

BOSU® Athletic Movement, Strength and Power

I. Balance: Foundation For All Movement

- A. Movement defined:
 - a. simple activities such as walking; the act of changing location
 - b. complex activities that integrate strength, power, balance, stability and flexibility
- B. Understanding athletic movement...
 - a. a change in body positioning that does *not* entail a change of location is movement's origin
 - b. "Movement is a motion!" – Balance must be considered!
 - c. all movement requires monitoring and/or a shift in the center of mass (COM)
 - 1. COM shifts occur within the base of support (BOS)

II. Perfect Point of Balance (PPB)

- A. PPB allows an individual to make quick, reflexive adjustments to postural and joint stabilizing muscles.
 - a. obtaining PPB allows for "perfect power initiation" and movement efficiency (Twist 2008)
 - b. stability and balance must always precede force generation
- B. PPB must be established before force can be effectively and safely exerted
 - a. Example: Olympic Bar Squat
 - 1. PPB must be established before force can be absorbed (deceleration)
- C. Deceleration must occur before an acceleration and/or change of direction...
 - a. e.g., change of direction during a soccer game
 - b. injuries typically occur in sport during deceleration phases

III. How Performance Improves

- A. Neural Coordination-which includes sequential firing and timing (body awareness)
- B. Optimal Mechanics
- C. Practice & Training
 - a. Progressive
 - 1. cognitive, associative, automatic stages of learning
 - 2. phases of force production – teach ability to absorb/resist force prior to producing force
 - b. Repeat exposure and training

IV. Sport and Life

- A. Movement occurs in unstable and unpredictable environments
- B. Movement requires force production and absorption in unstable situations
- C. Movement involves simple and complex activities
- D. What defines an "athlete"? Who can benefit from this training style?

References:

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BOSU® Athletic Movement, Strength & Power Workout

Key: **BT** = Balance Trainer; **BB** = Ballast Ball; **SS** = Sling Shot; **ER** = Elastic Resistance (covered tubing w/ handles);
DWU = Dynamic Warm-Up; **SSMB** = soft-shell med-ball; **PSU** = Platform Side Up; **DSU** = Dome Side Up

Component #1

Balance and Activation:

Purpose: activate nervous system firing; help to create compliancy between the mind and muscles with expectation that when a message is sent from the brain to the muscles it occurs quickly

| I. Foundational Exercise | Description, Set Up, Execution | SSMB / ER Use | Description, Set Up, Execution |
|---|---|---|--|
| 1. BT Acclimation Squat progress to eyes closed | <ul style="list-style-type: none"> •DSU Squat through progressive ROM | N/A | |
| 2. BT Squat with partner taps to body | <ul style="list-style-type: none"> •Partner # 1- Continuous DSU Squat through progressive ROM •Partner # 2- provides taps to the body allowing partner to regain balance after each tap | BT Partner SS Squats... 360° approach | <ul style="list-style-type: none"> •Partners set up on BT/DSU 6 feet apart with SS secured around the waist •Partners perform squats at the same tempo varying the line of the ER pull •Challenge stability from a 360° approach by doing a quarter turn after every 2-3 squats |
| 3. BB Lateral Lunge (foot on BB) with Partner Taps in extended position | <ul style="list-style-type: none"> •Partner # 1- Performs lateral Lunge with foot on top of the ball by extending the BB away from the body on lowering phase •Partner # 2- provides 3 taps to the ball in the low extended phase | BB SS Lateral Lunge... to SL balance (BB in hands) | <ul style="list-style-type: none"> •Partners set up approximately 6 feet apart with SS secured around the waist •Holding the BB out from the body, partners perform Lateral Lunges toward their partners at the same tempo...while pushing back to a single leg balance. |
| 4. BT Partner Hi-5 - Low 5 | <ul style="list-style-type: none"> •Partners perform Squats facing each other with various hand push combinations •High, High •Low, Low •High-Low, High-Low •Hand combination switches with each squat | BT SL Balance w/ Partner... Alternating Single Arm Chest Fly | <ul style="list-style-type: none"> •Partners set up 5-feet apart facing same direction in single leg balance on BT/DSU. •The handle of the ER is in the inside hand •Balance leg is opposite to handle hand •Partners alternate performing a single arm fly while the other partner works to maintain stability •Use toe-tap to regain/maintain balance |

Component #2

Dynamic Range of Motion (ROM) and Mobility:

Purpose: Progressively build full body mobility in various planes of motion, while continuing to develop muscle compliancy through the use of instability.

| Foundational Exercise | SSMB Exercise Description, Set Up, Execution | SSMB / ER Use | ER Integration: Description, Set Up, Execution |
|---|--|---------------|--|
| 1. BT DSU Backwards lunge to knee drive | <ul style="list-style-type: none"> • Partners set up on BT in an aligned athletic position... holding the MB out in front of the body • Partners step back into a lunge position before pushing back up with a knee drive to a single leg balance • Option: add in rotation of upper body over the drive leg | N/A | <ul style="list-style-type: none"> • Partners set up BT far enough apart to have slight tension on the ER • In aligned athletic position on the BT/DSU, partners hold the ER with both hands outstretched in front of the body; ER provides a lateral line of pull • Partners alternate performing back lunges returning to 2-foot dome position •Option: <ul style="list-style-type: none"> -Return to single leg balance -Add upper body rotation over drive leg |
| 2. BT X-Over (or Cross-Over) Lunge (ground to dome) | <ul style="list-style-type: none"> •Partners set up standing behind and slightly to one side of the BT in an aligned athletic position •hold MB out in front of the body •Partners perform an x-over lunge by bringing the outside leg in front and stepping onto the dome of the BT; sinking into a low position •Push back off the dome to reset •Option: rotate the upper body over the x-over leg | N/A | <ul style="list-style-type: none"> •Position BTs to create slight tension on ER when standing behind & slightly to the inside of BT; hold ER out in front of body •Partners alternate X-Over lunges; bring the inside leg in front/stepping onto dome of the BT; sinking into a low position •Using assistance from the ER--push back off dome to reset to the starting position •Progression-set up on outside of dome... crossing over with outside leg; ER provides resistance during return movement |

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| 3. BB Bridge with Upper Body Rotation | <ul style="list-style-type: none"> Partners set up in a bridge position on the BB ball, approximately 4-5 apart, holding the MB in outstretched arms directly over chests Maintaining level hips, alternate rotating the upper body from side to side | N/A | <ul style="list-style-type: none"> Partners set up in bridge position on the BB, approximately 4-5 feet apart so that tension is present on the ER. Hold handles of ER in outstretched arms; over chest. Maintaining level hips; partners alternate rotating upper body away from partner resetting to middle and before partner performs next rep; Switch Body alignment to change side focus for concentric vs. eccentric strength or power |
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Component #3

Movement Foundation to SAQ—Speed, Agility, Quickness

Purpose: Develop foundational movement skills for the purpose of transitioning to multidirectional movement.

Progressively recruit fast twitch muscle fibers to enable faster movement and greater force production.

-2-3 x 10 seconds each--1st time slow (cognitive); 2nd set moderate; 3rd set for quickness

| Foundational Exercise | Description, Set Up, Execution | SSMB / ER Use | ER Integration: Description, Set Up, Execution |
|---|---|---------------|---|
| 1. BT lateral 2 on 2 off (athletic arms; perform for time) | <ul style="list-style-type: none"> Begin standing over top of BT DSU w/ feet on ground to either side Cue--On-On-Off-Off...repeat "Slow to develop footwork" "Fast feet to train quickness" | N/A | <ul style="list-style-type: none"> SS Rear Resistance Partners set up facing away from each other, far enough apart to create slight tension on the ER |
| 2. BT Lateral 2 on 1 off | <ul style="list-style-type: none"> Standing on single leg; off center on DSU Cue – On-On-Off... (repeat) Slow to develop... (see above) | N/A | <ul style="list-style-type: none"> SS front resistance Partners set up facing each other Partners should be far enough apart to create a slight tension on the ER |
| 3. BT X-Over Drill | <ul style="list-style-type: none"> Standing on single leg closest to BT; off-center on DSU Outside leg initiates movement by crossing over onto dome Cue – 1-2-3, 1-2-3... Slow to develop... (see above) | N/A | <ul style="list-style-type: none"> SS lateral resistance Partners set up facing same direction; far enough apart to create slight tension on ER |
| 4. BT/DSU T- Plyos (2 x 30 secs- stick; progress to coupling) | <ul style="list-style-type: none"> Standing on top of BT/DSU From athletic stance perform 2 foot jumps in "T" Pattern, jumping to the sides and backwards Progression- stick each landing, coupling each landing through full ROM, quick off floor & stick on BT | N/A | <ul style="list-style-type: none"> SS rear resistance Partners set up facing away from each other; far enough apart to create slight tension on ER Progression 180° resistance--partner walks 180° behind working partner; varies line of pull |

Component #4

Strength and Power Exercises

Purpose: Build full body strength and power while integrating instability for greater neural demand on the body.

| Foundational Exercise | Description, Set Up, Execution | SSMB / ER Use | Description, Set Up, Execution |
|---|---|--|--|
| 1. Legs: BT Single Squat; progress to Split Squat Jumps | <ul style="list-style-type: none"> Athlete performs single leg squat Triple flexion/extension of lower body; athletic arms throughout... Progression: Split Squat Jumps- one foot is BT/DSU based while other is ground based Foot contacts "sweet spot of BT" while switching legs w/ each jump. | BT Single Leg Squat... SS front pull- Split Squat Jumps... w/ SS Lateral Balance Challenge | <ul style="list-style-type: none"> Partner sets up approximately 8 feet apart. Elastic tension helps with counter balance during lowering phase of squat Partner #1 performs single leg squat while Partner 2 is in 2-leg athletic position Split Squat progression- Partners set up side-to-side (lateral line of pull); partners working simultaneously; cue "jump/stick." |
| 2. Push: BB Partner Manual Resistance Press | <ul style="list-style-type: none"> Partner 1 sets up in Supine bridge on BB Ball; arms extended Partner 2 standing behind Partner 1 links hands with Partner 1 and applies resistance to the hands to simulate a bench press motion Partner 1 performs a bench press movement progressing to adding in a hip drive on the push phase | BB Crunch to...ER Push- using a controlled eccentric lowering | <ul style="list-style-type: none"> Partner 1 sets up holding the handles of the ER in a supine position on the BB with low back and shoulders supported by BB Partner 2 holding onto the middle of the toner-positions behind partner 1; providing a low anchor point Partner 1 performs a crunch to chest press; controlling eccentric return Option: perform on BT/DSU |

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|--|--|---|--|
| 3. Pull: BB Prone Pull in to Push Back | <ul style="list-style-type: none"> •Set up in a prone push-up position with feet on BB •Perform a knee tuck and then reset to extended position •next, perform a push-back by pushing upper body towards the ball before pulling back to start position •Keep hands in same spot throughout exercise; arms straight | SS attached to ankles for resistance... | <ul style="list-style-type: none"> •Attach SS to ankles ("step over and attach behind and below the toner") •position body in prone push-up position with feet on BB •Partner 2-wearing other belt assumes athletic position in line with partner's feet far enough away to keep tension on ER •Partner 1 performs a knee tuck, resets, followed by a small push back...pushing their upper body towards the ball while keeping their hands in the same place •Partner 2 can vary the resistance by adjusting their distance from their partner |
| 4. Shoulders: BT lateral Load to BB X-Body raise | <ul style="list-style-type: none"> •Partner 1 sets up on top of the BT / DSU holding the BB in 2 hands •Lowering into an athletic position the BB is moved to the outside of the body; chest stays square •While raising out of the squat the BB is brought X-body using a chopping/lifting movement (low to high/"hip to shoulder") •Pause at the top; triple flex to return to starting position (high to low/"shoulder to hip") •Pick up tempo to add more power to movement •Force production in low-phase; force absorption in high-phase | BT Squat to ER 2 hand X-Body Raise... Focus: load and weight shift | <ul style="list-style-type: none"> •Holding handles of the toners at waist height at side of body, Partner 1 stands in athletic position w/ one foot on dome of BT and one on the ground •Partner 2 holds middle of tube; provides low attachment point at the side of #1 •While raising out of athletic position (triple extending through the lower body) Partner 1 performs 2 arm X-body front raise while stepping onto dome of BT to reset to an athletic position •Pause in raised position before stepping off BT and repeating •Options: 1) Pick up the tempo to add more power to the movement or 2) Single leg finish on the dome |

Component #5

Integrated Core

Purpose: Progressively build core stability and strength while integrating greater resistance and balance demands.

| Foundational Exercise | Description, Set Up, Execution | SSMB / ER Use | Description, Set Up, Execution |
|--|--|--|---|
| 1. BT Isometric Hold with pushes to arms... Focus: rotational stability | <ul style="list-style-type: none"> •Partner 1 sets up on top of BT/DSU in Athletic Position w/ arms extended out in front of body •Partner 2 provides 2-3 second pushes to the arms...allowing Partner 1 to reset; resist rotation | BT Isometric Hold w/... partner pulls to ER | <ul style="list-style-type: none"> •Partner 1 sets up on top of BT DSU in Athletic Position w/ arms extended in front of body & holding 1-handle of the ER •Partner 2 sets up to side of Partner 1 and provides pulls at various angles to the ER •Perform for time on each side |
| 2. BB Crunch-Partner Overload to hands | <ul style="list-style-type: none"> •Partner 1 sets up in a crunch position on the BB •Partner 2 sets up behind partner 1 •Partner 1 performs a crunch, extending arms above head while partner 2 provides light resistance •Partner 2 applies force on lowering phase of crunch | BB ER Resisted Crunch... | <ul style="list-style-type: none"> •Partner 1 sets up in a crunch position with the middle of the ER around the back of the neck and under the arms in a harness fashion •Partner 2 provides a low attachment point by crouching behind Partner 1 •Partner 1 performs a crunch pushing the arms away from the body |
| 3. BB & BT Resisted Hamstrings Curl | <ul style="list-style-type: none"> •Partner 1 sets up in bridge position w/ ankles on BB; head and shoulders are on the BT •With hips and arms up, Partner 1 performs hamstrings curl by pulling ball in towards waist •Partner 2 provides resistance by placing one hand on the BB and creating enough frictional resistance to overload Partner 1 | SS for resistance... | <ul style="list-style-type: none"> •Partner 1 sets up in a bridge position with ankles on the BB; and head and shoulders on the BT; •SS is attached to the ankle with the line of pull running from the feet. •Partner 2 sets up in an athletic position providing a stable anchor •With hips and arms up, Partner 1 performs hamstrings curl by pulling ball in towards waist...over coming the ER |

Thank you for attending this BOSU workshop!

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