

Short Physical Performance Battery (SPPB) - Protocol

The Test explained

The short physical performance battery (SPPB) is a group of measures that combines the results of the gait speed, chair stand and balance tests (Guralnik et al., 2000). It has been used as a predictive tool for possible disability and can aid in the monitoring of function in older people. The scores range from 0 (worst performance) to 12 (best performance). The SPPB has been shown to have predictive validity showing a gradient of risk for mortality, nursing home admission, and disability.

Setting

Physiotherapy cubicle

Equipment Required

Chair with arms 18-19" in height	Stopwatch	Tape measure	2 cones to mark 2.44m
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Method

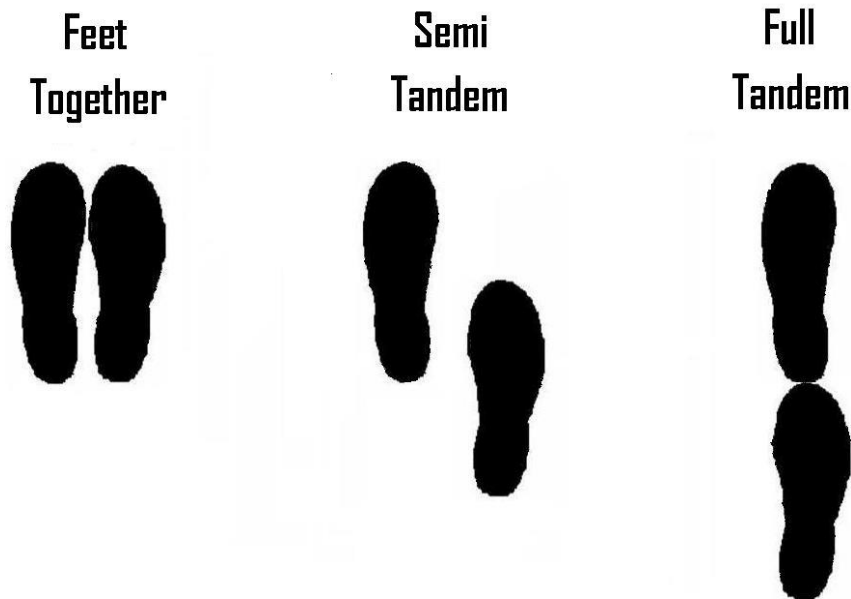
1. Assess the safety and suitability of the participant to perform the tests. If you feel they are too unsteady or weak please do not perform the SPPB measures.

2. **Repeated chair stands.**

Explain "I want to see how long it takes you to stand up and sit down as quickly as possible 5 times without stopping. After standing up each time, sit down and then stand up again. Keep your arms folded across your chest. Please watch while I demonstrate. I'll be timing you with a stopwatch"



3. Demonstrate to the patient.
4. Ask the participant if they are ready. If so, begin timing as soon as they bend forward at the hips.
5. Count out loud the number of sits the participant has performed.
6. Stop the stop watch when they have sat down having completed the 5th stand. Also stop if the participant starts to use their arms, or after 1 minute they have not completed the test. Stop if the participant can not complete 5 rises, and if you are concerned about the participant's safety. Record the number of seconds and the presence of imbalance. Then complete scoring according to outcome measure template.
7. **Balance Testing**
Explain "We will now look at your standing balance. We want to know if you can stand unsupported for 10 seconds with your feet in a certain position".
8. Demonstrate the positions 1, 2 and 3 only



9. Explain *“Begin with feet together beside each other. I want you to try to stand with your feet together, side by side, for about 10 seconds. Please watch while I demonstrate. You may use your arms, bend your knees, or move your body to maintain your balance, but try not to move your feet. Try to hold this position until I tell you to stop”*.

Stand next to the participant to help him or her into the side-by-side position. Allow participant to hold onto your arms to get balance. Begin timing when participant has feet together and let's go of your arm.

If they are able to complete 10 seconds progress to semi-tandem stand.

10. Repeat in semi tandem stand (heel of one foot placed by the big toe of the other foot). Explain *“Now I want you to try to stand with the side of the heel of one foot touching the big toe of the other foot for about 10 seconds. You may put either foot in front, whichever is more comfortable for you. Please watch while I demonstrate”*. Demonstrate.

Begin timing when participant has feet in position and let's go of your arm. The test is stopped when the participant moves their feet, grasps the interviewer for support, or when 10 seconds has elapsed.

Record time on Case Report Form

If they are able to complete 10 seconds progress to tandem stand.

11. Tandem Stand (feet directly in front of each other)

Explain *"Now I want you to try to stand with the heel of one foot in front of and touching the toes of the other foot for 10 seconds. You may put either foot in front, whichever is more comfortable for you. Please watch while I demonstrate"*.

12. Stand next to the participant to help him or her into the side-by-side position. Allow participant to hold onto your arms to get balance. Begin timing when participant has feet together and let's go of your arm. **8' Walk (2.44 metres)**

13. Mark out the distance with a tape measure and put a cone at either end. Place a chair at the other end if you think the participant might require it.

14. Explain *"This is our walking course. If you use a walking aid when walking outside your home, please use it for this test. I want you to walk at your usual pace between the two cones Walk all the way past the cone before you stop. I will walk behind you. We will be doing this test two times"*.

15. Start the stopwatch as the participant begins walking and stop once the participant reaches the far cone.

16. Then complete scoring on Case Report form.

17. After a short break repeat the 2.44meter walk and record the time.

Reference for chair height:

Puthoff M. (2008) Outcome measures in cardiopulmonary physical therapy: SPPB.
Cardiopulmonary Physical Therapy Journal. March 19 (1): 17-22