## Directions for Functional Reach Test

Using a yardstick mounted on the wall at shoulder height, ask the subject to position body close to, but not touching the wall with arm outstretched and hand fisted. Take note of the starting position by determining what number the MCP joints line up with on the rule. Have the subject reach as far forward as possible in a plane parallel with the measuring devise. Instruct subject to "Reach as far forward as you can go without taking a step." 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 end position numbers. If the feet move, that trial must be discarded and repeated. Guard the subject as the task is performed to prevent a fall. Subjects are given two practice trials, then their performance on an additional three trials is recorded and averaged. Scores less than 6 or 7 indicate limited functional balance. Most healthy individuals with adequate function balance can reach 10 inches or more.

| Test | Sections | Scoring | Time | Training |
|---|---|---|---|---|
| Functional Reach<br><br>Duncan, Weiner, Chandler, and Studenski | None<br><br>Subject reaches forward with hand and arm extended and parallel to a yardstick at shoulder height.<br><br>Reach as far as you can without taking a step* (*Weiner, et al,1992) | Scored in inches or centimeters | 1-2 minutes | None required |

| Tools | Reliability | Validity | Advantages | Disadvantages | Population |
|---|---|---|---|---|---|
| Yardstick level<br><br>Velcro on yardstick and velcro on the wall | ICC across days was 0.01 (Duncan, et al, 1992)<br><br>Test-retest reliability was 0.89 (Weiner, et al, 1992) | As reach decreases, the chance of falling increases (Duncan, et al,1992)<br><br>Walking speed and FR (r=0.71) Tandem walking and FR (r=0.67)<br><br>SLS and FR (r=0.64)<br><br>Mobility skills and FR (r=0.65) (Weiner, et al, 1992)<br><br>FR and center of pressure Correlated (r=0.71) Duncan, et al, 1990) | Easy to perform<br><br>Has documented reliability, validity, and predictive validity<br><br>FR has been shown to improve over the course of rehab | Only measures one functional movement<br><br>Forward is not the only direction that we move | Ages<br><br>Mean age was 78± 8.4 years (Weiner, et al, 1992)<br><br>217 males (over 70 yrs) were used to assess predictive validity (Duncan, et al, 1992)<br><br>115 children were tested (5-15 yrs) (Donahoe, et al,– Abstract 1993) |