



1

Symphony of Motion

"The spinal cord is the keyboard on which the brain plays when it calls for activity. But each key in the console sounds not an individual 'tone', such as the contraction of a particular group of muscle fibers, but a whole 'symphony' of motion.....

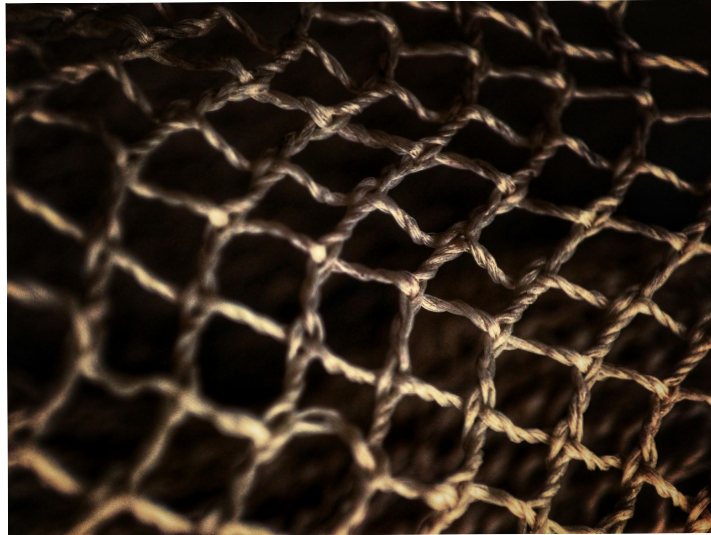
The brain thinks in terms of whole motions, not individual muscles."

..... Dr. Irvin M. Korr



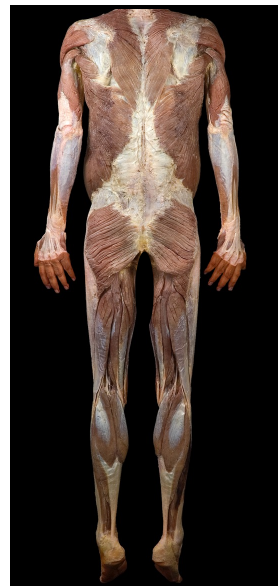
2

It's All Connected



3

What's The Core?



4

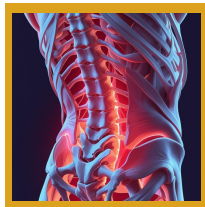
“Function First, Anatomy Will Follow”

...Serge Gracovetsky, Ph.D



5

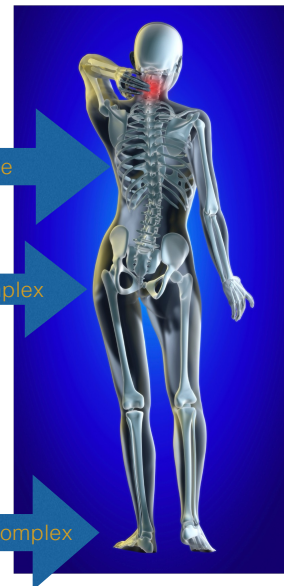
Movement Big Rocks



Thoracic Spine

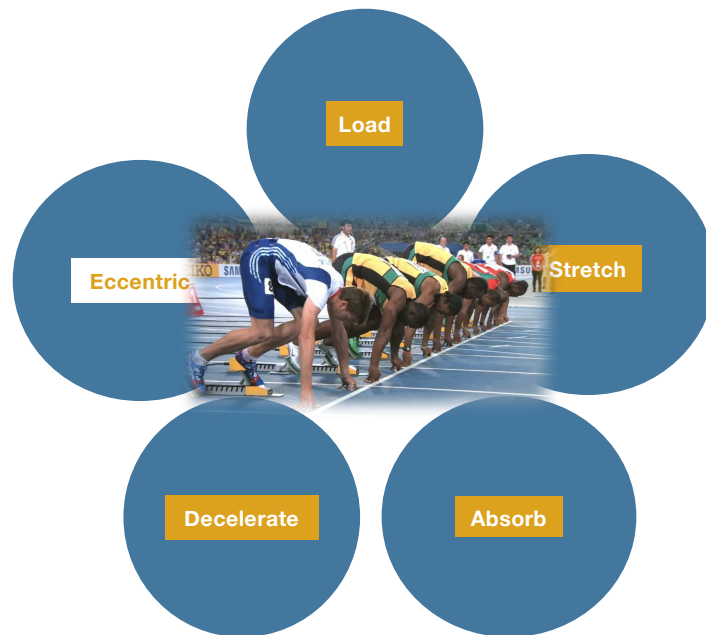
Hip Complex

Great Toe & Foot/Ankle Complex



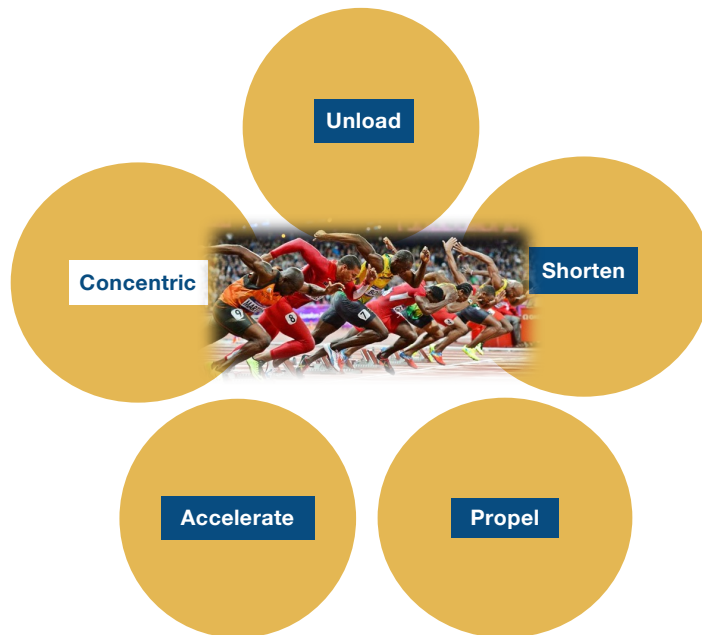
6

Tri-Plane Loading



7

Tri-Plane Unloading



8



***The Abdominals do
NOT flex the spine
when standing upright!***

9

Functional vs. Anatomical Anatomy

“The traditional mechanistic view of anatomy, as useful as it has been, has objectified rather than humanized our relationships to our insides.”

“.....whatever else they may be doing individually, muscles also influence functionally integrated body-wide continuities within fascial webbing.”

-----Thomas W. Myers
“Anatomy Trains”

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ABsolutely Friends

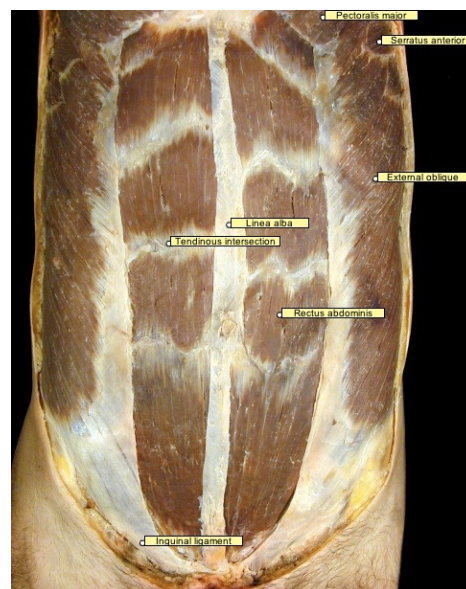


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Rectus Abdominis

| Functional Action | Phase 1: Deceleration | Phase 2: Transition | Phase 3: Acceleration |
|-------------------|---|---|---|
| Sagittal Plane | Assists in deceleration of spinal extension, lateral flexion & rotation | Assists in spine and pelvic stabilization | Assists in spine and hip flexion during toe off of the gait cycle |
| Frontal Plane | Decelerates lateral flexion to the opposite side | Assists in spine and pelvic stabilization | Assists concentric lateral flexion to the same side |
| Transverse Plane | Assists to decelerate rotation of the spine and hips | Assists in spine and pelvic stabilization | Assists to accelerate rotation of the spine |
| Origin | Pubic Crest | | |
| Insertion | 5-7 rib cartilage, xiphoid process | | |
| By the Book | Spinal Flexion, Posterior Pelvic Tilt | | |

source:
Insights Into Functional Training:
Principles, Concepts, & Applications,
 On Target Publications, 2017

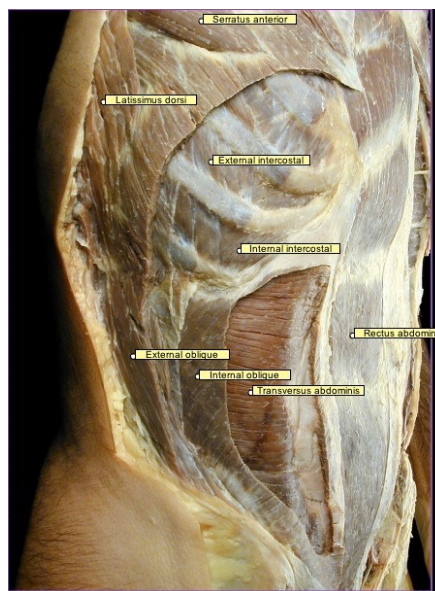


12

External Obliques

| Functional Action | Phase 1: Deceleration | Phase 2: Transition | Phase 3: Acceleration |
|-------------------|---|---|--|
| Sagittal Plane | Assists in lumbo-pelvic-hip complex stabilization, assist in deceleration of spinal extension | Assists in lumbo-pelvic-hip complex stabilization | Assists in spinal flexion |
| Frontal Plane | Assists in deceleration of lateral flexion to opposite side | Assists in lumbo-pelvic-hip complex stabilization | Assists in acceleration of hip abduction |
| Transverse Plane | Assists to decelerate Spinal rotation | Assists in lumbo-pelvic-hip complex stabilization | Assists in rotation to opposite side |
| Origin | Lower 8 ribs | | |
| Insertion | Abdominal aponeurosis & anterior iliac crest | | |
| By the Book | Spinal flexion, rotation to the opposite side, pelvic tilt and rotation | | |

source:
*Insights Into Functional Training:
 Principles, Concepts, & Applications,
 On Target Publications, 2017*

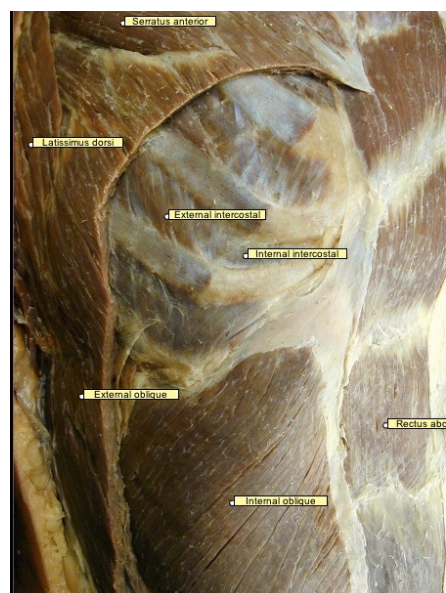


13

Internal Obliques

| Functional Action | Phase 1: Deceleration | Phase 2: Transition | Phase 3: Acceleration |
|-------------------|---|---|--|
| Sagittal Plane | Assists in deceleration of spinal extension | Assists in spine and pelvic stabilization | Assists in spine rotation and hip flexion during toe off of the gait cycle |
| Frontal Plane | Decelerates lateral flexion to the opposite side | Assists in spine and pelvic stabilization | Assists concentric lateral flexion to the same side |
| Transverse Plane | Assists to decelerate rotation of the spine and hips to the opposite side | Assists in spine and pelvic stabilization | Assists to accelerate rotation of the spine |
| Origin | Iliac crest, inguinal ligament, thoracolumbar fascia | | |
| Insertion | Linea Alba, pubic crest, lower 3 ribs | | |
| By the Book | Spinal Flexion, Posterior Pelvic Tilt, ipsilateral spinal rotation | | |

source:
*Insights Into Functional Training:
 Principles, Concepts, & Applications,
 On Target Publications, 2017*

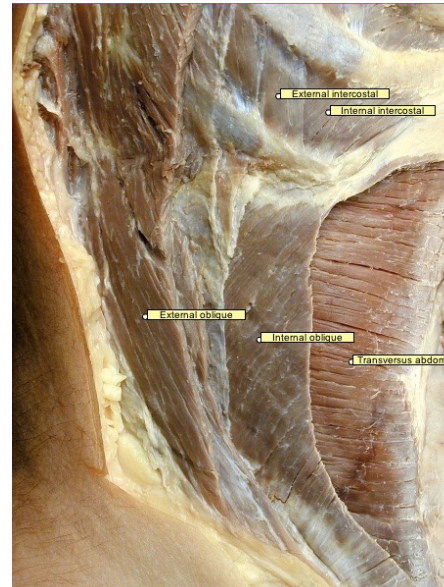


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Transverse Abdominis

| Functional Action | Phase 1: Deceleration | Phase 2: Transition | Phase 3: Acceleration |
|-------------------|--|---|--|
| Sagittal Plane | Provides stabilization to the lumbar spine & synergistically supports central unit | Assists in spine and pelvic stabilization with synergistic relationship of the internal oblique, multifidus | Provides stabilization to the lumbar spine & synergistically supports central unit |
| Frontal Plane | Provides stabilization to the lumbar spine & synergistically supports central unit | Assists in spine and pelvic stabilization with synergistic relationship of the internal oblique, multifidus | Provides stabilization to the lumbar spine & synergistically supports central unit |
| Transverse Plane | Provides stabilization to the lumbar spine & synergistically supports central unit | Assists in spine and pelvic stabilization with synergistic relationship of the internal oblique, multifidus | Provides stabilization to the lumbar spine & synergistically supports central unit |
| Origin | thoracolumbar fascia, cartilage of last 6 ribs, iliac crest | | |
| Insertion | Posterior Linea Alba, pubic crest, | | |
| By the Book | Central unit support | | |

source:
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 Principles, Concepts, & Applications,
 On Target Publications, 2017*



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Respiration & Oscillation Affects the Core

Lordosis & IAP controls the force transmission efficiency of the Lumbosacral fascia

Along with multifidus and psoas, creates the hoop tension

Gait, especially hip extension, ankle dorsiflexion, & Great toe dorsiflexion enhances the function

IAP controls fascia



Extension

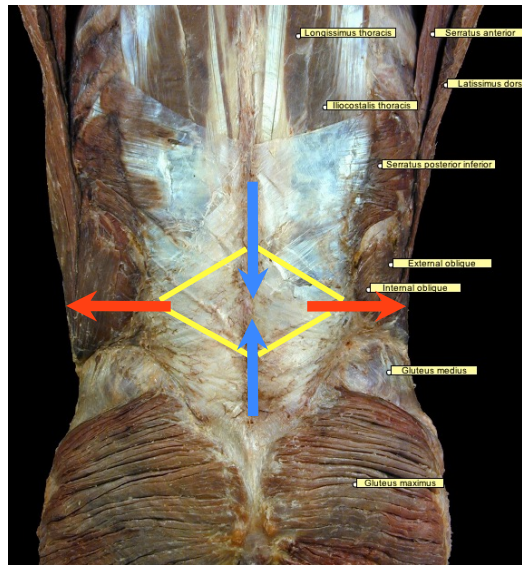


Flexion

Serge Garcovetsky, Ph.D. 2007

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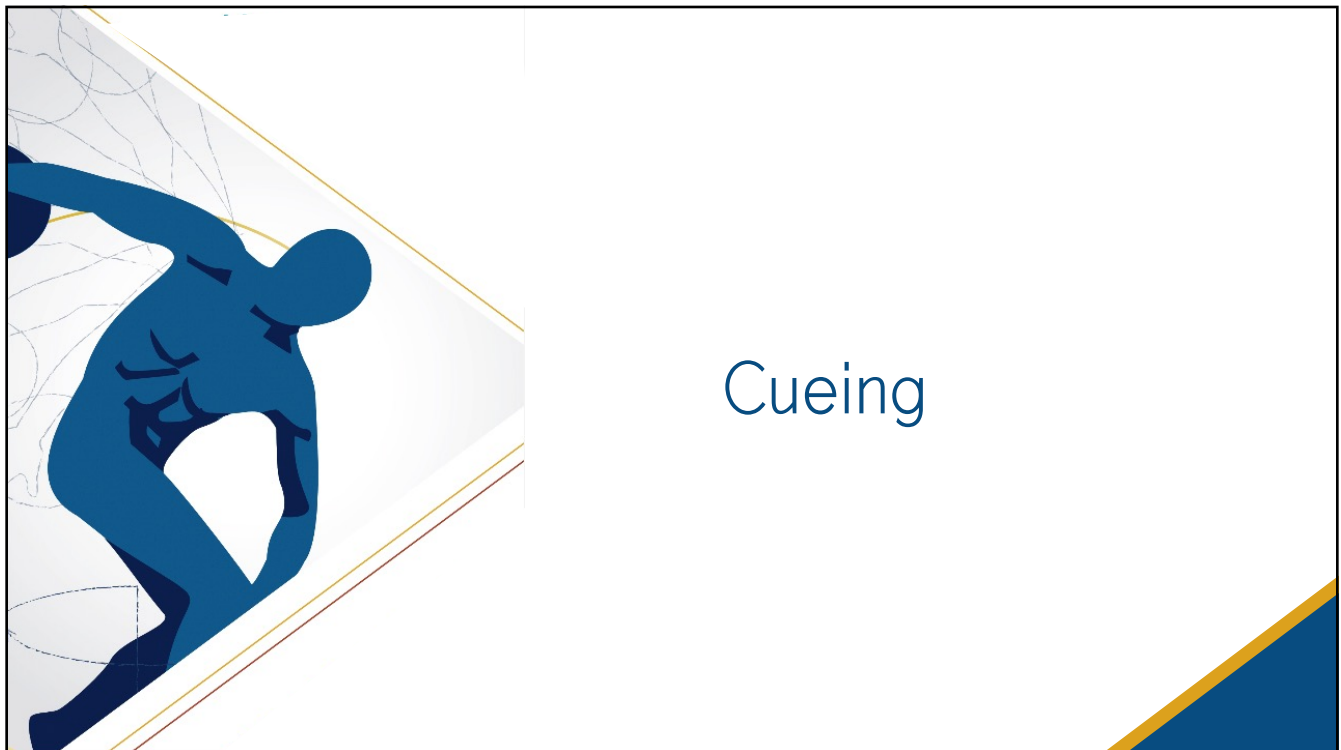
Posterior Core: The Internal Corset



When the TA is activated, it brings the spinous process closer together & extends the spine

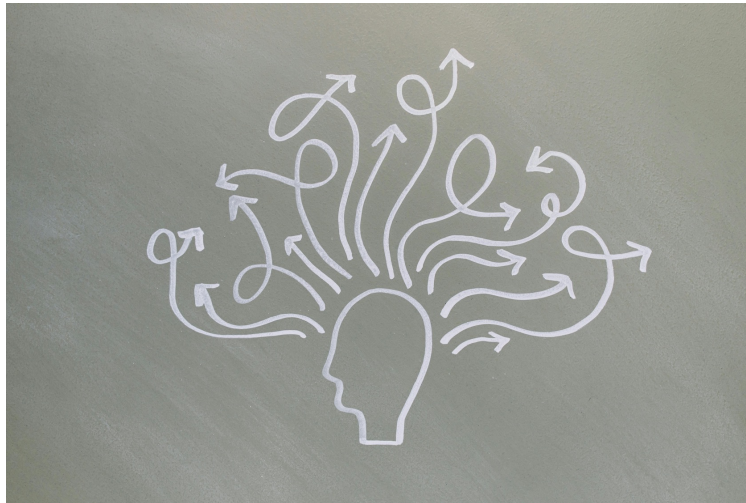
Consider the Posterior X-Factor and pelvic function & the impact upon the anatomy

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Cueing Confusion



19

Stand Tall



20

Shine The Beacon Of Life



where the pelvis goes, the low back will follow



21

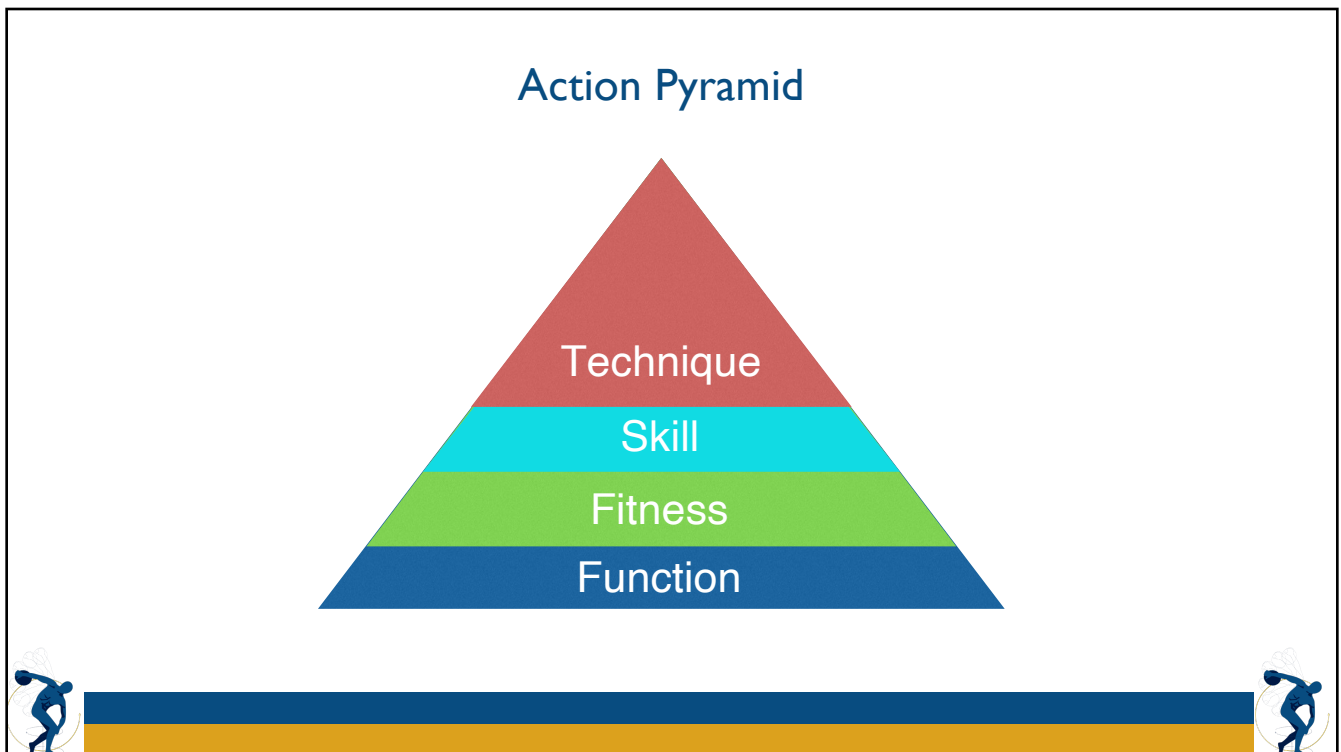
Where The Scapula Goes, The Humerus Will follow



22



23



24

Breathe!!!

25

Dead Bug with Extremity Reach

Lay tall: maintain lumbar spine toward floor

Reps: 5 - 10

Sets: build to 2 sets of 12, add a third set of 12

Frequency: 3-5 times per week



26

Rotation Stabilization

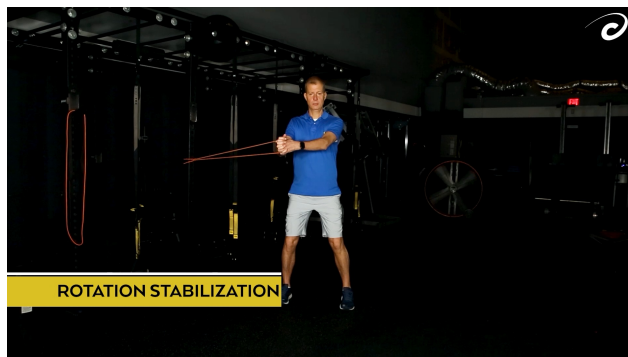
Stand Tall

When pulling, stay within shoulder width,
do not go wider than the shoulders

Reps: 5 - 10 each side

Sets: build to 2 sets of 12, add a third set of 12

Frequency: 3-5 times per week



27

Band Step Outs

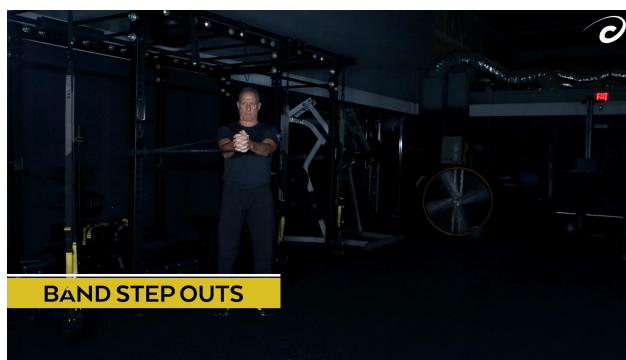
Stand
Tall

Shine the Beacon of Life: Make sure the hips
rotate when pulling

Reps: 5 - 10 each side

Sets: build to 2 sets of 12, add a third set of 12

Frequency: 3-5 times per week



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Warding Patterns



Level 1



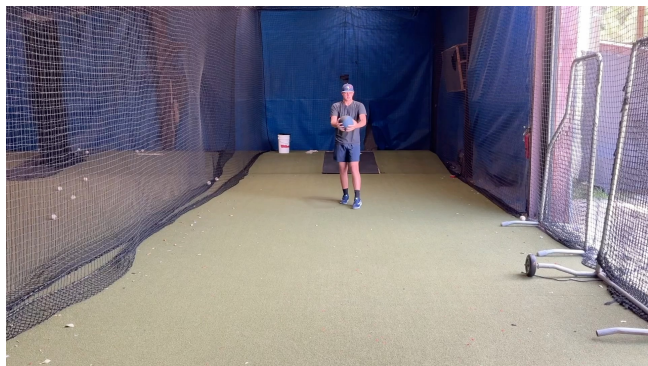
Level 2



Level 3

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Wide Rotation/Figure 8's



Wide Rotations



Figure 8's

Objective

- ✓gain thoracic spine mobility
- ✓gain abdominal strength through rotation

Cueing: Shine The Beacon of Life/Reach With The Scapula

30

Baby Makers

Pushup position with a long spine
Make sure shoulder are over the hands

Reps: 5 - 10 each in sagittal, frontal,
and transverse plane

Sets: build to 2 sets of 12, add a third set of 12

Frequency: 3-5 times per week

Caution: to those with low back pain or
shoulder discomfort



31

Pushup Potpourri

Pushup position with a long spine

Make sure shoulder are over the hands

Reps: 5 - 10 each in sagittal, frontal,
and transverse plane

Sets: build to 2 sets of 12, add a third set of 12

Frequency: 3-5 times per week

Caution: to those with low back pain or
shoulder discomfort



32

Tri-Plane Hip Lift (Bridging)

Lay Tall

Reps: 5 - 10 each side, each direction

Sets: build to 2-3 sets of 10

Frequency: 3-5 times per week



33

SandBell Drag

Pushup position with a long spine

Make sure shoulder are over the hands

Reps: 5 - 10 each in sagittal, frontal,
and transverse plane

Sets: build to 2 sets of 12, add a third set of 12

Frequency: 3-5 times per week

Caution: to those with low back pain or
shoulder discomfort



34

Single Leg Balance Posterior Overhead Reach

Stand Tall

Reps: 5 - 10 each side

Sets: build to 2-3 sets of 10

Frequency: 3-5 times per week

Movement must come through the hip!

Contraindicated for those with low back pain



35

Oblique Band/Cable Pull

Stand Tall

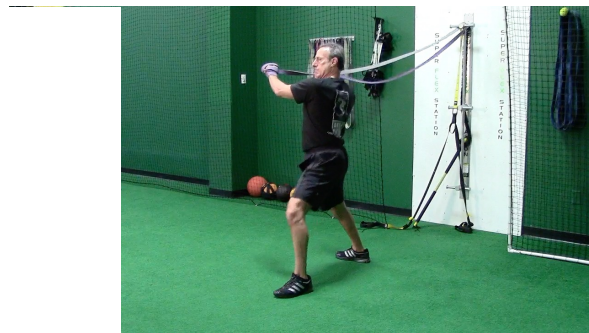
Hips shift & rotate before torso turns

Reps: 5 - 10 each side

Sets: build to 2-3 sets of 10

Frequency: 3-5 times per week

Movement must come through the hip!



36

Triangulated Shoulder Press

Stand
Tall

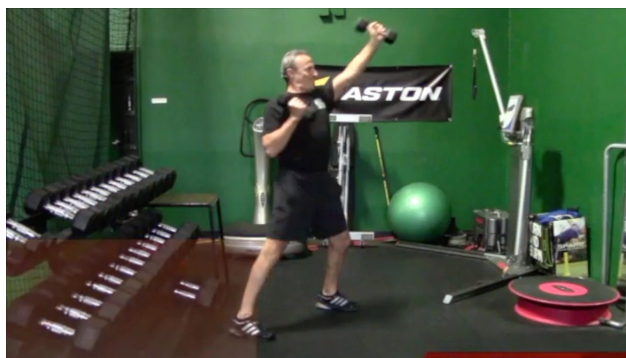
Start with neutral stance, then try staggered

Reps: 5 - 10

Sets: build to 2 sets of 12, add a third set of 12

Frequency: 3-5 times per week

Caution if the client has low back
or shoulder problems



37

Reverse Wood Chops

Stand Tall

Shine the Beacon of Life: Make sure the hips
rotate when pulling

Reps: 5 - 10 each side

Sets: build to 2-3 sets of 10

Frequency: 3-5 times per week



38

Medball Ground Based Patterns

Pushup position with a long spine
 Make sure shoulder are over the hands

Reps: 5 - 10 each in sagittal, frontal,
 and transverse plane

Sets: build to 2 sets of 12, add a third set of 12

Frequency: 3-5 times per week

Caution: to those with low back pain or
 shoulder discomfort



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Medball Throws

Make sure the extension comes from the hips
 and not lumbar spine

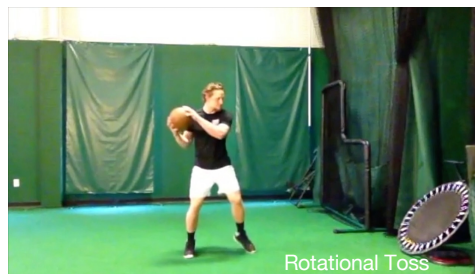
The hips must rotate slightly ahead of the torso
 to load the abdominal complex

Reps: 5 - 10 each side

Sets: build to 2 sets of 12, add a third set of 12

Frequency: 3-5 times per week

Caution if the client has low back
 or shoulder problems



40

TRX Rip Trainer Rotational Pulls

Stand Tall

Shine the Beacon of Life: Make sure the hips rotate when pulling

Reps: 5 - 10 each side

Sets: build to 2 sets of 12, add a third set of 12

Frequency: 3-5 times per week



41

ViPR Frontal Plane Overhead Reach

Stand Tall

Shine the Beacon of Life: Make sure the hips rotate when pulling

Reps: 5 - 10 each side

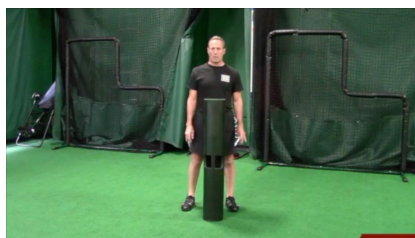
Sets: build to 2-3 sets of 10

Frequency: 3-5 times per week

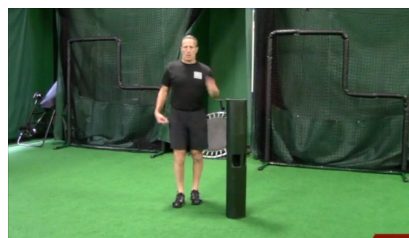


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ViPR Core Connections



ViPR Rotations



ViPR Anterior/Posterior X-Factor



ViPR Ball

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ViPR Anterior/Posterior X-Factor

Stand Tall

Shine the Beacon of Life: Make sure the hips rotate when pulling

Reps: 5 - 10 each side

Sets: build to 2-3 sets of 10

Frequency: 3-5 times per week



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Tri-Plane Integrated Movement Patterns



MB Games



ViPR Ball



Triangulated Shoulder Press

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Strong Core, Strong Performance



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Thank You For Attending!!!

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