##### Functional Reach

##### *& Multidirectional Reach*

*Functional Reach is item #8 in the Berg Balance Scale*

**Directions:**

Using a yardstick mounted on the wall at shoulder height, ask the subject to position themselves close to, but not touching the wall with their arm outstretched and hand fisted. Take note of the starting position by determining what number the MCP joints line up with on the yardstick. Have the subject reach as far forward as possible in a plane parallel with the measuring device.

**Instructions**: “Reach as far forward as you can without taking a step, keeping your feet flat on the floor, and keeping your hand at the level of the ruler.”

They are free to use various reaching strategies. Take note of the end position of the MCP joints against the ruler, and record the difference between the starting and ending position numbers. If they move their feet, that trial must be discarded and the trial repeated. Guard the subject as the task is performed to prevent a fall. Subjects are given two practice trials, and then their performance on an additional three trials is recorded and averaged. *HINT: to prevent a starting position with the scapula protracted, have the person hold both arms out horizontally. If the fingers match, they are not protracting. Then lower the non-testing arm and begin the test.*

Scores **less than 6 or 7 inches indicate limited functional balance**.   
Most health individuals with adequate functional balance can reach **10 inches** or more.

**Instructions to the patient:**

Please reach as far forward as you can without losing your balance. Keep your feet on the floor. You are not allowed to touch the wall or the ruler as you reach. You will have two practice trials and then I will record the distance that you reach forward.

**Criteria to stop the test:**

The patient’s feet lifted up from the floor or they fell forward. Most patients fall forward with this test. The therapist should guard from the front as that is the direction that you reach forward.

Duncan P, Weiner D, Chandler J, et al. Functional reach: a new clinical measure of balance. *J of Gerontol* 1990; 45: M192-197.

##### *Multidirectional Reach*

1. Forward (same as Functional Reach)
2. **Backward**: the starting position is the same as the Functional Reach. Keep the elbow extended and the arm reaching forward (along the yardstick), however the person leans backward as far as possible.
3. **Sideway to the right**: stand with back to wall, and right elbow extended with arm reaching along the level of the yardstick (without touching yardstick or the wall). Lean to the right as far as possible.
4. **Sideways to the left**.

**Reference Values**: (mean age in study was 74)

* Forward 8.9 + 3.4
* Backward 4.6 + 3.1
* Right 6.2 + 3.0 Left 6.6 + 2.8

Newton R. (2001). Validity of the multidirectional reach test: A practical measure for limits of stability in older adults. *J Gerontol Med Sci* 56A: M248