

BOSU® Mobility & Stability for Active Aging

Purpose: Help your active aging clients: build functional strength, face their fear of falling with gait training, learn various ways to get up & down, move more efficiently through the entire kinetic chain, & ultimately make all of their daily movements easier to do!

Population: Appropriate for this class should be "those who are current club members with class experience & appropriate biological & functional age to perform most of the abilities outlined here with effort, either on the floor or using the BOSU® Balance Trainer."

1. INTRODUCTION: "SENESCENCE" AS A HETEROGENEOUS GROUP FOR AGE

A. Chronological Age: years

B. Functional Age: ability to perform ADLs

C. Biological Age: physical & mental at cellular level from NEAT movement (e.g. anti-ox.)

Takeaway: "People who exercise regularly with task-dependent exercises ("games") have lower biological ages than people of the same chronological age who do not exercise."

D. Psychological Age: cognitive & self-efficacy age with neuroplasticity

Takeaway: "Aerobic & strength exercise improve cognitive functioning of this population when combined. Fitness classes can improve self-efficacy when designed using partners."

2. THEME, FORMAT AND SCOPE OF WORKSHOP

To give to trainers & instructors of this population some Mobility and Stability "GAMES" (kinesthetic challenges & drills) for improved Functionality, Reaction, Fall Prevention, Coordination, Range of Motion, and overall Self-Efficacy. Be aware that differences in age, ability, & agility are common to this market, and new instructors to this market may have to relinquish a traditional desire to maintain class conformity. Mirroring clocks takes practice. Font.

3. UNIQUE USES OF THE BOSU® BALANCE TRAINER FOR THE ACTIVE AGING MARKET

A. Utilize the dome's circles

B. Train the quadratus lumborum stabilizer in both standing & floor postures

C. Train the anterior tibialis using the cushion & resistance of the BOSU Balance Trainer

D. Play "games" like "Hot & Cold," "Touch," "Sleeping Dog," and "Bubblewrap"

E. Use the soft surfaces to make lunges accessible & comfortable

F. Face the fear of falling with "catch yourself" games

G. Give this population at least 4 new ways to get up and down

H. Let this population exercise in a comfortable, head-supported supine position

4. PHYSICAL AWARENESS of COMMON ISSUES

A. Musculoskeletal: osteoarthritis (inflammation of joints due to wear & tear), osteoporosis (bone loss), gout, loss of muscle mass, fractures

Takeaway: Longer warm-up time & joint manipulation up to 20-25% of class time, strengthen anterior tibialis muscles towards fall-prevention for active dorsiflexion (Rogers)

B. Neurologic: dementia (Alzheimer or other types), Parkinson's disease, strokes, poor vision, hearing & balance impairment

Takeaway: Fall prevention strategies and reaction "games" exercises

C. Visual: macular degeneration, glaucoma, cataracts, diabetes & hypertension, eye diseases

Takeaway: Visual drills, cueing where to look

D. Cardiovascular: disease, heart attacks, congestive heart failure, irregular heart rhythm (atrial fibrillation), high blood pressure (hypertension), atherosclerosis (hardening & narrowing of blood vessels) & peripheral vascular disease or peripheral artery disease (poor blood flow as a result of narrow blood vessels)

E. Hormonal: diabetes, menopause, thyroid issues, high blood cholesterol, slower overall metabolism.

5. GENERAL CONSIDERATIONS

- A. Longer systemic warm-up, especially for distal joints, and specific task preparation
- B. Encourage slower spinal rotation, especially cervical
- C. Generally avoiding strictly supine work and unsupported cervical flexion/extension
- D. < 2 consecutive minutes on knees
- E. Less independent time on BBT without stepping down
- F. Lower music volume < 60 decibels (apps like "Decibel Ultra")
- G. Provide ample time for changing body positions; this is part of the workout experience
- H. Emphasize pelvic floor, tva connection, tongue placement (roof) and balance throughout
- I. Hip replacements: generally promote hip-opening movements
- J. Proper hydration can improve muscular balance and this population is often dehydrated

6. OUR SURFACES: THE FLOOR AND THE BOSU® BALANCE TRAINER

- A. Contact Points (C.P.)
- B. Visual & Vestibular Affect (V.A.)
- C. Movement
- D. External Stimulus (Soft touch ball)

7. BOSU® EQUIPMENT: BOSU Balance Trainer (inflation), Soft touch ball, "sticky" mat, optional chair/foam roller/bar





8. BOSU® Yearbook Class Picture & MVP!

BOSU® STABILITY & MOBILITY FOR ACTIVE AGING

R = RIGHT, L = LEFT C.P.= CONTACT POINTS V.A. = VISUAL AFFECT BBT = BOSU BALANCE TRAINER
 STB = SOFT TOUCH BALL W/ = WITH PROG = PROGRESSION REG = REGRESSION

WHERE	MOVEMENTS & GAMES	NOTES
	ESTABLISHING "HOME," MEMORY GAME	PHONE #, GROCERIES, NAMES OF STUDENTS...
"HOME" BEHIND BOSU	1. SLOW SAGITTAL HEEL & TOE TAPS W/ARMS 2. SLOW FRONTAL HEEL & TOE TAPS 3. MARCHING TO DIFFERENT TIMES (12, 3, 6, 9) 4. HIP ROCKS & MARCHING "OUT AND IN" 5. "ROCKING HORSE ELEVATORS": SAGITTAL REACHES W/ARMS, ANTERIOR TOES, & POSTERIOR HEEL LIFTING. REPEAT OTHER SIDE (<i>Jags, Woolley</i>)	IN THIS ORDER, PREPARING FOR BOSU; PROG: MANIPULATE ORDER & TEMPO REG: KEEP LEGS WIDE
ACCLIMATE TO THE BOSU	6. MARCHING W/VISUAL TRACKING ARMS (V.A.) RHYTHMIC WARMUP DYNAMIC FLEXIBILITY: 7. FINGER/WRIST/ANKLE + SHOULDER WARMUPS + UNILATERAL & BILATERAL "BACKSTROKES" 8. BACK RHYTHMIC SAGITTAL MOVEMENTS 9. BACK RHYTHMIC FRONTAL MOVEMENTS 10. BACK RHYTHMIC TRANSVERSE MOVEMENTS	TRACK WITH FINGERS AWARENESS OF INDIVIDUAL SHOULDER & SPINE ISSUES
WALKING MOBILITY	"GAIT" GAME: WALK AROUND 2 BBTS & RETURN-- CUE: "LOOK BOTH DOWN & IN FRONT OF YOU" + MEMORY GAME	CUE: "THE 2 ND BALANCE TRAINER YOU WALK AROUND IS ALWAYS YOUR OWN"

BEHIND BBT AT "HOME"	ALTERNATING BETWEEN R & L FOR EACH: 1. KNEE LIFTS "STORK;" REG: HEEL/TOE LIFTS 2. 1 FOOT ON BBT FOR ANKLE/KNEE CIRCLES 3. "SLEEPING DOG" GAME: TOE/HEEL TAPS & TOUCHES ALL OVER BBT DOME (C.P.) 4. "BUBBLE WRAP" TOE/FOOT PUSHES ALL OVER & INTO BBT DOME, AT "HOME" (Bernier) 5. "ROCKING HORSE ELEVATORS": AS WARMUP WITH ANTERIOR FOOT ON BBT, 8-16 XS PER SIDE	USING ARMS AS NEEDED TEACH PELVIC FLOOR, TVA, & BREATHING CONNECTIONS ARMS OUT TO SIDE AS AN "AIRPLANE," AS NECESSARY PROG: LIFT FRONT FOOT
WALKING MOBILITY	"GAIT" GAME: WALK AROUND 2 BBTS REACTING TO CUES, TRYING TO RAISE A HEEL FOR "STORK"	CUE: "FREEZE" "WALK" MEMORY GAME
BEHIND BBT AT "HOME"	1. "TOUCH" REACTION GAME. POSSIBLE CUES: "R/L" "TOE/HEEL," "# OF RING," "RIM," "TOP" 2. SQUATTING TO TOUCH THE TOP 3. HINGING TO TOUCH THE TOP	GAME: CALL OUT R/L & A CUE 2 OR ONE HAND TOUCHES, AS ABLE
STAGGERED STANCE	1. R/L FOOT ON BBT, "HOT & COLD" REACTION GAME ("HOT" = KEEP FRONT FOOT LIFTED)	REG: JUST RAISE FRONT HEEL OR FOOT
BEHIND BBT AT "HOME"	1. HEEL PRESSES ONTO BBT NEAR RIM AT 6:00 2. ALTERNATING "CATCH YOURSELF" GAME IN SAGITTAL PLANE ANYWHERE ON BBT	TRY TO LEAN INTO BBT
BEHIND, IN FRONT, & WALKING AROUND BBT	1. BEHIND BBT ON FLOOR: "CLOCK" GAME ONTO FLOOR. PROG: ONTO BBT 2. IN FRONT OF BBT: "CLOCK" GAME 3. IN FRONT OF BBT: R ANTERIOR TIBIALIS STRENGTHENING BEHIND TOP & RIM AT LEFT HEEL, HANDS W/ OR W/O ASSISTANCE 4. AROUND BBT ON FLOOR: "BUBBLE WRAP" GAME: WALKING AROUND 360° IN ONE DIRECTION, PUSHING HEELS INTO BBT TO STRENGTHEN ANTERIOR TIBIALIS 5. [REPEAT #3 & #4 OTHER LEG]	"CLOCK" GAME BEHIND BBT: CALL OUT R OR L & TIME 3-4-5-6-7-8-9 O'CLOCK "CLOCK" GAME IN FRONT OF BBT: CALL OUT "R OR L," & TIME 9-10-11-12-1-2-3 O'CLOCK. REG: JUST STEP BACK TO "12" & RETURN
AT L SIDE OF BBT	1. L FOOT ON FLOOR & R ON BBT: PUSHING INTO BBT, DEPRESS R HIP & ELEVATE L HIP 2. R LEG SIDE STEPS ON & OFF "SQUATS" 3. L FOOT ON FLOOR & R ON BBT: OPPOSITE HIP ACTION: ELEVATE R HIP & DEPRESS L HIP 4. "CATCH YOURSELF" GAME IN FRONTAL PLANE 5. STANDING BEHIND BBT FOR "BACKSTROKES"	ARMS IN FRONTAL PLANE FOR ASSISTANCE AS AN "AIRPLANE" [REPEAT 1-5 OTHER SIDE]
WALKING MOBILITY	"GAIT" GAME & FIND A PARTNER PARTNER NAMES "A" AND "1"	MEMORY GAME TO PARTNER
1 PARTNER AT "HOME" AND OTHER ON OTHER SIDE OF BBT	1. LIGHT COMPRESSIONS UP & DOWN W/ PARTNER IN FRONT OFFERING ARMS CUE: "MARCH UP FOR A BIT/DOWN FOR A BIT" PROG: REACTION GAME TO LEADER'S CUES: "L/R FOOT UP" & "L/R FOOT DOWN"	REG: DO SAME FROM FLOOR. CUE: "TRY TO SWITCH LEGS" MOVING PARTNER TRAINS MOBILITY & STABILIZING

	2. [CHANGE PARTNER ROLES]	PARTNER TRAINS STABILITY
WALKING MOBILITY	"GAIT" GAME: WALK AROUND 2 BBTS & RETURN REACTING TO "FREEZE" CUE & FIND A NEW PARTNER	CUE: "FREEZE" & "WALK" MEMORY GAME TO PARTNER
PARTNER: TOP OF BBT	1. LIGHT COMPRESSIONS ON TOP, "TAPPING" DOWN WITH ALTERNATING LEG PROG: REACTION GAME TO CUES: "TAP L/R" 2. [CHANGE PARTNER ROLES]	CUES: "MARCH ON TOP & TAP DOWN," CHANGING REG: KEEP ENTIRE SERIES ON THE FLOOR
RETURN TO INDIVIDUAL WORK		
STANDING TO BBT/FLOOR MOBILITY	1. (BEHIND BBT) REACHING ARMS FORWARD TO BBT SURFACE & KNEEL; PUSH UP 2. (IN FRONT OF BBT) SQUAT TO SIT, BOUNCE UP 3. (BEHIND BBT) KNEELING ONTO BBT; BOUNCING	USE ASSISTIVE DEVICE AS NECESSARY
KNEELING STABILITY & MOBILITY ON BBT	1. "70-30" FOR "KNEEL TAPS" TO BBT SURFACE 2. "50-50" LEG WEIGHT BEARING TRACKING L & R 3. KNEELING "BOWING" HINGES TO DIFF.CIRCLES 4. QUADRUPED HAND "BUBBLEWRAP" GAME	PROG: TOES OFF OF FLOOR. REG: RUB KNEES REG: STAY STANDING. *MINIMIZE KNEE TIME
	---GET STB AND YOGA MAT FOLDED ½ IN FRONT OF BBT---	BALL SQUEEZES FOR ARTHRITIS
LUNGING TO SIDE-SITTING AT L/R SIDE OF BBT	1. L FOOT FORWARD, STAGGERED STANCE "LUNGES," LOWERING R KNEE NEAR/ONTO BBT 2. "R HIP ROCKS" FROM WARMUP, PRESSING INFERIOR HIP INTO BBT & RELEASE 3. SIDE-LYING SUPERIOR LEG EXTERNAL/INTERNAL ROTATION. PROG: SUPERIOR LEG ABDUCTION 4. 5. 6. [STAND, TURN, AND REPEAT #1, #2, #3]	PROG: ROTATION. USE UPPER BODY TO SUPPORT ON THE STB/BBT/FLOOR AS NECESSARY/APPROPRIATE AFTER #3, TURN AROUND ON BBT OR STAND & REPEAT
PRONE STABILITY	---OPTIONAL PRONE ASSISTED SPINAL EXTENSION W/ ELBOWS OR HANDS ON FLOOR---	OMIT FOR OSTEOPOROSIS
SITTING ON BBT 	1. VISUAL TRACKING R & L SIDE HOLDING STB (V.A.) 2. HIP OPENERS: BUTTERFLY ADDUCTOR WORK	USING STB AS ABLE. SUPINATED GRIP
SUPINE/ INCLINE ON MAT & BBT 	1. W/ STB: ALTERNATING ELBOW FLEXIONS (TOSS) 2. W/ STB: OVERHEAD LAT PULLS 3. SLOW SPINAL FLEXIONS W/HANDS 4. TRICEP PRESSES FLOOR ISOMETRIC	REG: WITHOUT STB STB BETWEEN KNEES AS APPROPRIATE
SUPINE BRIDGE W/ HEAD ON BBT TOP & FEET ON FLOOR/MAT 	1. BILATERAL BRIDGES, HANDS INTO FLOOR 2. TOE RAISES/CALF RAISES, COMBINING 3. ALTERNATING UNILATERAL BRIDGES (REG: DORSIFLEX OR PLANTARFLEX) 4. CHEST STRETCH, EXTENSION, & BREATHING 5. T'AI CHI MOVEMENT BEFORE STANDING	"Single leg bridges can dramatically improve stability of the ankle, knee, & hip complex & reduce falls" (Shoenfelder)
SLOWLY TRANSITION TO STANDING		
BEHIND BBT AT "HOME"	1. FLYING BIRD 2. PAINTING THE WALL 3. WILLOW TREE 4. WISE OWL TURNS 5. GALLOPING HORSE	(Tsang)
STRETCHES	ANTERIOR TIBIALIS, QL, & MAJOR MUSCLES	(Bernier, Jags)