movements. 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.



www.fascialmanipulation.com/en/
www.fascialmanipulation-stecco.com

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Fascial Manipulation©

- The technique involves deep manual friction over specific points on the deep muscular fascia that are always at a distance from the actual site of pain. In this way, the method can be applied safely even during the acute phase of a dysfunction.
- Hyperemia caused by deep friction could modify the extracellular matrix and restore gliding.



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Fascial Manipulation



Indications

- Myofascial Pain
- Repetitive Strain Injury
- Movement Imbalances
- Chronic / Compensatory Movement Patterns
- Chronic Pain Syndromes
- Somoatovisceral Dysfunction

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Fascial Manipulation



Contraindications

- Malignancy
- Aneurysm
- Acute rheumatoid arthritis
- Advanced diabetes
- Severe osteoporosis

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Soft Tissue Interventions – Movement Flow

Simple repetitive movements prescribed as “exercises” to aid fascial gliding and resolution of tension and dysfunction

Make it up as you go

Refer to work from Stecco Family and Anatomy Trains (Myers)

Try and keep it simple – Don’t over prescribe and get too technical

28

Soft Tissue Interventions “Gold Nuggets”

- A lot of it boils down to your clinical experience and to a degree preference. The more tools you have in the tool box, the more capable you are in treating different athletes.
- “Good decisions are made based on experience. Often Times experience is gained from bad decisions.”
- Unknown
- Don't be afraid to try things out. Use your intuition to guide you as no single method holds the answers to all possible questions and scenarios. If your favourite modality doesn't seem to work with a particular athlete, try something else - you might be surprised by the outcome.

Soft Tissue Interventions Questions