

## Appendix 1: BMCT framework


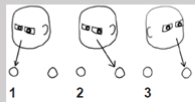


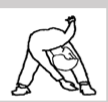

Exercise in sitting & sit to stand		5 min
Progression: BOS	Progression: Movements	Tools
Sitting on a chair/bench Sitting on an exercise ball  Feet shoulder width apart Feet close together One leg support	Rotation of the head - up/down/sideways Arms folded across the chest – rotate to the sides Hands folded while moving hands in wide circles  Sitting on an exercise ball: Lift arms/legs while maintain stability Roll forward until the ball supports the middle of the back	Juggling a balloon Ball on a tray or racket
<b>Cognitive load</b>	Counting, adding or subtracting numbers, remember series of numbers, spelling words backwards, reading a short text.	
<b>Sensory manipulation</b>	Proprioception: Sit to stand on uneven surface (e.g. foam) Vision: Sit to stand with eyes closed	

Exercises in standing		5 min
Progression: Changes of BOS	Progression: Movement	Tools
Feet shoulder width apart Feet close together Tandem stance Standing on one leg Standing on heel/toe	Lean forward/backward/sideways Rotation of the head - up/down/sideways Hands folded while moving hands in wide circles "Drawing" with one foot while standing on the other Pick objects up from the floor  <b>Exercises in pairs:</b> Mirror movements: One leads and the other follows Back against back passing ball: left side/right side, over head/between legs "Wrestling": hand against hand or with ball in-between	Button a shirt Juggling a balloon Dribbling a ball Ball on a tray or racket
<b>Cognitive load</b>	Counting, adding or subtracting numbers, remember series of numbers, spelling words backwards, reading a short text.	
<b>Sensory manipulation</b>	Proprioception: Standing on uneven surface (e.g. foam) Vision: Standing with eyes closed	

Exercises in stepping		10 min
Progression: BOS and direction	Progression: Movements	Tools
Feet shoulder width apart Feet close together  Forwards Sideways Backwards	High knees Steps in all directions Steeping up and down on a box – increasing height Stair climbing +/- handrail Jump forth and back in all directions - from one leg to the other - legs together	Juggling a balloon Ball on a tray or racket
<b>Cognitive load</b>	Counting, adding or subtracting numbers, remember series of numbers, spelling words backwards.	
<b>Sensory manipulation</b>	Proprioception: Stepping on uneven surface (e.g. foam) Vision: Stepping with eyes closed	

Exercises in walking - coordination		10 min
Progression: BOS and direction	Progression: Movement	Tools
Normal step width Narrow step width Tandem walk  Sideways Sideways – crossing legs Backwards	Walking while the heel of the swinging leg touches the shin of the standing leg Walking with head rotations Walking in figure of eight or slalom Picking things up from the floor Walking on toes or heels Pirouette during walking	Button a shirt Juggling a balloon Dribbling a ball Ball on a tray or racket
<b>Cognitive load</b>	Counting, adding or subtracting numbers, remember series of numbers, spelling words backwards	
<b>Sensory manipulation</b>	Proprioception: Walking on foam Vision: Walking with eyes closed	

Exercises in walking - speed		10 min
Progression: BOS	Progression: Movement	Tools
Normal step width Narrow step width	Slalom walking or figure of eight – at high speed Walking in a challenging environment (chairs, balls, cones, etc.) Picking things up from the floor Walking with 180 degree turns	Dribbling a ball
<b>Cognitive load</b>	Counting, adding or subtracting numbers, remember series of numbers, spelling words backwards.	
<b>Sensory manipulation</b>	Proprioception: Not applied in this station Vision: Not applied in this station	

Vestibular rehabilitation (detailed description in appendix)		10 min
Progression: Stability	Exercises	
Sitting on a chair Sitting on a ball Standing walking	Gaze at a stationary object Move eyes/head  	Illustrations are adapted from Byung JH, et al. 2011. Copyright by © 2011 Korean Neurological Association. Reprinted with permission.
	Gaze at a moving object Move body/eyes/head   	
	Change gaze (saccade) No movement of head and body 	
Static exercises are conducted in standing and sitting. Dynamic exercises are conducted in walking with and without head. Duration of exercises is 30 sec. Sensory manipulation (foam) can be used as a progression in standing.		