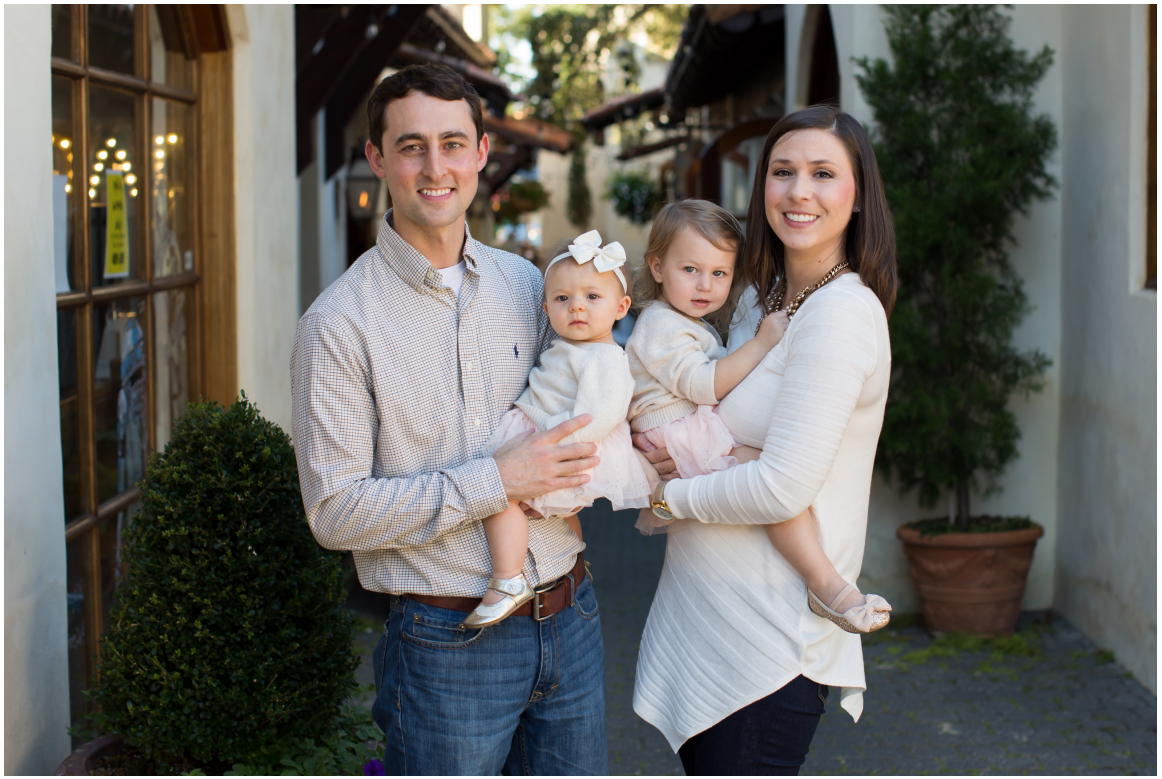
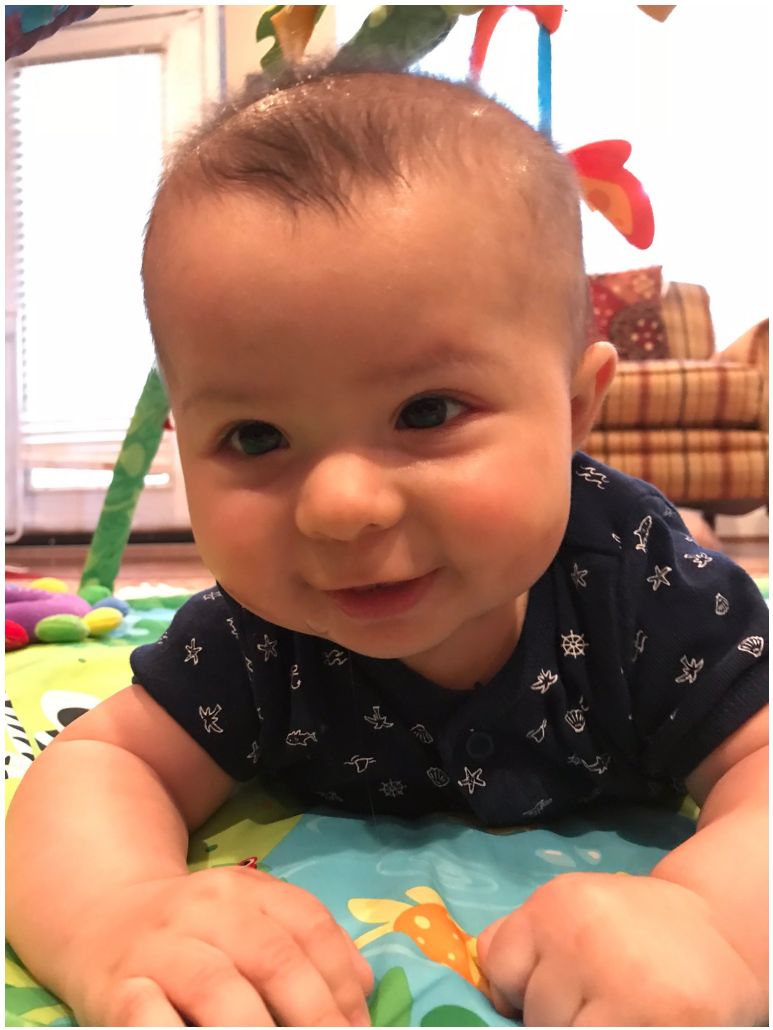
The Cervical Spine: Manual Interventions with Integration into Classification Based Pain

Speaker Biography

- Orthopedic and Sports Physical Therapist since 2011
- Board Certified Orthopedic Specialist since 2014
- Husband and Father of Two Beautiful Girls and Son 2018



New Kid on the Block



Objectives

Participants will be able to:

Identify patients who are appropriate for manual therapy

Apply various manual therapy techniques appropriately and safely to the cervical and/or thoracic spine

Gain an understanding of appropriate force with manual techniques

Objectives

Meaning:

Clear Potential Dangers

Correct Force, Correct Direction, Correction Location

Readdress the Tried and Trues, also some new, but each with Appropriate Technique

Manual Therapy

What am I doing?

Am I:

manipulating tissue?

moving a joint?

deforming scar tissue or fascia?

Manual Therapy

Perhaps:

- modulating pain
- diminishing movement evoked pain
- affecting CNS/Cortical Function

Manual Therapy

Hopefully:

Creating a diminished pain window for movement or other procedures !

Manual Therapy Application

Do I have to aggressively manipulate tissue to "loosen it up?"

Not Necessarily!

Manual therapy can be performed nearly pain free in many cases

TASTM, MWM, C/R or MET, Mob/Manipulation

This approach may be inappropriate and may harm the patient

Manual Therapy Application

Do I have to do it for a long time to be effective?

No! Some techniques can be performed in one to two minutes or less

Manual Therapy Application

Should manual therapy be performed in isolation?

Many times no—

Patient needs to move to decrease threat level

Patient needs to perform home treatments to reduce pain

Patient does not need to rely on the PT for all the work

Brief Overview of Classifications

Neck Pain: Revision 2017

Clinical Practice Guidelines Linked to the International Classication of Functioning, Disability and Health From the Orthopaedic Section of the American Physical Therapy Association

CPG for Classifying Cervical Pain

Cervical Pain with Mobility Deficit
(Mechanical Dysfunction)

Cervical Pain with Headache

CPG for Classifying Cervical Pain

Cervical Pain with Coordination Deficits
(Sp/Strains/Whiplash)

Cervical Pain with Radiating Pain
(Radicular)

MDT

Derangement

Dysfunction

Posture

Other

Let's Talk About Healing

Chemical/Pain

Subacute/Repair

Chronic vs Remodeling

Let's Talk About Healing

"Do No Harm"

Can be the challenge of a therapist when patient unable to tolerate our "go-to" techniques or preferred system of treatment

Begs the expansion of the therapist toolbox

Screen Appropriately

Appropriateness of Manual

Listening

Suspected Fracture

Canadian C-Spine

Signs of ICA/VA dissection

Extreme Pain

Appropriateness of Manual

Listening

Tumor

RA

Long Term Steroid Use

Appropriateness of Manual

Watching

Horners Syndrome high incidence in ICA and occasional tumor

Palsy

Appropriateness of Manual

Testing

BP

Neuro Testing

Alar Ligament

Transverse Ligament

Appropriateness of Manual

Testing

Pre-manipulative hold

No joint motion detected

Appropriateness of Manual

Tumor

Age >50

Previous Cancer

Unexplained Weight Loss

Constant and Progressing Pain

Appropriateness of Manual

Tumor

Pain for greater than one month and no response to conservative care

Elderly and first onset of neck pain or with rapidly increasing pain and stiffness

Dysphagia

Appropriateness of Manual

Cervical Myelopathy

Hoffmans, Babinksi, Clonus, Hyperreflexia,

Spasticity, L'hermitte's

Poor Hand Coordination or Motor

"Difficult to button shirt, write, hold a cup"

Appropriateness of Manual

Cervical Myelopathy

Gait Disturbance

Slow, Ataxic, Wide Based

Thenar wasting, Widespread motor weakness

Bowel/Bladder/Genital Dysfunction

Artery Dissection

Classic Signs

Horner's

Dizziness

Nausea/Vomiting

Gait Disturbance

Facial Presthesias

Artery Dissection

Classic Signs

- Headache
  - Unilateral and frontotemporal or entire hemicranium
- Facial Pain
- CN Signs
- Pain in the back of the head or neck
- Tinnitus

Post Trauma

Imaging if:

Loss of Consciousness
Death of another occupant in the vehicle
High Speed or High Impact
Bilateral UE Symptoms

Canadian C-Spine Rule

For alert (GCS=15) and stable trauma patients where cervical spine injury is a concern.

1. Any High-Risk Factor Which Mandates Radiography?

Age ≥ 65 years
or
Dangerous mechanism*
or
Paresthesias in extremities

Rule Not Applicable If:

- Non-trauma cases
- GCS < 15
- Unstable vital signs
- Age < 16 years
- Acute paralysis
- Known vertebral disease
- Previous C-spine surgery

No ↓

Yes →

2. Any Low-Risk Factor Which Allows Safe Assessment of Range of Motion?

Simple rearend MVC**
or
Sitting position in ED
or
Ambulatory at any time
or
Delayed onset of neck pain***
or
Absence of midline c-spine tenderness

No → **Radiography**

Yes ↓

3. Able to Actively Rotate Neck?

45° left and right

Unable ↑

Able ↓

No Radiography

*** Dangerous Mechanism:**

- fall from elevation ≥ 3 feet / 5 stairs
- axial load to head, e.g. diving
- MVC high speed (>100km/hr), rollover, ejection
- motorized recreational vehicles
- bicycle struck or collision

**** Simple Rearend MVC Excludes:**

- pushed into oncoming traffic
- hit by bus / large truck
- rollover
- hit by high speed vehicle

***** Delayed:**

- i.e. not immediate onset of neck pain

Stiell IG, Clement CM, McKnight RD, Wells GA, Brison R, Schull M, Rowe B, Worthington J, Eisenhauer M, Cass D, Greenberg G, MacPhail I, Dreyer J, Lee J, Bandiera G, Reardon M, Holroyd B,

Appropriateness of Manual

Need Patient Consent for each intervention*

"Something works for everyone but not everything works for everyone"

Interventions

Upper Cervical Spine

C1-2 Flexion Rotation

MET's or C/R

- OA
- AA
  - (Name it the direction they were stuck in if desired)

Interventions

Upper Cervical Spine

UPA

C1 SNAG

C2 HA SNAG

C2 Extension SNAG

Interventions

Mid to Lower Cervical Spine

NAG

C2-7

Reverse NAG

C5-T4

SNAGS

Rotation/Flexion/Extension/Sideflexion

Interventions

Mid to Lower Cervical Spine

UPA/UAP

Rotational MWM for Rotation or Rotation/Ext

Interventions

Repeated and Sustained Motions

Cervical Retraction (supine/prone if needed)

- Self OP
- Sustained
- PT OP

Interventions

Repeated and Sustained Motions

Retraction

- With Rotation
  - Add OP as needed
- With Sideflexion
  - Add OP as needed

Home Treatments

Belted/Towel Mulligan Rotational Mobilization

Self Head Ache Mob

Patient self Isometrics

Home Treatments

Retraction series:

Need to perform 10-15 reps every 2-3 hrs

Posture Correction with lumbar roll

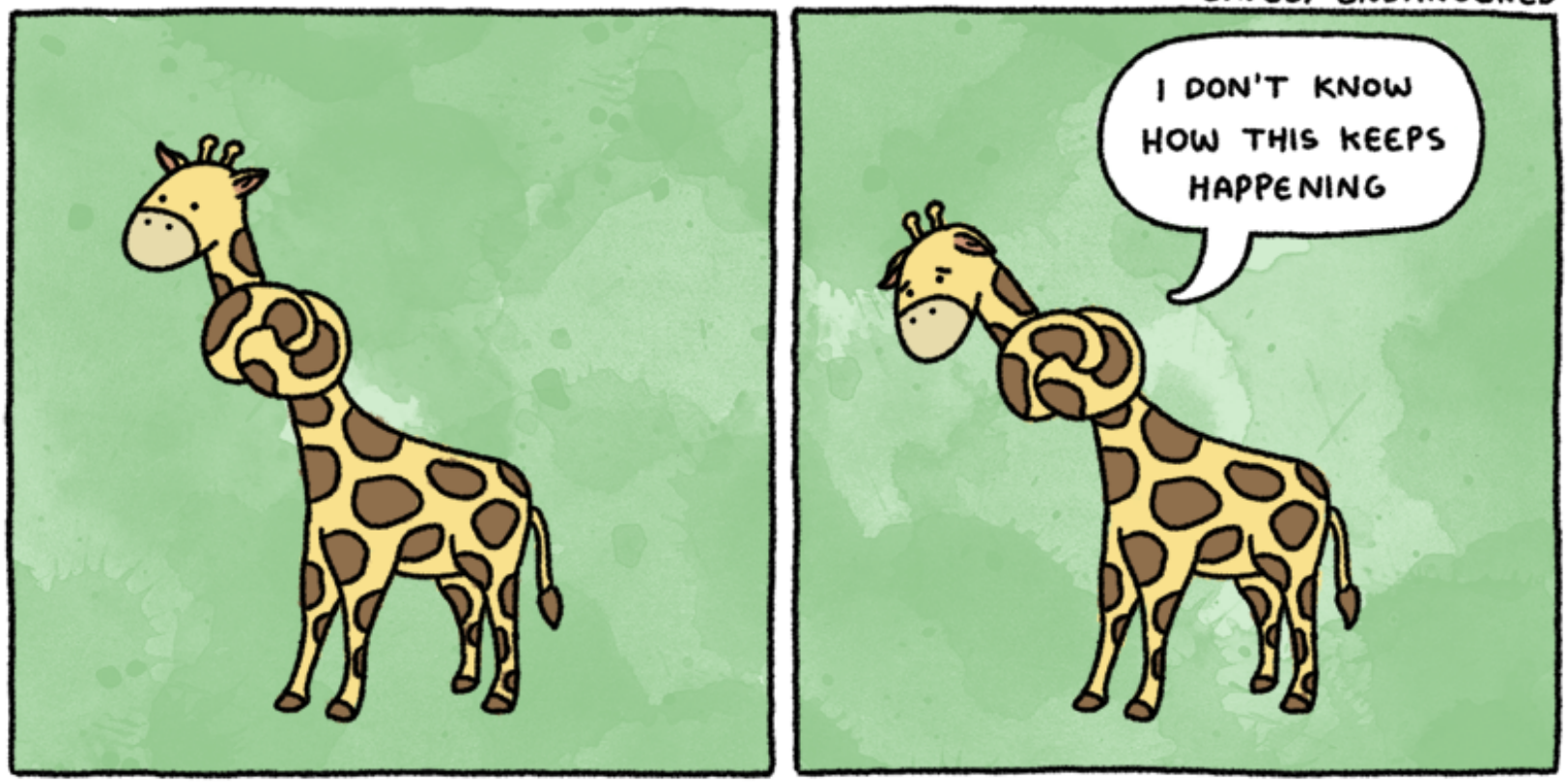
PT Bonus Content

Thoracic Manipulation

- Dog
- High Dog

Second/Third Rib Manipulation

SAFELY ENDANGERED



Picture References

spineuniverse.com

safelyendangered.com