

The 30 Second Sit to Stand Test: Summary



Equipment [1]:

- Stopwatch/clock
- Chair, 17 inches (43.2 cm) in height, placed against the wall
(If unable to transfer patient safely to a chair, testing can be done from edge of bed)
- Another person to assist if required for safety

Patient Positioning:

- Seated in middle of chair
- Back straight, feet approximately shoulder width apart, placed on floor at angle slightly back from knees
- One foot slightly in front of the other to help maintain balance
- Ideally, arms crossed at wrists and held against chest. This may not be feasible if patient is very deconditioned. If necessary patient may use a gait aid or the armrests of the chair to help them stand up

Testing Procedures:

- Assessor demonstrates one repetition
- Patient gets opportunity to practice one repetition (may not be feasible if patient is very deconditioned)

Instructions:

- Explain to the patient that this is a test of their maximal exercise capacity: “Try to complete as many full stands as possible within the 30 second time limit”
- Patient should rise to a full stand and then back to initial seated position with each repetition
- The test begins when the assessor says “Go”

Scoring:

- Score is the total amount of stands executed correctly within 30 seconds
- If patient is more than halfway up at the end of 30 seconds, count this as another full stand

Population Norms [2]:

Table 2 Distribution of scores on the clinical field tests and heart rate at the end of the 6MWT and ST presented with mean

Women						
Age Group	n	6MWT (m)	Heart Rate 6MWT (bpm)	ST (s)	Heart Rate ST (bpm)	30sSTS (n)
18–29y	(n=25)	649 (611–687)	152 (142–162)	33.0 (31.3–34.8)	172 (167–177)	26 (23–29)
30–39y	(n=26)	650 (617–683)	154 (145–163)	34.0 (31.9–36.2)	170 (164–176)	24 (22–27)
40–49y	(n=28)	664 (639–689)	143 (138–149)	35.0 (33.2–36.7)	164 (160–168)	25 (23–27)
50–59y	(n=27)	638 (614–662)	146 (139–154)	38.8 (36.6–41.1)	160 (154–166)	24 (22–26)
60–69y	(n=29)	573 (545–600)	137 (131–143)	46.2 (42.1–50.2)	149 (145–154)	21 (18–23)
70–79y	(n=37)	510 (488–531)	128 (123–134)	57.0 (53.5–60.4)	145 (139–152)	17 (16–19)
80–90y	(n=20)	438 (399–476)	120 (112–128)	74.6 (64.8–84.5)*	133 (125–142)	14 (13–16)
Total	(n=192)	590 (575–604)	140 (137–143)	39.0 (36.5–42.0)*†	157 (154–159)	22 (21–23)
Men						
Age Group	n	6MWT (m)	Heart Rate 6MWT (bpm)	ST (s)	Heart Rate ST (bpm)	30sSTS (n)
18–29y	(n=23)	715 (688–741)	161 (153–169)	28.8 (27.7–30.0)	174 (169–179)	27 (25–30)
30–39y	(n=24)	715 (690–740)	160 (152–168)	29.6 (28.0–31.3)	173 (167–179)	27 (25–30)
40–49y	(n=26)	708 (680–736)	140 (133–148)	30.6 (28.6–32.6)	158 (151–164)	29 (27–32)
50–59y	(n=32)	664 (638–689)	132 (125–139)	34.4 (32.8–36.1)	149 (144–155)	25 (23–27)
60–69y	(n=25)	632 (600–664)	126 (118–134)	37.8 (35.1–40.5)	142 (136–148)	24 (22–27)
70–79y	(n=30)	574 (541–607)	119 (113–126)	46.0 (42.1–49.9)*	131 (124–137)	19 (17–21)
80–90y	(n=18)	506 (468–544)	117 (110–125)	56.6 (48.9–64.3)	130 (122–138)	17 (15–18)
Total	(n=178)	648 (633–663)	136 (133–140)	33.9 (32.3–35.2)*†	151 (148–154)	24 (23–25)

NOTE. Values are presented as mean (95% CI) or as otherwise indicated.
Abbreviations: bpm, beats per minute; CI, confidence interval; ST, stair test.
* One participant excluded from the sample.
† Presented as median (95% CI).

References:

- [1] Jones CJ, Rikli RE, Beam WC. A 30-s chair-stand test as a measure of lower body strength in community-residing older adults. *Res Q Exerc Sport*. 1999;70:113-9.
- [2] Tvetter AT, Dagfinrud H, Moseng T, Holm I. Health-related physical fitness measures: reference values and reference equations for use in clinical practice. *Arch Phys Med Rehabil*. 2014;95:1366-73.