OMT Boot Camp

OMT Applications for Somatic Dysfunction of the Extremities

Thomas E. Sabalaske, DO
Name of Faculty/Moderator: Thomas E. Sabalaske, DO

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<th>Organization with Which Relationship Exists</th>
<th>Clinical Area Involved</th>
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Signature:    Date: 1-27-17

Please email this form to binam@acofp.org as soon as possible
Deadline: Thursday, February 2, 2017
OMT of the Extremities
Board Review

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www.doctorsab.com

AOCP FP OMT Boot Camp
March 2017

Objectives

- Brief anatomy review of the extremity articulations and tissues
- Review diagnosis and treatment of some of the more common conditions seen in family medicine and on the practical
- Establish principals for treating any dysfunction that is presented on the boards
Shoulder Anatomy

Three true joints:
- Glenohumeral
- Sternoclavicular – sellar joint
- Acromioclavicular – plane joint

One pseudo joint:
- Scapulothoracic

Shoulder Anatomy

Rotator cuff tendons (SITS):
- Supraspinatus
- Infraspinatus
- Teres minor
- Subscapularis

Major function is to stabilize the glenohumeral joint and enable external rotation
Spencer Technique

- Good for adhesive capsulitis
- Stretch the muscle group to test its range of motion, use muscle energy to work the muscle group to achieve post isometric relaxation
Spencer Stages

1. Extension
2. Flexion
3. Circumduction with compression
4. Circumduction with distraction
5. Abduction (with int/ext rotation)
6. Another internal rotator
7. Massage relaxer/lymph pump
8. Retest – as ALWAYS

Spencer Mnemonic

- Elephants – Extension
- Fly - Flexion
- Constantly - circumduction
- To – traction (and circumduction)
- Annoy - abduction
- Intoxicated – internal rotation
- People - pump
Shoulder Counterstrain Technique

○ You can always attempt to counterstrain any tender points either anterior or posterior in the shoulder. While monitoring the point, simply approximate the origin and insertion of the muscle/tendon being treated. This works well for tendonitis, especially **BICEPS TENDONITIS**.

Shoulder Muscle Energy

○ Most asymmetries of motion and impingement syndromes of the shoulder are amenable to muscle energy to facilitate a better balanced position. Teaching home exercises enhances the benefit.
Elbow Anatomy

- One true joint – ulno-humeral
  (range of motion flexion – 160 deg
  Extension – 0 deg.)
- Two accessory joints
  1. Radiohumeral
  2. Proximal radioulnar
Anterior Radial Head

- Diagnose with decreased posterior motion
- Treatment – HVLA – Pronate pt’s wrist while flexing at elbow, grab radial head with a few fingers, and encourage posterior motion while hyper-flexing the elbow.

Posterior Radial Head

- Diagnose with decreased anterior radial head motion
- Treatment – Contact radial head with fingers, encouraging anterior motion while hyperextending the elbow joint.
Decreased pronation/supination

- Diagnose as above, often found in combination with other dysfunctions
- Treat with direct muscle energy in a “shaking hands with patient” position

Epicondylitis

- Diagnose with point tenderness on either epicondyle and associated muscle use pain (lateral – posterior forearm muscles; medial – anterior)
- Treatment – first treat all surrounding dysfunctions, then counterstrain (extend the elbow and pronate for medial; or supinate for lateral) and then educate
Metacarpal dysfunction

- Diagnosis pain and decreased motion of one or more of the metacarpals
- Wiggle it (just a little bit) – articulatory technique where you translate the metacarpal ant/post with the neighboring metacarpals

Fingers

- Gap and gently rotate any stiff or dysfunctional phalanges
Hip Joint Anatomy

- Femoroacetabular joint – ball and socket synovial joint
- Primary flexor – iliopsoas
- Primary extensor – gluteus maximus
- Held in place by 4 ligaments and surrounding musculature
Functional Hip Stacking Technique

- Patient supine
- Palpate anterior hip capsule area
- Take the leg indirectly – away from all barriers (flexion/extension, ab/adduction, internal external rotation, compression/distraction)
- Hold until release is felt, then slowly return

Lateral Trochanteric Counterstrain

- Patient prone or supine
- Palpate tender point
- Abduct the leg and adjust with mild flex/ext or rotation to maximally decrease the tenderness of the point
- Hold for 90 seconds, slowly return
**Piriformis Counterstrain**

- Patient prone
- Monitor tender point
- Flex patient’s hip and knee to 90 degrees, abduct and externally rotate to maximally decrease tenderness
- Hold for 90 and slowly return

**Hip Musculature**

- Don’t forget to simply use muscle energy to address any abnormal tension in any of the muscles of the hip to enhance function
Knee Anatomy

Three Major Joints
1. Tibiofemoral joint
2. Patellofemoral joint
3. Tibiofibular joint – synovial joint important for pronation/supination of feet
Tibia on Femur dysfunction

- Treats abduction/adduction dysfunctions as well as torsions of tibia on femur
- Patient supine, physician contacts above and below knee and directly applies pressure through soft tissue barriers in rotation and varus/valgus

Counterstrain Patellar Tenderpoints

- Patient supine
- Foot/tibia internally rotated
- Physician grasps quad above knee and provides an inferior force, while palpating tenderpoint with other hand
Anterior Fibular Head HVLA

- Patient supine with pillow under knee
- Physician internally rotates patient’s foot/ankle
- Thrusts fibular head posteriorly while continuing to internally rotate ankle

Posterior Fibular Head HVLA

- Patient supine with hip and knee flexed
- Physician externally rotates ankle/foot with other hand in popliteal fossa
- Knee is flexed while applying anterior pressure on fibular head
Ankle Anatomy

1 major joint
- Talocrural (Tibiotalar) – hinge joint connecting talus to tibia/fibula
- Many minor joints and ligaments important for movement and shock absorption.
- Anterior talofibular ligament most commonly torn (always tears first)
HVLA Anterior Tibia on Talus

- Tibia resists posterior translation, ankle prefers dorsiflexion
- Patient supine, physician at foot of table
- Physician’s grasps patient’s heel and applies traction
- Corrective force with other hand posteriorly through distal tibia

HVLA Posterior Tibia on Talus

- Tibia resists anterior translation, ankle in plantarflexion
- Patient supine, physician at end of table
- Physician grasps foot with both hands, applies traction, dorsiflexion and mild eversion, and gives a gentle tug
Foot Anatomy

- Remember bones involved
- Plantar fascia – medial calcaneus extends out to phalanges
- Longitudinal arch (medial and lateral)
- Transverse arch
Foot conditions

- Pes planus – flat feet
- Hallux valgus – bunion
- Hammer toes – plantarflexion pip joints
- Plantar faciitis
Midfoot Thrust
(Hiss Whip)

- Patient prone, physician stands along side of dysfunction
- Physicians grasps the foot with thumbs crossed over dysfunctional bone, and applies downward thrust while inducing a whip-like motion of the foot and ankle

Metatarsal Articulation

- Patient supine, physician grasps foot and stabilizes one metatarsal while gently moving the adjacent metatarsal to increase mobility