

Single Step Test (Power Measure—Speed x Force)

Name: _____ **Date:** _____

The SST is a reliable measure between testers and a valid and responsive test of activity limitations when assessing unilateral lower extremity impairments in patients after TKA. **Used to assess change in LE power over time for any condition.**

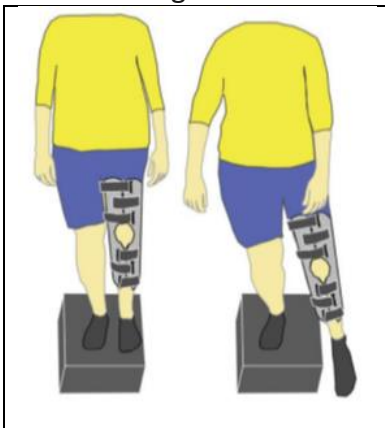
Equipment: 15 cm (6 inches) block to step on, stop watch

Purpose:

- Assess the strength/power (speed component) of the quadriceps and other LE extension muscles in a concentric and eccentric repetitive contraction in a unilateral functional task.
- Compare the involved leg with the uninvolved with those with OA and post TKA or with generalized LE weakness.

Procedure:

1. Subject is to stand on the 15 cm block (approximately 6 inches) with both feet on the block
2. Subject is instructed to squat to touch the heel of the non-testing leg to the floor and back up to the block
3. Subject is asked to perform this task as fast as they can for 20 repetitions
4. Subject can lightly rest their hands on the examiner's hands
5. Time is recorded for the 20 repetitions and then the other leg is tested
6. If they cannot perform 20 repetitions, the number they can successfully perform is recorded along with the time



Schematic depicting the single-step test or originally developed for s/p TKA. The test leg is on a 15-cm block (6 inch) (the other leg could be in a knee immobilizer to minimize its contribution to the task).

Subjects were asked to touch the heel of the non-test leg to the floor, then back to the block 20 times, as fast as possible.

	Right	Left
Number of times performed the correct squat		
Time taken to perform the squats		

Norms:

- 4 weeks post-operative: surgical: 33.5 sec, non-surgical 28.3 sec
- > 3 months: surgical 21.8 sec, non-surgical 20.7 cm

(Marmon AR, 2013)

Compare over time.