Four Square Step Test Description

The equipment required for the FSST is a stopwatch and four canes. The square is formed using four canes resting flat on the floor. Canes were 90 cm long, and the direction and type of handle used is not important (see Figure 1). The subject stands in square number one facing square number two. The aim is to step as fast as possible into each square, in the following sequence. Square number 2, 3, 4, 1, 4, 3, 2, and 1. This sequence requires the subject to step forwards, backwards, and sideways to the right and left. The score is recorded as the time taken to complete the sequence. The stopwatch starts when the first foot contacts the floor in square 2 and finishes when the last foot comes back to touch the floor in square 1. The following instructions are given to the subject. "Try to complete the sequence as fast as possible without touching the sticks. Both feet must make contact with the floor in each square. If possible, face the forwards during the entire sequence". The sequence is then demonstrated to the subject. One practice trial is completed to ensure the subject knows the sequence. Two FSST are completed with the best time taken as the score (no more than four attempts are allowed). A trial is repeated if the subject fails to complete the sequence successfully, loses balance, or makes contact with a cane during the sequence. Subjects who are unable to face forward during the entire sequence and need to turn before stepping into the next square are still given a score. All subjects wear their preferred shoes. The examiner stands in a position to see all steps taken by the subject, and an assistant provides the subject with close supervision. The entire test, including giving instructions and a practice trial, takes approximately five minutes to complete.

![Figure 1. Four Square Step Test set up.](image)

Note:
Subject starts in square #1, facing square #2. Subject steps forwards into square 2, sideways to square 3, backwards to square 4, sideways to square 1, sideways to square 4, forwards to square 3, sideways to square 2, backwards to square 1.

Reference:
Dite W, Temple VA.

A clinical test of stepping and change of direction to identify multiple falling older adults.

Four square step test references


