

Additional file 1: Description of the exercises and cooling down of the first session of each week

Week 1	Week 2	Week 3	Week 4
Session 1 (both feet stable)	Session 1 (one foot unstable)	Session 1 (two feet on airex)	Session 1 (unstable chair)
Calibration measurement sway area, eyes open	Calibration measurement sway area, eyes open	Calibration measurement sway area, eyes open	Tapping blocks (lateroflexion, nearby)
Calibration range of motion on stable seat, eyes open	Calibration range of motion on stable seat, eyes open	Calibration range of motion on stable seat, eyes open	Clock yourself
Go to target and back to centre on stable seat, 60% of range of motion	Go to target and back to centre on stable seat, 80% of range of motion	Go to target and back to centre on stable seat, 80% of range of motion	Lift and extend leg (unilateral, alternating)
Tapping blocks (lateroflexion, nearby), 60% arm reach	Tapping blocks (lateroflexion, nearby), 70% arm reach	Tapping blocks (lateroflexion, nearby), 80% arm reach	Lift Leg and extend leg and homolateral arm
Make a clock with arm without moving sway of body	Make a clock with arm without moving sway of body	Make a clock with arm without moving sway of body	Throw tennis balls into bucket (as many as possible)
Follow the path unidimensional (5 reps)	Follow the path bidimensional (5 reps)	Follow the path bidimensional (5 reps)	Lift and extend leg (unilateral, alternating)
Lift leg (unilateral, alternating)	Lift and extend leg (unilateral, alternating) and contralateral arm	Lift and extend leg (unilateral, alternating)	Lift Leg and extend leg and homolateral arm
Lift and extend leg (unilateral, alternating)	Lift Leg and extend leg and homolateral arm	Lift Leg and extend leg and homolateral arm	Trunk rotations lower trunk while lower body is still (4cm)

Throw ping bong ball into bucket (as many as possible)	Throw tennis balls into bucket (as many as possible)	Throw tennis balls into bucket (as many as possible)	Trunk rotations upper trunk while upper body is still while extending both arms
Boat Game (2x)	Boat Game (2x)	Boat Game (2x)	Look over the shoulders (up) while extending both arms
Trunk rotations lower trunk while lower body is still (2cm)	Trunk rotations lower trunk while lower body is still (4cm)	Trunk rotations lower trunk while lower body is still (4cm)	Lift and extend leg (unilateral, alternating)
Trunk rotations upper trunk while upper body is still	Trunk rotations upper trunk while upper body is still while extending both arms	Trunk rotations upper trunk while upper body is still while extending both arms	Lift Leg and extend leg and homolateral arm
Look over the shoulders (up)	Look over the shoulders (up) while extending both arms	Look over the shoulders (up) while extending both arms	Pattern cones (correct order): place cones on top of each other, 120% arm reach
Pattern cones (correct order)	Pattern cones (correct order): place cones on top of each other, 130% arm reach	Pattern cones (correct order): place cones on top of each other, 140% arm reach	Place cones in position, place tennis balls on cones, 120% arm reach
Place cones in position, place pingpong balls on cones	Place cones in position, place tennis balls on cones, 130% arm reach	Place cones in position, place tennis balls on cones, 140% arm reach	Recollect tennis balls, recollect cones, 140% arm reach
Recollect pingpong balls, recollect cones	Recollect tennis balls, recollect cones, 130% arm reach	Recollect tennis balls, recollect cones, 140% arm reach	Upper trunk rotation while reaching to contralateral side on

			stable surface, reach to filled bottle (spa) at table height and lift the bottles, 140% arm reach
Upper trunk rotation while reaching to contralateral side on stable surface, reach to bottle (spa) at table height	Upper trunk rotation while reaching to contralateral side on stable surface, reach to filled bottle (spa) at table height and lift the bottles, 130% arm reach	Upper trunk rotation while reaching to contralateral side on stable surface, reach to filled bottle (spa) at table height and lift the bottles, 140% arm reach	Resististing the skipping rope (saggital plane)
Follow the path unidimensional (5 reps)	Follow the path bidimensional (5reps)	Follow the path bidimensional (5reps)	Pelvic tilting
Resististing the skipping rope (saggital plane)	Resististing the skipping rope (saggital plane)	Resististing the skipping rope (saggital plane)	Pelvic tilting (follow sagittal line) while arms go up- and downward
Pelvic tilting (follow sagittal line)	Pelvic tilting (follow sagittal line) while arms go up- and downward	Pelvic tilting (follow sagittal line) while arms go up- and downward	Buttock in the seat with mat on the head (follow horizontal line)
Follow the path unidimensional (5 reps)	Buttock in the seat with mat on the head (follow horizontal line)	Buttock in the seat with mat on the head (follow horizontal line)	Lateral flexion of the trunk initiated from the shoulder girdle on an unstable surface with hold in end position
Hula hoop overhead: first head, then thighs and feet	Follow the path bidimensional (5 reps)	Follow the path bidimensional (5 reps)	Balloon in the air (tennis racket)

Throwing and recollecting seed bags	Lateral flexion of the trunk initiated from the shoulder girdle on an unstable surface with hold in end position	Lateral flexion of the trunk initiated from the shoulder girdle on an unstable surface with hold in end position	Hula hoop overhead: first head, then thighs and feet
Lateral flexion of the trunk initiated from the shoulder girdle on an unstable surface with hold in end position	Follow the path bidimensional (5reps)	Follow the path bidimensional (5reps)	Throwing (in hula hoop) and recollecting seed bags
	Balloon in the air (tennis racket)	Balloon in the air (tennis racket)	Order objects on the shelves, shelves at 140% arm reach; objects left and right alongside the patient (on psoas blocs)
	Hula hoop overhead: first head, then thighs and feet	Hula hoop overhead: first head, then thighs and feet	
Cooling down			
1 minute	Hands Chest Chair: Hands at the height of the chest or supported on the lap. 10 deep belly breathing.		
1 minute	Neck Bend Exercise: Head up and down 10 times in combination with in and out breaths. Elevate shoulders 10 times and relax in combination with breathing		
1 minute	Chair Neck Rolls: Gently move the head from shoulder to shoulder in combination with breathing.		
1 minute	Neck Twists: Gently turn the head from one side to the other side in combination with breathing.		

1 minute	Chair Seated Side Stretch Pose: Extend the trunk, hold on one side for 30 seconds, repeat it at both sides. Possibly with arm in extension.
1 minute	Chair Seated Twists: turn full trunk to one side and hold for 30 seconds, repeat it at both sides.
1 minute	Chair Pose On Chair Hands On Knees: extend spine upwards, bend slowly forward, stretch the spine while in this forward bend, look up and exhale.
1 minute	Seated Forward Fold Pose on Chair: exhale, fold forward, chest towards thighs, hands towards floor.