



Fit & Functionally Ready Core

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The muscles of the core form the base from which all movement & forces are generated. The core works to connect the lower and upper extremities and allow the body to function as one comprehensive unit.

In addition to extension (back extension) and flexion (crunch) of the spine, the core can be trained to help overcome and prevent common injury. Proper training will also form the foundation for functional movements including push, pull, walk, run, bound, jump, squat, lunge, chop, lift, & bend under multiple speeds and directions. The core has two major activation patterns **1) preACTivation** and **2) sequential firing**. Together they are referred to as the ‘**set - fire sequences**’.

- **Setting / PreACTivation** of core stabilizers like the TA, Multif, pelvic floor, diaphragm to stabilize the spine and pelvis prior to movement or weight training.
- **Firing / Activation** of core movers, like the obliques, rectus abs, erectors, QL's etc to create and dissipate movement.

Core Concepts & Progressions

- All movement begins from establishment and maintenance of good posture & alignment
- Determine your pain free ROM at all times (avoid painful or restricted movements / exercises - even if a warm-up or activity helps alleviate the restriction)
- Be willing to master & perfect control and ROM before choosing more advanced exercises.
- Each workout should include a) pelvic and scapula stability b) function or isolation
- Long slow movements should be performed perfectly in the warm-up. If not, functional and explosive movements will eventually lead to pain or injury.
- Load or Lever length: light loads and short levers to reduce core shear forces
- 360° Prescription: train all major slings (360°) and functional movement patterns
- Constantly think – push pull during rotation or gait / stride patterns

Core Error Detection & Correction

Error

Improper setting

Protruding abdominals

Low Back Arches or lifts away from floor when performing dead bug

Rounding of the upper back or shoulders elevated

Torso breaks down when force is applied or load added

Back Rounds and torso side bends during rotation

Movement Correction

draw in / tight pants and lift up / stop pee

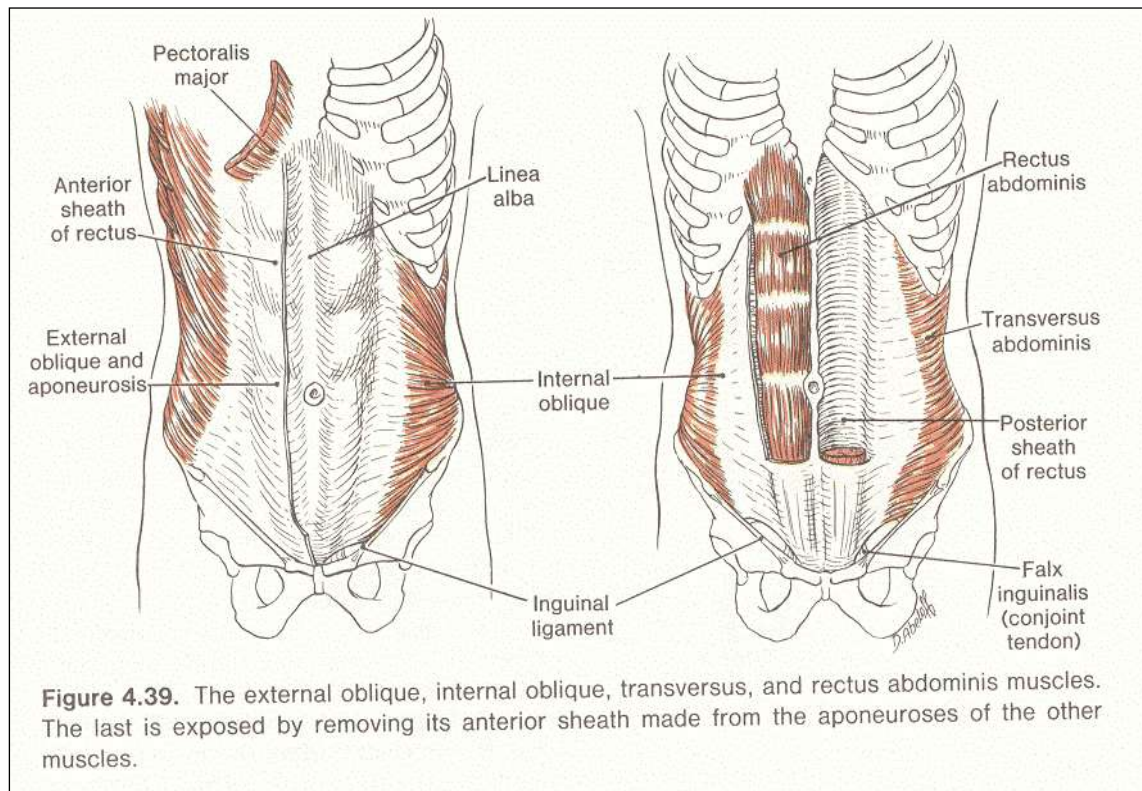
belly button up & in, engage your 'stop pee' muscles

Reset the core & tilt pelvis towards chest using low abs not glutes.

Chest up, shoulders down and back

Fire core, brace core, tighten core, maintain a rigid core, torso upright,

Push Ribs fwd & keep shoulders parallel to hips and the ground (i.e. no side bending)





Core Stability & Core / Sling Strengthening Progressions

Core ACT	Core Sling(s)	FS1 – Core Slings	FS2 - Core Slings
Contracted Dead Bug (x4/:5s)	Lateral Sling – Leg Lifts	Side Lying Upper Lower Leg Lift	Side Lying Leg Lift Hover & Assisted Lat Crunch
Side Lying Bow & Arrow Rotation (x8/2s)	Lateral Sling – Side Bend	Hammie Activated Back Lying Side Reach Crunch	Elbow Table Top <u>PP</u> Si2Si Pendulum
1ft Bridge Opp Knee Tuck Hold (x8/:2s)	Posterior Diag Sling (Cobra)	Prisoner Twisting Back Ext	3pt Kneeling <u>MB</u> Elbow Lifts
Elbow Side Lying Reach & Rotate (x8/:2s)	Posterior Diag Sling (Swimmer)	Face Down Lying Contra Arm & Leg Lift	<u>BOSU</u> Swimmer Switches
Elbow Side Lying Jane Fonda (x8/:2s)	Posterior Long Sling	Face-up Lying Floor Pull OvHd Slides	<u>SitFit</u> DB Facedown Lying Field Goal Post
Quadruped Kneeling Opp Arm Leg Raise (x 8/ move /side)	Posterior Long Sling	Face Down Assisted 2 Position Superman Back Extension	BOSUD Face Down Lying Sh to Shoulder OvHd Press
Quad Kneeling Si2Si Hip Shift & Childs Pose (x6)	Anterior Diag Sling	Face Up Lying <u>MB</u> Push Pull Upper Crunch	Face Up Lying Push Pull Straight Leg Bicycle Crunch
Kneeling Plank w Alt Arm Lift (x4/2s hold)	Anterior Diag Sling	Back Lying Field Goal Towel Btwn Knee Alt Drops	Back Lying Field Goal <u>MB</u> Btwn <u>Knees</u> Prisoner Drops
Split Kneeling 2Way (OvHd Twist & Fwd Bend) Kneeling (x4/move/si:2s)	Anterior Long Sling (assisted crunch regression)	<u>MB</u> Set Fire Heel Press Crunch	<u>MB</u> Push Press Sit-up w Overhead Reach
Standing Bend down w Add&Abd ACT (x4,5s Hold)	Anterior Long Sling	Back Lying Anterior Pelvic Tilt	Back Lying Straight Leg Lifts w Tilt
Split Hinge Rotating Airplane (x4/: 2s)	Anterior Long Sling - Psoas	Diagonal Alternating Leg Lowers	Back Lying Bottom Ft Rotated Leg Lift & SB Squeeze



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SB = Stability Ball, MB = Medicine Ball, DB = Dumbell, BOSUP or D = BOSU either Platform or Dome side, PP = Paper Plates or Gliders

Weekly Schedule: perform FS core workouts no more than 3x per week but generally it is recommended to perform these workouts 2x per week. When sufficient resistance / intensity and reps / volume are added to the core program, these muscles will require a similar amount of recovery as other muscle groups.

Notes: Advanced or an acceptable option = Underlined

Rx: each column / FS progression column can be a stand alone training program which should be combined into mini 360' circuit. Stu McGill suggested the following core rotation.

Exercise Order:

Sequence Option 1 : Anter Long – Psoas, Lateral – Side Bend, Anter Diagonal, Lateral Sling – Leg Lifts, Poster Diag, Poster Long

Sequence Option 2: Post Long, Post Diag, Lateral - Side Bend, Anter Long, Anter Diagonal

Sequence Option 2: Anterior Diag – Knee Drops, Lat Sling – Side Sit, Posterior Diag, Poster Long, Anter Long - Crunch

Rx & Rest : (volume):

Beginners Wk (1-4) = 1set / exer, Wk (5-8) = 2sets / exer

- Bodyweight & gravity based resistance, reps below 12 reps per / set / side of each exercise
- 8-12 min
- Min Rest 15-30s rest btwn sets & 2 min between circuits (can use core stability exercises as recovery)
- Reverse Periodization: increasing reps per set after wk 2 or wk 1 if workout is performed 3x / wk

Intermediate Wk (6-10) = 1sets / exer of sequence 1 & 2, (Wk 11-14) = 2set / exer of sequence 1-2 + additional set of either

- Add light resistance to exercises, reps below 15 / set / side of each exercise
- 15 -20 min
- Min Rest or a core stability exercise after each sequence / circuit
- linear periodization & weekly microcycles on resisted exercises and reverse on all bodyweight exercises