MOUNT MARTY
COLLEGE

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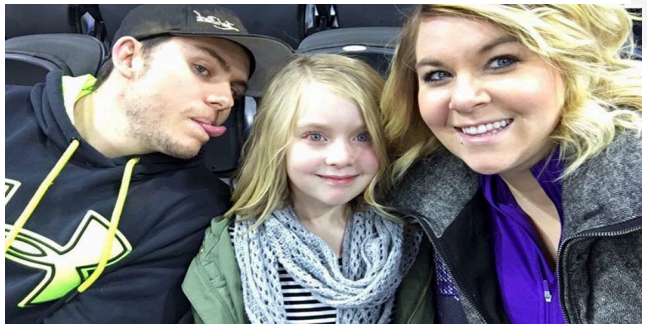
LANCERS

Movement, Mobility, & Recovery Strategies for the Track & Field Athlete

Thank You

Dr. Marcus Long
Randall Fischer

Jared Meador



My Family!

Dr. Donovan Conley

Dr. Scott Staiger

Darin Boysin & Everyone at Nebraska Coaches Association

Lifelong Learning | Awareness of God | Hospitality | Community

- 6 + Years personal training/Strength Coach Experience
- PhD in Health & Human Performance–focus on gerontology (2022)
- Master’s of Science in Education (MSEd.) in Exercise Science
- Bachelor's of Science (BS) in Exercise Science
- Certified Strength & Conditioning Specialist (CSCS)
- Reflexive Performance Reset Level 1 & 2 (RPR)
- Functional Movement Screen Level 1 (FMS)
- Y-Balance Test (YBT)
- Certified Speed & Agility Coach (CSAC)
- Twitter & Instagram @danielflahie
- The Die Healthier Podcast
- President Yankton Rotary Club
- Board Member Heartland Humane Society
- BFLF Mentor with United Way

Health Drives Performance

- Recover Like Champions!
  - Sleep
  - Stress Management
  - Hydration
  - Nutrition
  - Soft Tissue & Mobility Work
- Everyone can work hard in practice and in the weight room, but very few take the rest of the day seriously.
- You are either recovering or preparing.
- Maslow’s Hierarchy of Needs.

Health Focused

- Volume is a physical and morale killer
- Stress is Stress
- Understand what is happening outside of sports – Conscious Coaching
- Be aware of increased injury periods:
  - Beginning of fall
  - Midterm
  - Finals

Academic Stress

Effect of Physical and Academic Stress on Illness and Injury in Division 1 College Football Players

Mann, J. Bryan[1,2]; Bryant, Kirk R.[3]; Johnstone, Brick[3]; Ivey, Patrick A.[2]; Sayers, Stephen P.[1]

Journal of Strength and Conditioning Research: January 2016 - Volume 30 - Issue 1 - p 20–25
doi: 10.1519/JSC.0000000000001055
Original Research

FREE

Abstract | Author Information | Article Outline | Article Metrics

Mann, JB, Bryant, KR, Johnstone, B, Ivey, PA, and Sayers, SP. Effect of physical and academic stress on illness and injury in division 1 college football players. *J Strength Cond Res* 30(1): 20–25, 2016—Stress-injury models of health suggest that athletes experience more physical injuries during times of high stress. The purpose of this study was to evaluate the effect of increased physical and academic stress on injury restrictions for athletes (n = 101) on a division I college football team. Weeks of the season were categorized into 3 levels: high physical stress (HPS) (i.e., preseason), high academic stress (HAS) (i.e., weeks with regularly scheduled examinations such as midterms, finals, and week before Thanksgiving break), and low academic stress (LAS) (i.e., regular season without regularly scheduled academic examinations). During each week, we recorded whether a player had an injury restriction, thereby creating a longitudinal binary outcome. The data were analyzed using a hierarchical logistic regression model to properly account for the dependency induced by the repeated observations over time within each subject. Significance for regression models was accepted at $p \leq 0.05$. We found that the odds of an injury restriction during training camp (HPS) were the greatest compared with weeks of HAS (odds ratio [OR] = 2.05, $p = 0.0003$) and LAS (OR = 3.65, $p < 0.001$). However, the odds of an injury restriction during weeks of HAS were nearly twice as high as during weeks of LAS (OR = 1.78, $p = 0.0088$). Moreover, the difference in injury rates reported in all athletes during weeks of HPS and weeks of HAS disappeared when considering only athletes that regularly played in games (OR = 1.13, $p = 0.75$) suggesting that HAS may affect athletes that play to an even greater extent than HPS. Coaches should be aware of both types of stressors and consider carefully the types of training methods imposed during times of HAS when injuries are most likely.

Nervous System Centered

- High CNS fatiguing lifting and sprint work should be in accordance with one another.
- Training should be focused around the impact on the nervous system.
- Warm-ups Should be used to simulate nervous system.
- Static stretching prior to training is largely a waste of time.

Our Process

- Movement Evaluation
  - Modified FMS
- Movement Flow Analysis
- Breathing & Posture Assessment
- RPR Zone 1 Reset
- RPR Full Reset
- Individualize From There

Lifelong Learning | Awareness

FUNCTIONAL MOVEMENT SCREEN SCORE SHEET

NAME:	DATE:	DOB:	
SCHOOL/AFFILIATION:			
HEIGHT:	WEIGHT:	AGE:	GENDER:
PRIMARY SPORT:		PRIMARY POSITION/OCCUPATION:	
HAND/LEG DOMINANCE:		PREVIOUS TEST SCORE:	

TEST		RAW SCORE	FINAL SCORE	COMMENTS
DEEP SQUAT				
HURDLE STEP	L			
	R			
INLINE LUNGE	L			
	R			
SHOULDER MOBILITY	L			
	R			
SHOULDER CLEARING TEST	L			
	R			
ACTIVE STRAIGHT- LEG RAISE	L			
	R			
TRUNK STABILITY PUSH-UP				
EXTENSION CLEARING TEST				
ROTARY STABILITY	L			
	R			
FLEXION CLEARING TEST				
TOTAL SCREEN SCORE				
FEET TOGETHER SQUAT	L			
	R			
KNEE STABILITY STANDING	L			
	R			
KNEE STABILITY JUMPING	L			
	R			
ANKLE MOBILITY	L			
	R			

Common Occurrences

- Shallow, rapid, and chest-driven breathing
- Slouching rounded shoulders & foreword neck
- Very Tight Thoracic Spine
- Lumbar Pain
- Tight Hip and/or weak hip flexors
- “Tight” aka weak hamstrings
- Knee Pain
- Tight Ankles
- Tight & Painful Feet

Stay in Your Lane?

- Stay within your scope of practice, but don’t be afraid to veer out of your lane.

- Form solid relationships with the Athletic Training staff, physical therapists, MDs, etc.

Kinetic Chain

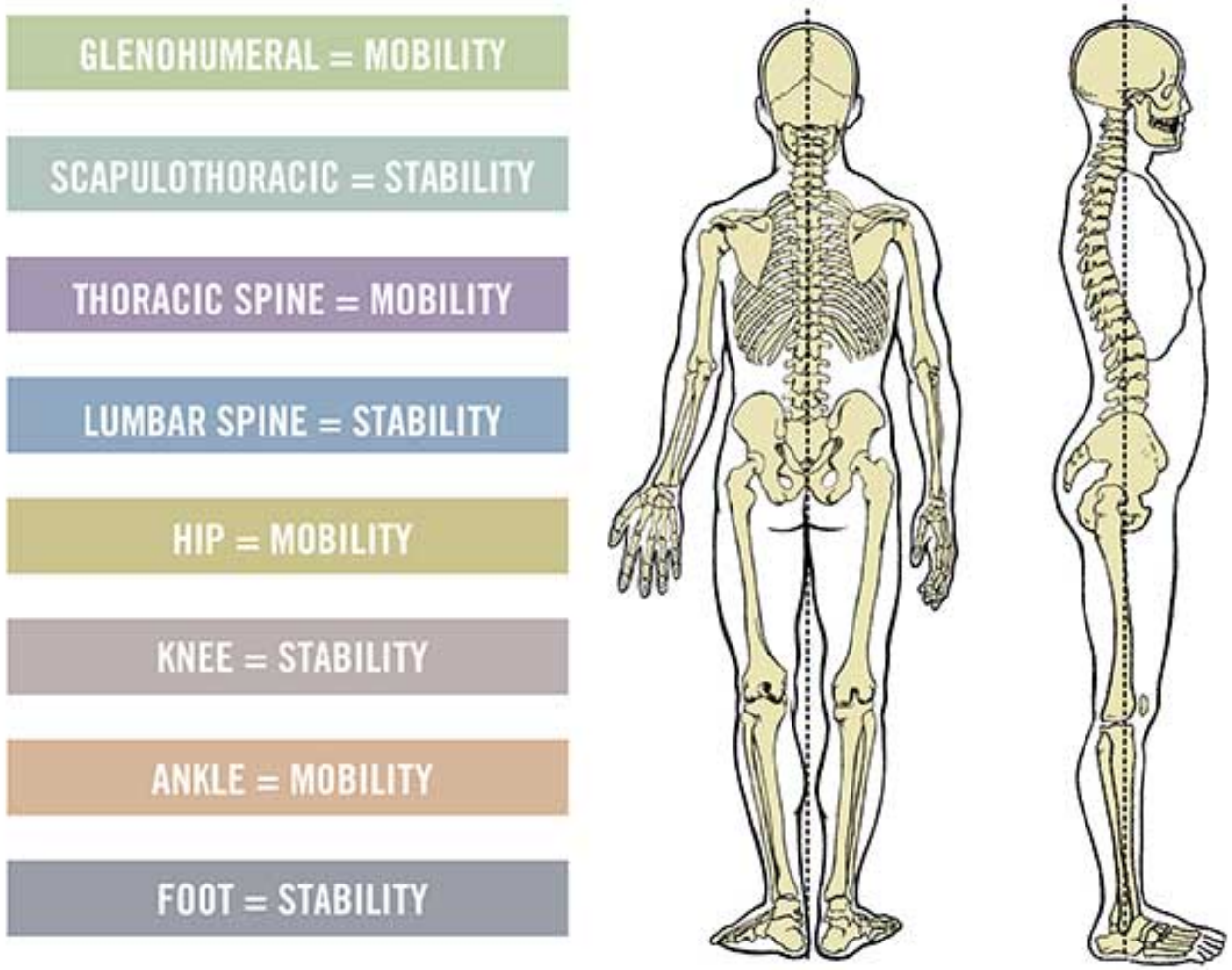


Figure 1: The Stability Mobility Relationship of the Kinetic Chain.

Mobility Drills

Everyday Warm Ups

EVERDAY Running Warm Up

- RPR Reset
- Wall Pistons (1,2,3)
- Hip Flow 1&2& Hurdle Series
- Knee Hugs
- Quad/Hammy Stretch
- Baby Crawl
- A March
- Banded A March
- A SKIP
- Banded A Skip
- B March
- B Skip
- High Knees
- Butt Kicks
- Carioca
- PVC Pipe Sprint
- Med Ball Sprint

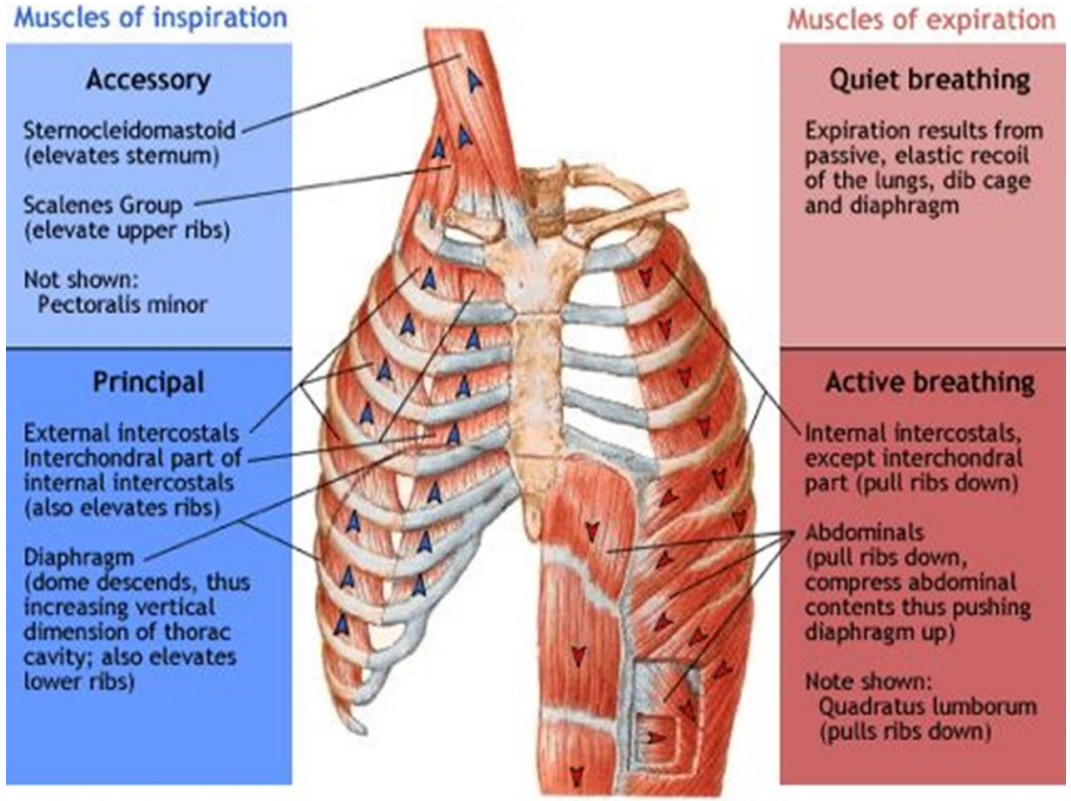
EVERDAY Lifting Warm Up

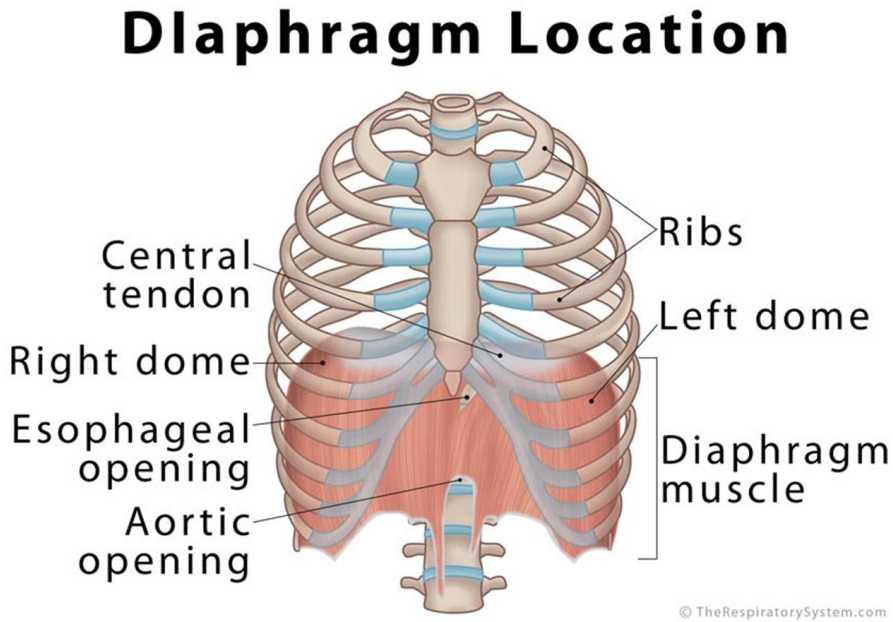
- RPR Reset
- Foam Roll
- Hip Flow 1&2
- Ankle Dorsiflexion

Breathing-The Key to Performance?

- Poor posture effects breathing, poor breathing effects posture
- How many people consciously work on their breathing?
- Diaphragm, Psoas, Glutes

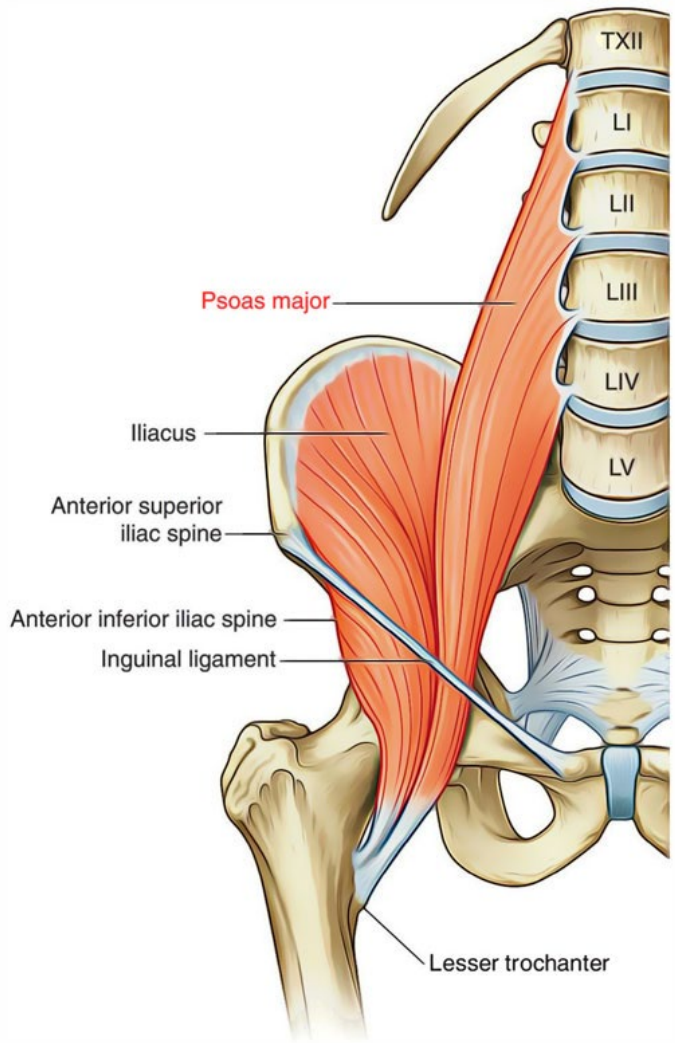
Breathing 101





Psoas

- Origin: Lower border Transverse process L1-L5
- Side of T12 & L1-L5
- Psoas major muscle that connects upper & lower body
- Major Hip Flexor
- Often isn’t used properly



Approaching the Core All Wrong?

- We need to open up, not continue to compress down
- We do Zero crunches, sit-ups, leg raises.
- Those target the rectus abdominis, which does little for sports performance
- Puts massive stress on lumbar spine & tightens already tight hip flexors

What To Do Instead?

- Planks
- Medicine Ball Rotational Throws
- Anti-rotational work –Standing

Pareto’s Principle

- Anyone can throw together a workout that makes kids tired.
- Sweat & Effort doesn’t always equal meaningful work.
- More isn’t better. Better is better.

Stress Response

- Diaphragmatic breathing stimulates Cranial Nerve X (vagus nerve)
- Parasympathetic control of heart, lungs, & GI tract
- “Fight or Flight”

Relax!

Life

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Thank you!

Questions?