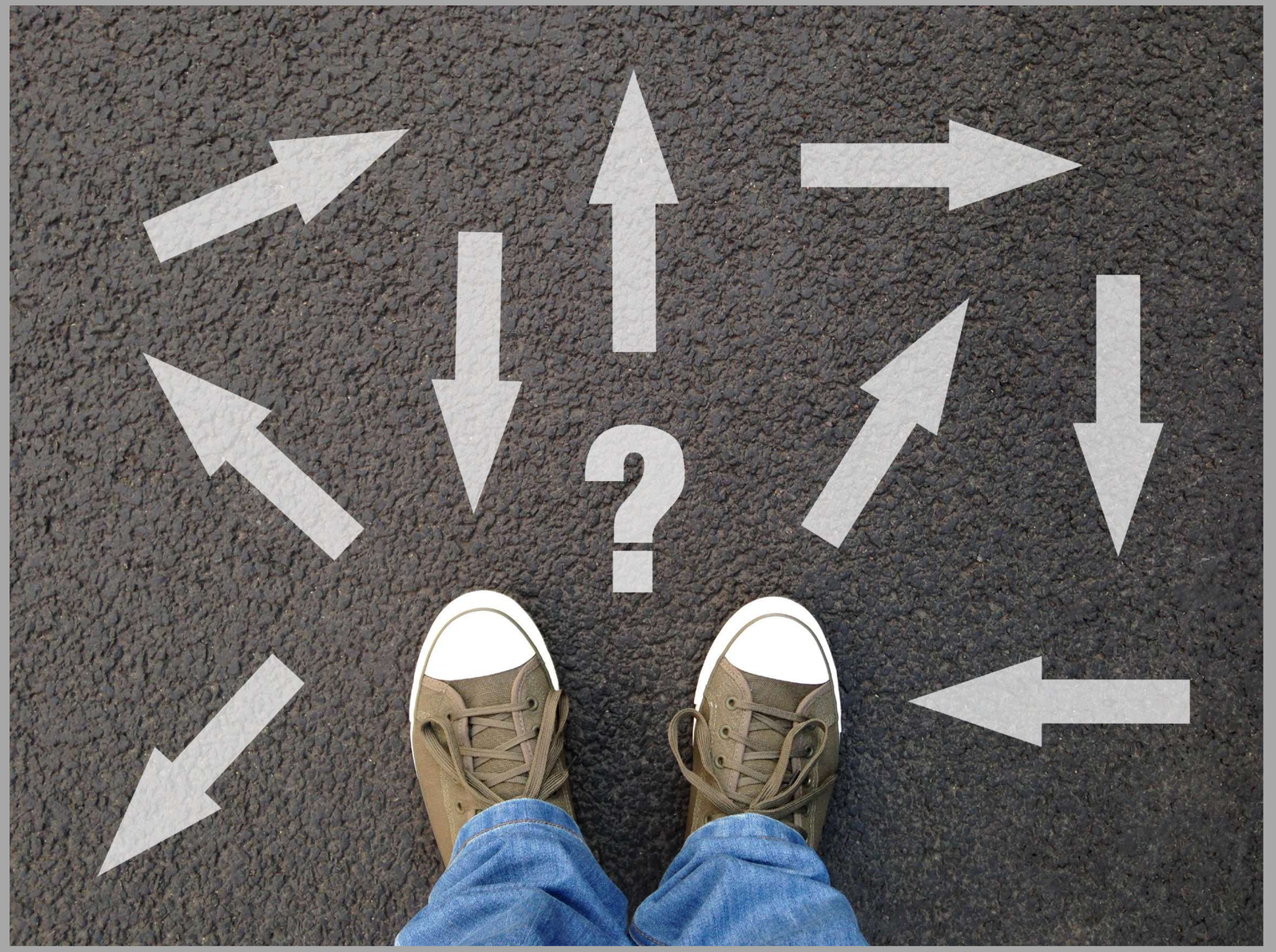
HOW TO OPTIMIZE FUNCTIONAL TRAINING TO IMPROVE LONGEVITY AND BE MORE RESILIENT

JOSH HENKIN, CSCS
DVRTFITNESS.COM

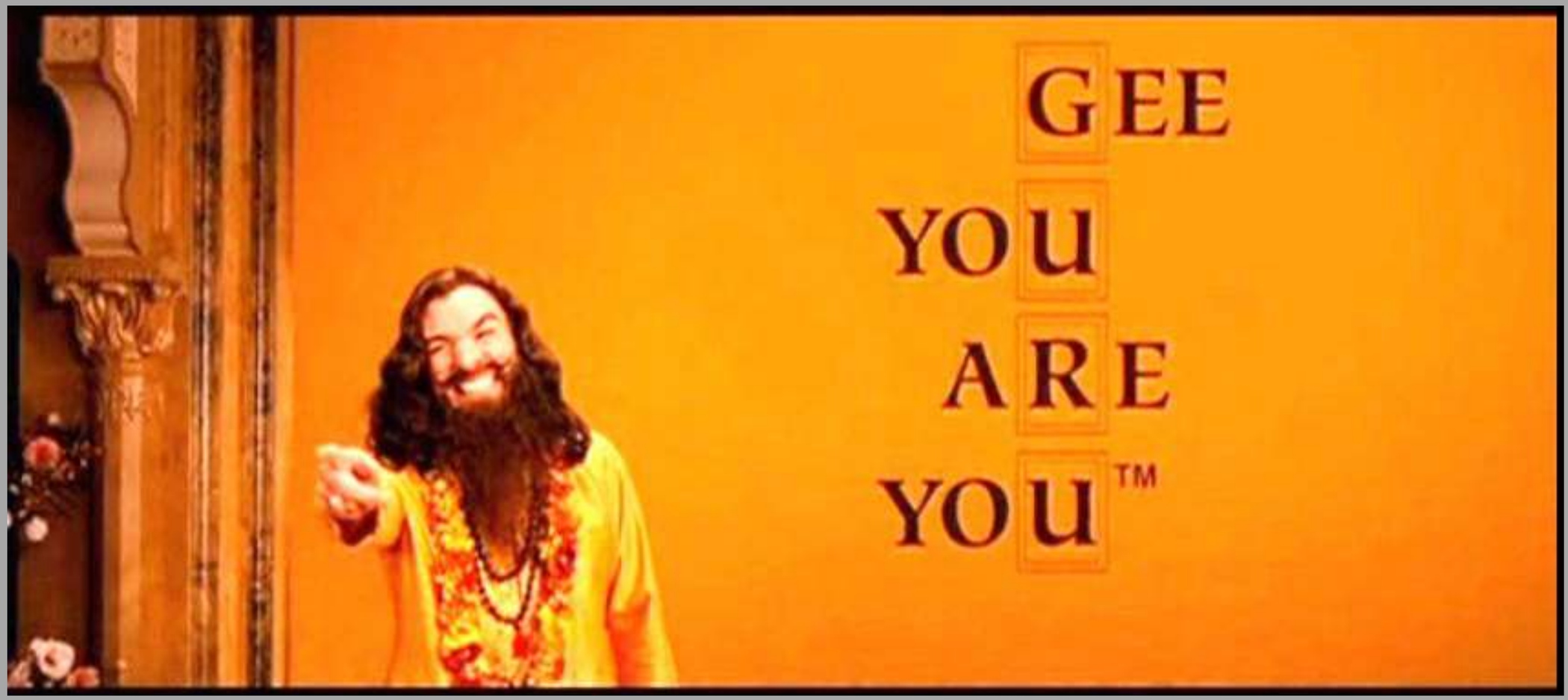
THANK YOU!!!

THE INDUSTRY LET YOU DOWN



HOW DO WE EVEN KNOW WHAT'S RIGHT?

WE LOOK FOR ONE PERSON TO HAVE ALL THE ANSWERS



SO WE DEFAULT TO...

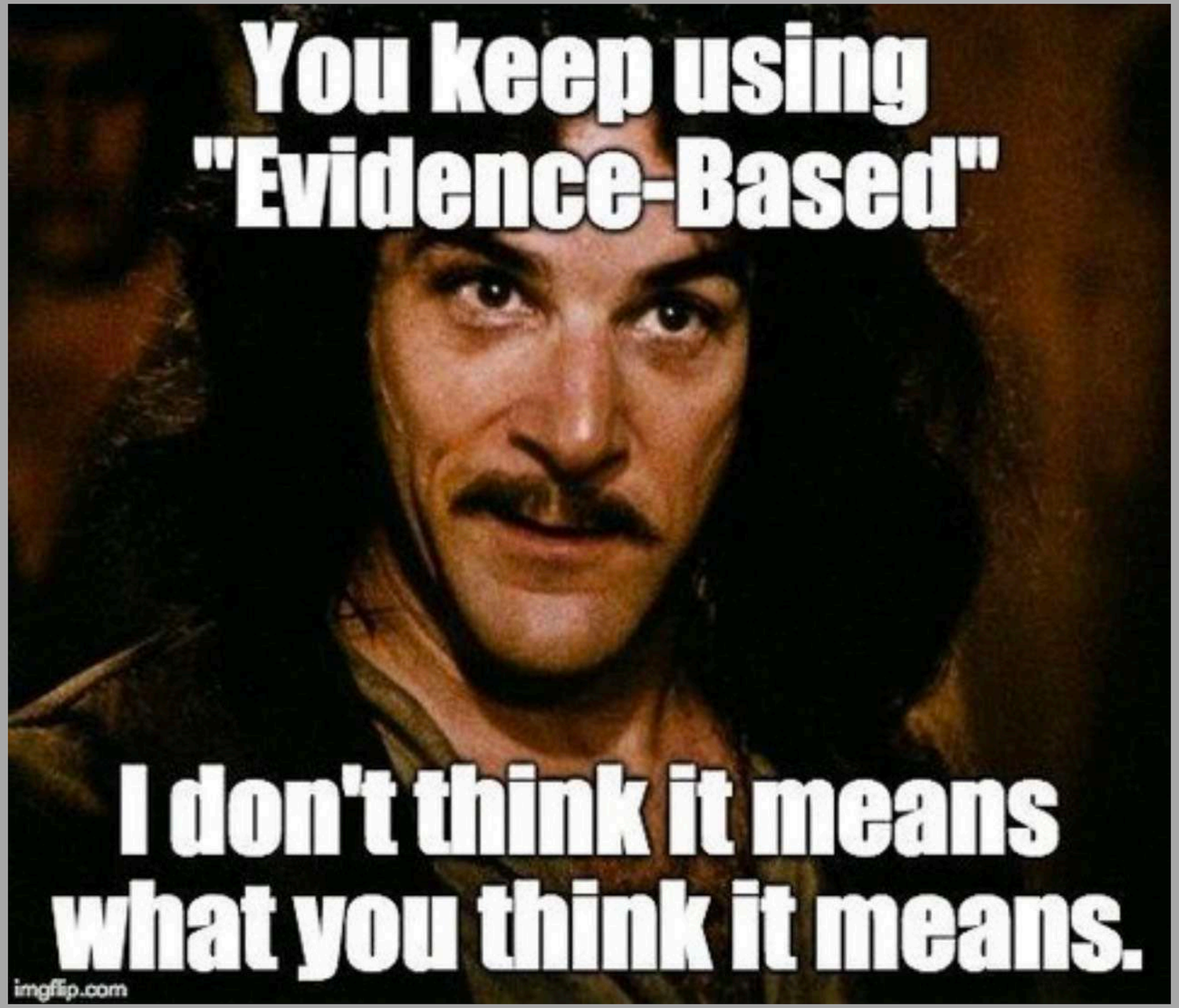
Dr Nicole Huffman
@DrNicoleNMD

Just because something is common doesn't make it healthy

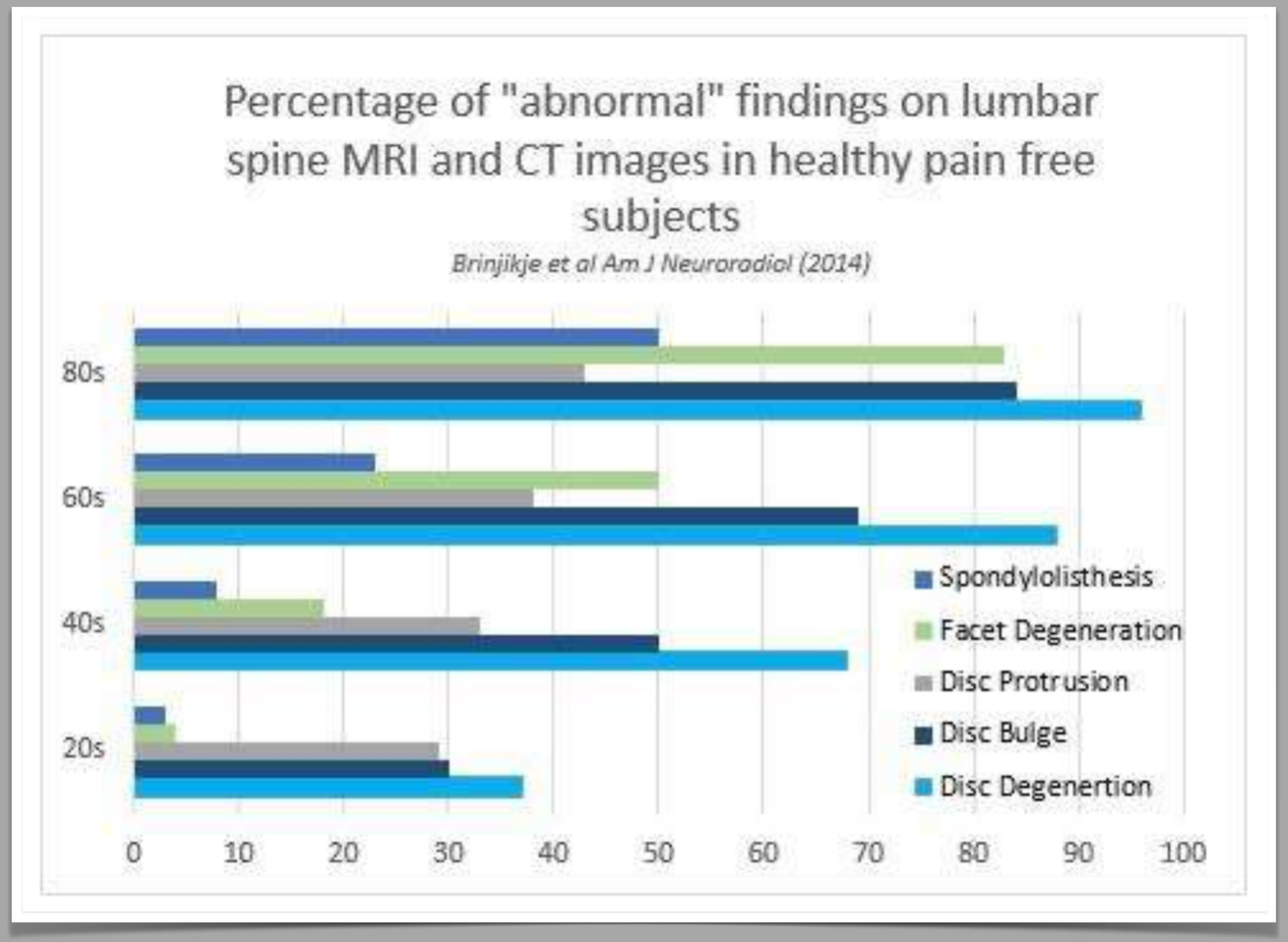
Analysis of Acute Non-specific Back Pain Content on TikTok: An Exploratory Study

Andrey Zheluk et al. Cureus. 2022.

described in consensus guidelines. Conclusion TikTok is a popular social media channel among young people. However, the most viewed TikTok videos about ANSBP are not produced by mainstream health professionals and the videos featuring the #backpain hashtag do not generally reflect contemporary evidence-based practice. There is considerable scope for mainstream health professionals to provide evidence-informed self-management and self-care content for ANSBP on TikTok.


You keep using
"Evidence-Based"
I don't think it means
what you think it means.
imgflip.com

COMMON LOW BACK MYTHS



“YOU ARE NOT YOUR MRI.”

These imaging findings must be interpreted in the context of the patient’s clinical condition.”

“IT ISN’T ROCKET SCIENCE, BUT IT IS STILL SCIENCE” - COACH DOS

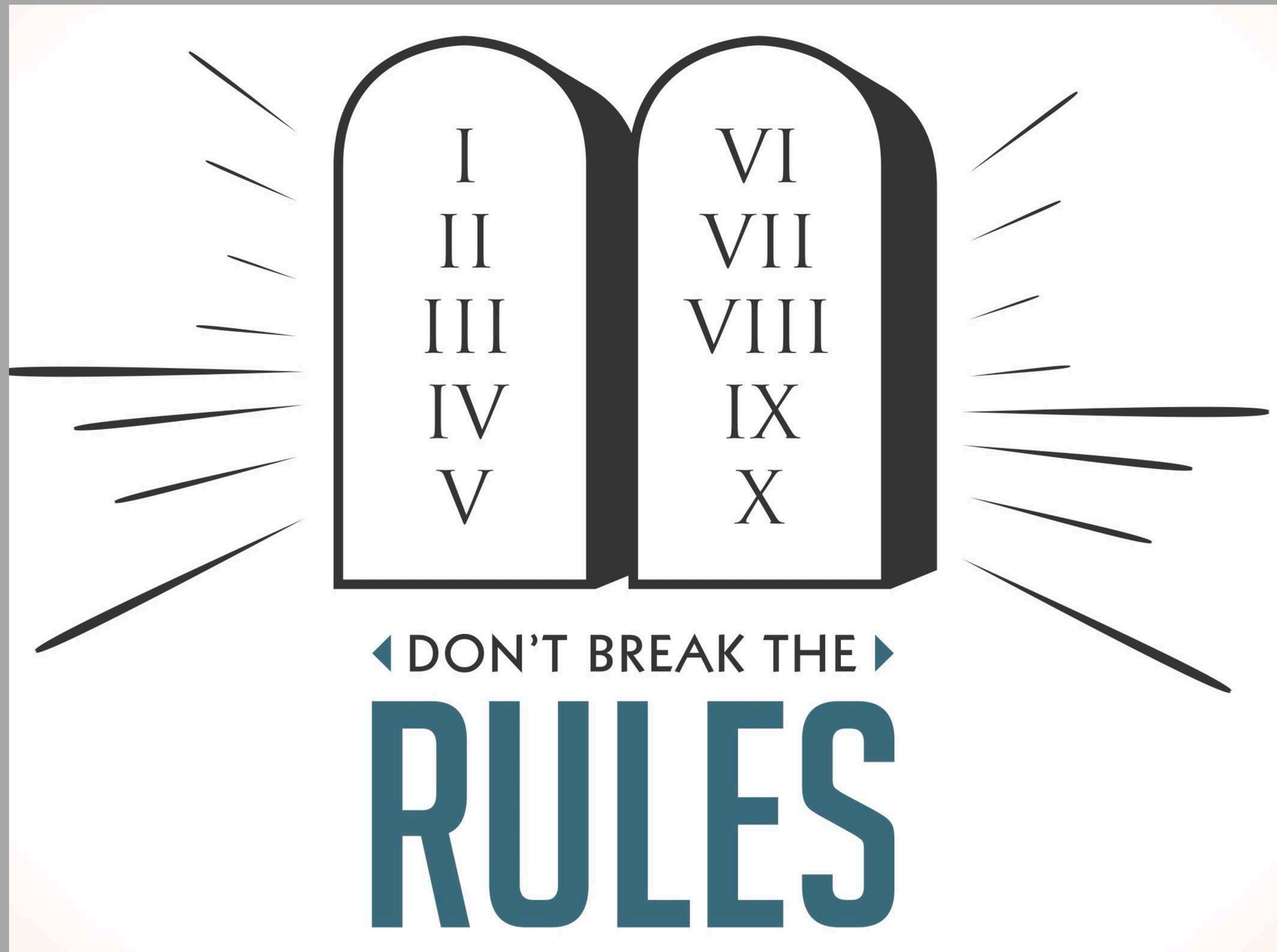
WHY PEOPLE HATE TALKING ABOUT PROGRAMMING

IT IS HARD TO KNOW WHAT WE ARE TRYING TO ACHIEVE

WE LOVE....

BUT NEVER CONSIDER...
YOU CAN'T OUT CHEERLEAD A BAD PROGRAM

NOTHING IS PERMANENT



If you don't ask the right questions, you don't get the right answers. A question asked in the right way often points to its own answer. Asking questions is the ABC of diagnosis. Only the inquiring mind solves problems.

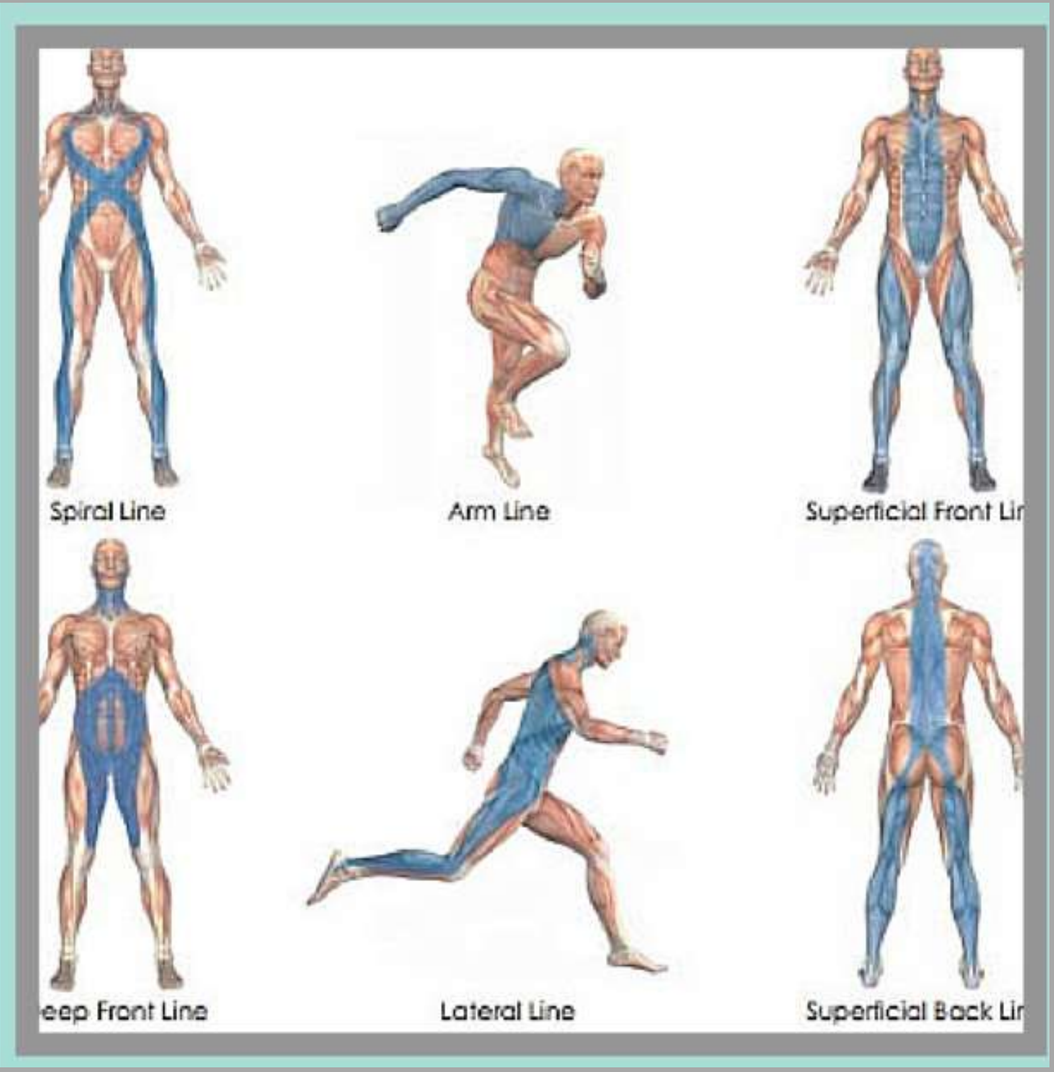
— Edward Hodnett —

THE REALITY OF FITNESS TRAINING

Effective strength training pretty much consists of rotating the same basic 15-20 exercises until you die.

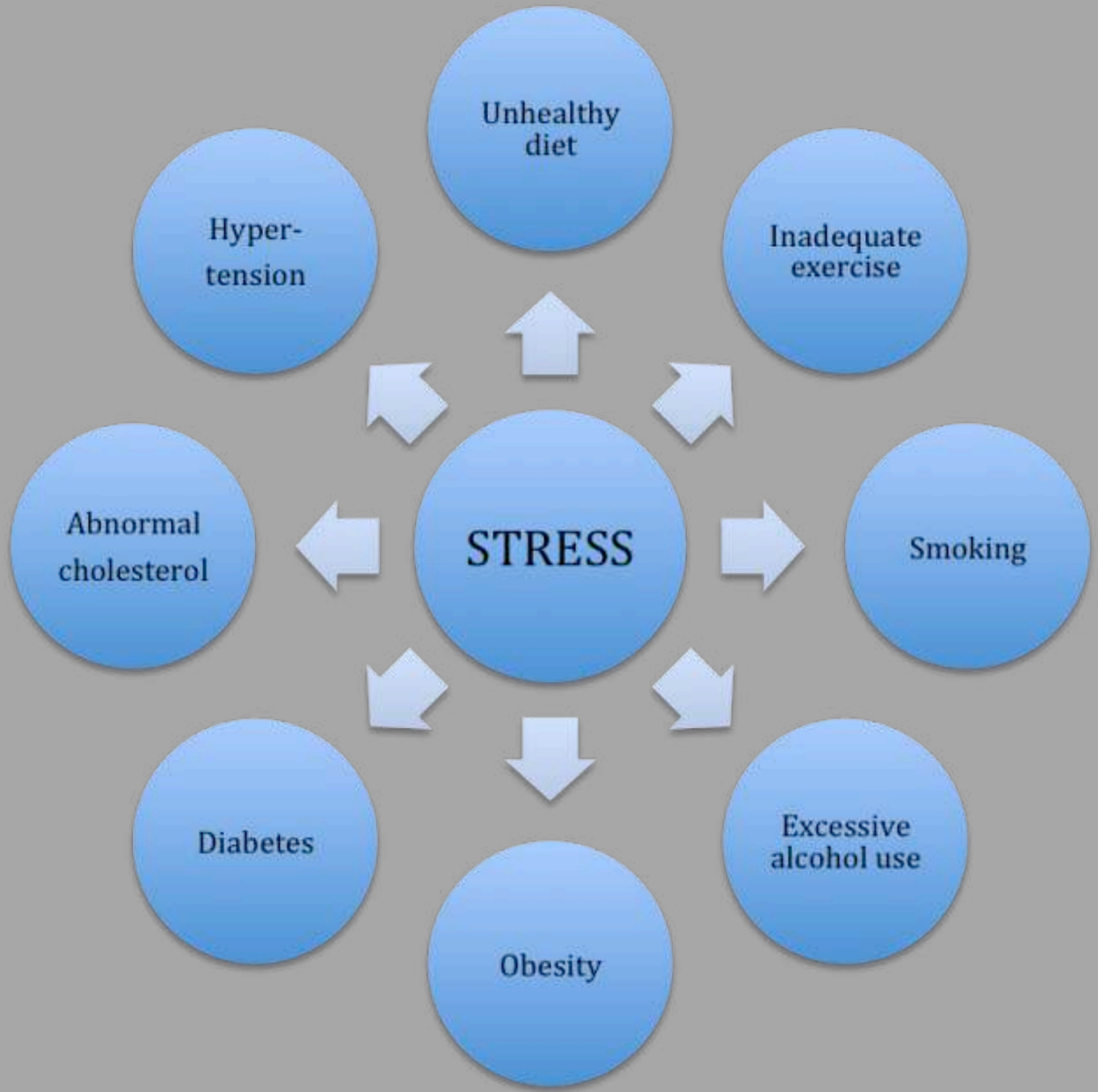
What muscle is that picture showing? The one going across the torso....Must have missed that one in anatomy class.

Whats wrong with classic regular basic proven multi joint moves ?

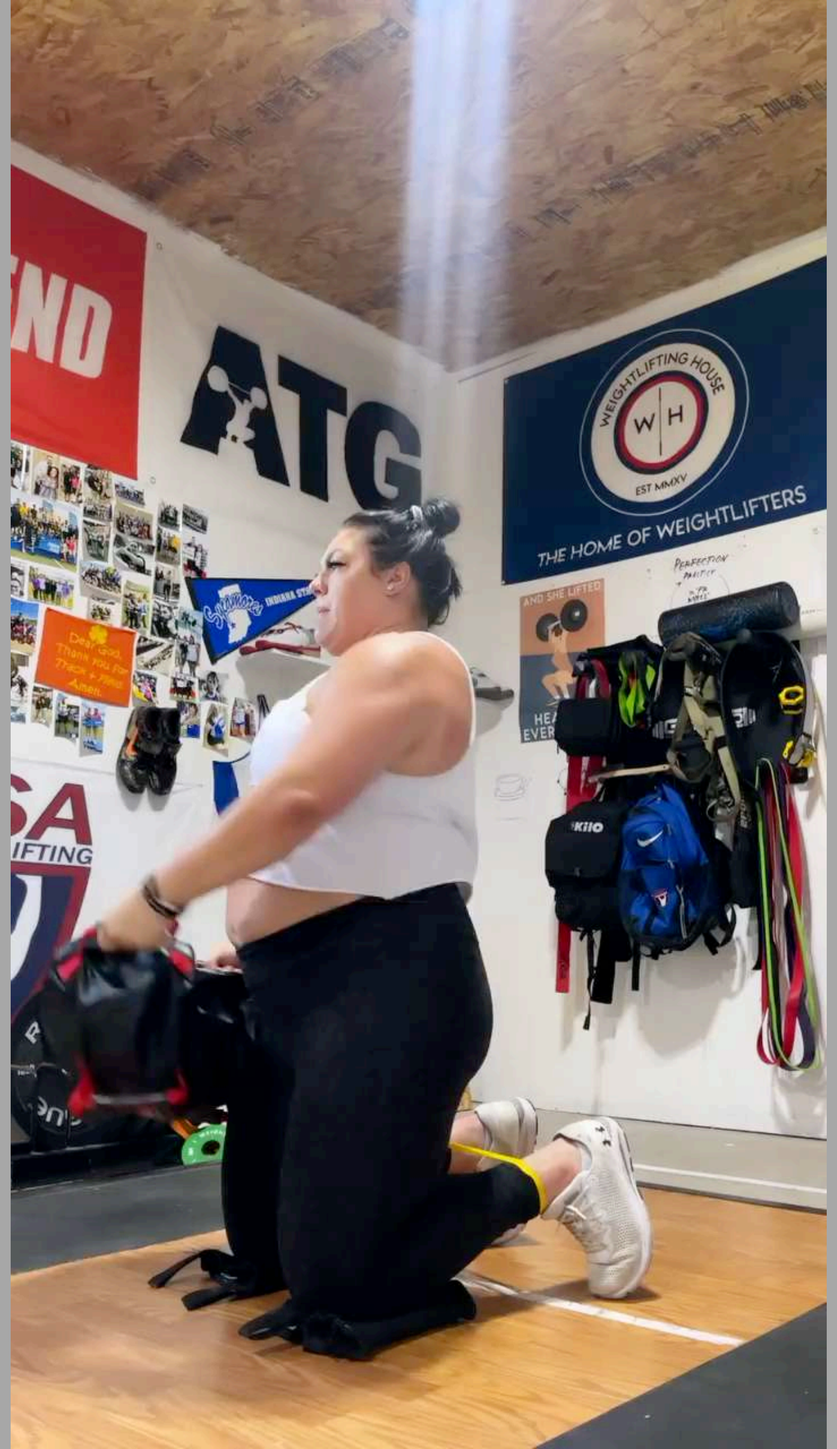


LET'S TALK ABOUT THE ELEPHANT IN THE ROOM...

[redacted] True for functionality. But building muscle "shape" not so much. And most people want to look good unfortunately. But your information is 100%


Unhealthy diet
Hyper-tension
Inadequate exercise
Abnormal cholesterol
STRESS
Smoking
Diabetes
Excessive alcohol use
Obesity


SHIFT


ATG
WEIGHTLIFTING HOUSE
EST MMXV
THE HOME OF WEIGHTLIFTERS


HOOKGRIP©
ROGUE
25
20

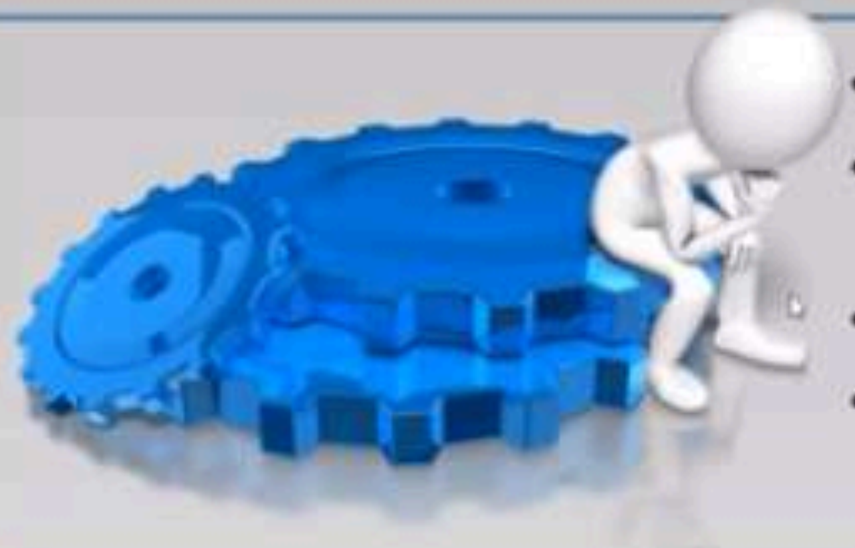
SO WHAT IS FUNCTIONAL TRAINING?

"Isolating a muscle about a joint, and training it with progressive overload is purely a bodybuilding hypertrophy approach. Functional training incorporates the goal of enhancing strength throughout the body segment linkage. This means the strength be generated quickly, throughout complex motions and postures, and in an environment that preserves balance and joint stability, and avoids injury, risks, etc."-Dr. Stuart McGill

Lee Taft @leetaft · 3d

When all is said and done... aren't we just after improved efficiency? If we display great efficiency of power, strength, quickness, speed, and overall movement we made athletes better.

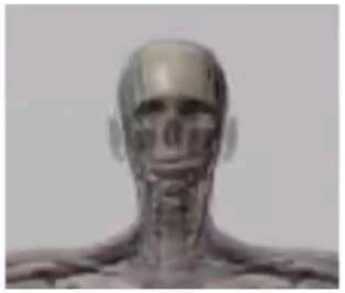
What Is So Wrong With Isolation?

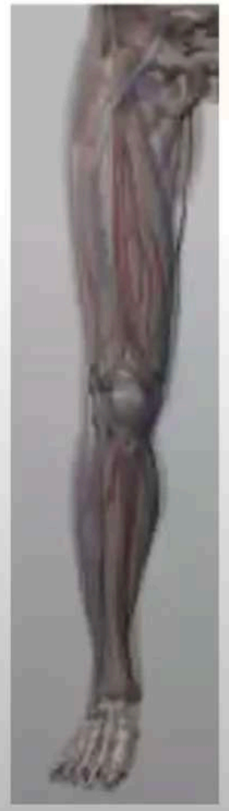


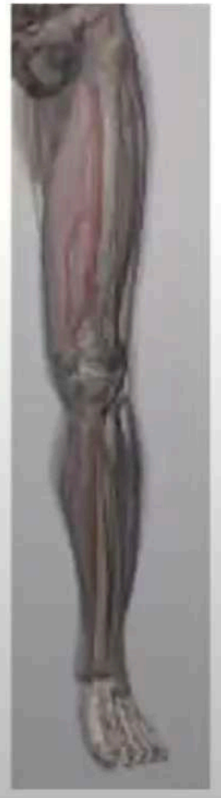
- Separates the muscle from the "team"
- It does not know how to work in conjunction with it's partners
- **Disrupts timing & sequence** of movement
- Ignores the **SOURCE** of the problem and the role of the **BRAIN** with coordination

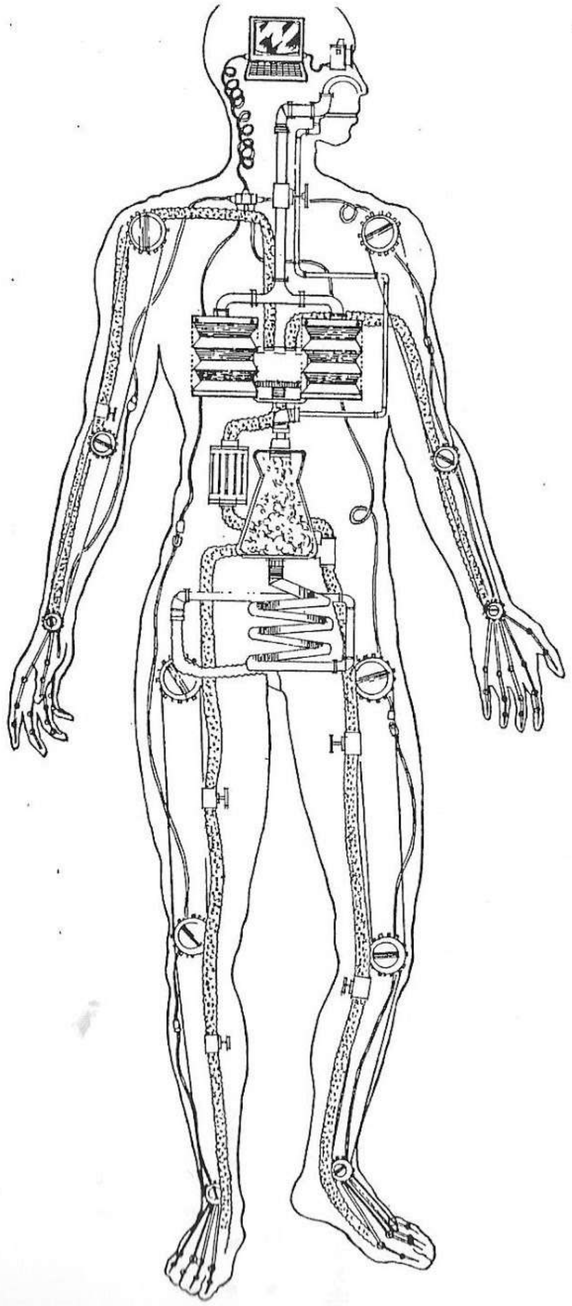
- **Patterns** are like groups of movements linked together in a big chunk of information.
- The chunk of information is known as a **motor program**
- Motor programs link many movements together all at once to complete a specific task

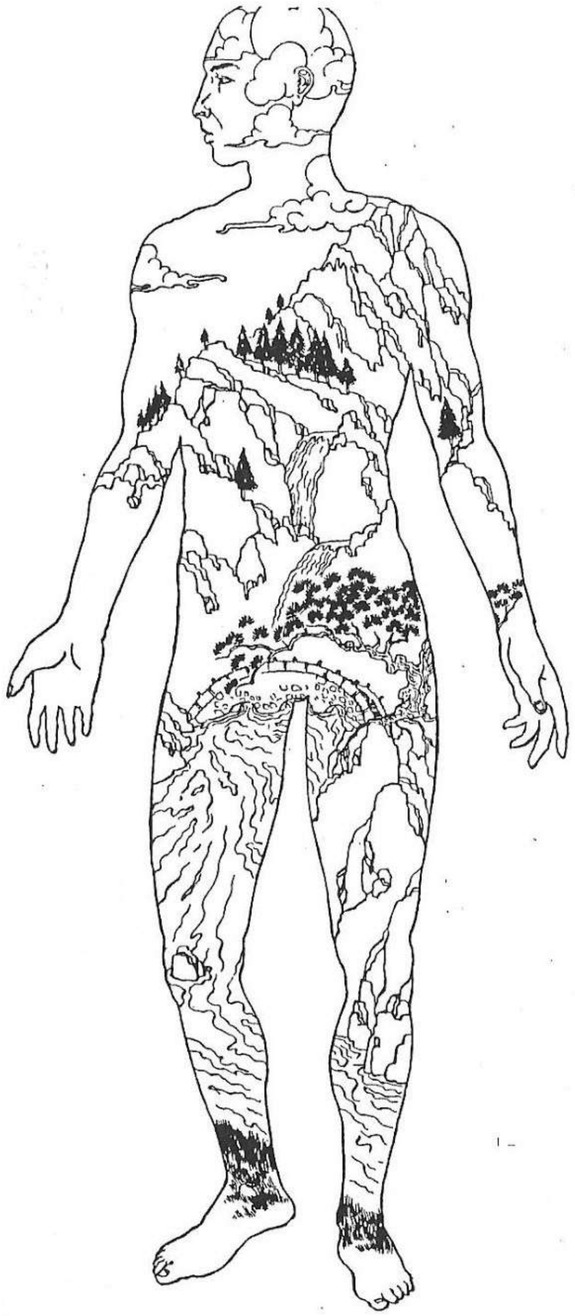
THE BODY IS THE GREATEST MACHINE











IJSPT INTERNATIONAL JOURNAL OF SPORTS PHYSICAL THERAPY

Int J Sports Phys Ther. 2014 Dec; 9(7): 924–937.

PMCID: PMC4275197

PMID: 25540708

EFFECTS OF LOWER EXTREMITY AND TRUNK MUSCLES RECRUITMENT ON SERRATUS ANTERIOR MUSCLE ACTIVATION IN HEALTHY MALE ADULTS

Navpreet Kaur, PT, DPT, PhD, MTC,[1] Kunal Bhanot, PT, PhD, MTC,[1] Lori Thein Brody, PT, PhD, SCS, ATC,[2] Jennifer Bridges, PhD,[3] David C. Berry, PhD, AT, ATC,[3] and Joshua J. Ode, PhD[3]

Author information Copyright and License information Disclaimer

The shoulder complex does not function in isolation. Synchronized sequential rotation from the LE through the trunk needs to occur in order for the shoulder joint to act efficiently in overhead sports.[15] The shoulder is a part of the kinetic chain and the body is considered as a linked system of articulated segments.[12] Each segment (LE, trunk, pelvis and UE) in the kinetic chain has a specific role in ensuring that the UE performs efficiently in athletic endeavors.[3,12] This coordinated sequencing of the segments is known as the kinetic chain. Sequential activation of the LE, pelvis and trunk muscles is required to facilitate the transfer of appropriate forces from these body segments to the UE.[16] Such forces result in a harmonized movement at the UE needed in throwing activities in various sports. Momentum generated by the larger segments in the kinetic chain is transferred to the adjacent distal segments.[12,17] This mechanism results in summation of

in one area of the body can be related to a body region away from the primary site.[32] Alteration of the knee flexion angle in tennis players decreased the contribution by the hip and trunk, leading to increased loads and injuries at the shoulder and elbow.[18] Posterior-superior glenoid labral tears were arthroscopically proven in athletes with weakness or tightness at the hip joint.[33] The following myofascial linkages resulting in overlapping among the muscles of the shoulder complex and the trunk have been reported:[29,30]

- Latissimus dorsi (LatD) and ipsilateral SA.

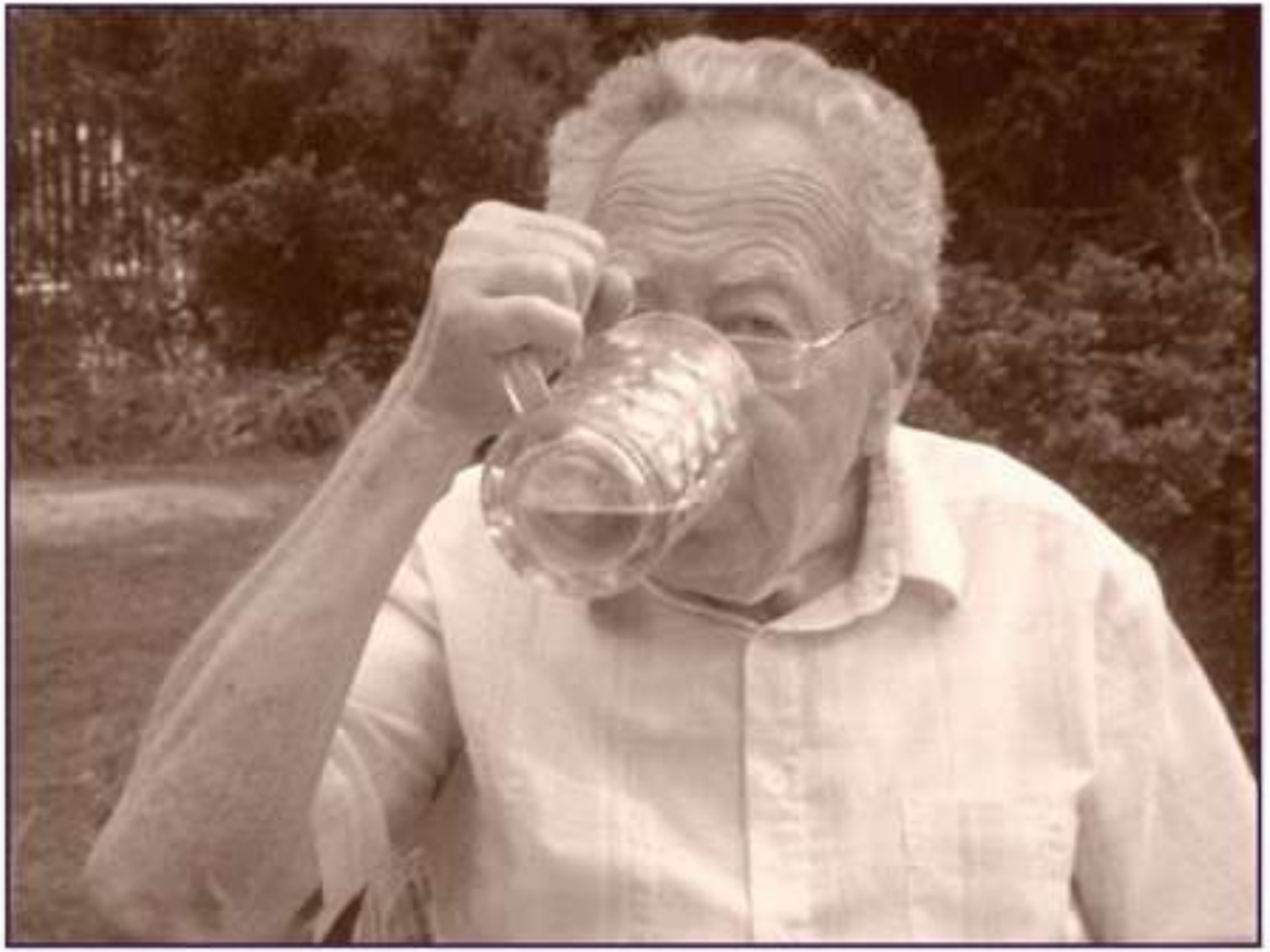
- SA, ipsilateral rhomboid and external oblique (ExOb) muscle, and contralateral internal oblique, and femoral adductor muscle (FAd). The SA courses anteriorly around the rib cage to attach to the ribs and interdigitates with the ExOb. The fiber line of ExOb then becomes continuous with the internal oblique and FAd on the contralateral side. The orientation of these muscles, anatomically linking the UE, trunk, and the LE across the front of the body is referred as the “serape effect”.

- LatD and contralateral gluteus maximus (cGMax) via thoracolumbar fascia.

The ultimate ability to produce forces necessary for performance of overhead sports is not solely due to the UE contributions. [3,12] Efficient distal segment motions occurring in such functional motions as overhead throwing and striking involve proximal core muscle activation patterns. More than half of the force production required by a tennis player in an overhead tennis serve is produced from trunk muscles (TM) and lower extremity (LE) muscles.[4,12] Weakness or limited trunk and hip mobility can alter the normal activation pattern required in overhead throwing athletes, producing distal joint dysfunction.[13] The core musculature acts as a connecting link between the upper and the lower extremity limbs in overhead athletic endeavors.[14]

He who treats the site of pain is lost.

...Karel Lewit



BODYBUILDING MENTALITY GETS US...

BB/DB Romanian Deadlift (RDL)

BB/DB Stiff legged Deadlifts (SLDL)

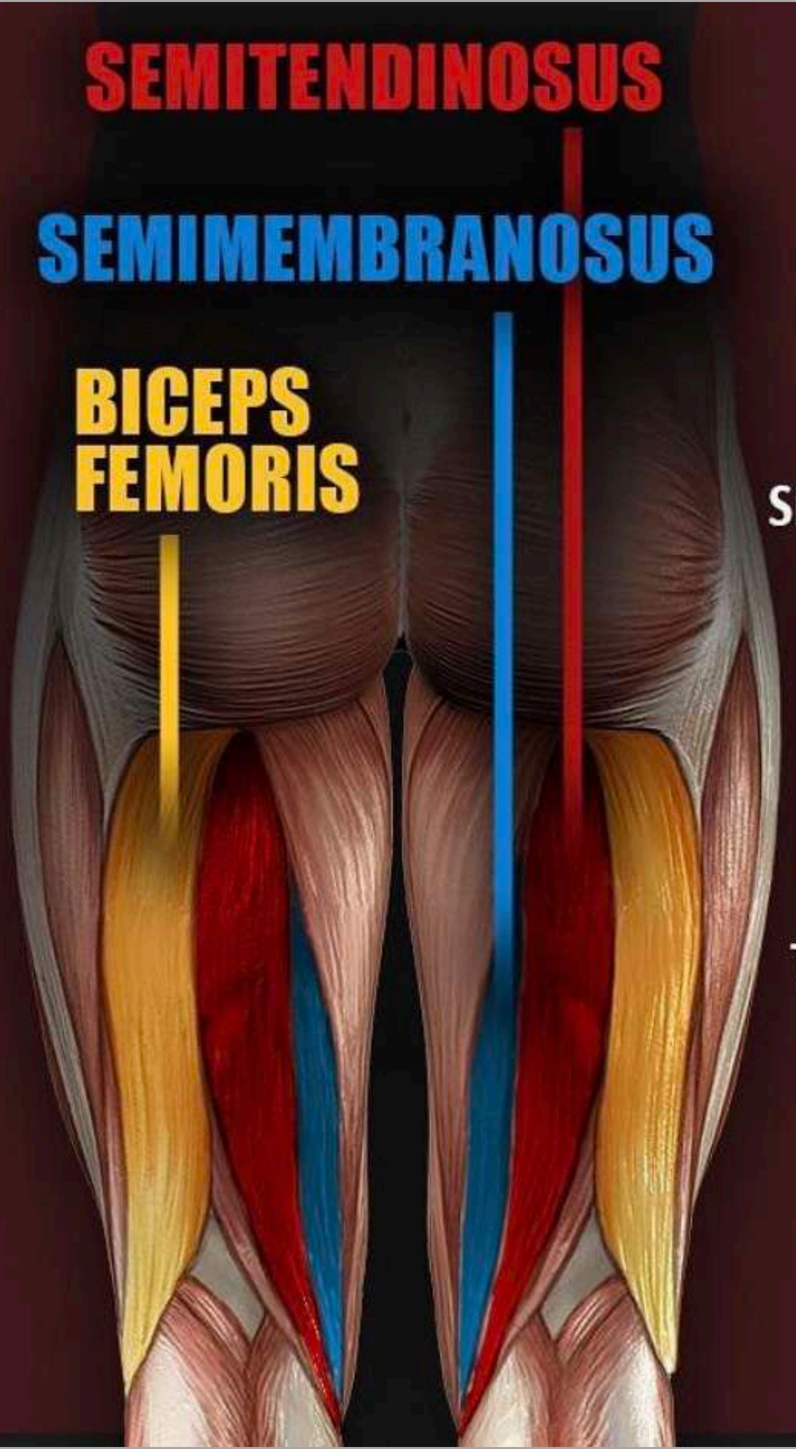
Banded Sumo-Stiff Legged Deadlifts

Gliding/Suspended Leg Curls

Decline DB Leg Curls

Nordic Hamstring Curls

Eccentric Foam Roller Walkouts



Glute/Ham Raise

Swiss Ball Leg Curls

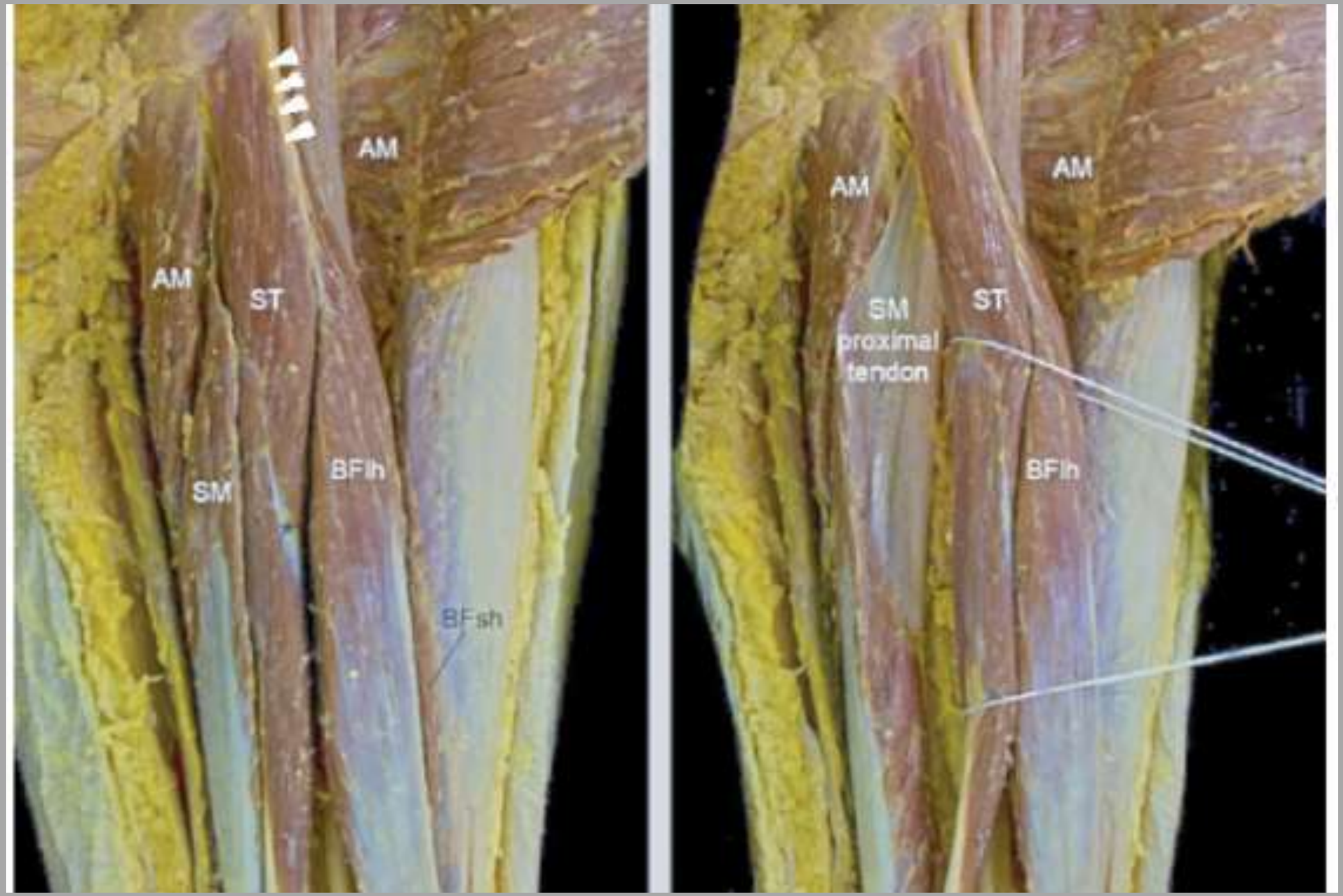
Seated Leg Curls

Single Leg RDL (same side & Contralateral)

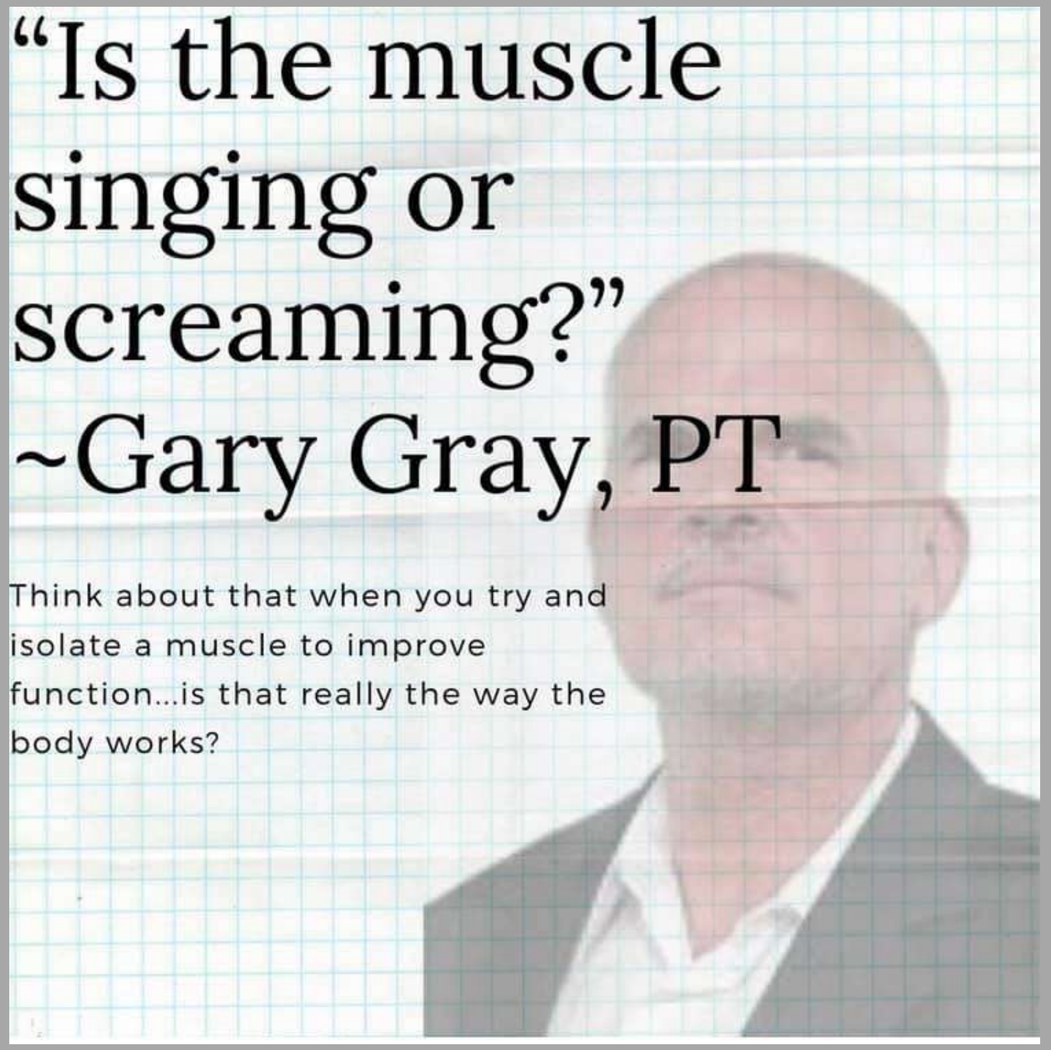
Hamstring Banded Tantrums (single leg & high velocity)

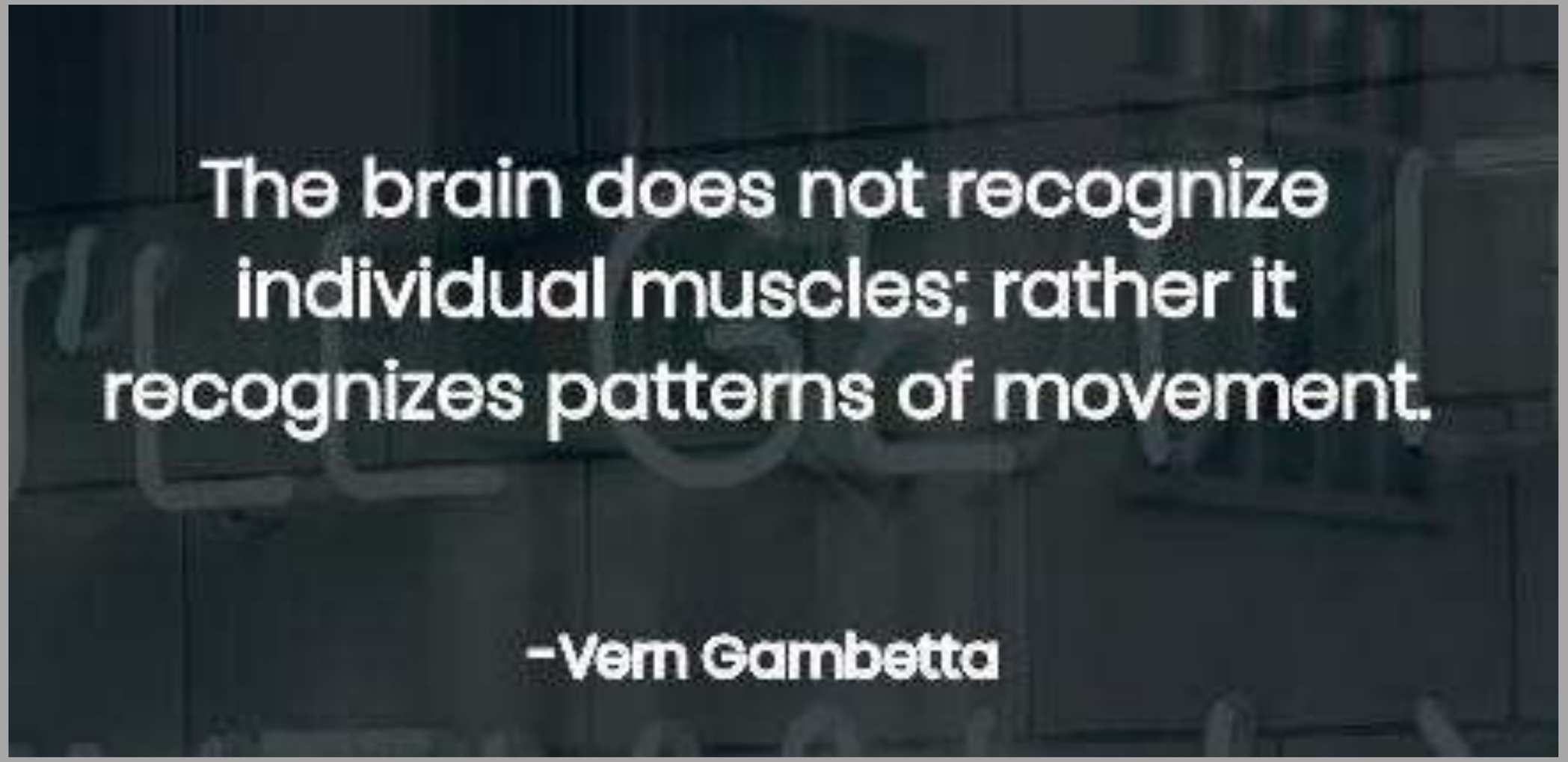
Treadmill Concentric Hip Bridge Leg Curls

Lying Leg Curls w/ Isometric, Deceleration, Eccentric Tempos

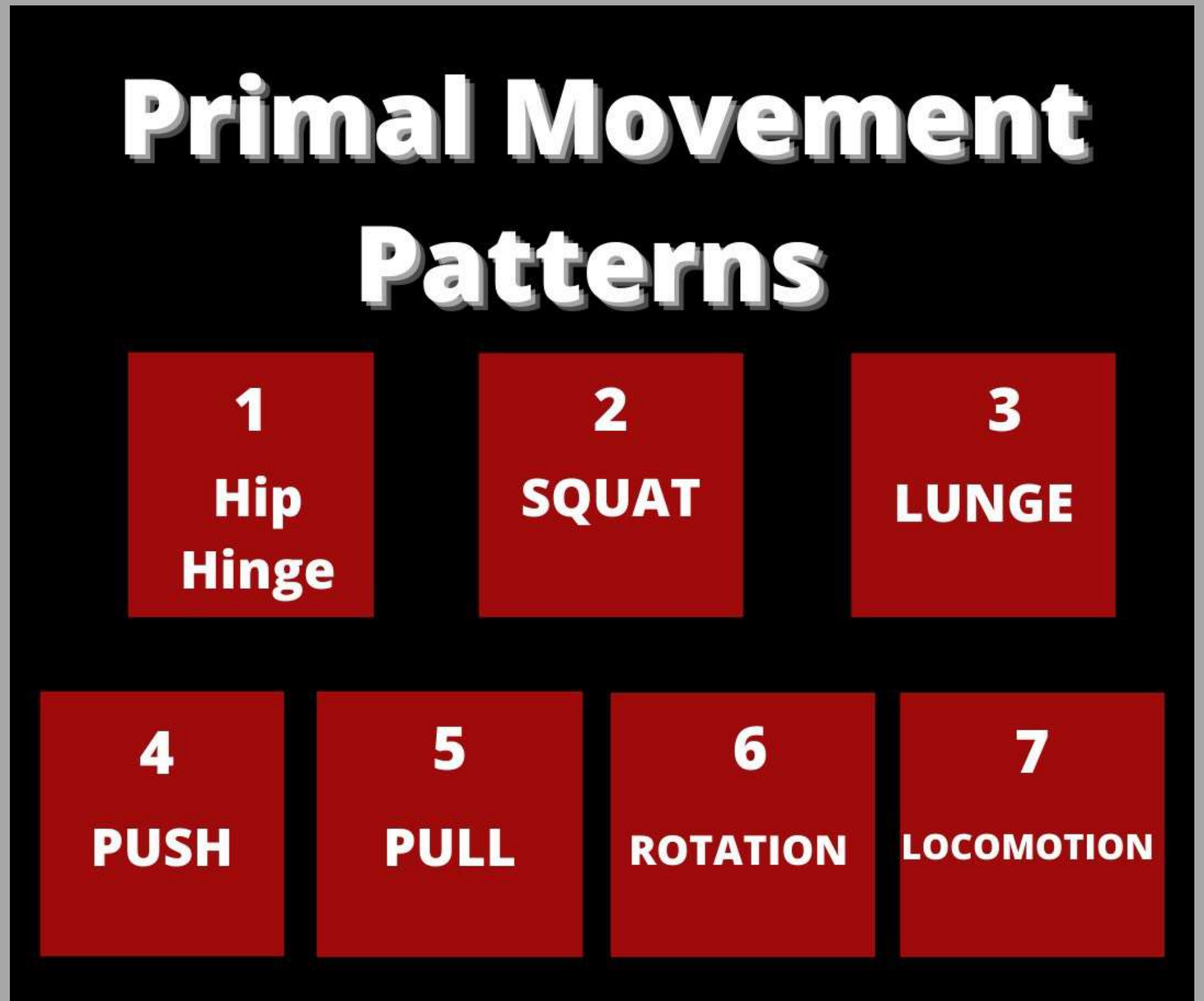

AM
AM
ST
SM
BFlh
BFsh
AM
AM
SM
proximal
tendon
ST
BFlh

“Single muscles cannot be activated to 100% MVC in these whole-body standing exercises that do not isolate joints. This is because most torso muscles create moments about the 3 orthopedic axes of the spine. If a muscle were activated to a higher level, unwanted moments would occur that would have to be balanced by other muscles. This places a constraint on the activation level of any muscle in a “functional exercise”...The 3-dimensional joint moment constraints hold the peak muscle activity levels in check during the whole-body multiplanar exercises.”-McGill et al, Exercises for the torso performed in a standing posture: spine and hip motion and motor patterns and spine load.




The brain does not recognize individual muscles; rather it recognizes patterns of movement.
-Vern Gambetta

MOVEMENT PATTERNS



Research article | Open Access | Published: 24 December 2008

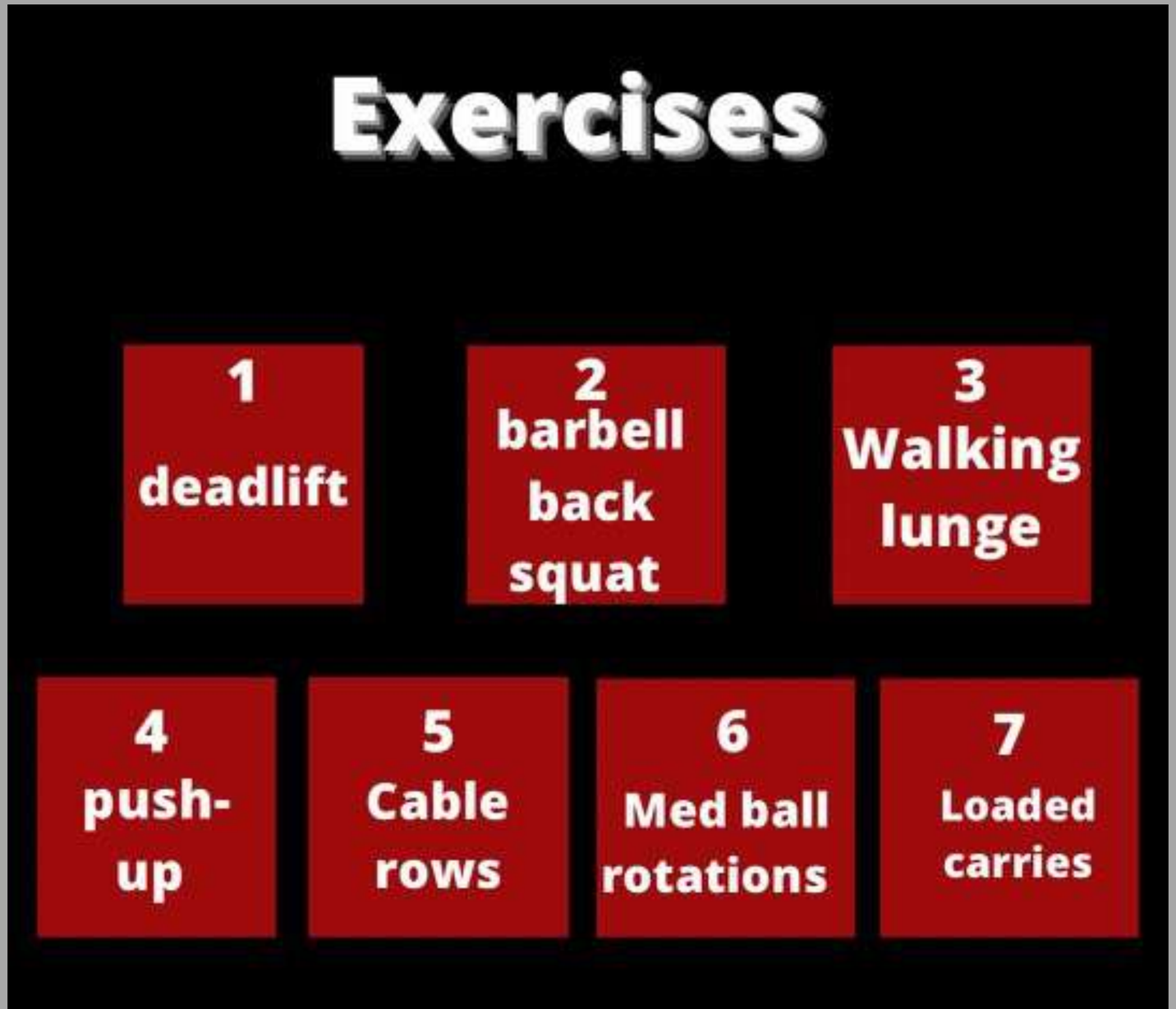
Movement control tests of the low back; evaluation of the difference between patients with low back pain and healthy controls

Hannu Luomajoki ✉, Jan Kool, Eling D de Bruin & Olavi Airaksinen

BMC Musculoskeletal Disorders **9**, Article number: 170 (2008) | Cite this article

The underlying hypothesis is that impaired movement control (MC) and a lack of awareness of maladaptive movement patterns perpetuates LBP. Physiotherapists make clinical decisions based on the observation of movement control. O'Sullivan [4] describes back pain patients with reduced MC and excessive movement as pain provocateurs. Sahrmann [1] suggests in her theory of "relative flexibility" that movement occurs through the pathway of least resistance, e.g. if hip motion is relatively stiff compared to that of the low back, then movement is more likely to occur in the back, leading to a back pain problem related to the direction of that particular movement. Synonyms used for movement impairment syndromes are motor control dysfunctions [2, 3] and MC impairment [4, 13].

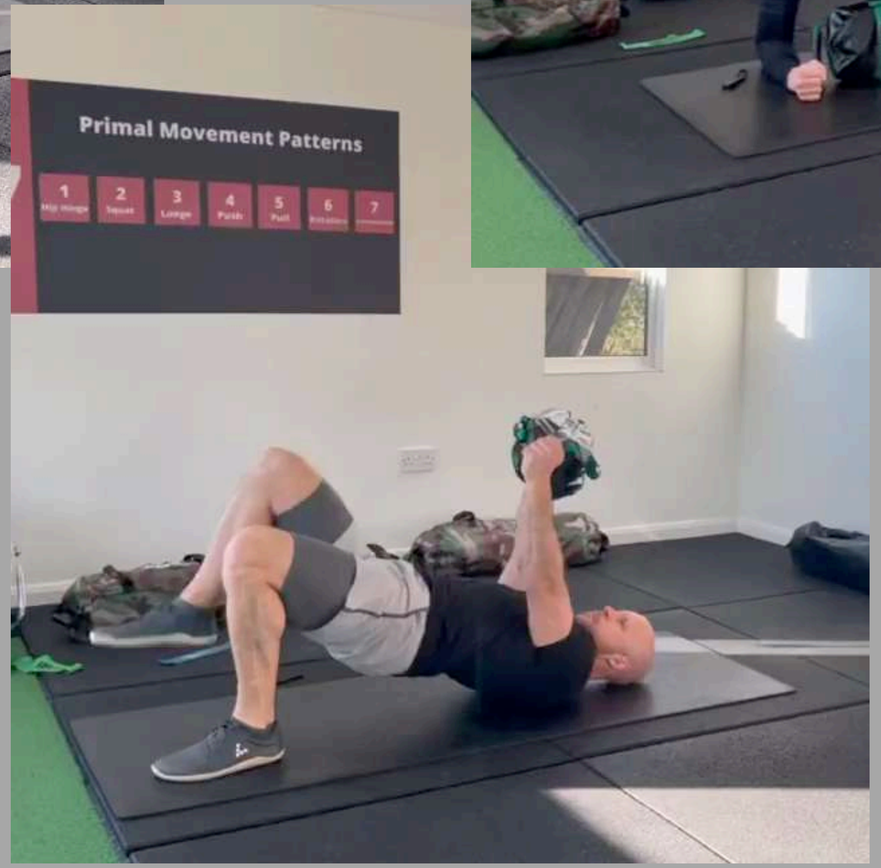
VERSUS EXERCISES



THE SQUAT MOVEMENT PATTERN VS. EXERCISE


Primal Movement Patterns
1 Hip Hinge
2 Squat
3 Lunge
4 Push
5 Pull
6 Rotation
7


Primal Movement Patterns
2 Squat
3 Lunge
4 Push
5 Pull
6 Rotation
7

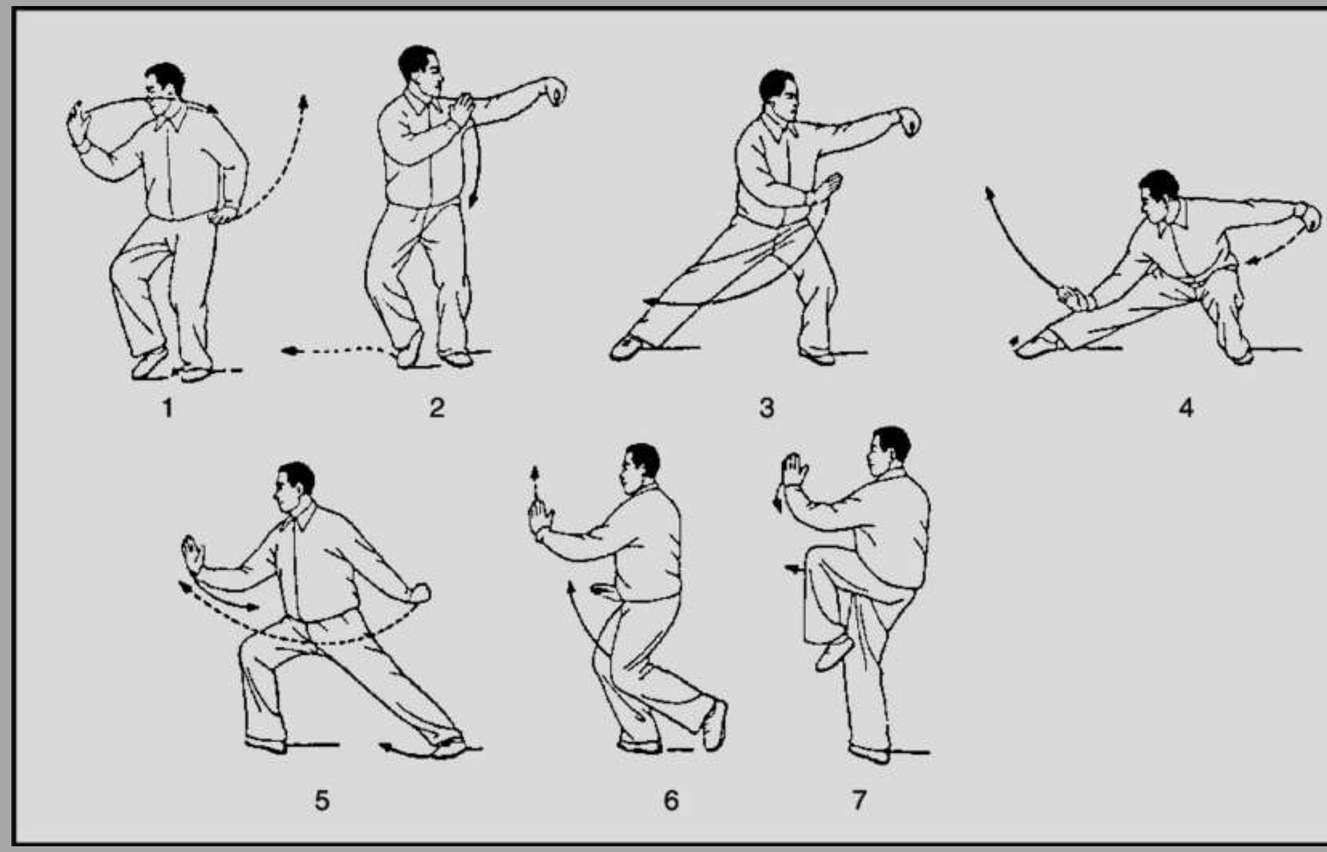

Primal Movement Patterns
1 Hip Hinge
2 Squat
3 Lunge
4 Push
5 Pull
6 Rotation
7

WERE WE CLOSER BEFORE?

MOVEMENT TRAINING HAS BEEN USED FOR CENTURIES

“NATURE IS NOT COMPARTMENTALIZED” -CHUNGLIAN AL HUANG

-Mind-Body
-Fascial Lines
-The Core Is Essential
-Diagonal & Circular Patterns
-The Body Works In Opposites
-Integrated Movement Patterns
-Breathing Techniques
-Multi-Planar
-Various Stances
-Stability & Mobility
-Progression Of Movement



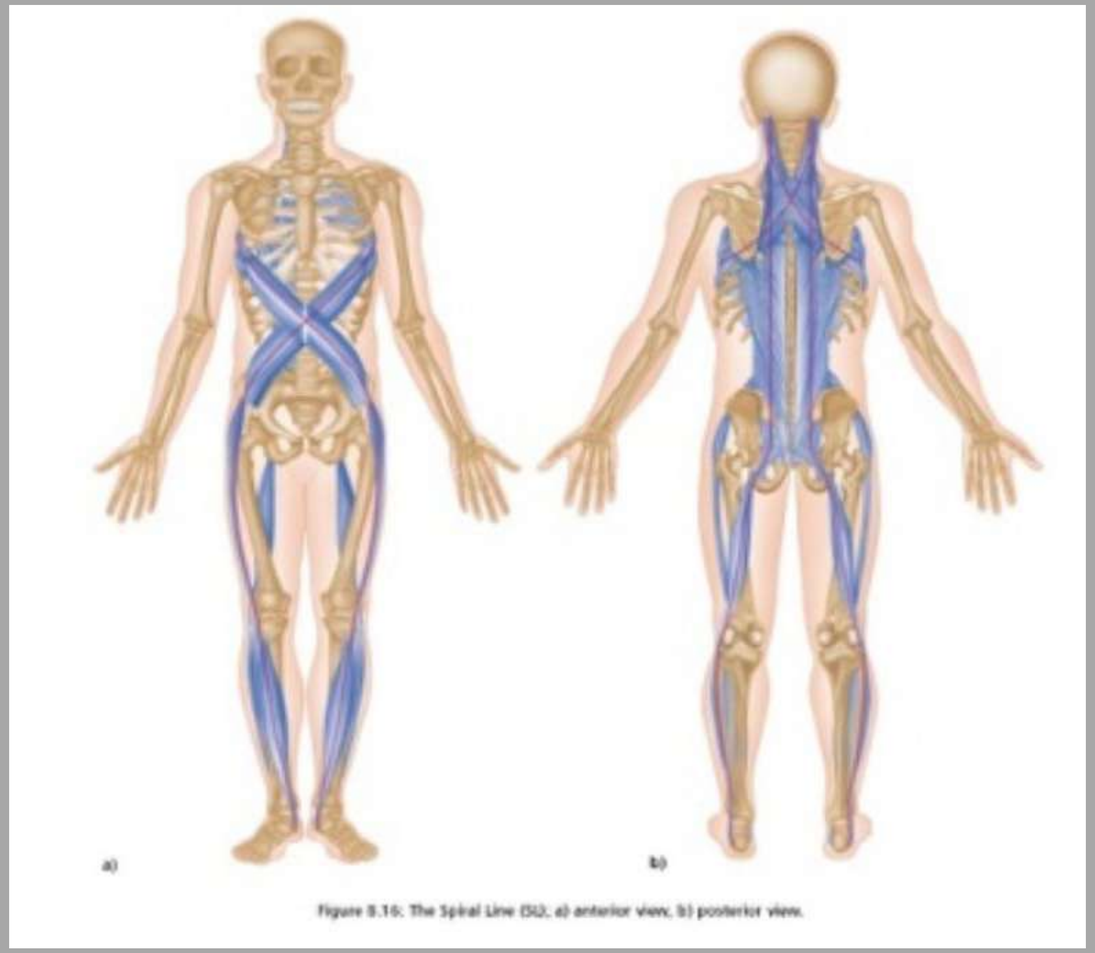
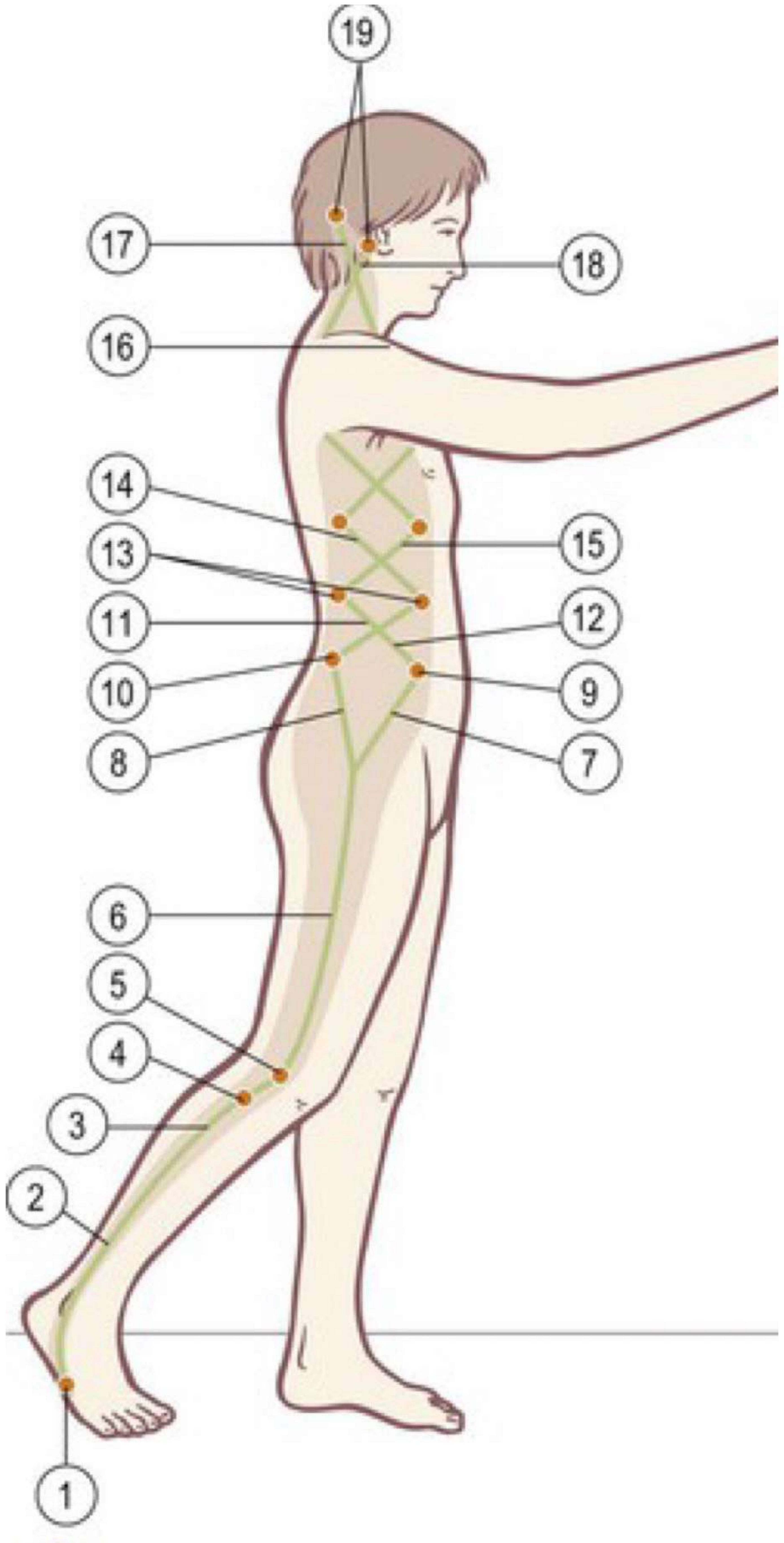
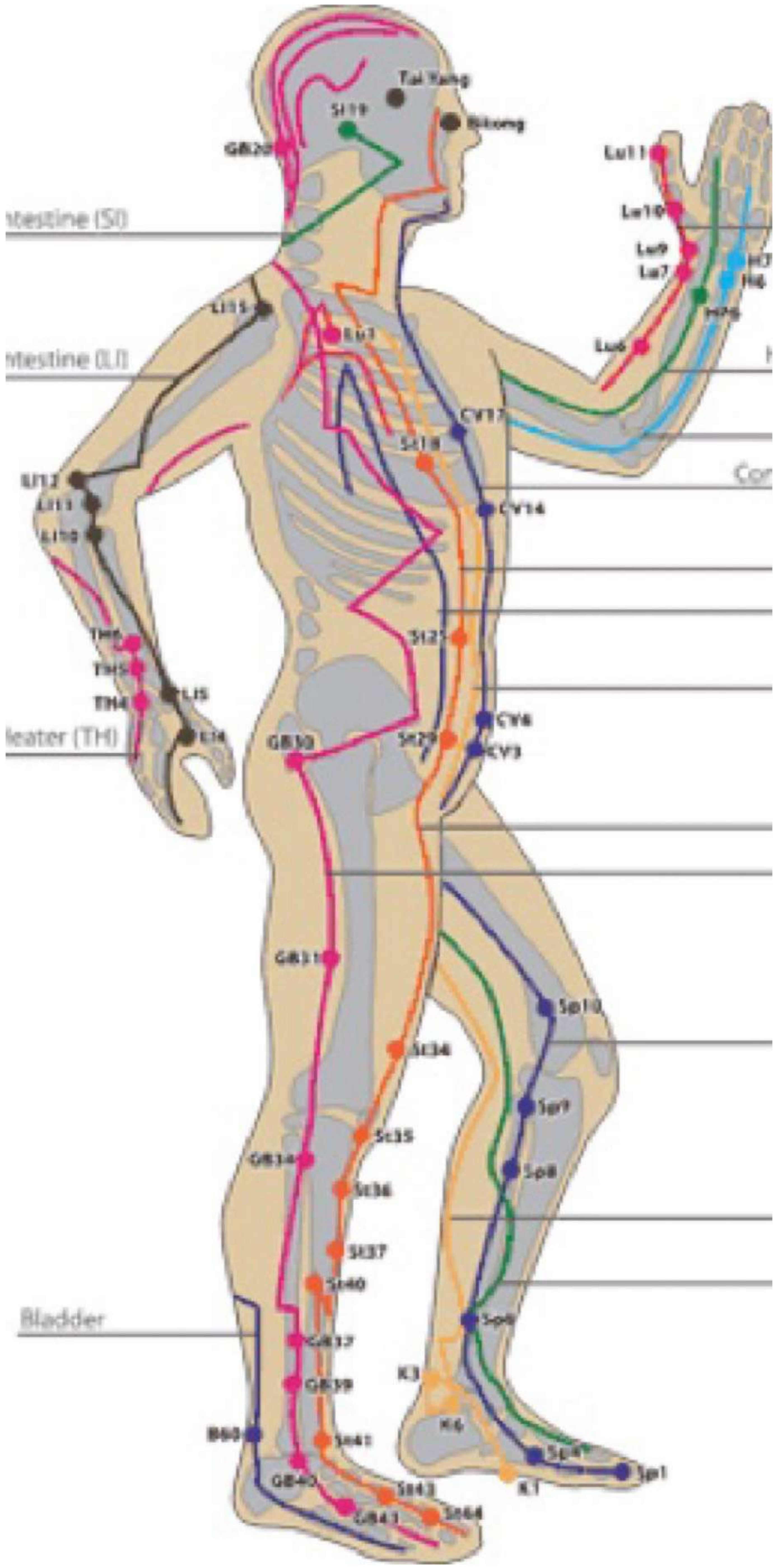
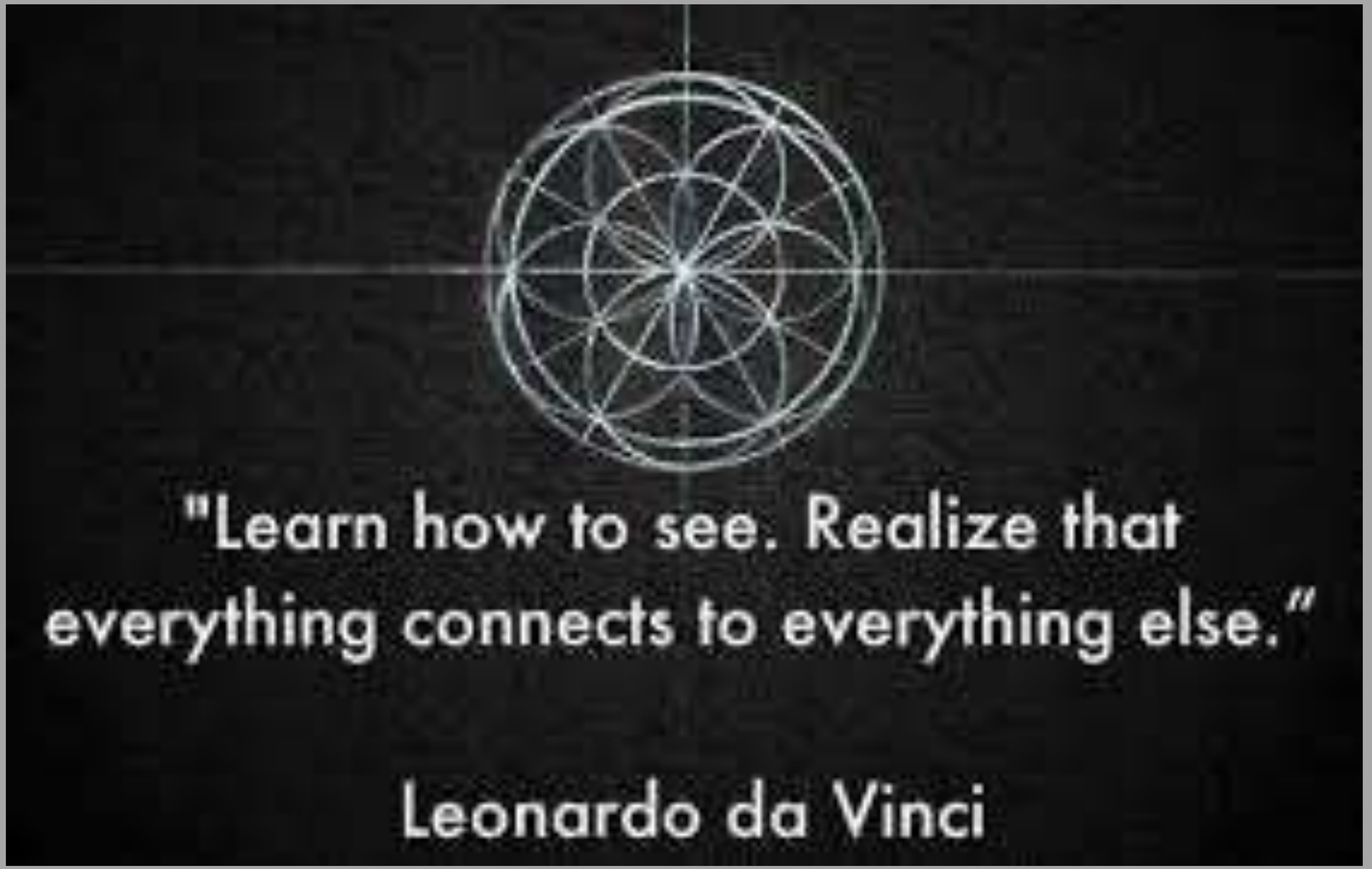


Figure 9.16: The Spiral Line (SL), a) anterior view, b) posterior view.


19
17
18
16
14
13
15
11
12
10
9
8
7
6
5
4
3
2
1

A

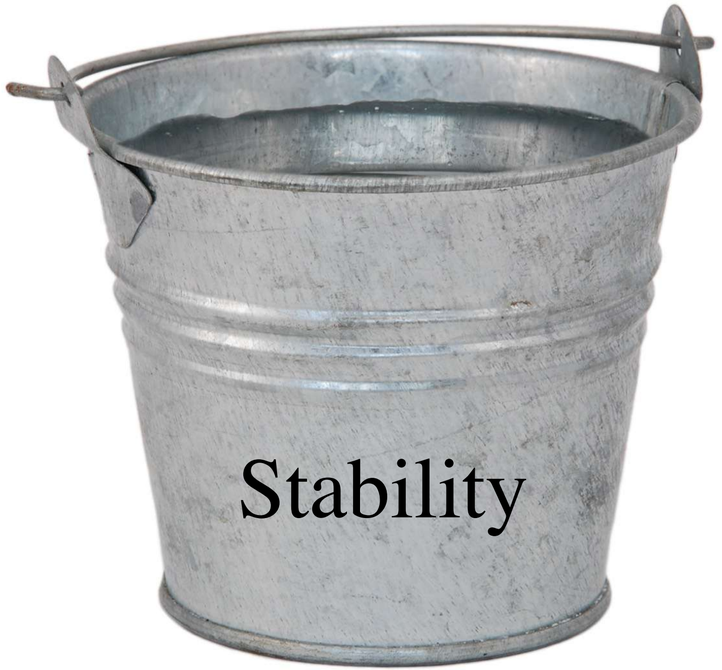

Tai Yang
Bitong
SI19
GB20
ntestine (SI)
Lu11
Lu10
Lu9
Lu7
H7
H6
LI15
Lu1
Lu6
ntestine (LI)
CV17
St18
LI12
LI11
LI10
CV14
St25
TH6
TH5
TH4
LI5
LI4
CV6
CV3
St29
GB30
leater (TH)
GB31
Sp10
St34
Sp9
St35
GB34
Sp8
St36
St37
St40
Bladder
GB37
Sp6
K3
GB39
B60
K6
St41
Sp4
Sp1
K1
GB40
St43
GB41
St44


"Learn how to see. Realize that
everything connects to everything else."
Leonardo da Vinci

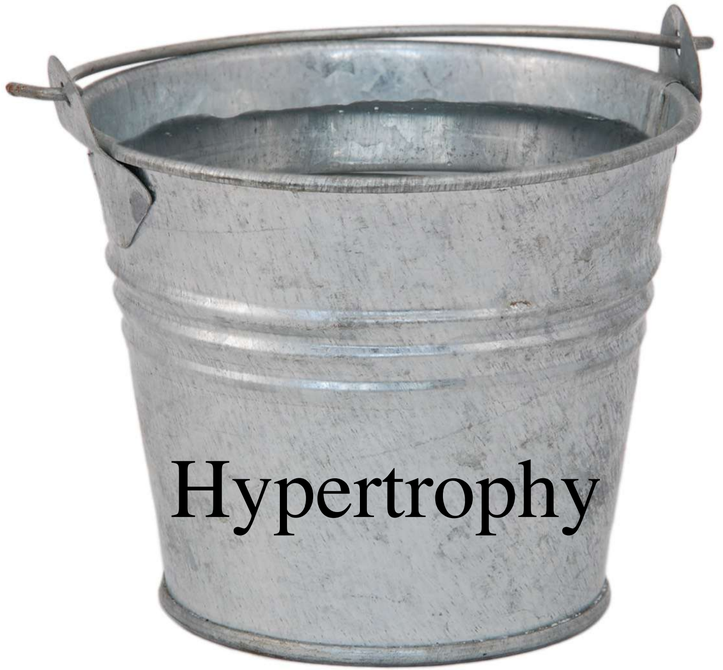

Strength


Mobility


Power


Stability

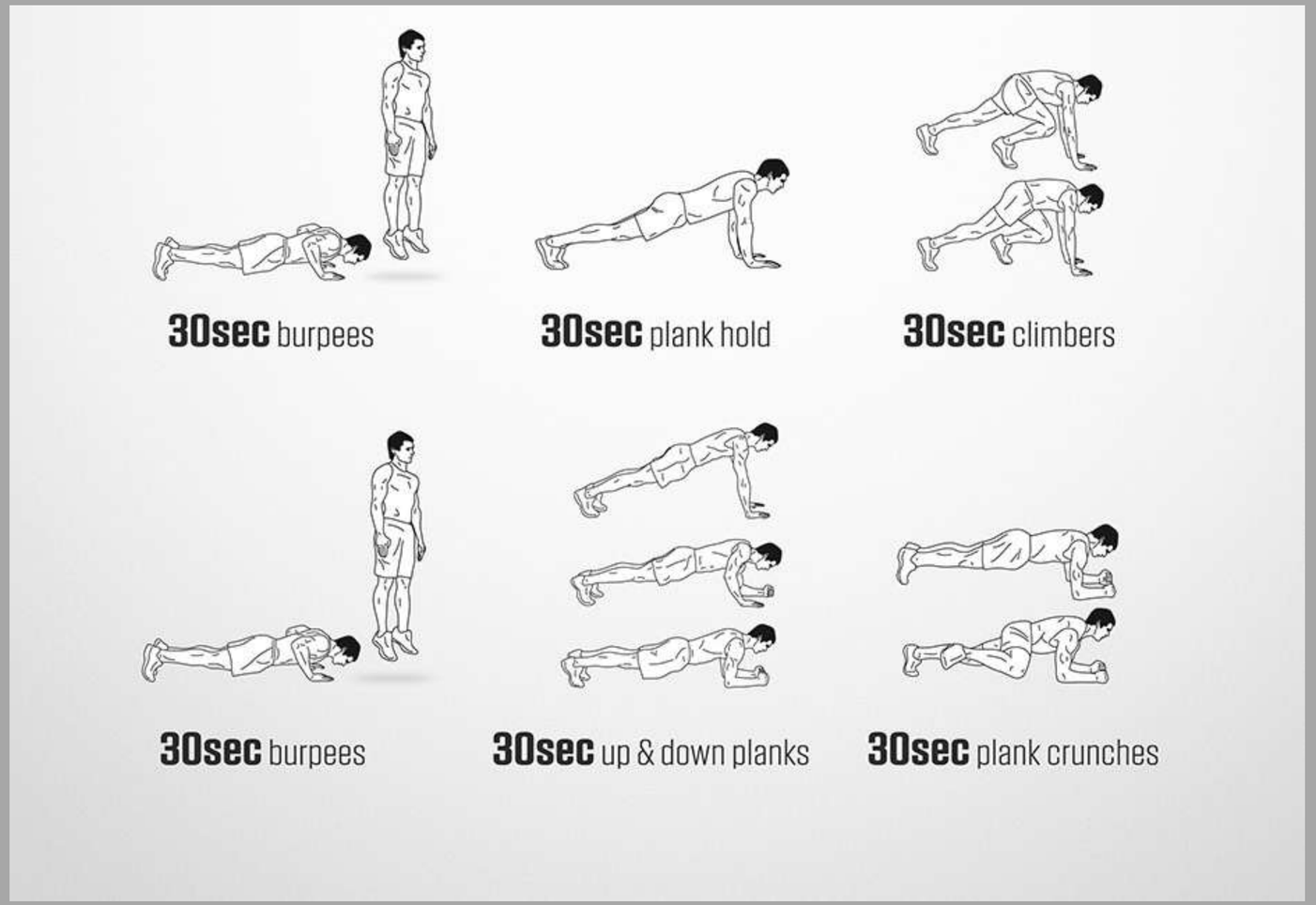

Endurance


Hypertrophy

COMMON MISTAKE #1: MOVEMENT REDUNDANCY

-Deadlift
-Swing
-Clean
-Snatch

-Mountain Climber
-Push-up
-Plank

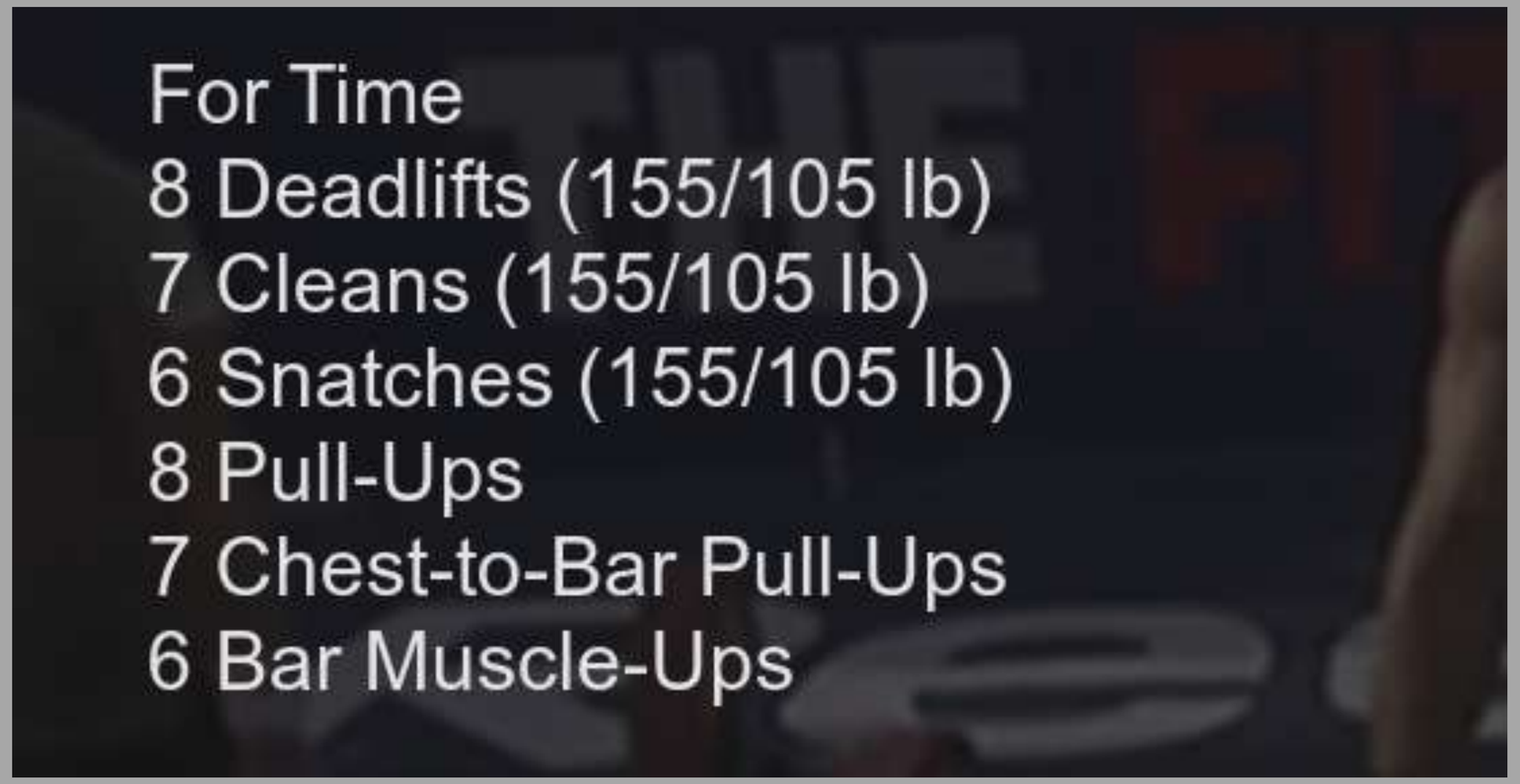


COMMON MISTAKE #2: NOT CONSIDERING HOW EXERCISES IMPACT ONE ANOTHER

-Pull-ups
-Deadlifts

-Power Clean
-Bent Row

-Squats
-Lunges



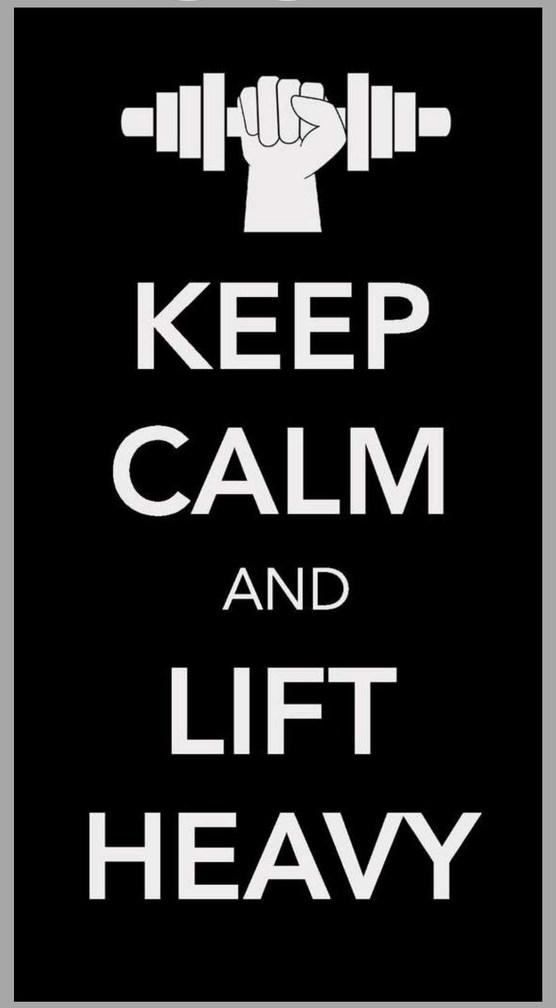
COMMON MISTAKE #3: PLACING LOAD OVER NEUROLOGICAL STRESS

*Squats Before Lunges?

*Push-up vs Bench Press?

*Deadlift vs Single Leg Deadlift?

*Dumbell Lunge vs MAX Lunge?



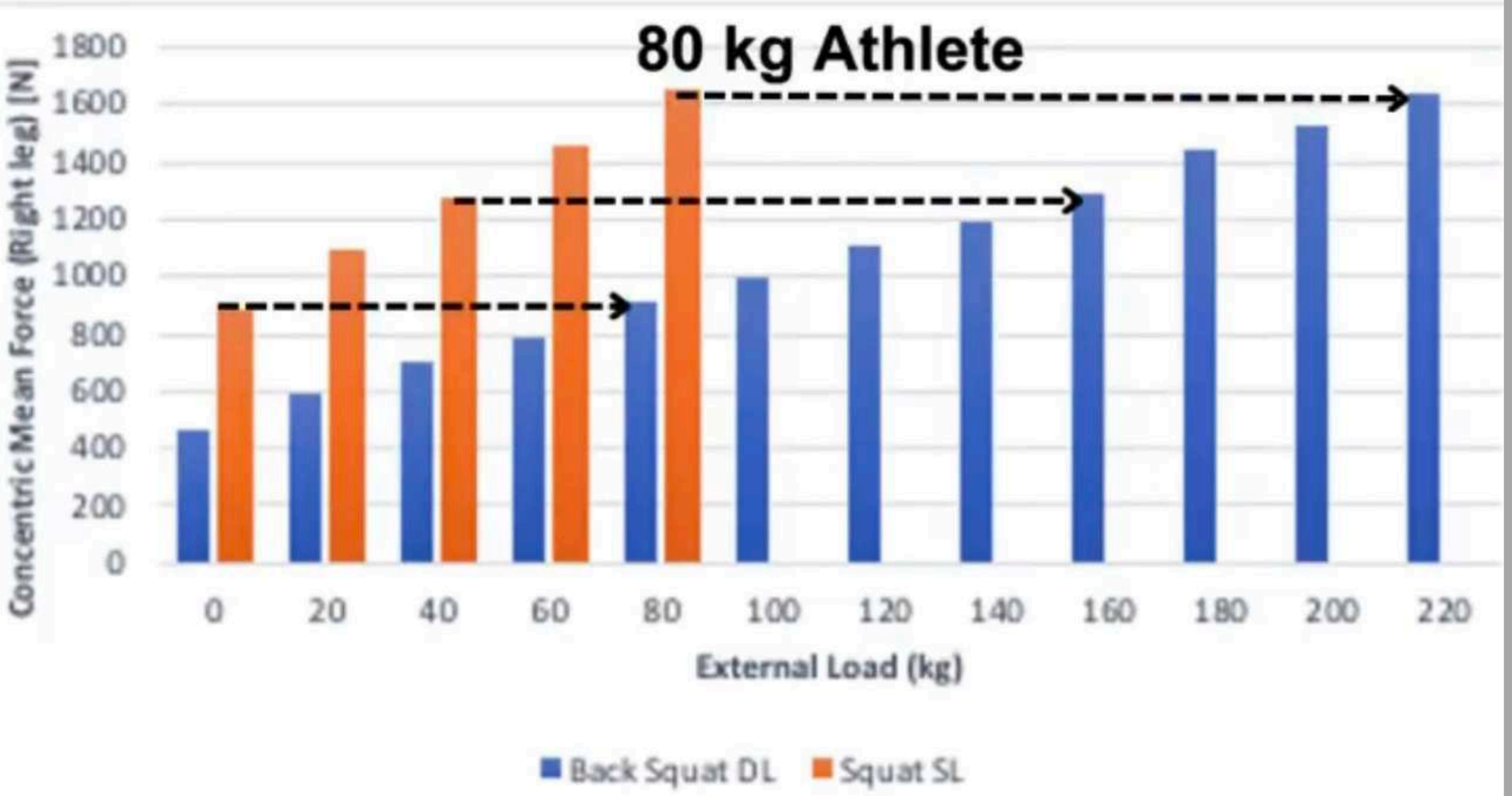
SQUAT PROGRESSION

KB Goblet Squat

Double KB Racked Squat

BB Front Squat

Safety Bar Squat



- SL Squat with no additional load is equivalent to a Squat with body weight load
  - SL Squat with 50% BW additional load is equivalent to a Squat with x2 BW
  - SL Squat with 100% BW additional load is equivalent to a Squat with x3 BW

Vertical force, displacement, muscle activity.

		Bilateral Squat	RLESS
	Vertical Force (N)	1414.8 ± 251.0	1412.3 ± 258.6
	Vertical Displacement (m)	0.76 ± 0.04	0.65 ± 0.36
CONCENTRIC (RMS mV)	Gluteus Maximus	361.1 ± 228.6	287.8 ± 166.4
	Biceps Femoris	392.2 ± 220.4	396.7 ± 186.6
	Semitendinosis	272.2 ± 176.3	313.3 ± 177.1
	Rectus Femoris	1526.7 ± 410.0	1374.4 ± 432.9
	Vastus Lateralis	660.0 ± 363.3	637.8 ± 422.9
	Vastus Medialis	718.9 ± 424.6	668.9 ± 332.0
	Tibialis Anterior	500.0 ± 340.0	562.2 ± 415.0
	Medial Gastrocnemius	277.8 ± 156.4	380.0 ± 305.0
	Gluteus Maximus	134.4 ± 66.2	158.9 ± 52.1
	Biceps Femoris	161.1 ± 106.6	228.9 ± 134.7
	Semitendinosis	223.3 ± 197.4	204.4 ± 198.8
	Rectus Femoris	1182.2 ± 364.9	1228.9 ± 1007.0

Table 6. RMS EMG data for the gluteus medius (GMD) during the eccentric (ECC) and concentric (CON) phases of the 4 study exercises. (N=14)

	Step-Up	Lunge	Deadlift	Squat
GMD ECC	0.56 ± 0.27[a]	0.55 ± 0.30[a]	0.25 ± 0.09[b]	0.23 ± 0.11[b]
GMD CON	0.85 ± 0.27[a]	0.84 ± 0.35[a]	0.56 ± 0.34[b]	0.38 ± 0.15[b]

a = significantly different than S and DL ($p \leq 0.001$); b = significantly different than SU and L ($p \leq 0.001$)

Table 7. RMS EMG data for the gluteus maximus (GMX) during the eccentric (ECC) and concentric (CON) phases of the 4 study exercises. (N=14)

	Lunge	Step-Up	Deadlift	Squat
GMX ECC	0.95 ± 0.45[a]	0.87 ± 0.31	0.76 ± 0.36[b]	0.62 ± 0.34[b]
	Step Up	Lunge	Deadlift	Squat
GMX CON	1.99 ± 0.91[c]	1.88 ± 0.69[c]	1.79 ± 0.88[c]	1.18 ± 0.50[d]

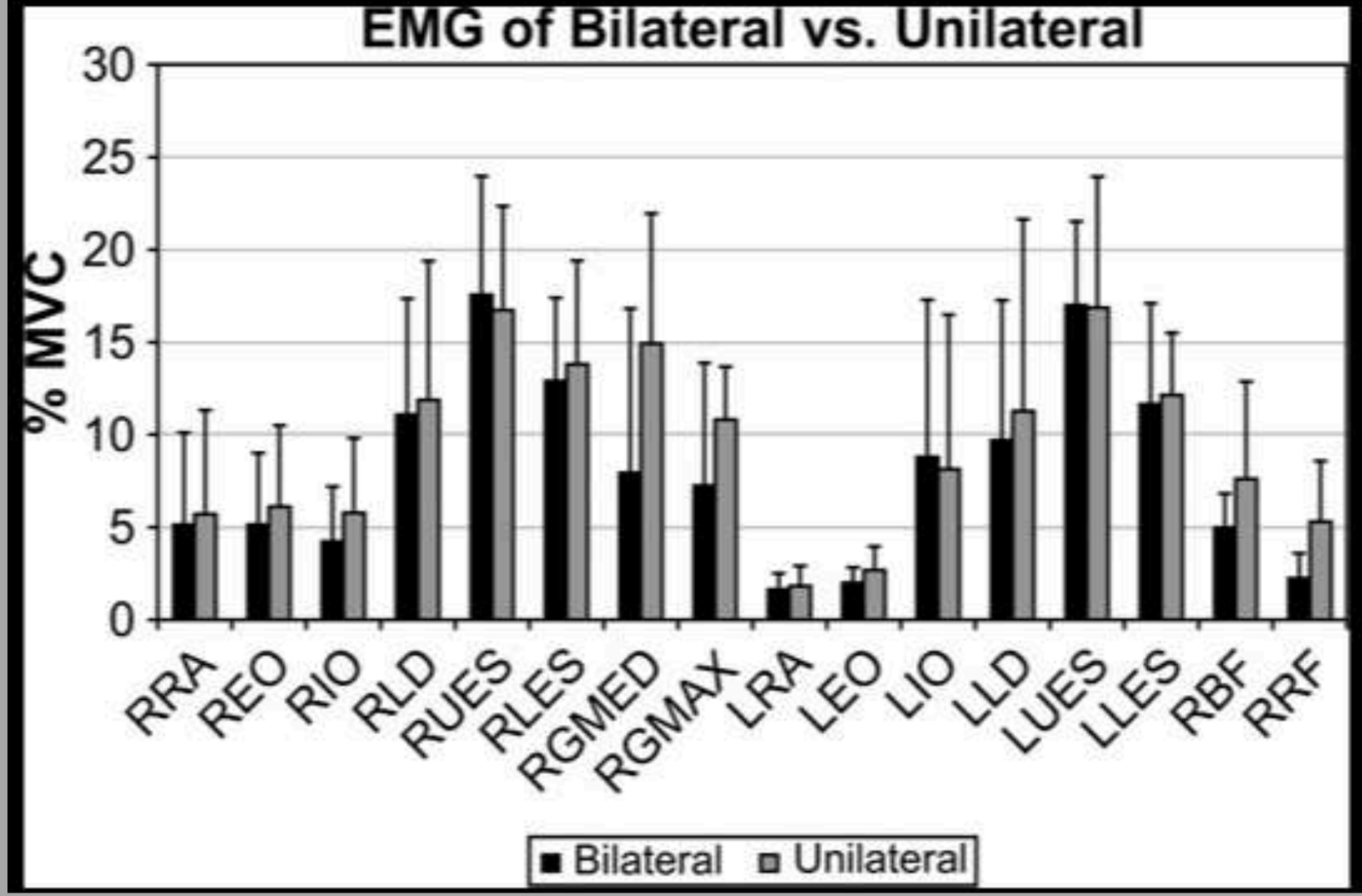


Figure 6

Muscle activation during the good morning exercise, both bilaterally and unilaterally.

Source

Exercises for the Torso Performed in a Standing Posture: Spine and Hip Motion and Motor Patterns and Spine Load

The Journal of Strength & Conditioning Research23(2):455-464, March 2009.

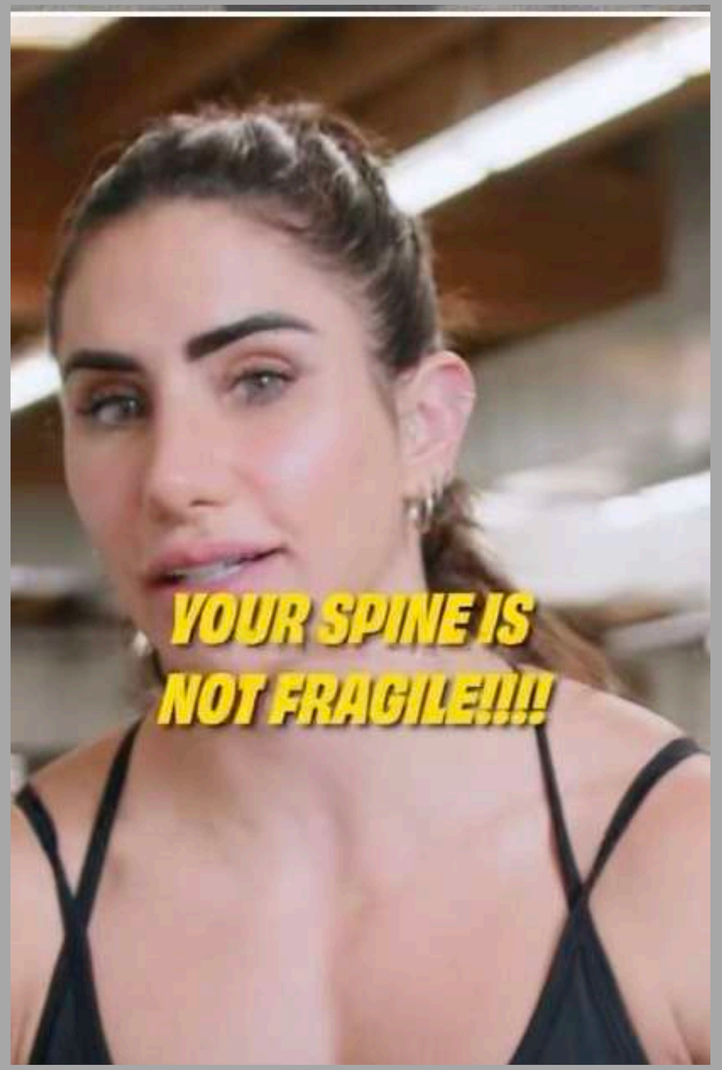
COMMON MISTAKE #4: NO BAD EXERCISES?

-Inefficient

-High Risk/Low Reward

-High Risk/High Reward
vs. High Risk/Low Reward

-Surviving or Thriving?



Terrain grade change

- Core and pelvis muscle activation for stability

- Requires eccentric and concentric leg strength
- Quadricep and hamstring coactivation and stiffness
- Fatigue resistance

- Plantarflexor & dorsiflexor strength

Interaction with variable terrain surface

- Trunk control, avoidance of excessive forward lean
- Core muscle coactivation, prevention of pelvic drop and obliquity

- Knee flexion and neutral alignment

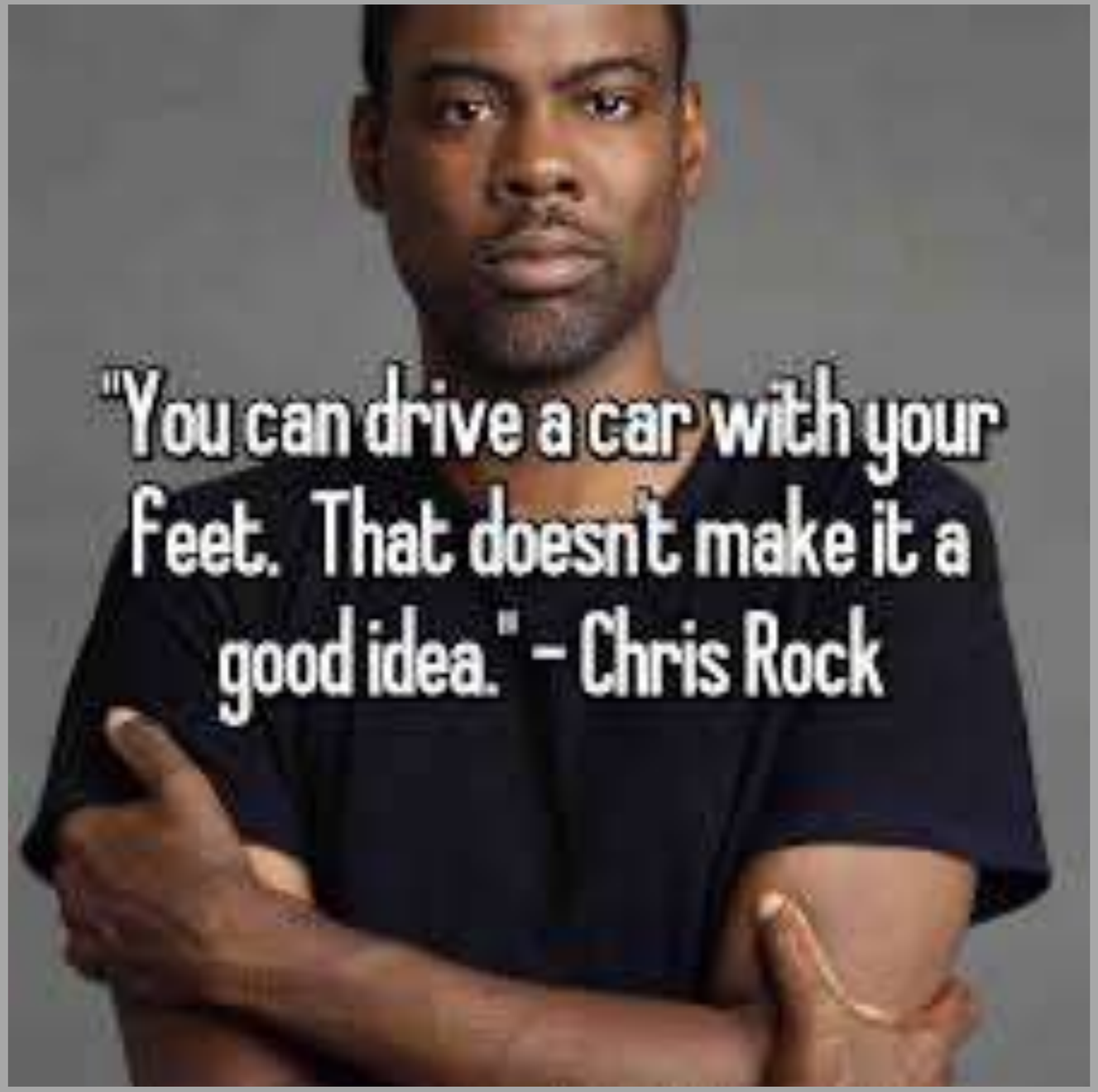
- Intrinsic foot muscle strength
- Ankle strength, reactivity and neuromotor control
- Stable foot landings, non-heel strike with appropriate ankle range of motion

High ground reaction forces

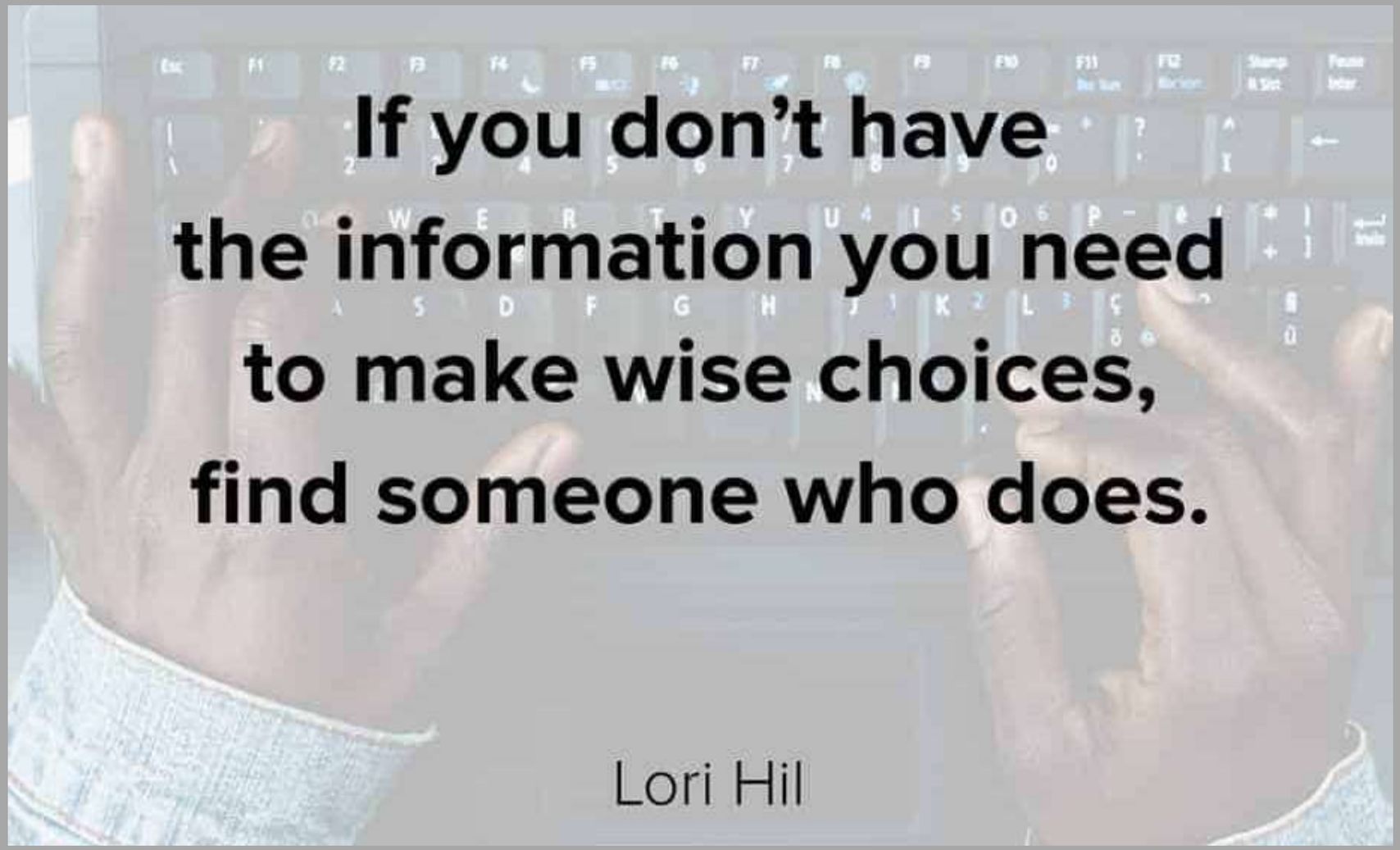
ARE WE TRYING TO BE AS RISKY AS POSSIBLE?

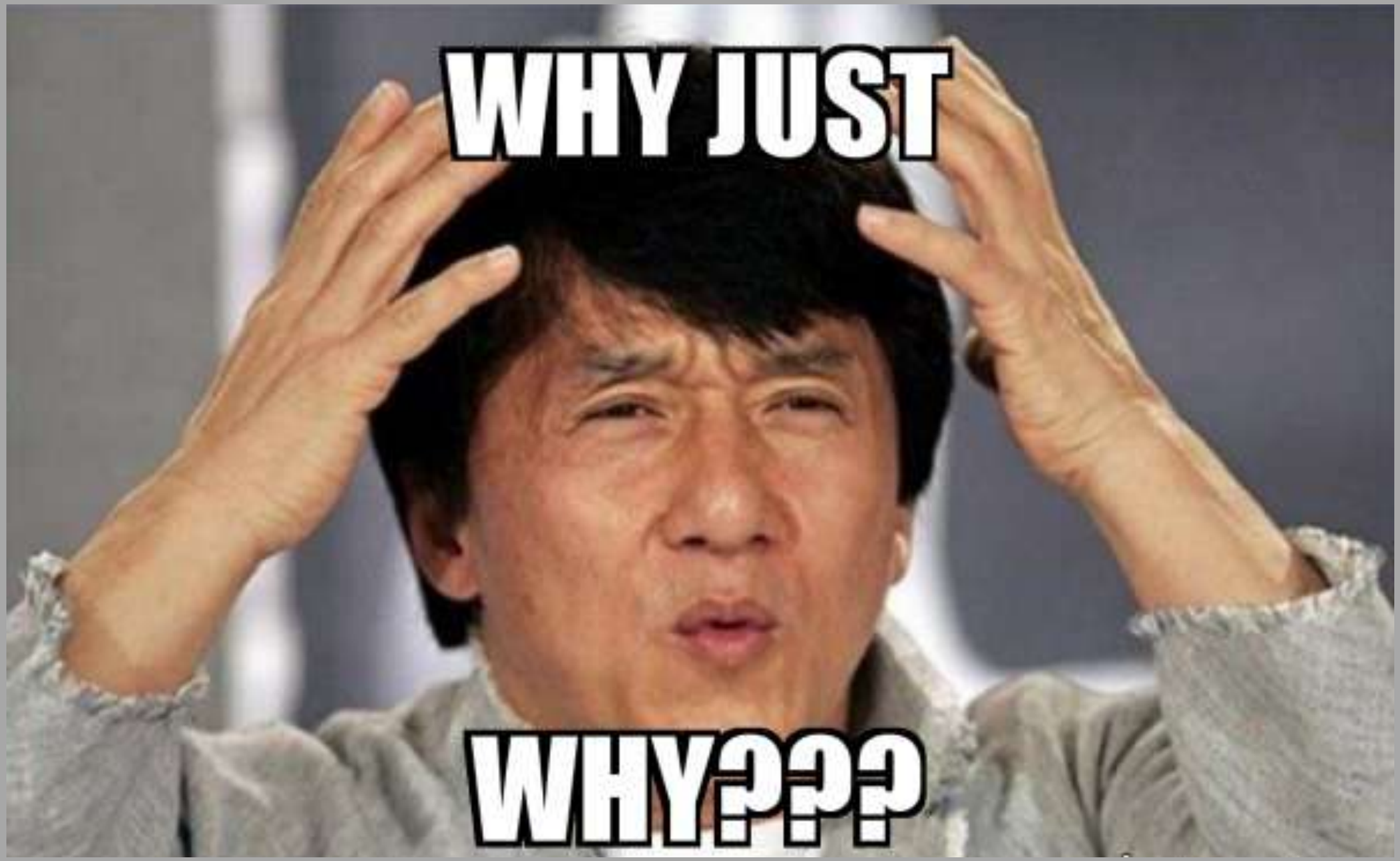
Exercise Prescription

-Dosage
-Side Effects
-Contraindications
-Frequency


"You can drive a car with your
Feet. That doesn't make it a
good idea." - Chris Rock

WE HAVE SOOOOO MANY GOOD EXERCISES TO CHOOSE FROM




WHY JUST
WHY???

HOW WE FALL BACK INTO BODYBUILDING BY ACCIDENT

-We are removing important joints from movements.

-There is focus on individual muscles (i.e. vmo, soleus, supraspinatus, glutes, serrates anterior, etc.)

-There is an emphasis on compromising movements to target muscles.

Vastus Medialis Obliquus and Vastus Lateralis Activity in Patients with and without Patellofemoral Pain Syndrome

in Journal of Sport Rehabilitation

John P. Miller, Daniel Sedory, and Ronald V....

The purpose of this study was to examine the efficacy of closed kinetic chain exercises in preferentially recruiting the oblique fibers of the vastus medialis obliquus (VMO). Fifteen athletically active females, 6 with patellofemoral pain syndrome (PFPS) and 9 without PFPS, performed two isometric and two dynamic closed kinetic chain exercises. The isometric exercises were a static lunge with 30° of knee flexion (SL@30°) and with 70° of knee flexion (SL@70°). The dynamic exercises were a step-up/step-down exercise (SUSD) and a modified wall slide (MWS). Selective recruitment of the VMO occurred during the MWS ($p < .05$) and the SUSD in the subjects without PFPS ($p < .05$). For the SL@70° ($p < .01$), the MWS ($p < .01$), and the SUSD ($p < .05$), subjects with PFPS had greater activity of the vastus lateralis (VL), resulting in a lower VMO: VL ratio for those exercises ($p < .05$). It was concluded that the closed kinetic chain exercises examined in this study do not preferentially recruit the VMO in individuals with PFPS. In addition, individuals with PFPS have a lower VMO:VL ratio during these exercises compared to individuals without PFPS.

Original

Can vastus medialis oblique be preferentially activated? A systematic review of electromyographic studies

Toby O Smith , BSc (Hons), MCSP, Damien Bowyer , MSc, BSc (Hons), MCSP, John Dixon , PhD, BSc (Hons), Richard Stephenson , PhD, MSc, BA, MCSP, Rachel Chester , MSc, MMACP, MCSP & Simon T Donell , FRCS(Orth), MD

Pages 69-98 | Published online: 10 Jul 2009

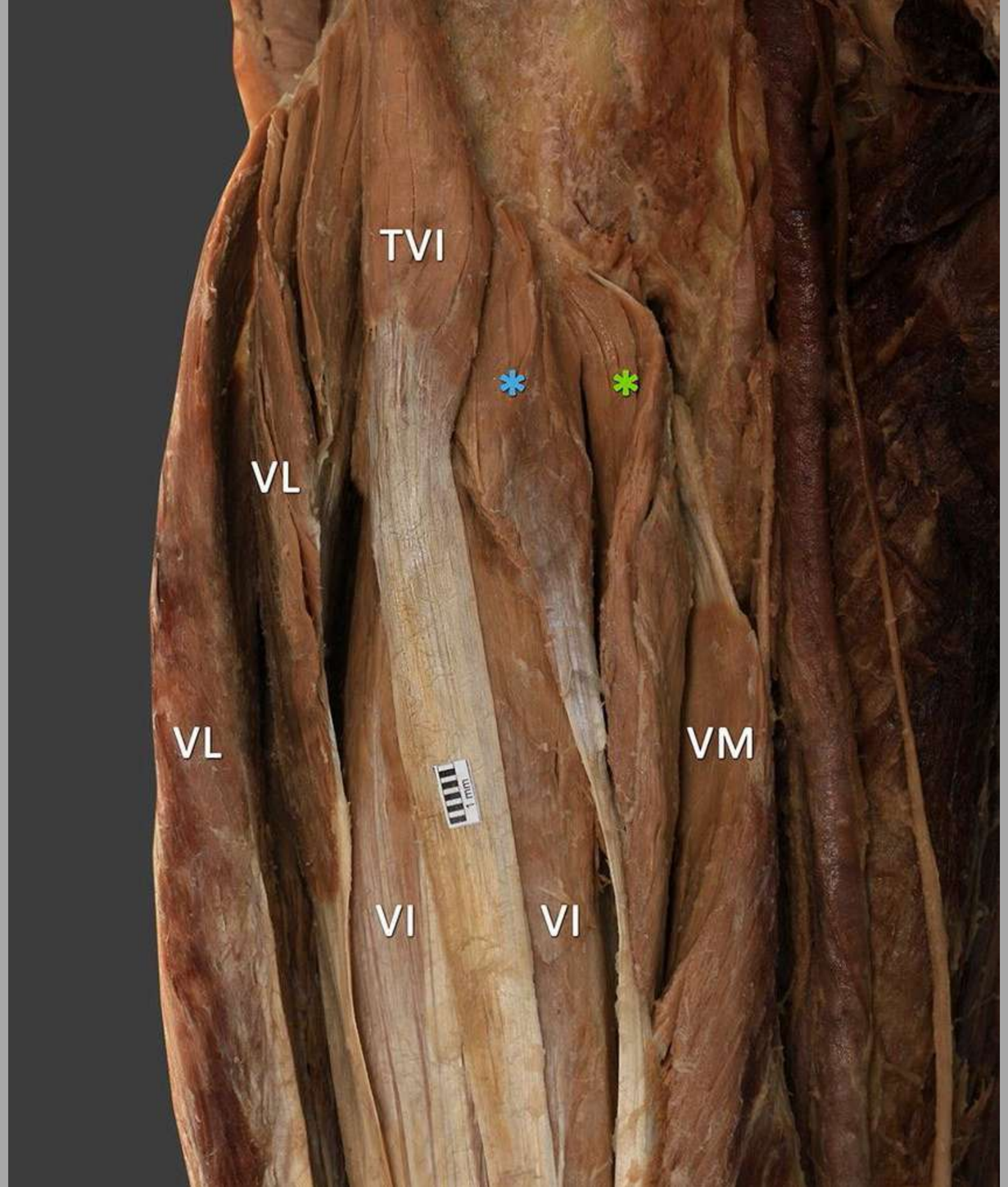
Download citation https://doi.org/10.1080/09593980802686953

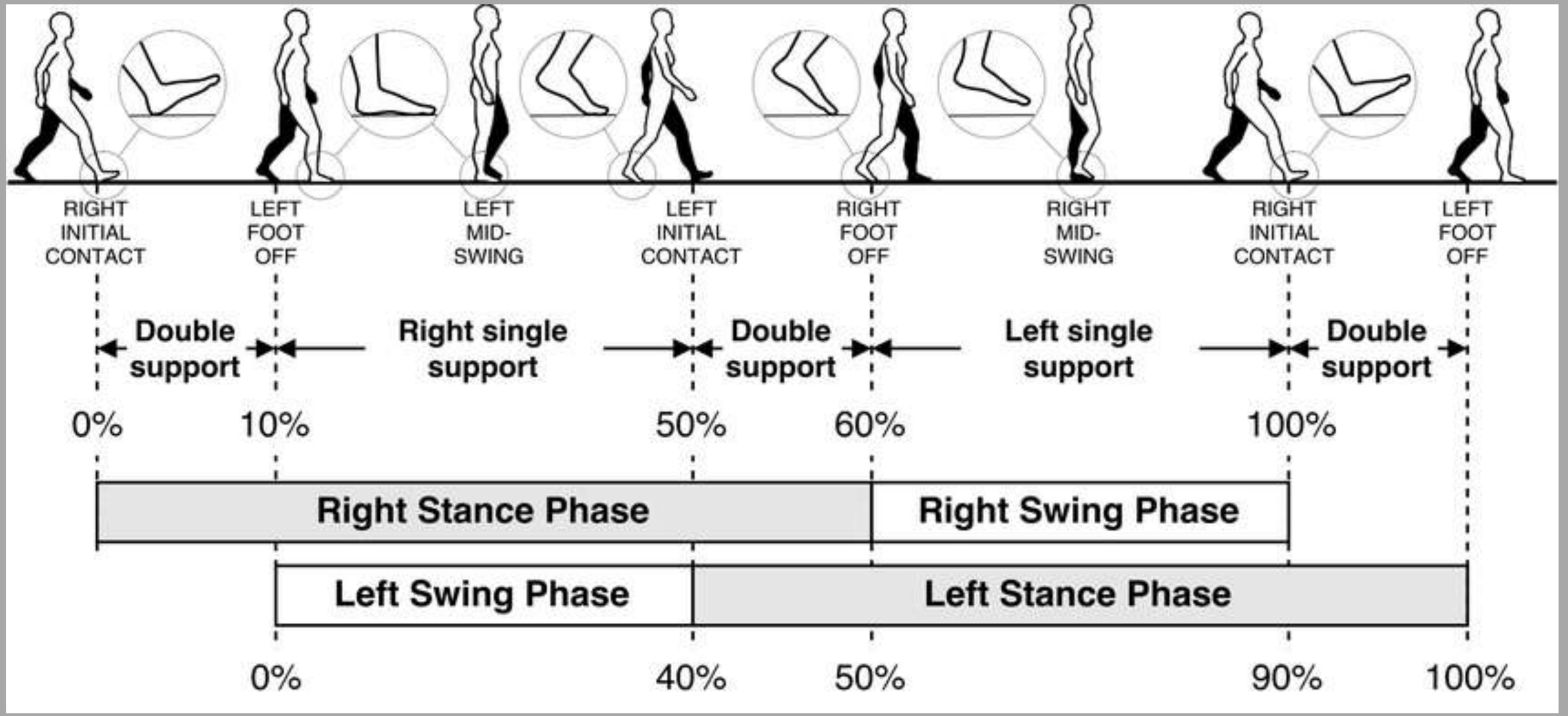
with the addition of a co-contraction were included. Twenty papers reviewing 387 participants were reviewed. These reported principally that altering lower limb joint orientation or the addition of a co-contraction does not preferentially enhance VMO activity over VL. Nonetheless, the evidence-base presented with a number of

Conclusion

This review suggests that VMO cannot be preferentially activated by altering lower limb joint orientation or through the addition of co-contraction. Only three of the 20 studies included provided any evidence for preferential VMO activation, each in different lower limb joint positions. Furthermore, a number of methodological limitations, particularly in EMG data collection and analysis, were identified in

these studies. Strong evidence that VMO can be preferentially activated and strengthened is absent. It is therefore recommended that clinicians should not focus on VMO strengthening, in preference to general quadriceps training when rehabilitating patients with patellofemoral disorders, because this may not be possible.


TVI
VL
VL
VM
VI
VI


RIGHT INITIAL CONTACT
LEFT FOOT OFF
LEFT MID-SWING
LEFT INITIAL CONTACT
RIGHT FOOT OFF
RIGHT MID-SWING
RIGHT INITIAL CONTACT
LEFT FOOT OFF
Double support
Right single support
Double support
Left single support
Double support
0%
10%
50%
60%
100%
Right Stance Phase
Right Swing Phase
Left Swing Phase
Left Stance Phase
0%
40%
50%
90%
100%

Anterior cruciate ligament injury and ankle dorsiflexion

Charlotta Wahlstedt, Eva Rasmussen-Barr

Knee Surgery, Sports Traumatology, Arthroscopy 23 (11), 3202-3207, 2015

Conclusion

The present findings suggest lower degree of ankle dorsiflexion in subjects with an ACL injury than in uninjured controls. A functional test measuring ankle dorsiflexion with a goniometer may be one way of identifying individuals at increased risk of ACL injury.

OTHER | DECEMBER 01 2014

Altered Knee and Ankle Kinematics During Squatting in Those With Limited Weight-Bearing–Lunge Ankle-Dorsiflexion Range of Motion

Karli E. Dill, MA, ATC; Rebecca L. Begalle, PhD, ATC; Barnett S. Frank, MA, LAT, ATC; Steven M. Zinder, PhD, ATC; Darin A. Padua, PhD, A

J Athl Train (2014) 49 (6): 723–732.

https://doi.org/10.4085/1062-6050-49.3.29

Conclusions:

Greater ankle DF-ROM assessed during the WBL was associated with greater knee-flexion and ankle-DF displacement during both squatting tasks as well as greater knee-varus displacement during the single-legged squat. Assessment of ankle DF-ROM using the WBL provided important insight into compensatory movement patterns during squatting, whereas nonweight-bearing passive ankle DF-ROM did not. Improving ankle DF-ROM during the WBL may be an important intervention for altering high-risk movemer patterns commonly associated with noncontact anterior cruciate ligament injury.

The Knee
Volume 21, Issue 3, June 2014, Pages 669-675

Acute influence of restricted ankle dorsiflexion angle on knee joint mechanics during gait

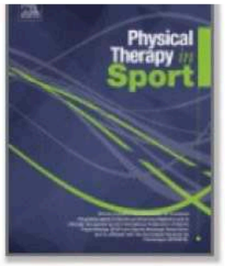
S. Ota [a], M. Ueda [b], K. Aimoto [c], Y. Suzuki [c], S.M. Sigward [d]

Show more

Conclusion

The meta-analysis results provide evidence that reduced ADF is correlated with DKV. The assessment of ADF in the clinical setting is important, as it may be related to harmful movement patterns of the lower limbs.

Physical Therapy in Sport
Volume 29, January 2018, Pages 61-69



Literature Review

The association of ankle dorsiflexion and dynamic knee valgus: A systematic review and meta-analysis

Conclusion

The meta-analysis results provide evidence that reduced ADF is correlated with DKV. The assessment of ADF in the clinical setting is important, as it may be related to harmful movement patterns of the lower limbs.


I CAN DO THIS
ALL DAY.
YEAH, I KNOW.
I KNOW.

- The VMO is entirely dependent on what happens at the joints above and below the knee – the **Ankle and the Hips!**

SO WHAT ARE WE GOING TO DO?

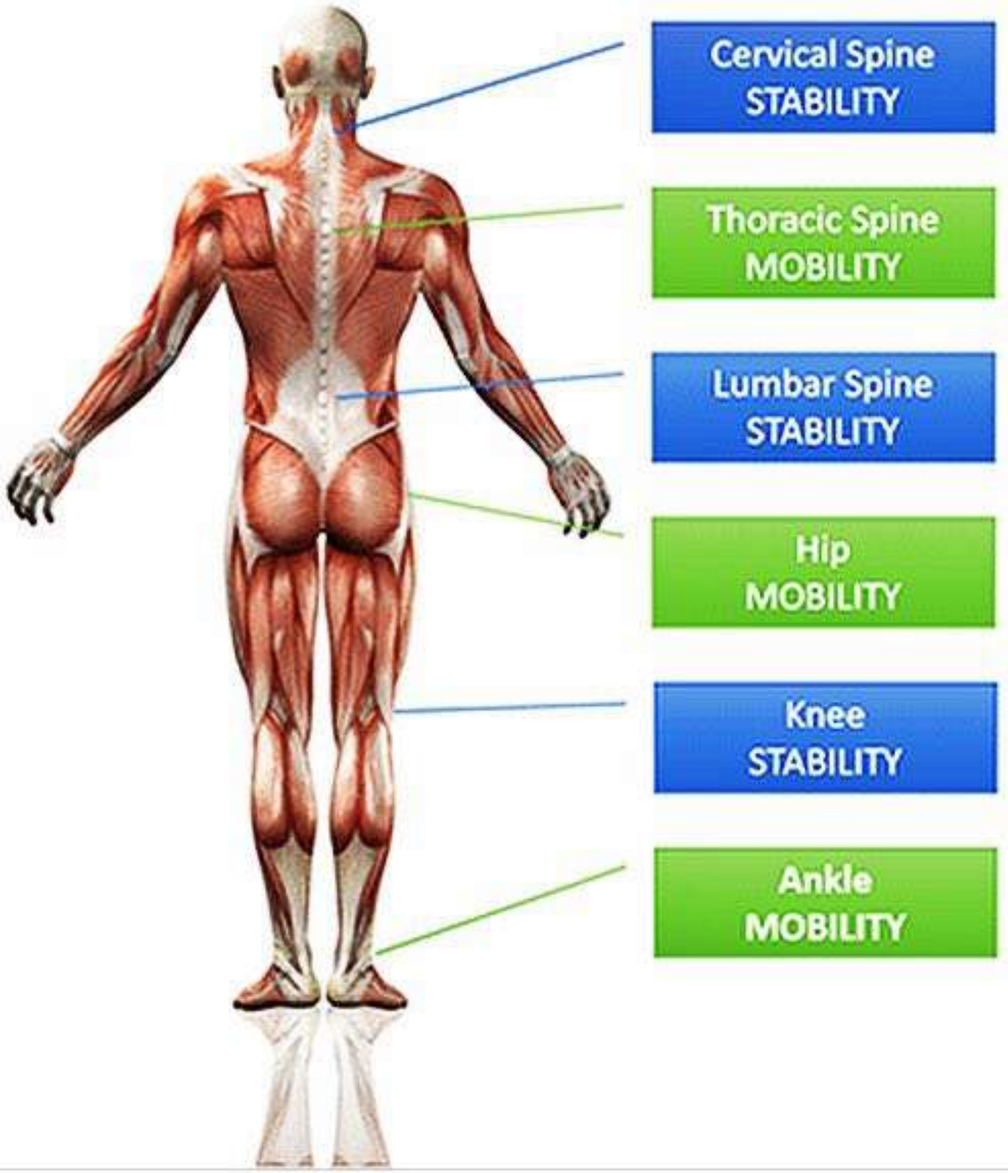
Methodical Movement Systems
@MethodicalMS

The joint by joint approach

Areas that need mobility vs. areas that need stability.

The process is simple:
❎ Lose thoracic mobility, get neck & shoulder pain (or low back pain).
❎ Lose hip mobility, get low back pain (or knee pain).
❎ Lose ankle mobility, get knee pain.

The Joint by Joint Approach



Cervical Spine
STABILITY

Thoracic Spine
MOBILITY

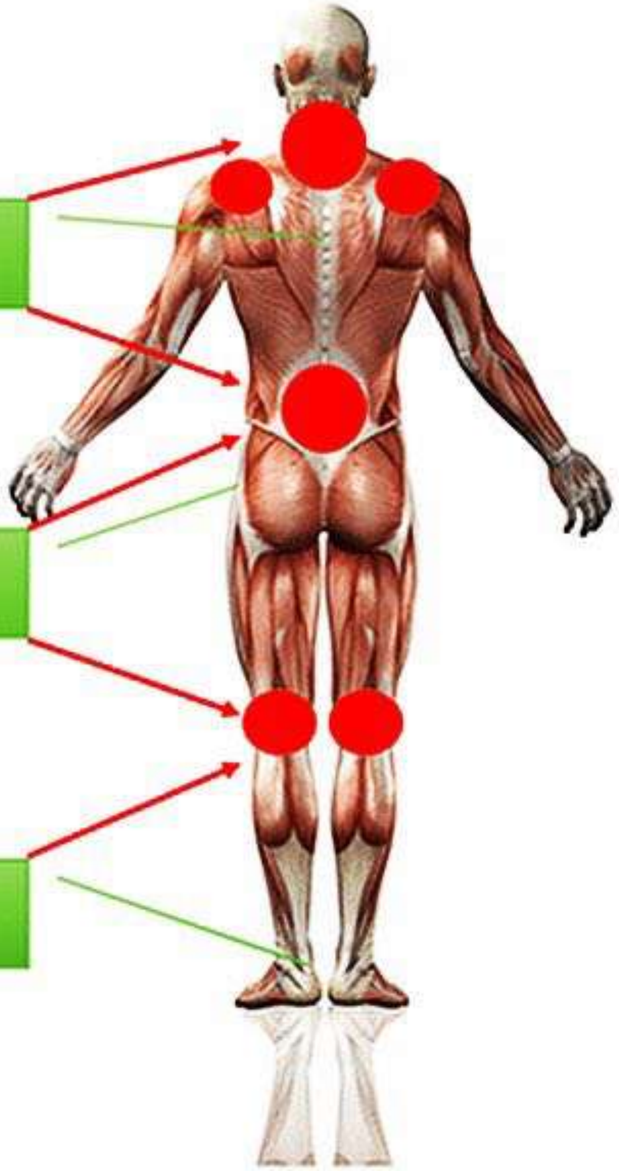
Lumbar Spine
STABILITY

Hip
MOBILITY

Knee
STABILITY

Ankle
MOBILITY

The Compensational Pain Response



Thoracic Spine
MOBILITY

Hip
MOBILITY

Ankle
MOBILITY

Relationship Between Core Stability, Functional Movement, and Performance

Tomoko Okada, Kellie C. Huxel, and Thomas W. Nesser

Exercise Physiology Laboratory, Athletic Training Department, Indiana State University, Terre Haute, Indiana

Core stability is achieved through stabilization of one's torso, thus allowing optimal production, transfer, and control of force and motion to the terminal segment during an integrated kinetic chain activity (8,14,15,23). Research has demonstrated the importance and contributions of core stability in human movement (12) in producing efficient trunk and limb actions for the generation, transfer, and control of forces or energy during integrated kinetic chain activities (3,6,8,14,18). For example, Hodges and Richardson (12)

The Role of Core Stability in Athletic Function

W. Ben Kibler,[1] *Joel Press*[2] and *Aaron Sciascia*[1]

1 Lexington Clinic Sports Medicine Center, Lexington, Kentucky, USA
2 Rehabilitation Institute of Chicago, Chicago, Illinois, USA

Abstract

The importance of function of the central core of the body for stabilisation and force generation in all sports activities is being increasingly recognised. 'Core stability' is seen as being pivotal for efficient biomechanical function to maximise force generation and minimise joint loads in all types of activities ranging from running to throwing. However, there is less clarity about what exactly constitutes 'the core', either anatomically or physiologically, and physical evaluation of core function is also variable.

'Core stability' is defined as the ability to control the position and motion of the trunk over the pelvis to allow optimum production, transfer and control of force and motion to the terminal segment in integrated athletic activities. Core muscle activity is best understood as the pre-programmed integration of local, single-joint muscles and multi-joint muscles to provide stability and produce motion. This results in proximal stability for distal mobility, a proximal to distal patterning of generation of force, and the creation of interactive moments that move and protect distal joints. Evaluation of the core should be dynamic, and include evaluation of the specific functions (trunk control over the planted leg) and directions of motions (three-planar activity). Rehabilitation should include the restoring of the core itself, but also include the core as the base for extremity function.


@HODGES_HEALTH_AND_PERFORMANCE
Smart Athlete
Phy therapy
Before .. no core
Connection
@ULTIMATESANDBAG


can make you TIRED,
ryone can make you

HOW WE CAN THINK ABOUT THE SQUAT: 81!!!

Load Position	Body Position
Press Out	Bilateral
Goblet	Sprinter Stance
Bear Hug	Split Squat
Front Loaded	Lateral Squat
Double Rack	Rear Foot Elevated Split Squat
Off-Set USB	Cossack Squat
Off-Set KB	Single Leg Squat From Box
Single Arm KB	Skier Squat
Shoulder	Pistol Squat

RANGE OF MOTION

SPEED

LOAD

POSITION OF LOAD

POSITION OF BODY

PLANE OF MOTION

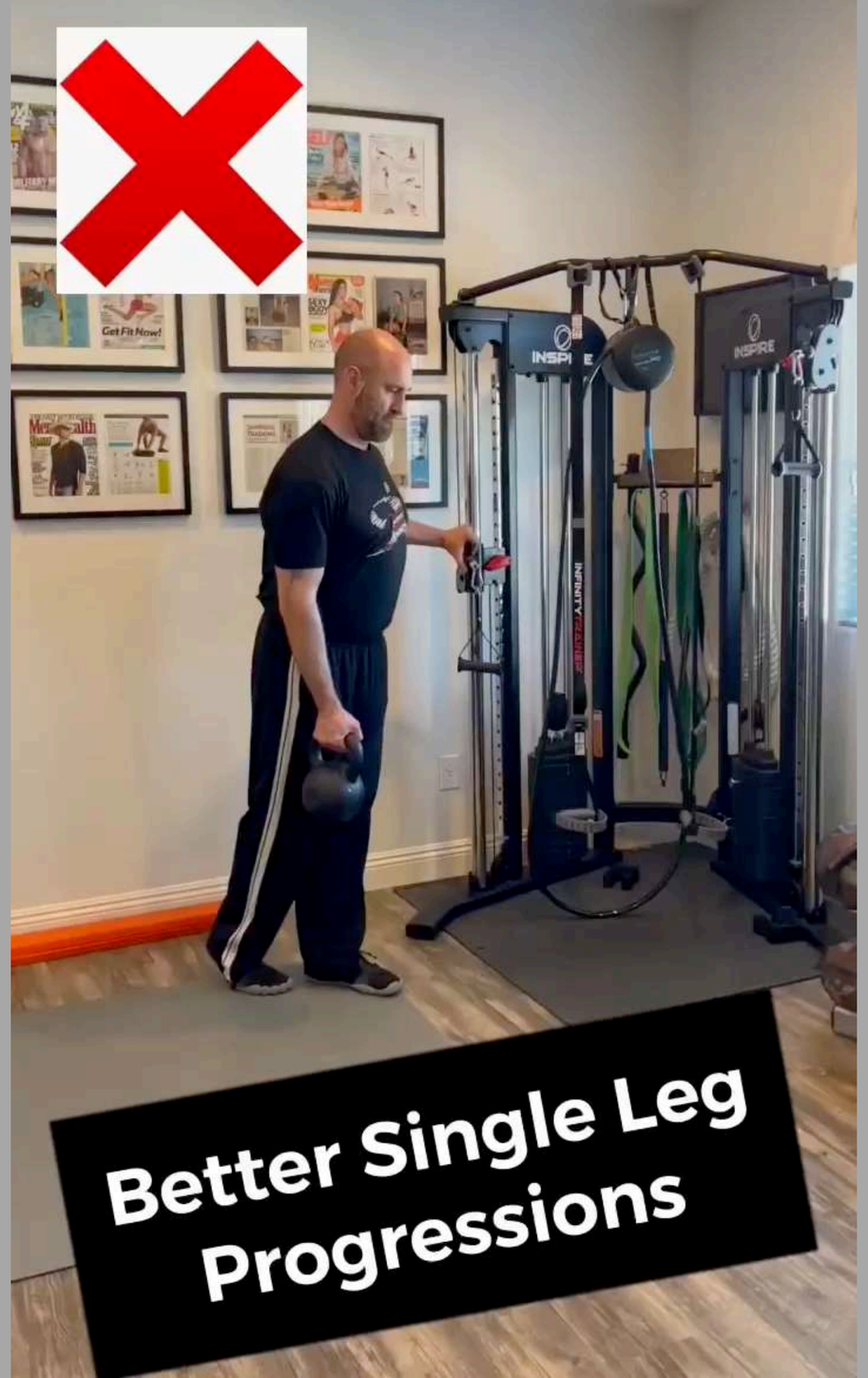
STABILITY OF IMPLEMENT

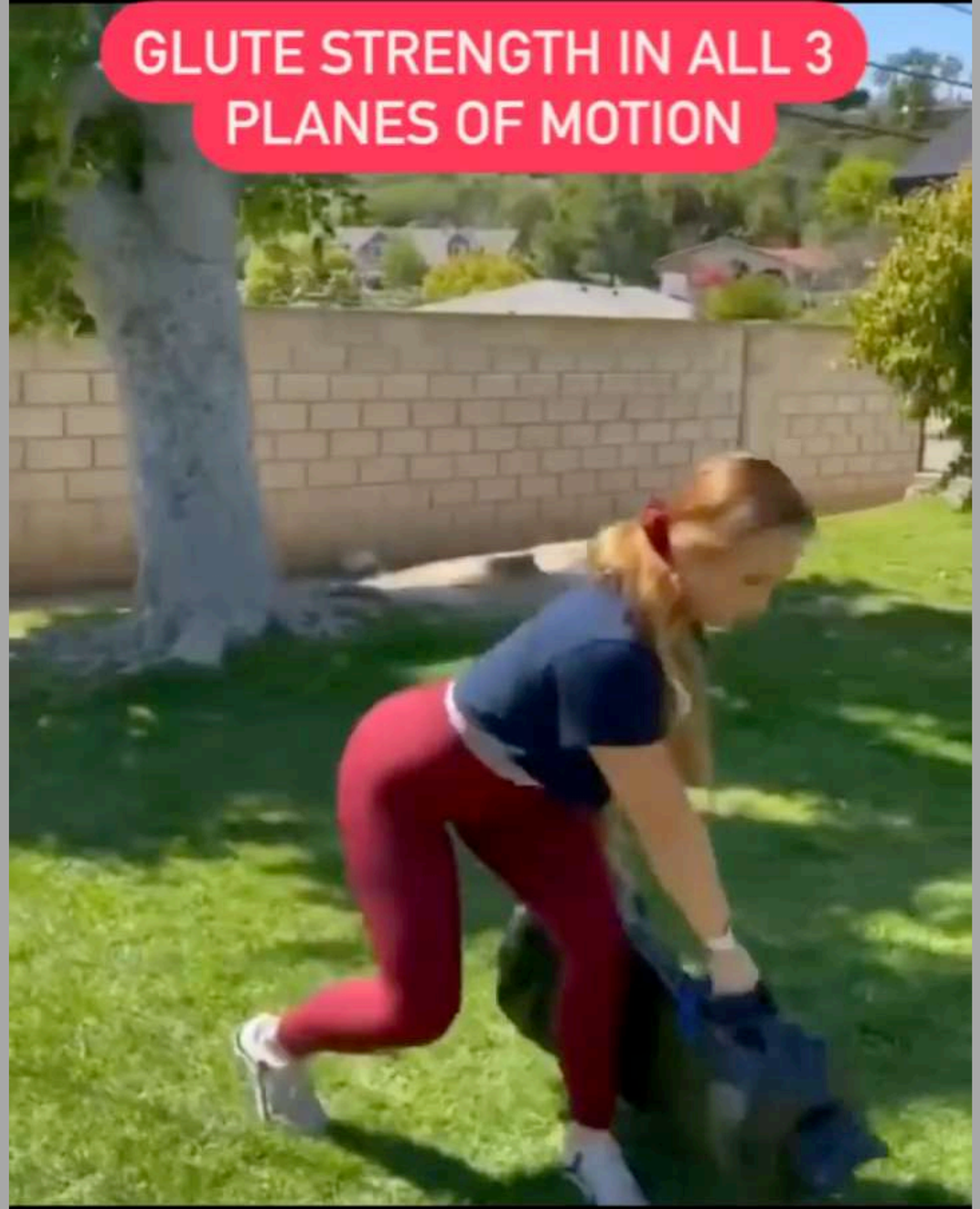

ALLOW YOURSELF TO BE COACHED


ALLOW YOURSELF TO BE COACHED


2020


OVRT


Get Fit Now!
INSPIRE
INSPIRE
INFINITY CRUSHER
Better Single Leg Progressions


GLUTE STRENGTH IN ALL 3
PLANES OF MOTION

USB Lateral Good Morning

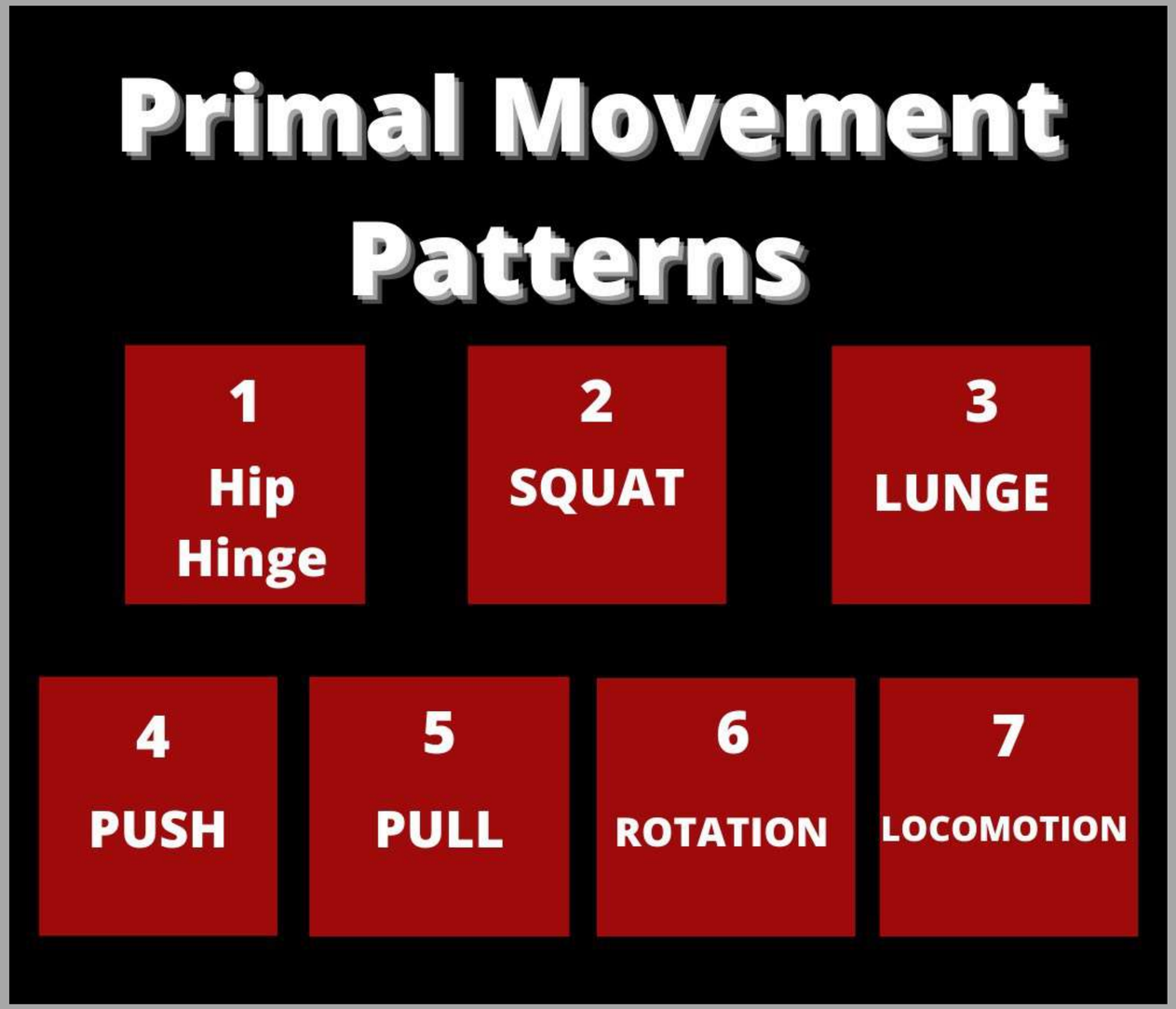

IF YOU WANT A STRONG UPPER BACK AND GOOD CORE STRENGTH DON'T LIVE OFF THIS KETTLEBELL ROW

PRINCIPLE #1: BALANCED MOVEMENT PATTERNS

-Do you have movement pattern redundancy?

-How many movement patterns do you place in the workout?

-Can certain exercises cover multiple movement patterns?



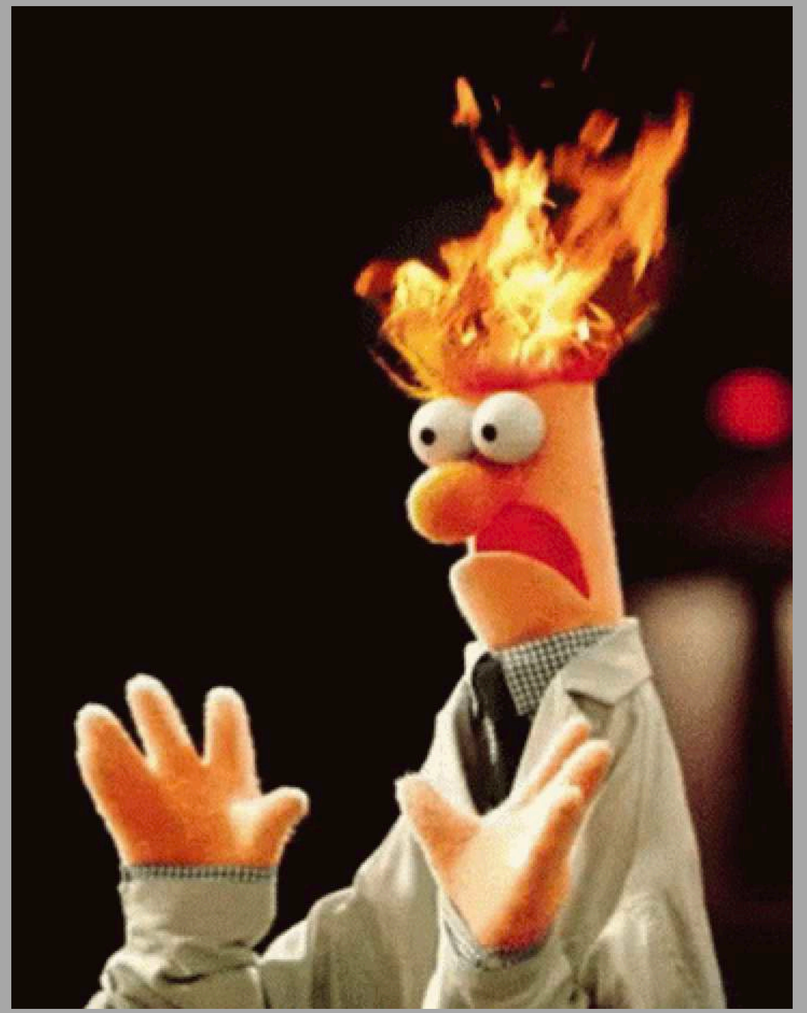
PRINCIPLE #2: LOAD POSITION & BODY POSITION

-Upper Dominant Lifts: Body Position First

-Lower Body Dominant Lifts: Load Position First


I
SANDBAGS

DON’T STRESS!
YOU ARE JUST LEARNING A NEW LANGUAGE!



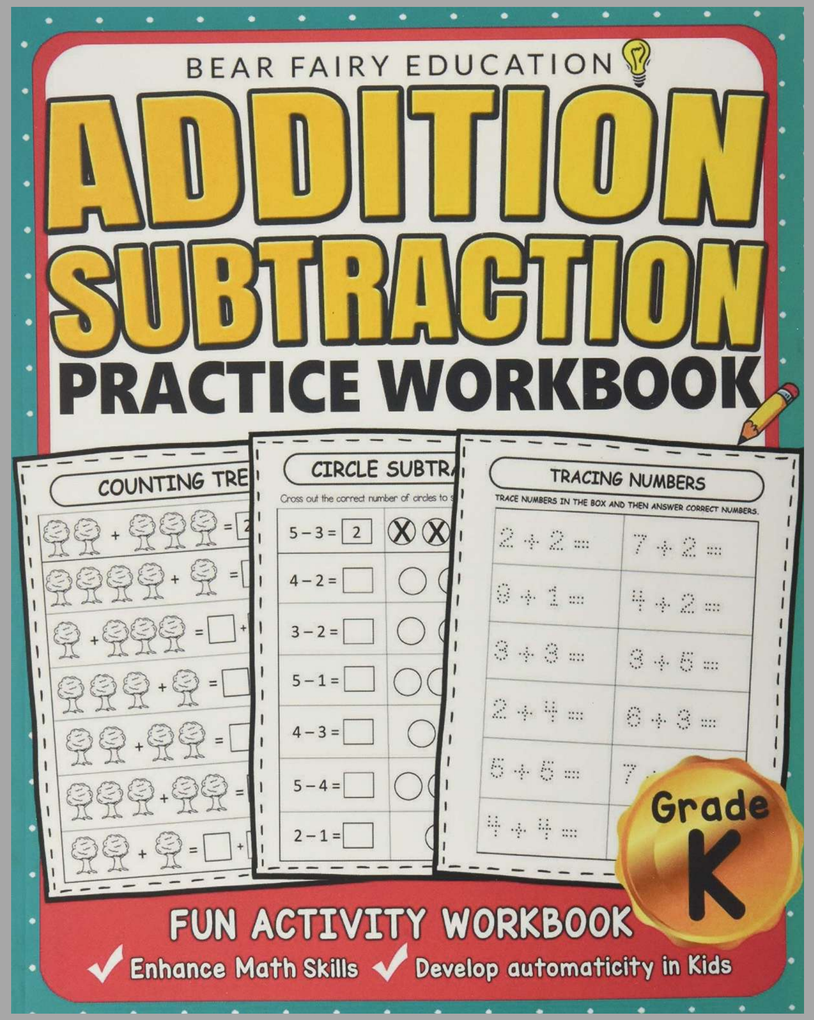
ALL WE DID WAS...

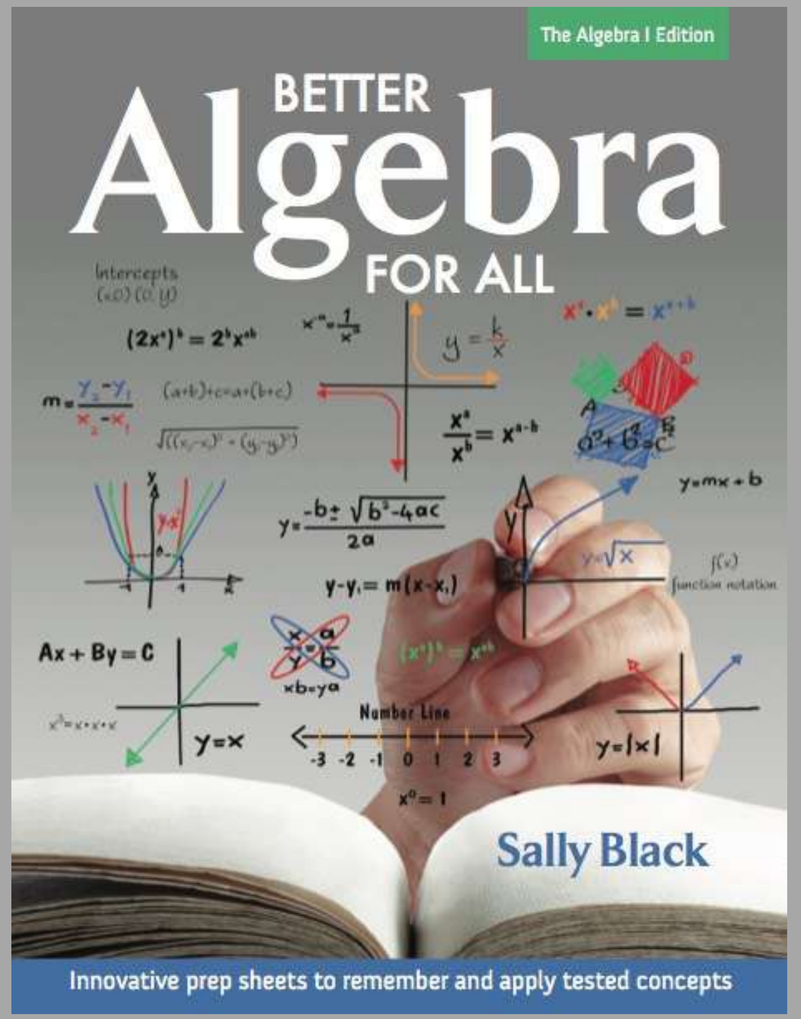
-Why Use Certain Body Positions

-How Do We Use Load Position To Stimulate Specific Outcomes & Goals

-How Do We Put It Into An Incremental System

BUT IT IS JUST TOO COMPLICATED!



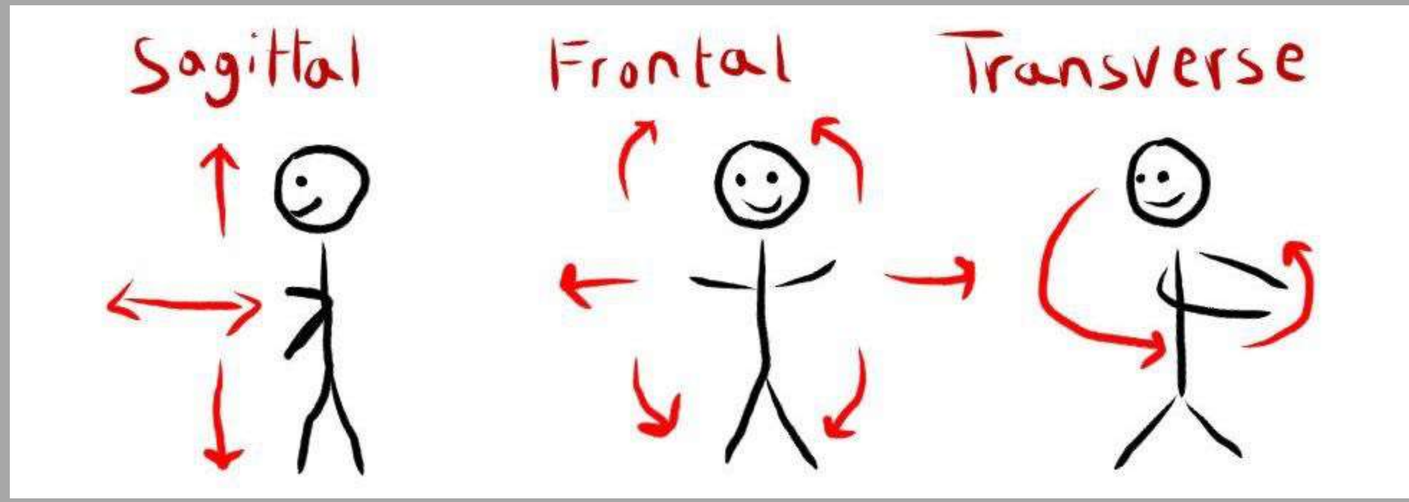


PRINCIPLE #3: PLANES OF MOTION USED

-Which Planes Should People Start With?

-How Do We Progress The Planes Of Motion?

-Can We Make Planes Of Motion As Incremental As Load?



PHASE I

May 2nd – May 20TH

CONDITIONING PHASE: INTENSITY 65-75%
DAILY WARM-UP: JUMP ROPE 4 MINUTES (4 DIFFERENT DRILLS), STRETCH

MONDAY	TUESDAY	THURSDAY	FRIDAY
BENCH PRESS 5 X 5 ADD WT EACH SET	SQUATS 4 X 10	WIDE GRIP BENCH PRESS 4 X 8	
MILITARY PRESS 4 X 8	POWER CLEANS 4 X 6	INCLINE BENCH 4 X 10	LAT PULLDOWN TO FRONT 3 X 10
INCLINE DB PRESS 4 X 10	PUSH PRESS 4 X 8	DB BENCH PRESS 4 X 10	FRONT SQUAT 4 X 8
FRONT DB RAISES 10	UPRIGHT ROWS 3 X 10	DB PULLOVER 3 X 10	LUNGES 3 X 8
SIDE DB RAISES 3 X 10	LEG CURLS 4 X 10	DB ROWS 3 X 10	POWER CLEAN & PRESS 4 X 6
TRICEP CABLE PUSHDOWNS 3 X 10	STRT BAR CURLS 3 X 10	CLOSE GRIP BENCH 3 X 8	LEG PRESS 4 X 6
OVER HEAD TRICEP EXT 3 X 10	DB CURLS 3 X 10	HEADACHES 3 X 10	
DIPS 25X	DB SHRUGS 3 X 10	DIPS 25X	STRT BAR CURLS 3 X 10
ABS	PULL-UPS 25X	ABS	HAMMER CURLS 3 X 10
STRETCH	ABS	STRETCH	ABS
	STRETCH		STRETCH

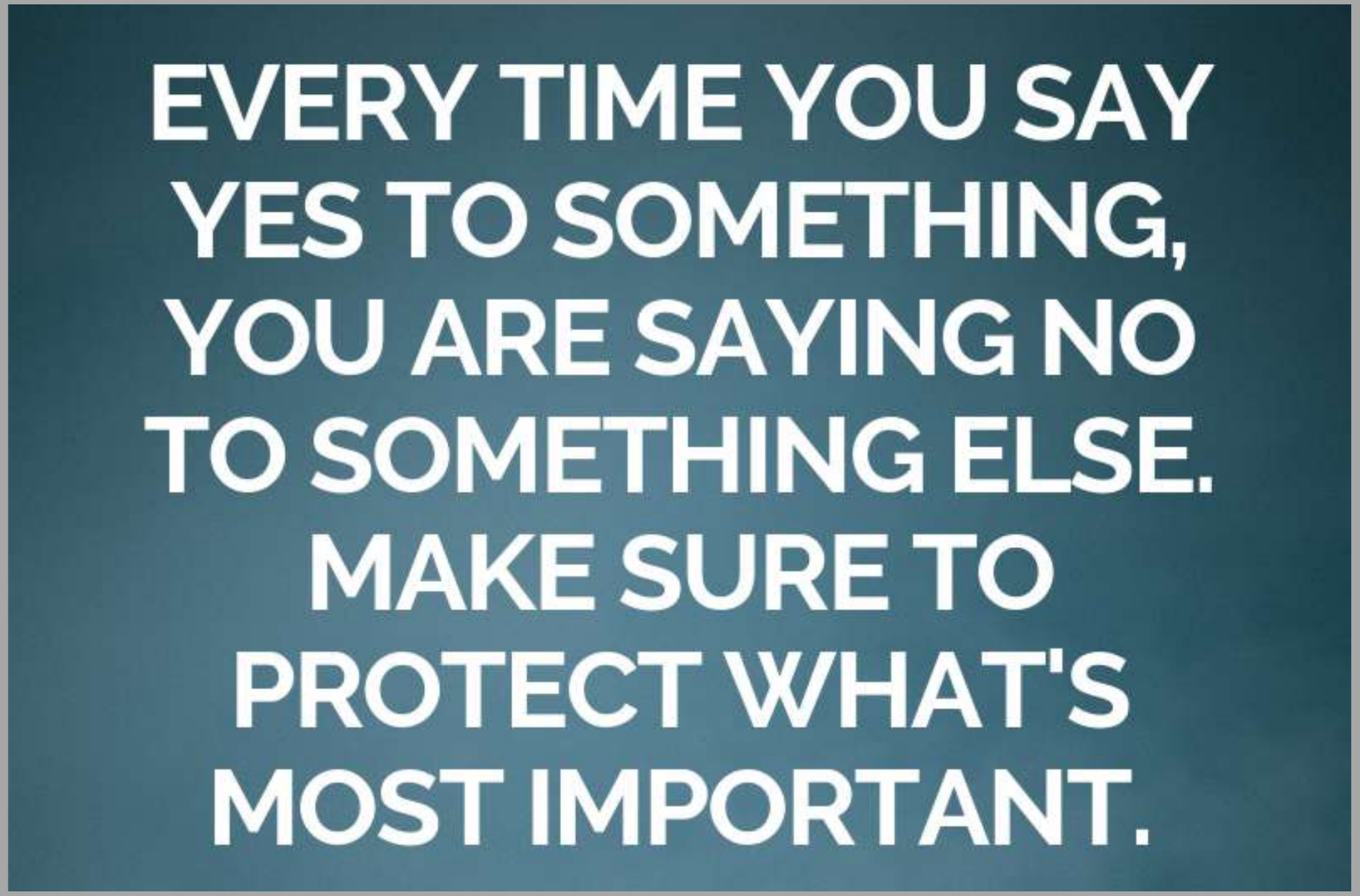
POSSIBLE 36 EXERCISES

Movement Patterns	Planes Of Motion	Compound vs Single Joint
Pushing: 16	Sagittal: 32	Compound: 20
Squat: 2	Frontal: 2	Single Joint: 12
Hip Hinge: 2	Transverse: 1	
Upper Body Pull: 4		
Lunge: 1		
Rotation: 1		
Locomotion: 0		

“WHEN DO I GET TO THE BARBELL?”

“In an advertising brochure, Triat described these implements as “Barres A Spheres De 6 Kilos,” (bars with spheres of six kilos), although he also included in his equipment list “GroHalteres et Barres A Deux Main,” **(Large dumbells and bars for two hands)”**

CAN'T I JUST DO EVERYTHING?!

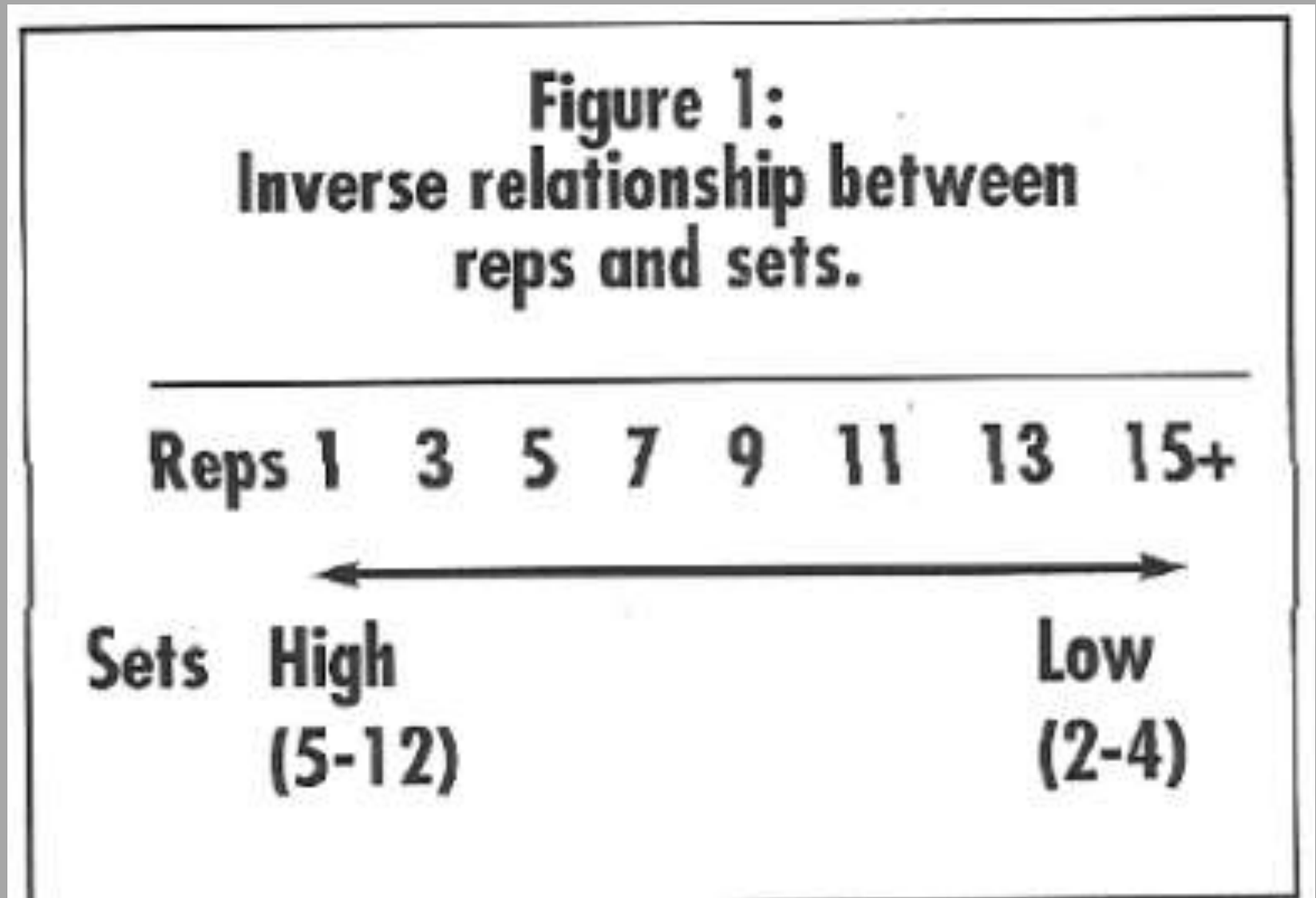


3 DAY A WEEK PROGRAM

Exercise	Movement Pattern	Body Position	Load Position	Planes Of Motion
A1. Front Loaded Rear Slide Lunge	Lunge	Rear Slide	Front Loaded	Sagittal/Frontal
A2. Supported 3 Point Row	Upper Body Horizontal Pull/ Rotation	3 Point	Unilateral Supported	Sagittal/Transverse
B1. Sprinter Stance Deadlift	Hip Hinge	Sprinter Stance	Hip Loaded	Sagittal/Transverse/Frontal
B2. Half Kneeling Cable Press	Upper Body Horizontal Push/ Lunge	Half Kneeling	Horizontal Push	Sagittal/Transverse/Frontal
C1. Suspended Fly	Upper Body Pull	Plank	N/A	Sagittal
C2. Double Rack March	Locomotion	March	Front Loaded	Sagittal/Frontal

Exercise	Movement Pattern	Body Position	Load Position	Planes Of Motion
A1. Lateral Step Good Morning	Hip Hinge	Asymmetrical	Front Loaded	Sagittal/Frontal
A2. Chair Pull-up	Upper Body Vertical Pull	Chair	Bilateral	Sagittal
B1. Off-Set Kettlebell Sprinter Squat	Squat	Sprinter Stance	Off-Set Front Load	Sagittal/Transverse/Frontal
B2. Sprinter Loaded Kettlebell Press	Upper Body Vertical Push/Locomotion	Sprinter Stance	Single Arm Loaded	Sagittal/Frontal/Transverse
C1. Side Plank Row with Hip Abduction	Locomotion	Side Plank Bent Knees	USB Row	Frontal Plane
C2. Front Loaded Rotations	Rotation	Vertical	Front Loaded	Transverse

WHAT ABOUT SETS & REPS?



WHAT WE DON'T CONSIDER...

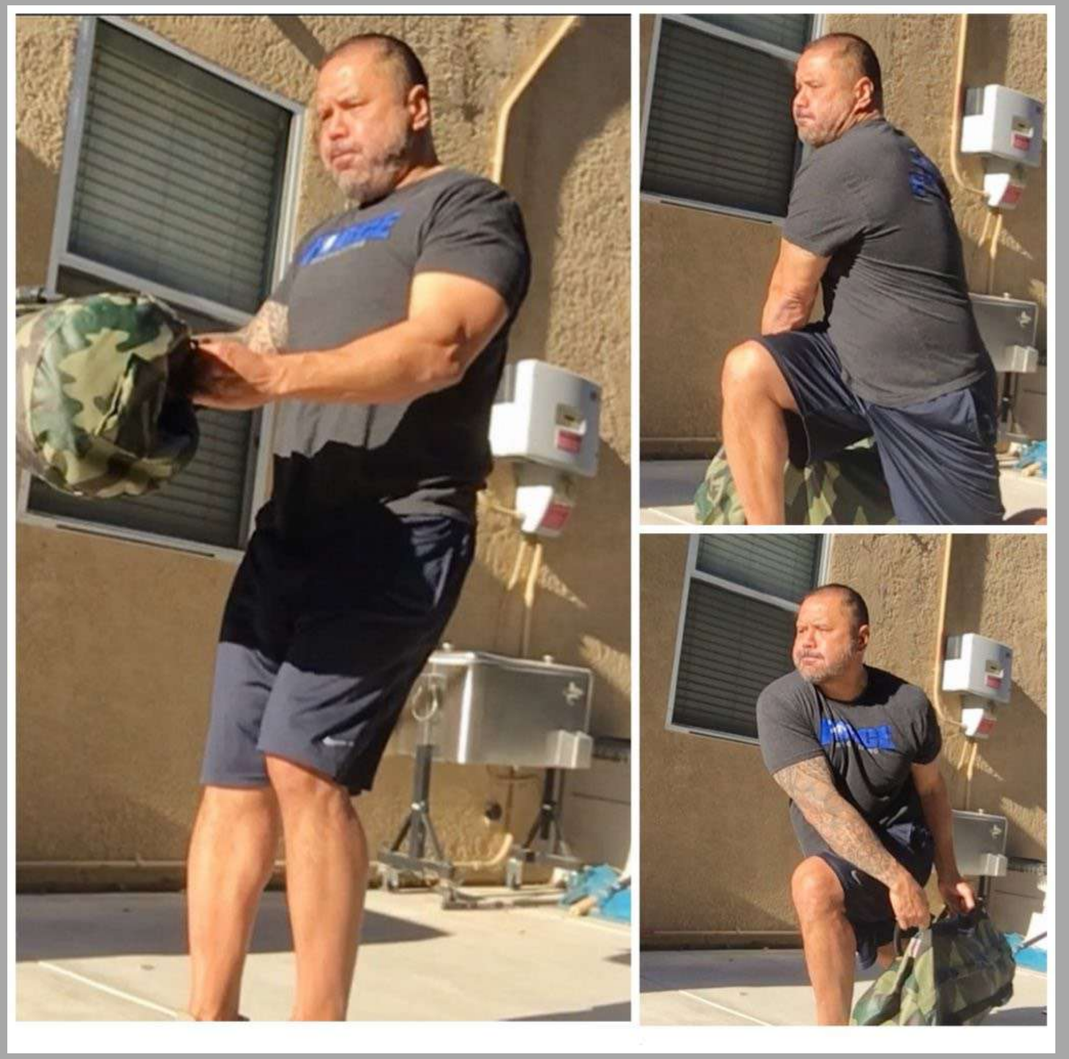
-Are we in working asymmetrical or unilateral drills?

-Which planes of motion are emphasized?

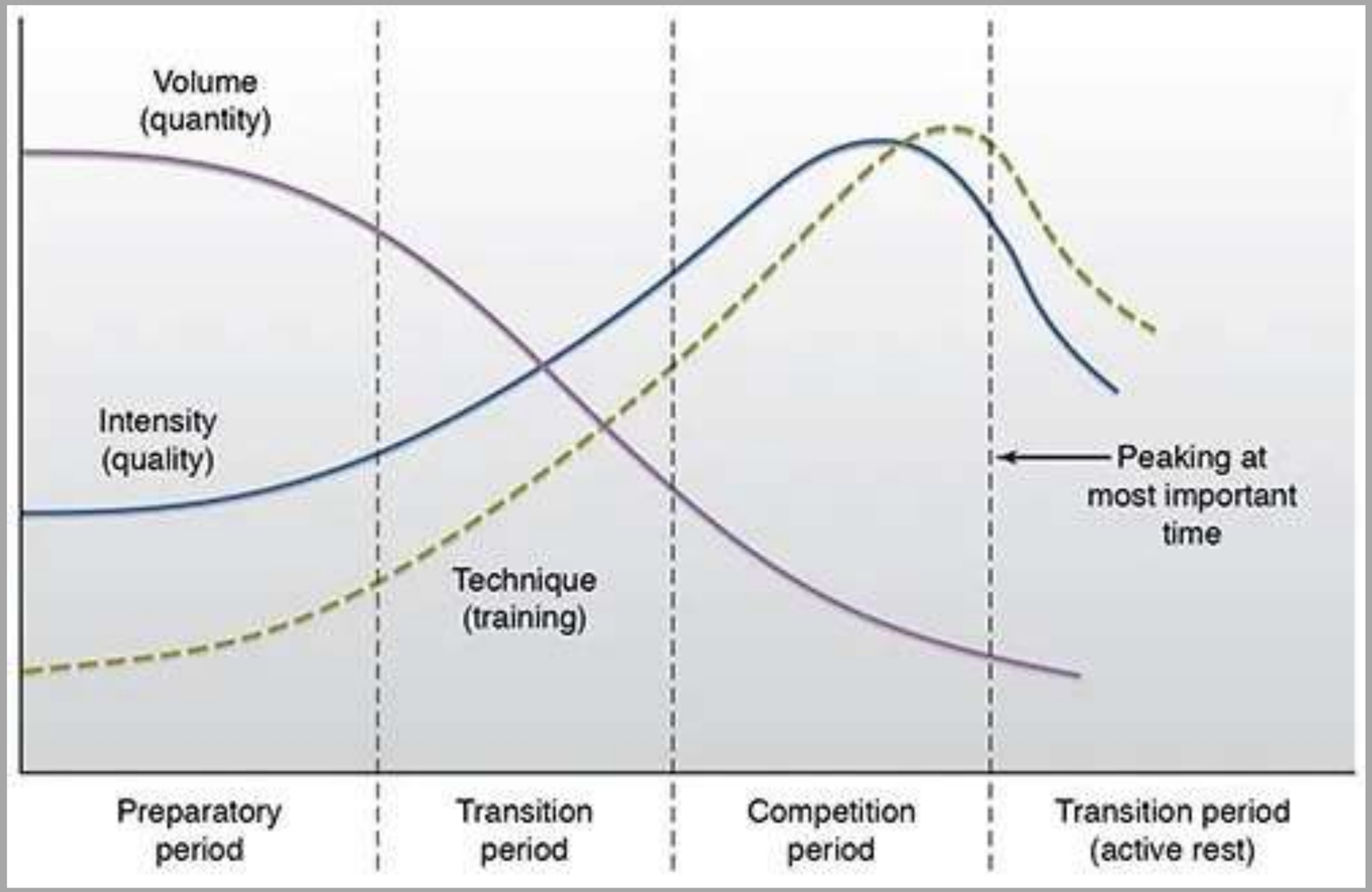
-Position of load (is the load unilateral/ asymmetrical)?

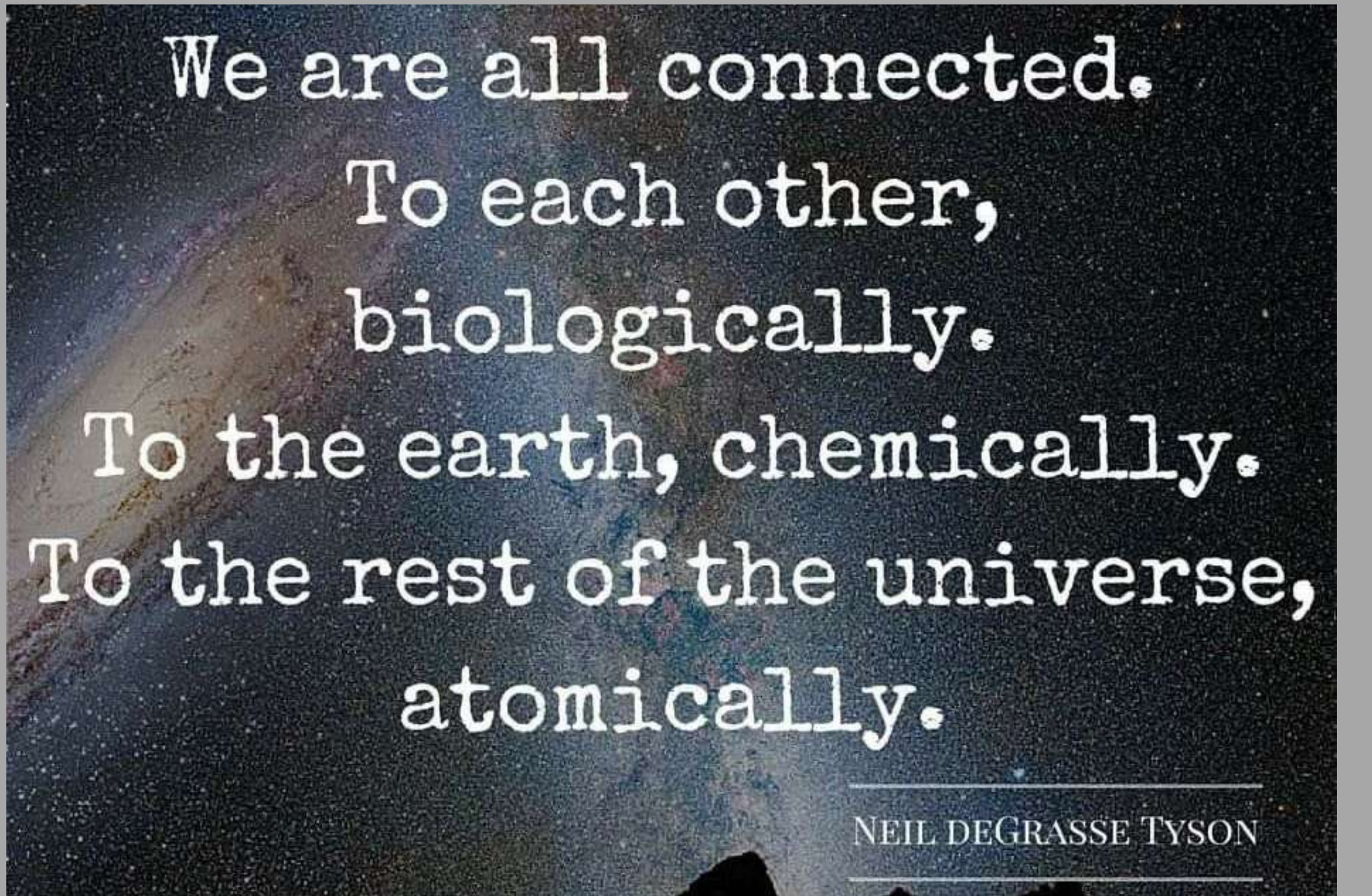
-Nature of the movement (swings, max lunges, shoveling...)

-Proficiency in the drill



DO YOU NEED TO STRESS ABOUT PERIODIZATION?




We are all connected.
To each other,
biologically.
To the earth, chemically.
To the rest of the universe,
atomically.
NEIL DEGRASSE TYSON

CHECK OUT OUR ONLINE EDUCATION FOR 30% OFF WITH CODE “PB” THIS WEEK AT DVRTFITNESS.COM
&
CHECK OUT LIVE EVENTS AS WELL!

INSTAGRAM:
ULTIMATESANDBAG
JOSHHENKINDVRT
FACEBOOK: DVRTFITNESS