

Corrective Strategies for Overhead Athletes (and Meatheads, Too!)

Tony Gentilcore, CSCS

Thank You to People Who Are Smarter Than Me

☛ Eric Cressey, Mike
Robertson, Mike
Reindd, Dean
Someset, Mark
Young, Bret Contreras,
Mike Boyle, Gray
Cook, Optimus Prime

☛ My Girlfriend, PhD!

☛ Also, thank YOU!!!!



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Who Is This Gentilcore Guy?

☛ Brief History – AKA,
the boring stuff

- ☛ BA in Health Ed
- ☛ CSCS
- ☛ Former competitive athlete

☛ Co-Founder of Cressey
Performance

- ☛ Hudson, MA
- ☛ Variety of clientele



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Goals/Overview

- Discuss common upper body pathologies and imbalances seen in overhead athletes, as well as Week end Warriors
 - ⚡ Shoulder Impingement (primary vs. secondary)
 - ⚡ AC Joint issues
- Assess, correct, and program around said issues
- Troubleshoot common exercise technique
- Learn to make lemonade out of lemons
 - ⚡ Learn to elicit a training effect

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A Little Taste of CP



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Shoulder Joint Shenanigans

- It's kind of a big deal
 - ⚡ More than one joint
 - ⚡ GH, scapulohumeral, AC, sternoclavicular
- Lots of "stuff" happening
- 17 muscular attachments alone



The shoulder joint

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Shoulder “Impingement”

- ☞ Garbage Term?
- ☞ No shoulder is the same.
- ☞ Many root causes, which makes assessment all the more imperative.



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The Bigger Picture 12 Shoulder Health Factors (courtesy of Cressey & Reinold)

- | | |
|----------------------------|-----------------------------------|
| ☞ Overuse | ☞ Type 3 Acromion |
| ☞ Rotator Cuff Weakness | ☞ Poor Exercise Technique |
| ☞ Scapular Stability | ☞ Poor Cervical Spine Function |
| ☞ Poor GH ROM | ☞ Opposite Hip-Ankle Restrictions |
| ☞ Soft Tissue Restrictions | ☞ Poor Programming Balance |
| ☞ Poor T-Spine Mobility | ☞ Faulty Breathing Patterns |

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Internal Impingement

- ☞ Namely, posterior shoulder pain
- ☞ Supra and infraspinatus “pinned” against Posterior-Superior glenoid and labrum
 - ☞ EC: shoulder stability sacrificed for mobility
 - ☞ EC: 7,200+ degrees IR per throw (20 full revolutions per second)
 - ☞ Humeral head migrates superiorly = ouchie
- ☞ Seen most often in overhead athletes



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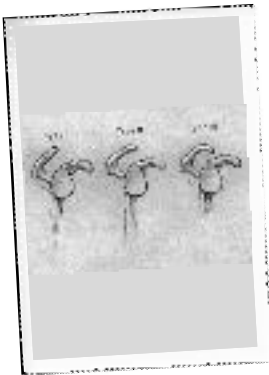
External Impingement (Meathead-itis)

- ⚡ Most common pathology in lifters and "computer guy"
- ⚡ Anterior Pain
- ⚡ Pain with bench pressing, overhead activities, as well as approximation
- ⚡ Primary vs. Secondary



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External Impingement Primary

Morphological
change

Acromion Type I, II,
and III

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External Impingement Secondary

Structural

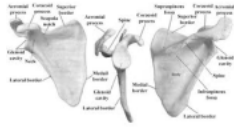
Poor Scapular positioning, T-
Spine, Tissue Quality,
Technique, Programming

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External Impingement (Poor Scapular Positioning)

- ☼ When in doubt – look at scapulae
- ☼ Culprit of most (not all) shoulder pathology
- ☼ Canoe from cannon
- ☼ Poor positioning = FUBAR joint kinematics



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External Impingement (Poor Scapular Positioning)

- ☼ Downward Rotators: Upper traps, levator, rhomboids
- ☼ Upward Rotators: upper traps, lower traps, serratus anterior
- ☼ Tug-of-war between force couples
- ☼ When upward rotators weak – often leads to impingement. Unfortunately, many think it's the rotator cuff that's the issue. LEAKY ROOF SYNDROME.

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Leaky Roof Syndrome

- ☼ Treating symptoms and not cause.
- ☼ Shoulder hurts? Must be rotator cuff, right?



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External Impingement (Poor Scapular Positioning)

- ✎ Scapular downward rotation syndrome = downward rotators dominant
 - ✎ due to poor training, behavioral demands, and atrocious posture, become short and stiff.
- ✎ Also, poor upward rotation = lower back pain

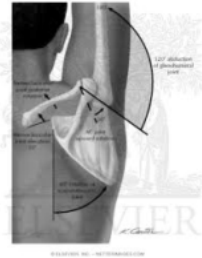


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How to “Assess” Scapular Positioning

- ✎ Scapulohumeral Rhythm
- ✎ After first 30 degrees of scapular elevation, both GH and scapula move in a 2:1 ratio
- ✎ Watch for shrugging
- ✎ Landmarks: base of spine, inferior angle



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Hammer Low Traps!!!

- ✎ *Smith, M., Sparkes, V., Busse, M., & Enright, S. (2009). Upper and lower trapezius muscle activity in subjects with subacromial impingement symptoms: Is there imbalance and can taping change it? Physical Therapy in Sport, 10 (2), 45-50 DOI: [10.1016/j.ptsp.2008.12.002](https://doi.org/10.1016/j.ptsp.2008.12.002)*
- ✎ EMG of lower vs. upper traps with and w/o impingement
 - ✎ WITH impingement = greater ratio of upper to lower trap dominance
 - ✎ Asymptomatic: UT to LT ratio of 1.80
 - ✎ Symptomatic: UT to LT ratio of 3.15
 - ✎ Upper trap 3x more active than lower trap is subjects with impingement.
 - ✎ How you like dem apples!!!!

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Hammer Low Traps (some more)

- ☞ No need to get cute in the beginning
- ☞ EMPHASIZE technique with the basics
 - ☞ COACH your athletes and clients
 - ☞ Seated Rows, TRX Rows, Face Pulls, Chin-Ups
- ☞ As a result, they'll learn to promote a more advantageous position for the scapulae – posteriorly tilted (retracted, depressed).



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Half Kneeling Cable Row



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Seated Cable Row



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Half Kneeling Cable Pulldown



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Chin-Up

Coaching Cues

- Shoulder blades in back pocket
- Pull through elbows – NO SHRUGGING
- Pull to sternum
- Don't dive bomb
- Limit Body English



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Hammer Low Traps and Serratus!!!!



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Forearm Wall Slides



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Forearm Wall Slide – 135 Degrees



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1-Arm Prone Trap Raise



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TRX Ys



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Other Favorites

- 🌟 Scapular Wall Slides
- 🌟 Standing Shoulder Ws
- 🌟 Mike Reinold



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Hand Switches



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Slideboard Miyagi's



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Programming Considerations



- ❖ Eliminate overhead activities – have to earn the right (lower back considerations).
- ❖ Modify or eliminate Horizontal pressing
- ❖ Horizontal pull your ass off
- ❖ Hammer t-spine mobility (addressed later)
- ❖ Avoid "at risk" position – front squat over back squat

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Programming Considerations Continued

- ❖ (feet-elevated push-up ISO holds)>(feet-elevated) body weight push-up>stability ball push-up>weighted push-up>neutral grip DB floor press>neutral grip decline DB press>pronated grip decline DB press>barbell board press>barbell floor press>neutral grip DB press>low incline DB press>close grip bench press>bench press>barbell incline press>chicks will want to hang out with you. WIN!!!!

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Programming Considerations Continued

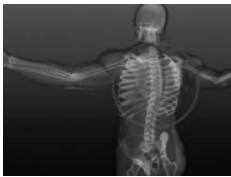


- ⚡ Limited ROM before full ROM
- ⚡ Adducted before abducted
- ⚡ Unstable (GASP !!!) before stable
- ⚡ Closed-chain before open chain
- ⚡ DBs before barbells
- ⚡ Isometrics before "regular" speeds
- ⚡ Traction before approximation (pull-ups, before OH pressing)

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External Impingement (Thoracic Mobility)



- ⚡ One could argue, everything starts and ends with T-spine mobility
- ⚡ OH reach test
- ⚡ Drastically effects scapular positioning, and quite frankly, this is of more importance
- ⚡ Mike Boyle: "The important thing about t-spine mobility is almost no one has enough and it's hard to get too much."

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External Impingement (Thoracic Mobility)

- ⚡ Lumbar Locked Rotation – Greg Rose, Titleist Performance Institute
- ⚡ A bit more advantageous because it doesn't allow for any cheating.
- ⚡ By "locking" the lumbar spine into position, we can't use it to produce more range of motion.
- ⚡ For general population clients, we're looking for anywhere from 50-70 degrees of rotation. Comparatively, for rotational sport athletes, we'd want to see 70-90 degrees – although 90 degrees is freaky.

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Lumbar Locked Rotation



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Side Lying Windmill



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Yoga Push-Up Complex



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Supine No-Money Drill



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Bench T-Spine Extension Mobilization



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Recoiled, Rollover Throws



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Where to Place Them?

- ☐ As part of a general warm-up
- ☐ Pre-Work – paired with med ball work
- ☐ "Fillers"
 - ❖ A1. Trap Bar Deadlift 4x5
 - ❖ A2. Bench T-Spine Ext-Mob 3x8



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Sample Training Day

Exercises	Sets	Reps
A1. Trap Bar Deadlift * Irradiation of rotator cuff	4	2x3, 2x5
A2. Bench T-Spine Ext-Mobilization	3	8
B1. 1-Arm Standing Cable Row	3	10/arm
B2. Push-Ups; Loaded	3	8
C1. Face Pulls w/ External Rotation	3	12
C2. 1-Legged Hip Thruster – df bench	3	10/leg
D. Scapular Stability Circuit: Hand Switches, Forearm Wall Slides	2	10/each

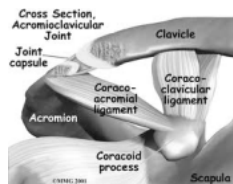


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AC Joint Conundrum

(Acromioclavicular Joint for the non-nerds out there)

- ☐ Pain with palpation, horizontal ADD-uction, full extension, and approximation (usually)
- ☐ Party at the Coracoid Process
 - ❖ Pec minor, coracobrachialis, and SH of bicep



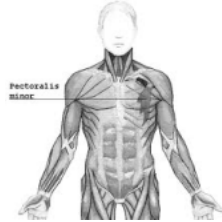
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AC Joint Conundrum

- Almost always, look at pec minor: computer guy (flexion)

- Signs?

- Scapular Protraction
- Loss of scapular posterior tilt (winging)
- Decreased sub-acromial space (impingement)



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BUT, Important to Make Sure



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Programming Considerations?



- Always start with soft tissue work, a close second would be ball SMR with a ball.
- When in doubt, improve upward rotation
 - Strengthen lower traps and serratus anterior, stretch pec minor, levator scapulae
- Behavioral Modifications
 - Tissue creep

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SMR with Ball



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Programming Considerations

- ⚡ Lowerbody --really, only thing to avoid is frontsquats
 - * Specialty bars, Drip or top squat
 - * Single leg work (except FSG), GHR, barrel bridges, deadlifts, freestyle
- ⚡ Never, ever, ever, ever, never, and I mean ever....perform another dp -- not worth it!
- ⚡ Overhead Pressing may be okay -- individual basis
- ⚡ Push-Ups? Might be iffy.
 - * Iso Holds, pain free ROM
 - * Likewise, benching probably a no-go. Board presses
- ⚡ Avoid full extension on rowing variations
 - * Pec Minor = scapular anterior tilt. Compensate retract only posterior tilt with GH type extension (and forward lean with head)

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GCB Bar



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Dips (*Seriously, Stop It!!!)

- ⚠ Just asking for trouble
 - ⚠ Maximal IR with GH extension
- ⚖ Cost - Benefit



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Elevated Push-Ups



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Push-Up ISO Hold with Perturbation



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DB Floor Press



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Board Press



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Bad Row/Good Row



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Sample Training Day

Exercises	Sets	Reps
A1. GCB Box Squats	4	3
A2. Supine NoMoney Drill w. Band	3	3x(3x10s)
B1. 1-Legged Push-up ISO Hold (Pain Free!)	3	15s/leg
B2. TRX Inverted Row	3	8-10
C1. DB Reverse Lunge –from deficit	3	8/leg
C2. Pallof Press	3	10/side
D. SMR Ball Rolling on Wall	2	infinity

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And That's About It

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