Implementing Corrective Exercise Strategies to Improve Mobility & Stability

Dr. Jeffrey Tucker
11600 Wilshire Blvd. #412
Los Angeles, CA 90025
310-473-2911
www.DrJeffreyTucker.com
Welcome & thanks

• The entire staff
• All the presenters

• Thank you for allowing me to share with you!

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Core practice values

• Create a unique personalized combination of treatment options with manual therapy, modalities, corrective exercise experiences and therapeutic lifestyle education.

• To deliver extraordinary care to our clients; to create an environment where the practitioner & client work together as a learning team.

• Do the right thing; seek truth; speed in results; be profitable; have fun.
What is your technique sequence?

• Assess range of motion restrictions, joints, & soft-tissue
• Apply mob/manipulation & release myofascial restrictions (D-M-S.com & laser)
• Awareness exercises (Posture, breathing)
• Teach self myofascial release approach (foam roll, stick work)
• Teach self stretch techniques
• Teach low load (body weight, bands, balls, etc) exercise techniques
• Teach whole body exercise approaches: KB, F-W, etc.
• Discuss therapeutic lifestyle changes
Do I adjust?

...ALL THE TIME. I also do exercise – ALL THE TIME. But, the emphasis in care w/ the patient is

1. To build their SELF EFFICACY
2. To enhance their MOTOR PROGRAMS
3. To enable them to resume PARTICIPATION & play “full out”
4. To enable them to FUNCTION INDEPENDENTLY
How about passive care?

- **Passive care** is dependency producing & does not affect the CNS movement patterns.

- **Active care** produces independence & changes CNS movement patterns. Of course passive care can be a catalyst & in that context we use it.

- **Adjustments** like chiropractic, acupuncture, soft tissue massage, isolated muscle stretching, or other passive modalities can be first line therapy. But…I use them as a catalyst. You cannot re-groove a movement pattern w/ passive care. The problem is residivism.

- The old question – “*how long do the session changes last*”? It depends on the patient improving their movement & motor patterns. **Re-patterning** controls movement INDEPENDENTLY (then you & the patient can be confident that improvement will last).
Points I always check

- Ankles – hypomobile/mobility
- Knees – hypermobile/stability
- Hips – hypomobile/mobility (ROM +)
- Lumbar spine – hypermobile/stability
- Thoracolumbar Junction – hypomobile (Thoracic 5 area– hypomobile)/mobility
- Scapulo-thoracic – hypermoblie/stability
- 7th Cervical-T1 – hypomobile
- Cervical spine - hypermobile
- Upper cervical – hypomobile

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Pop Quiz: Perform A Posture Evaluation
The Basics: Evaluation of Static Posture

- Hypertrophied sternocleidomastoid
- Forward head posture
- UE internal rotation/round shoulders
- Shoulders
- Scapulae (winging, elevated)
- Medial rotation of scapulae
- Ribs
- Hypertrophied thoracolumbar erector spinae
- Pelvis (unleveling, tilt, distortion)
- Protruding abdomen
- Sway back or flat back
- Anterior pelvic tilt
- Flattened superolateral quadrant of the buttock
- Prominence of the iliotibial band
- Lateral deviation of the patellae
- Foot (flattened heel, flat foot)
Pain & Movement Patterns

• Pain can alter movement, but movement might remain altered even after the pain is resolved.

• Isolated strength, muscle flexibility & balance might return to normal but functional movement patterns can still be dysfunctional.
Prehab, Rehab, Conditioning Plan

- Posture improvement.
- Release the tightness & trigger points in tight and overactive muscles.
- Restore normal mobility to the neural system.
- Restore normal ROM to the ankles, hips, & mid-upper thoracic spine.
- Increase strength.

Corrective Exercise Continuum

**Inhibit**
- Inhibitory Techniques
  - Self Myofascial Release

**Lengthen**
- Lengthening Techniques
  - Static Stretching
  - Neuromuscular Stretching

**Activate**
- Activation Techniques
  - Positional Isometrics
  - Isolated Strengthening

**Integrate**
- Integration Techniques
  - Integrated Dynamic Movement

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Muscle Function

**Stabilizers**
- Glut med
- TrA
- Int obl
- MF
- Lower trap
- Serratus ant
- Rot cuff
- DNF

**Mobilizers**
- Gastroc
- Quadriceps
- Hamstrings
- Adductors
- Hip flexors
- Rectus abdominus
- Er sp
- Lats

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Glut med & TrAb

- Band walk
- Hip abduction

- Quadruped rocking

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Internal Oblique & MF

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Lower trap & Serratus anterior

- ‘No money’ drill
- Brugger maneuver
- Y-T-L-V

- Forward punch
Rotator cuff & DNF

• ‘Sling’
When is rehab complete?

• The physiological process of healing is complete
• Physical performance is reinstated
• The CNS is satisfied that threat levels have reduced and has ‘turned off’ its ‘surveillance’
• How do we go from ‘surveillance’ to ‘end’ of rehab?
Corrective Movement Strategies

• Create a Logical Approach: Screen, Test, Assess

• Create a Movement Baseline: Functional Movement Screen (FMS)

• Correctly Identify Dysfunction

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Starting and Progressing??

Baseline for Movement

- Squatting
- Stepping
- Lunging
- Reaching
- Leg raising
- Push-up
- Rotary Stability

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Neck-Shoulder Pain-Rehab Plan of Action

Corrective Exercise Continuum

Inhibit
- Inhibitory Techniques
  - Self Myofascial Release

Lengthen
- Lengthening Techniques
  - Static Stretching
  - Levator Scapula
  - Upper Trap
  - Pectoralis Minor/Major
  - Latissimus Dorsi

Activate
- Activation Techniques
  - Positional Isometrics
  - Isolated Strengthening

Integrate
- Integration Techniques
  - Integrated Dynamic Movement

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Lengthen: Static

- SCM
- Scalenes
- Upper trapezius
- Levator scapulae
- Pectoralis minor
- Suboccipitals
- Thoracic spine
  - Cross-legged or ball b/t knees seated lateral bending, rotation
  - Childs pose sitting deep in the hips; keep the lower back from taking the rotation
Activate: Chin-tuck-head-lift exercise

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Activate: Prone Retraction & Seated Retraction

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Forward Shoulders Program Design

• Inhibit & Lengthen
  – SCM
  – Scalenes
  – Levator Scapula
  – Upper Trapezius
  – Pectoralis Minor/Major
  – Latissimus Dorsi

• Activate
  – Mid/Lower Trapezius
    • Ball Combo 1
    • Bruggers

• Integrate
  – Ball Squat to Band Row

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Forward Shoulders: INHIBIT

- SCM (pinch + tuck the chin & lift the sternum + turn the head 20 degrees + tip the head)
- Scalenes (subscap/ant, infraspin/post, ss & LV/mid)
- Levator scapulae (tennis ball)
- Upper trapezius (tennis ball)
- Pectoralis minor
- Lats

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Forward Shoulders: LENGTHEN

- Use of Static or Neuromuscular Stretching
- Shortened muscles include:
  - SCM
  - Scalenes
  - Levator Scapula
  - Upper Trapezius
  - Pectoralis Minor (and major)
  - Latissimus Dorsi

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Forward Shoulders: ACTIVATE

- Use of Positional Isometrics and/or Isolated Strengthening
- Weakened muscles include:
  - Deep Cervical Flexors
  - Mid/Lower Trapezius
  - Rotator Cuff

Integrity of cervical spine stability?

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Neck - Shoulder Corrective Exercise Solution

• Integrate:

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ASLS: Corrective Movement Strategies:

• Set Baseline: Check, Re-check and Re-Check

• Must have Positive Short-Term Responses to Obtain Long-Term Adaptation

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Achieving Long-Term Adaptation???

- ASLR reveals tight hamstring
- Corrective exercise
  - Core engagement
  - Double leg lowering
  - Single leg dead lift

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Active Straight Leg Raise with Core Activation
Active Straight Leg Lowering
ASLR: Single Leg Deadlift

A.

B.

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Considerations for Corrective Exercise Prescription

• Get back to basics: Proper Education and Goal setting (posture, Bruegger’s, thumbs cue)

• First Remove the Negatives!!!!

• Consider to be Supplemental

• Recovery, Progression and Re-testing

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Why Overhead Squat?

- Based on clinical & scientific evidence
- Incorporates all of the major joints in the body
  - 5 Kinetic Chain Checkpoints
- Evaluates:
  - Total body strength
  - Flexibility
  - Neuromuscular control

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Deep Squat
Poor Performance Errors

Ankle Mobility – heels off the ground

Hip Mobility – tight glutes and/or hamstrings

Hip Stability – gluteus medius weakness (knee caving) intrinsic foot weakness

T-Spine Mobility/Core Stability – forward torso – weak core

Shoulder Mobility – tight lats, pec minor, lower trap, serratus

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Is this a Mobility or Stability Problem?
Consider Squatting

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Mobility vs stability first?

- The starting point to stability training begins with improvements in mobility.
- The stability work reinforces the new mobility and the new mobility makes improved stabilization possible.
Exercise Progression: Mobility First

• Because quality stability is driven by quality proprioception

• Quality proprioception is not possible with limitations in mobility

• Gain Mobility then Train Stability

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SECOND - ESTABLISH FUNCTIONAL STABILITY

- Stability is not strength
- Stability is reflex driven
- Neuromuscular and Postural control
- Gain Static then Dynamic Stability

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Workshop: Dynamic Mobility Circuit for ankles, hips & Tsp

• Foam rolls
• Stretch Strap
• Balance pads
• Balls
• Bands

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Please join me in a 1 hour workshop

• Turkish Get Up
  - Corrective exercise routines
References

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• Cook, Gray: Movement 2011
• Page, Phil: The Janda Approach 2010
• Voss DE: Proprioceptive Neuromuscular Facilitation, Patterns and Techniques, 1985
• Thera-band Academy

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Thank you!

- Email: DrJTTucker@aol.com
- www.DrJeffreyTucker.com
- Office: 1-310-473-2911
- “I have always felt that we need to move away from teaching prescriptive exercises (every exercise for everyone). Let’s teach the ability to individualize to the patient, to analyze movement, create tests, choose from our exercise repertoire, re-test, and measure outcomes”.
  
  JT