

**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 Health ABC 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. The test is divided into two parts.

- the time to walk 20 meters at the participant's usual pace along with the number of steps, and
- the time to walk 20 meters as fast as the participant can, along with the number of steps

The 20-meter walk tests will be conducted in the following order: usual pace; then quick pace.

**2. Equipment and Supplies**

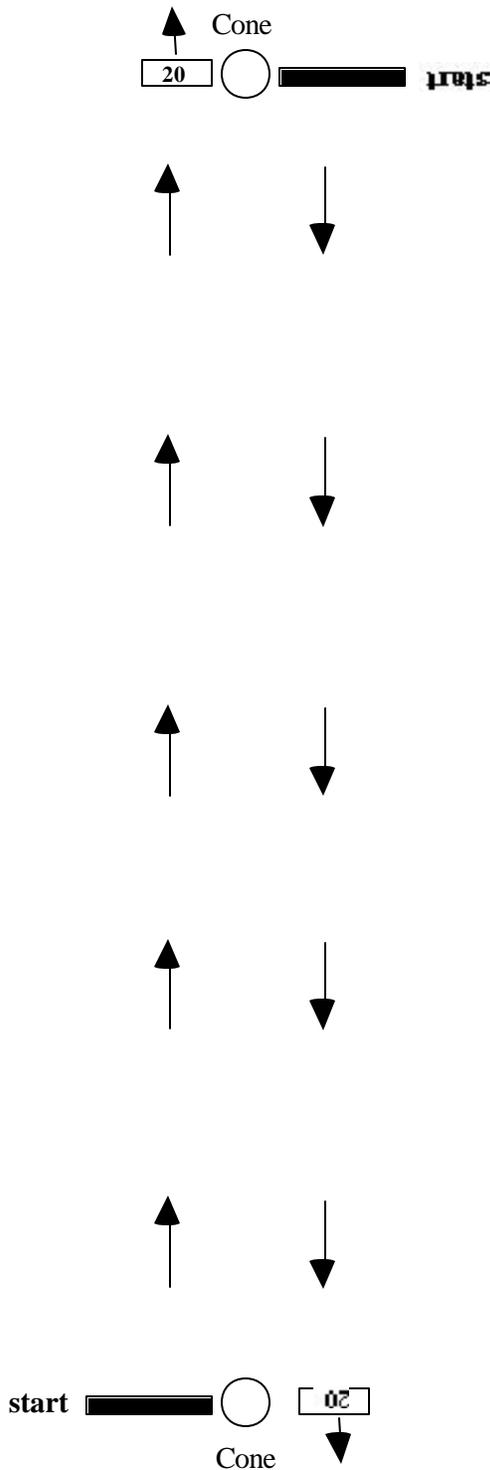
- Two fluorescent orange traffic cones
- White cloth tape
- Digital stop-watch

**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 **0:00.00**. 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.

COURSE ILLUSTRATION



3. Safety Issues and Exclusions

There are no exclusions for the 20-meter walk. However, if a participant is unable to do the balance (6 meter) walks without excessive exertion, they may be exempted from the 20-meter walk. The form should be marked “not attempted/unable.”

4. Course set-up

For consistency between 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 20-meter length. Measuring from the center of each cone, place the cones 20 meters apart. Place a 1/2 meter length of white cloth tape across the floor to the left of one of the cones to mark the start of the course. Participants are to walk in the clockwise direction.

5. Measurement Procedures

a) Describe the 20-meter walk and demonstrate how to walk past the cone, using the cone at the start.

Script: “For this test, you will be walking from here (**point out the starting line**) to the orange cone at the end of the hall at your usual walking speed. Walk past the orange cone and then stop.”

For the return trip we want you to walk as fast as possible.

“Now wait until I say 'Go'. Remember, I want you to walk at your usual walking pace. ~~Walk past the orange cone and then stop. Any questions?~~”

b) To start the test, say,

Script: "Ready, Go."

c) Begin timing and counting participant's steps until their first footfall over the finishing line at 20 meters. You will need to walk a few steps behind the participant. Start timing with the first footfall over the starting line (participant's foot touches the floor on the first step).

d) When the participant reaches the 20-meter mark, push the right/hand STA/STP button on the stop watch, and record the number of steps taken on the form (in field labeled "Usual pace 20 meters"). (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 Year 4 Clinic Visit Workbook (page 28). Reset the stop watch and have the participant repeat the 20-meter walk by walking back to the starting line. Instruct the participant to walk as quickly as they can for the second portion of the test.

Script: "OK, fine. Now turn around and when I say go, walk back the other way as fast as you can. 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 field labeled "Fast pace 20 meters").

g) Record the time it took to do the second (fast-pace) 20-meter test on the 20-meter Walk data collection form in the Year 4 Clinic Visit Workbook.

h) Record whether or not the participant was using a walking aid, such as a cane on the 20-meter Walk data collection form.

## **6. Procedures for Performing the Measurement at Home**

Not applicable.

## **7. Alert Values/Follow-up/Reporting to Participants**

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

## 8. Quality Assurance

### 8.1 Training and Certification

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

- Read and study manual
- Attend Health ABC 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

### 8.2 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
  - Times within  $\pm 1$  s of QC officer, step counts agrees with QC officer

### 8.3 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
- Correct number of steps counted, and time stopped with first footfall over the finish line
- Resets stopwatch for second 20 meter fast-pace walk
- Instructs participant to walk as fast as they can
- Records number of steps for second 20 meters
- Correct number of steps counted, and time stopped with first footfall over the original starting line
- Reviews form for completeness