7 Overlooked Opportunities for Building Durable Pitchers

Eric Cressey, MA, CSCS
www.EricCressey.com
@EricCressey

Mistake #1:
Basing Interventions on Averages

- Harvard professor Todd Rose:
- "The real difficulty is not finding new ways to distinguish talent; it is getting rid of the one dimensional blinders that prevented us from seeing it all along.”
- "We live in a world that demands we be the same as everyone else - only better - and reduces the American dream to a narrow yearning to be relatively better than the people around us rather than the best version of ourselves."

Reinold et al (2008). Changes in shoulder and elbow passive range of motion after pitching in professional baseball players

TABLE 1
Range of Motion Before, After, and 24 Hours After Pitching in the Dominant Arm[a]

	Before	After	24 Hours After	*P* for ANOVA
Shoulder				
ER	136.5 ± 9.8	135.3 ± 9.3	136.5 ± 9.0	.213
IR	54.1 ± 11.4	44.6 ± 11.9[b]	46.5 ± 10.0[b]	<.001[b]
TM	190.6 ± 14.6	179.9 ± 13.7[b]	182.9 ± 11.5[b]	<.001[b]
Elbow				
Flexion	144.9 ± 7.1	144.7 ± 5.9	145.8 ± 5.8	.264
Extension	–5.1 ± 9.5	–8.3 ± 8.8[b]	–7.7 ± 8.9[b]	<.001[b]

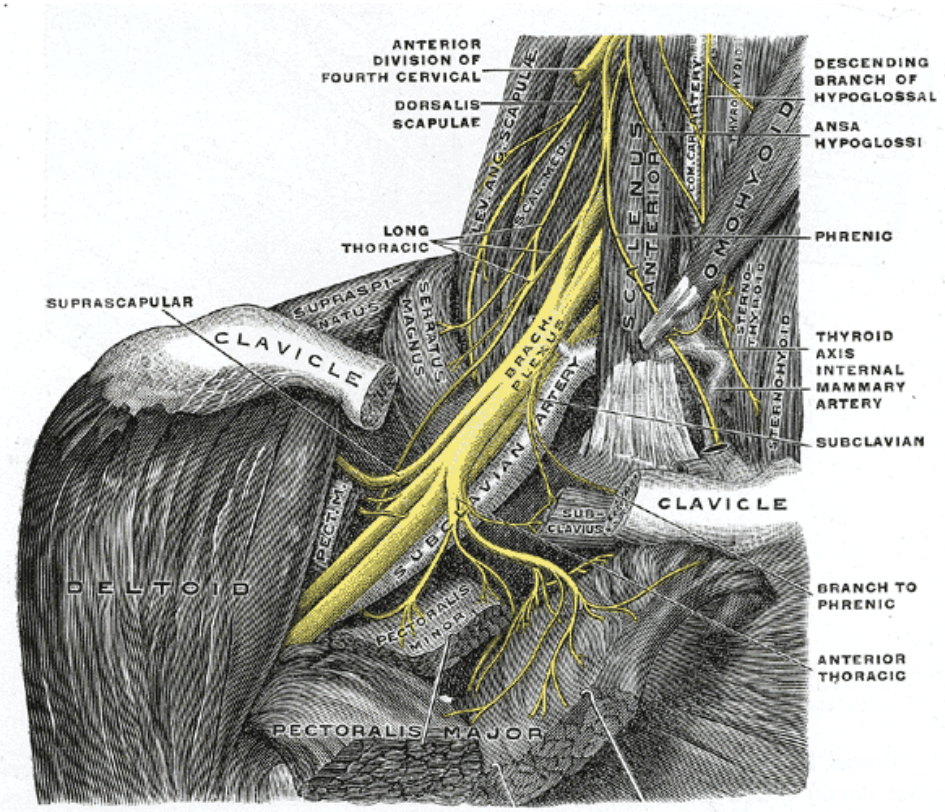
Questions to Ask

- Has the athlete been injured using the approach?
- Has the athlete stagnated or been ineffective with the approach?
- Is the athlete novice enough that a change is easy to acquire and implement?
- What's the minimum effective dose that can be applied to "test the waters" of change?
- How can you involve the athlete in the decision-making process with respect to modifications?
- How can we change the *situation* rather than the *person*?
- Can the change be more efficiently implemented utilizing an athlete's learning style?

Mistake #2: Ignoring the Neck.

Thoracic Outlet Syndrome

- Brachial plexus and/or vascular structures are impinged:
  - Between anterior and middle scalenes?
  - Between clavicle and first rib?
  - On a “bonus” cervical rib? (1/500 people)
- Unfortunately, it’s not that simple…



Neck Screening and Self-Care

- SFMA: Cervical Flexion/Extension, Rotation
- Suboccipital Rolling
- Acumobility Ball

Mistake #3:
Letting Ugly Warm-ups Fly.

- If you give up the core, you're just trying to shoot a cannon from a canoe.
- Optimal shoulder girdle function occurs in very small windows.
- Impingement is a physiological norm.
- Osteokinematics vs. Arthrokinematics

Why Warm-up?

- Thomas Kurz on the warm-up period: “improved elasticity and contractibility of muscles, greater efficiency of the respiratory and cardiovascular systems, a shorter reaction time, improved perception, better concentration, improved coordination, and regulation of emotional states”
- Optimize neuromuscular recruitment
- Shortened learning loop
- Establish stability within new range-of-motion

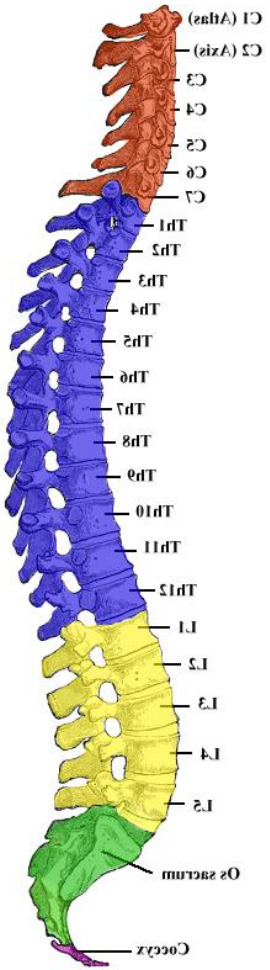
Mistake #4: Cranking Everyone into Thoracic Extension and Rotation

- Many pitchers have excessive thoracic extension and rotation.
- The more you extend and rotate away from ball release, the further you have to go to have a consistent, successful release point.
- Watch for a flat upper back.

Thoracic Positioning

- The spine and rib cage tell the scapula where to go.
- The scapula tells the humerus where to go.
- The humerus delivers the rest of the arm – which dictates where the ball goes.

Kyphotic Thoracic Spine



Measuring Thoracic Extension/Rotation

- Lumbar Locked Rotation
- Dr. Greg Rose: TPI
- Goals: 50-70° general population, > 70° rotational sport athletes
- Hands behind back, Lumbar spine rounded

Flat T-Spine Drills

- All Fours Belly Lift
- Serratus Wall Slides
- Push-up Variations
- Bear Crawls
- Rowing where the scap can actually move!

Mistake #5:
Stretching What Shouldn’t Be Stretched.

Hypermobility: Beighton Score

- Fingers extend past 90° angle to dorsal aspect of hand
- Thumb contacts forearm with full flexion
- >10° hyperextension at elbow
- >10° hyperextension at knee
- Palms flat to floor with toe touch movement

Why does one feel “tight?”

- True Muscular Shortness?
- Protective Tension?
- Neural Tension?
- Previous Injury? Soft Tissue Restrictions?
- Protective Spasm?
- Osseous Restrictions (Bony Blocks)?
- Inadequate stiffness at adjacent joints?

Mistake #6: Not Having a Good Network of Doctors Who Understand Throwers.

Vetter, ML et al. What Do Resident Physicians Know about Nutrition? An Evaluation of Attitudes, Self-Perceived Proficiency and Knowledge. J Am Coll Nutr. 2008 Apr; 27(2): 287–298.

- “Although 77% agreed that nutrition assessment should be included in routine primary care visits, and 94% agreed that it was their obligation to discuss nutrition with patients, only 14% felt physicians were adequately trained to provide nutrition counseling.”
- My guess is that the number is comparable if we are talking about orthos who are seeing baseball pitchers.

Mistake #7: Labeling All Anterior Shoulder Pain "Biceps Tendinitis."

- Tendinitis is actually pretty uncommon.
- If it is the biceps, it's likely tendinosis.
- That said, it's not always the biceps – and assuming it is can lead to a LOT of bad diagnoses and ineffective rehab approaches.

Soapbox Moment

- Your athletic trainer alone should not be DIAGNOSING pathology.
- Ergo, neither should your coaching staff, strength coach, or anyone else who isn't a doctor.
- If something hurts, find someone qualified to check it out.
- If something hurts for a long time, find someone even more qualified to check it out.

Closing Thoughts

- Ask more questions, and do more listening.
- Assess, don’t assume.
- Every rep matters.
- Don’t try to coach the different out of someone unless they’re really struggling.
- Don’t just stretch everything that’s tight; ask why it’s tight in the first place. And if you don’t know what “it” is, refer out.

More Info…

- Free Presentations at www.EricCressey.com:
- Individualizing the Management of Overhead Throwing Athletes: https://ericcressey.com/free-presentation-individualizing-the-management-of-overhead-athletes
- Hip Shoulder Separation in Rotational Athletes: Making Sense of the Thoracic Spine: https://ericcressey.com/free-presentation-hip-shoulder-separation-in-rotational-athletes-making-sense-of-the-thoracic-spine