

## Sitting Balance Assessment Tool (SitBAT)

### GENERAL INSTRUCTIONS

Read each item and scoring criteria prior to initiating the task with a patient. Provide verbal instruction and/or demonstration, as needed, for each task per instructions. Circle the rating which best describes the patient's functional performance.

The patient should understand that the goal of this tool is to measure sitting balance, so they must maintain their balance to the best of their ability while attempting the tasks.

Necessary equipment: clinical mat table (hi-low ideal), stopwatch or watch with a second hand, tennis ball, tennis ball filled with (135) pennies, 8.5x11" standard piece of paper.

### The STANDARD SITTING POSITION:

- The patient sits symmetrically on a standard clinical mat table (high/low preferred);
- ~50% of thigh length supported on the mat;
- Feet are on the floor with 8.5" between medial borders of feet (use standard paper to measure);
- Hips, knees and ankles approximating 80-100 degrees flexion each (**use a clinical bench, step or platform as needed to align the patient's lower extremities into this position; equipment must be safe for a sit to stand transfer**);
- Hands should rest in the patient's lap, with palms facing up.

### I. SIT TO SUPINE TRANSITION

The patient begins in the standard sitting position on the mat table, allowing adequate space for the patient to self-select movement either left or right to achieve supine.

INSTRUCTIONS: Please lie down on the mat. You may move in either direction.

- 4 Independent or Modified Independent
- 3 Minimal Assistance: Patient provides at least 75% of effort necessary to complete the task
- 2 Moderate Assistance: Patient provides at least 50%, but less than 75% of effort necessary to complete the task
- 1 Maximum Assistance: Patient provides at least 25%, but less than 50% of effort necessary to complete the task
- 0 Dependent: Patient provides less than 25% of effort necessary to complete the task

## II. SUPINE TO SIT TRANSITION

The patient begins in a supine position on the mat table. The patient must move back toward their original starting position on the mat edge.

INSTRUCTIONS: Please sit up on the edge of the mat.

- 4 Independent or Modified Independent
- 3 Minimal Assistance: Patient provides at least 75% of effort necessary to complete the task
- 2 Moderate Assistance: Patient provides at least 50%, but less than 75% of effort necessary to complete the task
- 1 Maximum Assistance: Patient provides at least 25%, but less than 50% of effort necessary to complete the task
- 0 Dependent: Patient provides less than 25% of effort necessary to complete the task

## III. SCOOTING

The patient begins sitting on the mat table with full femur support (popliteal folds mat edge) with lower legs unsupported, hanging off the mat table. The goal is for the patient to scoot forward, while maintaining balance, into the standard sitting position. The patient may use their arms.

INSTRUCTIONS: Please scoot forward so that you are closer to the edge of the mat, bringing your feet toward the floor (provide a visual goal for the patient).

- 4 Independent or Modified Independent
- 3 Minimal Assistance: Patient provides at least 75% of effort necessary to complete the task
- 2 Moderate Assistance: Patient provides at least 50%, but less than 75% of effort necessary to complete the task
- 1 Maximum Assistance: Patient provides at least 25%, but less than 50% of effort necessary to complete the task
- 0 Dependent: Patient provides less than 25% of effort necessary to complete the task

## IV. QUIET SITTING – EYES OPEN

The patient begins in the standard sitting position.

INSTRUCTIONS: Please sit with your arms folded across your chest for 2 minutes.

- 4 able to sit safely and securely for 2 minutes
- 3 able to sit 2 minutes with supervision
- 2 able to sit for 30 seconds, but less than 2 minutes
- 1 able to sit for 10 seconds, but less than 30 seconds
- 0 unable to sit without support or sits unsupported for less than 10 seconds

#### V. QUIET SITTING – EYES CLOSED

The patient begins in the standard sitting position.

INSTRUCTIONS: Please sit with your arms folded across your chest, with your eyes closed, for 2 minutes.

- 4 able to sit safely and securely for 2 minutes
- 3 able to sit 2 minutes with supervision
- 2 able to sit for 30 seconds, but less than 2 minutes
- 1 able to sit for 10 seconds, but less than 30 seconds
- 0 unable to sit without support or sits unsupported for less than 10 seconds

#### VI. TURNING TO LOOK OVER LEFT SHOULDER

The patient begins in the standard sitting position. The examiner may place an object **directly behind** the patient to facilitate a functional turn to see the object.

INSTRUCTIONS: With your arms folded across your chest, turn to look behind you, as far as possible, over your left shoulder.

- 4 rotates and looks behind with a pronounced weight shift over the left ischial tuberosity
- 3 rotates and looks behind well, but without a pronounced weight shift over the left ischial tuberosity
- 2 rotates, but with less than 90 degrees combined cervical and trunk rotation
- 1 initiates turn but loses balance and catches self independently
- 0 unable to initiate turn OR loses balance during task requiring assistance to keep from falling

#### VII. TURNING TO LOOK OVER RIGHT SHOULDER

The patient begins in the standard sitting position. The examiner may place an object directly behind the patient to facilitate a functional turn to see the object.

INSTRUCTIONS: With your arms folded across your chest, turn to look behind you, as far as possible, over your right shoulder.

- 4 rotates and looks behind with a pronounced weight shift over the right ischial tuberosity
- 3 rotates and looks behind well, but without a pronounced weight shift over the right ischial tuberosity
- 2 rotates, but with less than 90 degrees combined cervical and trunk rotation
- 1 initiates turn but loses balance and catches self independently
- 0 unable to initiate turn OR loses balance during task requiring assistance to keep from falling

**INTERIM EXAMINER INSTRUCTIONS: Orient the patient to the 2 different weight tennis balls. Tell the patient that these will be used interchangeably in the next several tasks. Do not tell the patient which ball you will use for each task, randomizing the order of tasks #VIII through XIII.**

**PICKING UP OBJECT FROM FLOOR:**

The patient begins in the standard sitting position. The examiner places the tennis ball just anterior to the patient's great toes at midline. The patient self-selects which arm to reach with. Successful task complete involves forward reach to pick up the ball **with safe return to an independent sitting position.**

**INSTRUCTIONS:** Pick up the tennis ball from the floor and return to a sitting position. Try to do this without using your arms on the mat or on your legs.

- 4 able to pick up ball safely and independently without use of arms for support
- 3 able to pick up ball safely but uses arms on mat or legs OR requires supervision to safely pick up ball and safely return to the sitting position
- 2 reaches within 1-2 inches (2-5cm) from the ball and keeps balance independently; may use arms for support; safely returns to an independent sitting position (Close & Independent)
- 1 reaches within 1-2 inches (2-5cm) from the ball and needs supervision while attempting the task; able to return to sitting with supervision; may use arms for support (Close AND/OR Supervision)
- 0 unable to complete the task as described above OR requires assistance to keep from falling (Not Close AND/OR Requires Assistance)

VIII. PICKING UP OBJECT FROM FLOOR – STANDARD TENNIS BALL

Score: \_\_\_\_\_

IX. PICKING UP OBJECT FROM FLOOR – PENNY PACKED TENNIS BALL

Score: \_\_\_\_\_

## LATERAL REACHING

The patient begins in the standard sitting position. The examiner asks the patient to raise his/her \_\_\_\_ arm to 90 degrees of shoulder abduction, elbow extended, neutral wrist, extended fingers with palm down. The examiner may provide active assistance and/or passive support. The arm is lowered to the point where fingers touch the mat. From the distal aspect of the 3<sup>rd</sup> digit, 11 inches (using length of standard paper) are measured laterally on the mat, at which point the tennis ball is placed.

INSTRUCTIONS: Pick up the tennis ball from the mat and return to an upright position. Try to do this without using your arms on the mat or on your legs for support.

- 4 able to pick up ball safely and independently without use of arms for support
- 3 able to pick up ball safely but uses arms on mat or legs OR requires supervision to safely pick up ball and safely return to the sitting position
- 2 reaches within 1-2 inches (2-5cm) from the ball and keeps balance independently; may use arms for support; safely returns to an independent sitting position (Close & Independent)
- 1 reaches within 1-2 inches (2-5cm) from the ball and needs supervision while attempting the task; able to return to sitting with supervision; may use arms for support (Close AND/OR Supervision)
- 0 unable to complete the task as described above OR requires assistance to keep from falling (Not Close AND/OR Requires Assistance)

### X. LATERAL REACHING LEFT – STANDARD TENNIS BALL

Score: \_\_\_\_\_

### XI. LATERAL REACHING RIGHT – STANDARD TENNIS BALL

Score: \_\_\_\_\_

### XII. LATERAL REACHING LEFT – PENNY PACKED TENNIS BALL

Score: \_\_\_\_\_

### XIII. LATERAL REACHING RIGHT – PENNY PACKED TENNIS BALL

Score: \_\_\_\_\_

#### XIV. EXTERNAL PERTUBATION

The patient begins in the standard sitting position. The examiner will provide a sudden strong posterior pull on anterior trunk, **just inferior to the clavicles**.

**Repeat 3 times.**

INSTRUCTIONS: Please sit with your arms folded across your chest. Hold your sitting position and balance while I try to move you. Try to do this without using your arms on the mat or on your legs for support.

- 4 able to stabilize and hold sitting position independently without use of arms for support
- 3 able to stabilize and hold sitting position independently with use of arms for support
- 2 significant retropulsion, recovers independently with use of arms for support
- 1 significant retropulsion AND/OR requires supervision
- 0 requires assistance to keep from falling

#### XV. LOWER EXTREMITY MOVEMENT/CHANGING BASE OF SUPPORT

The patient begins in the standard sitting position. The patient self-selects the leg to move.

INSTRUCTIONS: Please sit with your arms folded across your chest. Lift one foot and slide it up your shin from your ankle to your knee, while holding your balance. Try to do this without using your arms on the mat or on your legs for support.

- 4 able to complete task safely and independently without use of arms for support
- 3 able to complete task safely but uses arms on mat or legs OR requires supervision without use of arms for support
- 2 able to complete 50% range AND keeps balance independently; may use arms for support
- 1 unable to complete 50% range AND/OR needs supervision while attempting the task
- 0 unable to attempt task OR requires assistance to keep from falling

#### XVI. SIT TO STAND TRANSFER

The patient begins in the standard sitting position.

INSTRUCTIONS: Please stand up. Try to do this without using your arms for support.

- 4 able to stand and stabilize independently without using arms
- 3 able to stand and stabilize independently using arms for support
- 2 requires multiple attempts to stand but independent using arms for support
- 1 needs minimal assistance to stand or stabilize (patient provides at least 75% of effort necessary to complete the task)
- 0 needs moderate to maximal assistance to stand (patient provides less than 75% of effort necessary to complete the task) OR unable to attempt standing