

5X Sit-to-Stand Test (5XSST)

Description: Assesses functional lower extremity strength, transitional movements, balance, and fall risk.

Equipment: Stopwatch; standard height chair with straight back (16 inches high);

Therapist Instructions: Have the patient sit with their back against the back of the chair. Count each stand aloud so that the patient remains oriented. Stop the test when the patient achieves the standing position on the 5th repetition.

Patient Instructions: "Please stand up straight as quickly as you can 5 times, without stopping in between. Keep your arms folded across your chest. I'll be timing you with a stopwatch. Ready, begin."

Interpretation:

- Lower times = better scores
- MDC: 3.6-4.2 sec^{1,2}
- MCID: 2.3 sec³

Age-Matched Norms⁴:

Age Bracket	Time (sec)
60-69 yo	11.4
70-79 yo	12.6
80-89 yo	14.8

Fall Risk:

- Geriatrics
 - need for further assessment of fall risk: ≥ 12 sec⁵
 - recurrent falls: > 15 sec⁶
- Vestibular Disorders
 - fall risk: > 15 sec⁷
- Parkinson's Disease
 - fall risk: > 16 sec⁸

¹ Schaubert, K. L. and Bohannon, R. W. (2005). "Reliability and validity of three strength measures obtained from community-dwelling elderly persons." *J Strength Cond Res* 19(3): 717-720.

² Mong, Y., Teo, T. W., et al. (2010). "5-repetition sit-to-stand test in subjects with chronic stroke: reliability and validity." *Archives of Physical Medicine and Rehabilitation* 91(3): 407-413.

³ Meretta, B. M., Whitney, S. L., et al. (2006). "The five times sit to stand test: responsiveness to change and concurrent validity in adults undergoing vestibular rehabilitation." *Journal of Vestibular Research* 16(4-5): 233-243.

⁴ Bohannon RW. Reference values for the five-repetition sit-to-stand test: a descriptive metaanalysis of data from elders. *Percept Mot Skills* 2006; 103(1):215-222.

⁵ Tiedemann, A., Shimada, H., et al. (2008). "The comparative ability of eight functional mobility tests for predicting falls in community-dwelling older people." *Age and Ageing* 37(4): 430-435.

⁶ Buatois, S., Perret-Guillaume, C., et al. (2010). "A simple clinical scale to stratify risk of recurrent falls in community-dwelling adults aged 65 years and older." *Physical Therapy* 90(4): 550-560.

⁷ Buatois, S., Miljkovic, D., et al. (2008). "Five times sit to stand test is a predictor of recurrent falls in healthy community-living subjects aged 65 and older." *Journal of the American Geriatrics Society* 56(8): 1575-1577.

⁸ Duncan, R. P., Leddy, A. L., et al. (2011). "Five times sit-to-stand test performance in Parkinson's disease." *Arch Phys Med Rehabil* 92(9): 1431-1436.