

Physical therapy for patients with COVID 19 - A complete guide to manage COVID 19 patients with Rehabilitation

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Short Physical Performance Battery (SPPB)

- Has three components:
- 1. **Ability to stand for 10 seconds with feet in 3 different positions: together side by side, semi tandem and tandem**
- 2. **Two timed trials of a 3 meter or 4 meter walk (fastest recorded)**
- 3. **Time to rise from a chair five times**
- Scoring: minimum score = 0 , maximum score= 12
- Higher scores indicate better lower extremity function.
- Score of less or equal to 10 indicates mobility disability.
- You can find the administration toolkit at:
<https://geriatrics.ucsf.edu/sites/geriatrics.ucsf.edu/files/2018-06/sppb.pdf>
- Ref: <https://www.sralab.org/rehabilitation-measures/short-physical-performance-battery>

Medical Research Council Sum score (MRC - SS)

This test is used to measure strength on critically ill patients in ICU.

The scoring of the scale is the same as manual muscle testing for each muscle.

The grading starts at 0 (no visible contraction) to maximum score of 5 (full range of motion, against gravity, with maximum resistance) it is also termed as "normal"

The difference in this test, is MRC-SS lets the therapist assess the level of cooperation. This can be done in two different ways:

1. One can assess the level of cooperation by asking five standardized questions:
2. The other way to assess cooperation is by assessing confusion in ICU patient.

Medical research Council Sum Scale (MRC-SS)

5 standardized questions to assess cooperation:

1. open & close your eyes
2. Look at me
3. Open your mouth & put out your tongue
4. Nod your head
5. Raise your eyebrows after I have counted to five.

Confusion assessment method for the intensive care unit (CAM-ICU)

This method assesses delirium in ICU patients by present or absence of four features:

1. Acute onset of changes of fluctuations in the course of mental status
2. Inattention
3. Disorganized thinking
4. Altered level of consciousness (other than alert)

If the patient presents with both the features 1 & 2, plus either 3 or 4, s/he is determined to be delirious.

Here is the link that I found useful:

https://cdn-links.lww.com/permalink/ccm/a/ccm_42_4_2013_09_20_vanpee_12-02363_sdc1.pdf

2 Minute Step Test

This is probably the most known and widely used tests out of all the 5 tests that are recommended by APTA for COVID 19 patients.

- Patient in standing position next to a wall
- Mark patient's of iliac crest and patella on the wall. Also, place a tap half the distance between the two.
- Explain the patient that he is going to step in place, raising each knee to the mark on the wall for an many times as possible, for two minutes,
- Count the number of times a knee (it can be right or left, any predetermined side) reaches the mark.
- There are published normative data based on age and gender for this test.
- The data suggests that number of steps less than 65 in two minutes are associated with lower levels of functional mobility.

2 Minutes Step Test Cont..

Age Range	Number of steps - women	Number of Steps - Men
60-64	75-107	87-115
65-69	73-107	86-116
70-74	68-101	80-110
75-79	68-100	73-109
80-84	60-90	71-103
85-89	55-85	59-91
90-95	44-72	52-86

Reference:

https://journals.lww.com/jgpt/fulltext/2019/04000/two_minute_step_test_of_exercise_capacity_8.aspx
<https://geriatrictoolkit.missouri.edu/>

SLUMs (Saint Louis University Mental Status Exam)

- SLUMs is a questionnaire that tests orientations, memory, attention, and executive function.
- Has 11 question, with total of 30 points.
- It includes items like animal naming, digit span, figure recognition, clock drawing and size differentiation.
- Cut off score to determine dementia, or mild cognitive impairment depends on the patient's level of education as well as primary language.

Reference:

<https://digitalcommons.wou.edu/cgi/viewcontent.cgi?article=1020&context=pure#~:text=The%20MMSE%20is%20an%2011,total%20possible%20score%20of%2030>

<https://www.sralab.org/rehabilitation-measures/saint-louis-university-mental-status-exam>

EQ - 5D - 5L (health related quality of life measures)

- This is a reliable, valid and sensitive tool to measure quality of life.
- It comprises of two parts: 1. the EQ- 5D descriptive system
 - 2. The EQ visual analogue scale (EQ- VAS)
- The descriptive system comprises of 5 dimensions:
 - Mobility,
 - Self Care
 - Usual activities,
 - pain/discomfort
 - anxiety/depression.

EQ - 5D - 5L (health related quality of life measures)

- Each dimension has 5 levels:
 - no problem,
 - slight problems
 - moderate problems,
 - severe problems
 - extreme problems.
- The patient will choose the health state s/he is in and that will lead to 5 digit dimension that indicates overall health state for that individual.
- The EQ VAS is the patient's self rated health on a vertical visual analogue scale.
- Reference: <https://euroqol.org/eq-5d-instruments/eq-5d-5l-about/>
