



The Senior Fitness Test

Summary

Rikli and Jones developed the Senior Fitness Test for adults aged over 60 years.^{1–4} It is primarily used to evaluate physical function in healthy elderly people but is also used for people with dementia.⁵ It comprises six functional tests of strength, endurance, balance, agility and flexibility. Each test is scored separately on different scales. The scores are not tallied into an overall score.

The Senior Fitness Test can be performed in people's homes or in clinics and does not require costly tools or technical expertise. The six functional tests include:

1. The Chair Stand Test. This requires people to repeatedly stand up from and sit down on a chair for 30 seconds. The number of stands is recorded. This reflects lower body strength.
2. The Biceps Curl Test. This requires people to repeatedly lift a 5 lb (2.27 kg) weight (for women) or an 8 lb (3.63 kg) weight (for men) for 30 seconds. The number of lifts is recorded. This reflects upper body strength.
3. The 6-minute Walk Test. This is measured in distance (m) and reflects aerobic endurance. The original version of the Senior Fitness Test required people to walk on a rectangular course but more recent versions use a straight line. If a 6MWT is not feasible then it is acceptable to replace this test with the 2-minute Step test. The number of full steps completed in 2 minutes is recorded.
4. The Chair Sit and Reach Test. This is measured in distance (cm) and reflects lower body flexibility.
5. The Back Scratch Test. This is measured in distance (cm) and reflects upper body flexibility.
6. The 2.45-m Up-and-Go test. This is measured in time (seconds) and reflects agility and dynamic balance.

Commentary

The Senior Fitness Test is a practical and suitable set of tests for clinical use and is appropriate for healthy elderly people and those with dementia. The Senior Fitness Test is simple to use and comes with a thorough instruction manual and a video. In addition, most clinicians would be familiar with all of the items of the Senior Fitness Test. The whole test takes approximately 30 to 40 minutes to perform, which may be a limitation for some time-limited clinicians. It is now available in Polish and Danish as well as the original English version.^{4,6–8}

The Senior Fitness Test has been used in several clinical trials.^{9–12} The normative United States values are widely used and compare well with the normative data obtained from a Norwegian sample of healthy elderly people.^{3–5,7} This suggests that the United States normative data may be appropriate for most similar countries. The Senior Fitness Test is recommended for measuring physical fitness in older people with and without cognitive impairment and is appropriate for both research and clinical purposes.

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Body Mass Index (BMI) is also recorded as $\text{weight}/(\text{height})^2$.

Performance standards for the Senior Fitness Test are based on the results of more than 7000 older adults from the USA. These data provide excellent normative standards for senior age groups of American men and women ranging from 60 to 94 years of age.^{1–4} Similar normative values have also been reported for a Norwegian sample where the items were adapted to the European metric and weight system.^{6,7}

The six items comprising the Senior Fitness Test are reliable with an ICC ranging from 0.8 to 0.98.^{1–5} Validity of the different items of the Senior Fitness Test has been evaluated, where possible, by comparing it with available gold standards. For example, the Chair Stand Test has been compared to the one repetition maximum leg press ($r = 0.78$ for men and $r = 0.71$ for women),¹ and the Biceps Curl Test has been compared to the combined one repetition maximum for the upper trunk ($r = 0.84$ for men and $r = 0.79$ for women). Similarly, the 6-minute Walk Test has been compared to time on a treadmill at 85% of maximal heart rate ($r = 0.82$ for men and $r = 0.71$ for women) and the 2-minute Step Test has been compared to the 1-mile walk time ($r = 0.73$) and time on a treadmill at 85% of maximal heart rate ($r = 0.74$). The Chair Sit and Reach Test has been compared to the hamstrings flexibility test, as endorsed by the American Academy of Orthopaedic Surgeons ($r = 0.76$ for men and $r = 0.81$ for women). The Back Scratch Test and the 2.45-m Up-and-Go test have not been formally validated because there are no gold standards. Instead, they are based on consensus opinion of best overall measures of shoulder flexibility and combined physiological attributes such as power, speed, agility and balance, respectively.^{1–4,8–12}

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