

20-METER WALK

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20-METER WALK

1. Background and rationale

Direct assessments of physical performance have become standard measurements in epidemiological studies in the elderly. These assessments generally tap multiple domains of physiological performance, including lower extremity strength, balance, coordination, and flexibility. The assessment techniques used in MOST have been derived from several previous studies, are reliable when performed in a standardized fashion, and are well tolerated by elderly participants. This is a modification of the short walk test used in many epidemiological and clinical studies. This test measures the time it takes for the participant to walk 20 meters at their usual walking pace along with the number of steps that they take to walk 20 meters.

2. Equipment and supplies

- Two fluorescent orange traffic cones
- Bright cloth tape
- Digital stop-watch

2.1 Use of the stopwatch



The stopwatch will be used to measure the time it takes to complete a task from the beginning of the activity until the conclusion. Press the middle (mode) button to make sure you are in stopwatch mode. The display should read **0:0000**. To time the task, just press the right-hand button (labeled STA/STP) at the top of the stopwatch to begin, and press again when the task is completed. The time is digitally displayed on the stopwatch. To get the display to read **0:0000** again, press the left (lap) button. Time is displayed as minutes: seconds.hundredths of a second.



3. Safety issues and exclusions

There are no specific exclusions for the 20-meter walk. However, if a participant has impairments of gait, balance, or vision that may pose a risk of falling, discuss with the participant whether they can safely perform the test. If unable to do the walk, the form should be marked “not attempted/unable.”

4. Course set-up

For consistency between field centers, the walking course length will be 20 meters and should be laid out in an unobstructed, dedicated corridor. Fluorescent orange traffic cones should be used to indicate the beginning and end of the walk and should be placed beyond the start and finish line so that the participant does not slow down during the walk. Measuring from the center of each line, place the lines 20 meters apart. Cones should be carefully placed so that they do not create a tripping hazard for the participant. Place a 1/2 meter length of bright cloth tape across the floor to mark the start and end of the course. Participants are to walk in the clockwise direction.

5. Measurement procedures

a) Describe the 20-meter walk. Participant’s toes should slightly touch the starting line, without going over the starting line, at the start of the walk. Demonstrate how to walk past the cone, using the cone at the start.

Script: “Now we want to measure your usual walking speed over this 20-meter course. You will start behind this line. When you have walked past the orange cone I want you to stop. Do not slow down until you have passed the cone.”

Emphasize that the participant needs to walk past the orange cone. Demonstrate how to walk past the cone.

"Now when I say 'Go,' I want you to walk at your usual walking pace. Any questions?"

b) To start the test, say,

Script: "Ready, Go."

c) You will need to walk a few steps behind the participant. Begin timing and counting steps with the first footfall over the starting line and . . .

UAB: stop with the first footfall on or over the finish line.

U of I: stop with the first footfall over the finish line.

(Note difference between sites. We want the test to be administered the same way as it has in the past and there is one subtle difference between the sites. See above.)

d) When the participant reaches the 20-meter mark, push the right/hand STA/STP button on the stopwatch, and record the number of steps taken on the form (in field labeled "Trial 1"). You will need to carry the form on a clipboard.

e) Record the time it took to do the first 20-meter test on the 20-meter Walk data collection form in the Clinic Visit Workbook. Reset the stopwatch and have the participant repeat the 20-meter walk by walking back in the other direction. Emphasize that the participant should again walk at their usual walking speed for the second portion of the test.

Script: "OK, fine. Now turn around and when I say 'Go,' walk back the other way at your usual walking pace. Be sure to walk past the cone before slowing down. Ready, Go."

f) When the participant reaches the starting line, push the right/hand STA/STP button on the stop watch, and record the number of steps taken on the form (in data field labeled "Trial 2").

g) Record the time it took to do the second 20-meter test on the 20-meter Walk data collection form in the Clinic Visit Workbook.

h) Participant can use a walking aid, if needed, during the 20-meter walk. Record whether or not the participant was using a walking aid, such as a cane, during the 20-meter walk on the 20-meter Walk data collection form.

6. Alert values/follow-up/reporting to participants

These test results have no alert values and are not reported to the participant or physician.

7. Quality assurance

7.1 Training and certification

The examiner requires no special qualifications or experience to perform this assessment. Training should include:

- Read and study manual
- Attend MOST training session on techniques (or observe administration by experienced examiner)
- Practice on other staff or volunteers
- Discuss problems and questions with local expert or QC officer

7.2 Certification requirements


- Complete training requirements
- Conduct exam on two volunteers while being observed by QC officer:
 - According to protocol, as demonstrated by completed QC checklist

7.3 Quality assurance checklist


- Main points of script correctly and clearly delivered
- Correctly demonstrates
- Toes touching start line
- Timing started coincident with participant's first footfall
- Instructs participant to walk at their usual pace
- Records number of steps for first 20 meters
- UAB: Correct number of steps counted, and time stopped with first footfall on or over the finish line
- U of I: Correct number of steps counted, and time stopped with first footfall over the finish line
- Resets stopwatch for second 20-meter walk

- Again, instructs participant to walk at their usual pace
- Records number of steps for second 20 meters
- UAB: Correct number of steps counted, and time stopped with first footfall on or over the original starting line
- U of I: Correct number of steps counted, and time stopped with first footfall over the original starting line
- Reviews form for completeness

8. Data collection form



20-Meter Walk



MOST ID #	Acrostic	Date Form Completed	Staff ID#
13988			
Office Use Only		Month / Day / Year	

①

Directions:

"Now we want to measure your usual walking speed. You will start behind this line. When you have passed the orange cone, I want you to stop."

(Examiner Note: Demonstrate how to walk past cone and stop.)

"Now when I say 'Go,' I want you to walk at your usual walking pace. Any questions?"

"Ready, Go."

Begin timing and counting steps with the first footfall over the starting line and stop with the first footfall over the finish line.)

Trial 1

Done Steps Second Hundredths/Sec

Participant refused →

Not attempted, unable →

Attempted, unable to complete →

Stop test.
Go to next exam.

②

Directions:

Reset the stopwatch and have the participant repeat the 20-meter walk by walking back in the other direction.

"OK, fine. Now turn around and when I say 'Go,' walk back the other way at your usual walking pace. Ready, Go."

Trial 2

Done Steps Second Hundredths/Sec

Participant refused →

Not attempted, unable →

Attempted, unable to complete →

Stop test.
Go to next exam.

③ Was the participant using a walking aid, such as a cane? Yes No