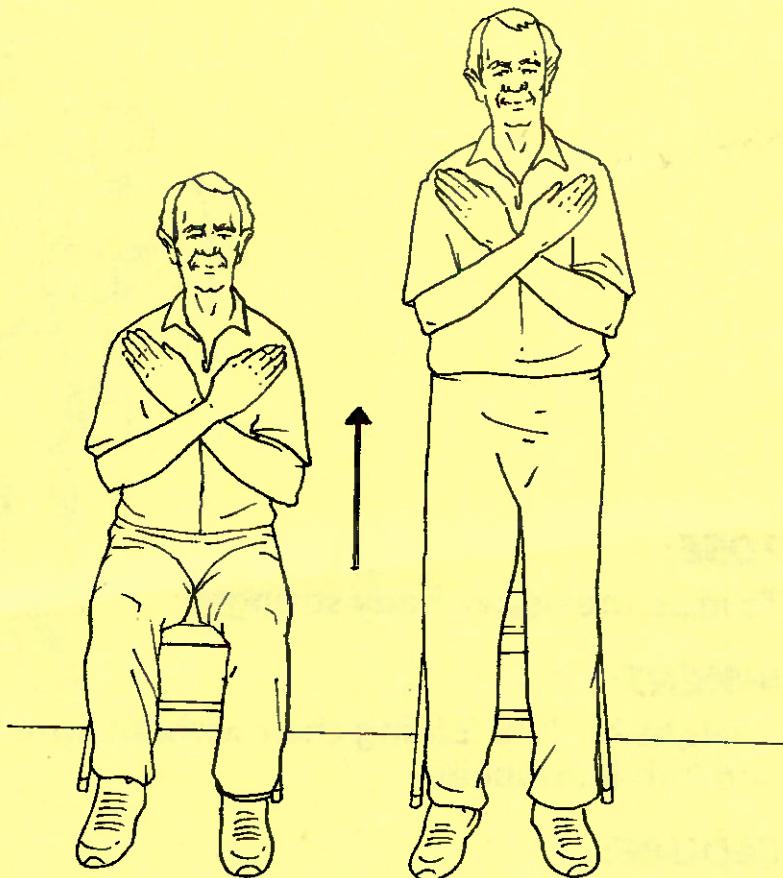


STATION 1

CHAIR STAND TEST



PURPOSE:

To measure lower-body strength

EQUIPMENT:

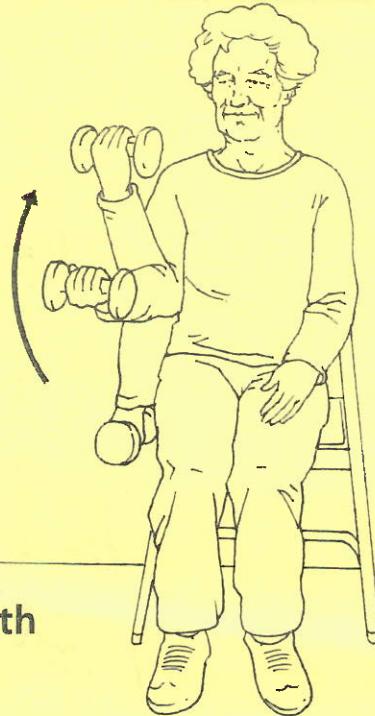
Straight-back chair (17 in. or 43.18 cm seat height); stopwatch

PROCEDURE:

- Have the participant sit in the middle of the chair, feet flat on the floor, arms across chest.
- On signal "go" have the participant rise to a full stand, then return to a fully seated position.
- After a warm-up trial to check for correct form, administer one test trial.
- The score is the number of stands completed in 30 seconds.

STATION 2

ARM CURL TEST



PURPOSE:

To measure upper-body strength

EQUIPMENT:

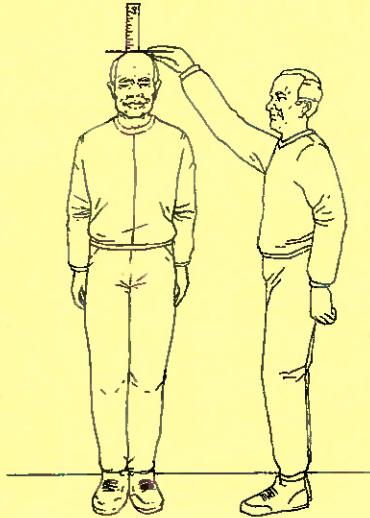
Straight-back or folding chair without arms, stopwatch, 5-lb and 8-lb dumbbells

PROCEDURE:

- Have the participant sit in the chair (slightly to the dominant side), with feet flat on the floor.
- The participant should hold the weight down at the side, perpendicular to the floor, in a handshake grip.
- On the signal "go" have the participant curl the weight through a full range of motion as many times as possible in 30 seconds. The palm should rotate up during the curl-up phase, then should return to a handshake position at extension. The upper arm must remain still throughout the test.
- After one or two warm-up curls without the weight to check for correct form, administer one test trial.
- The score is the number of curls completed in 30 seconds.

STATION 3a

HEIGHT AND WEIGHT



PURPOSE:

To assess body mass index (BMI)

EQUIPMENT:

Scale, 60-in (152.4-cm) tape measure, masking tape, and ruler (or other flat object to mark top of head)

PROCEDURE: (weight)

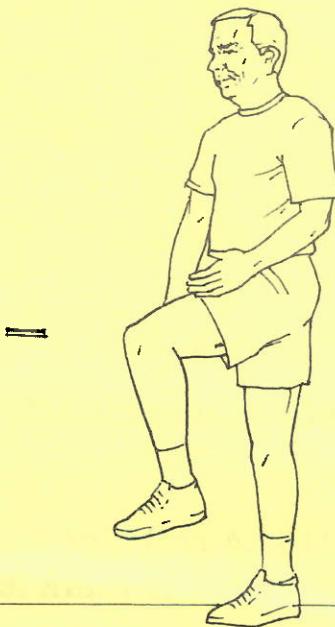
- Have the participant remove any heavy coats or sweaters; shoes may be left on.
- Measure weight to the nearest pound, subtracting 1 to 2 lbs (1/2 to 1 kg) for shoes.

PROCEDURE: (height)

- Position the tape measure on the wall, 20 in. (50.8 cm) up from the floor.
- Have the participant stand against the wall with the back of the head lined up with the tape measure.
- Lay the ruler on top of the participant's head, extending it back to the tape measure.
- The score is the number of inches in height as indicated on the tape measure, plus 20 in. (50.8 cm) (the distance from the floor to the zero mark on the tape).
- If shoes were worn, subtract 1 to 2 in. (2 to 4 cm), using your best judgment.

STATION 3b

2-MINUTE STEP TEST



PURPOSE:

To assess aerobic endurance

EQUIPMENT:

Tally counter, stopwatch, tape measure or 30-in. (76.2-cm) piece of cord, masking tape

PROCEDURE:

- To establish stepping height, use masking tape to mark the midpoint between the participant's kneecap and iliac crest (front protruding hip bone), which you can determine by extending the cord between the middle of the patella and the hip bone, then doubling it over.
- Transfer the masking tape to a nearby wall or doorway to use as a guide for the correct stepping height.
- On the signal "go" the participant should begin stepping in place, raising each knee to the indicated height.
- The score is the number of full steps completed in 2 minutes (counted each time the right knee reaches the target height).

STATION 4

CHAIR SIT-AND-REACH TEST



PURPOSE:

To assess lower-body (primarily hamstring) flexibility

EQUIPMENT:

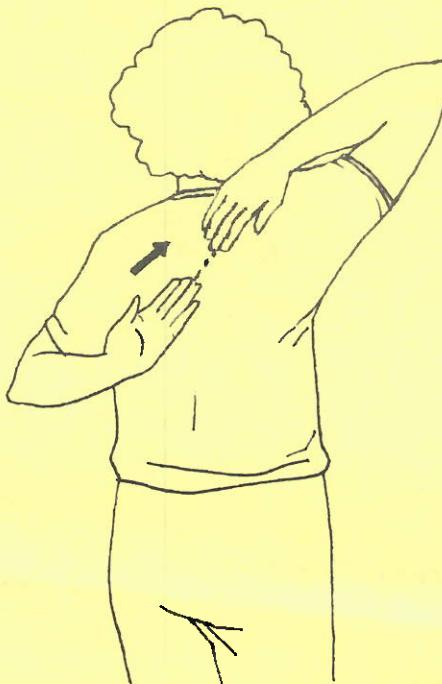
Folding chair with a seat height of 17 in. (43.18 cm) that will not tip forward, 18-in. (45.72-cm) ruler (half a yardstick).

PROCEDURE:

- Have the participant sit on the edge of the chair, with the crease at the top of the leg even with the chair.
- The preferred leg should be extended straight out in front of the hip, with the heel on the floor and the ankle flexed at 90°; the other leg is bent and off to the side, with the foot flat on the floor. (The preferred leg is the one resulting in the better score.)
- With hands overlapping and the middle fingers even, have the participant reach toward the toes as far as possible.
- After two practice trials, administer two test trials and record scores to the nearest half inch. Record a minus (−) score if the reach is short of the toes and a plus (+) score if the reach goes beyond the toes.
- The knee of the extended leg *must* remain straight.

STATION 5

BACK SCRATCH TEST



PURPOSE:

To measure upper-body flexibility

EQUIPMENT:

18-in. (45.72-cm) ruler (half a yardstick)

PROCEDURE:

- Have the participant reach one hand over the shoulder and down the back; the other around the back and up the middle.
- Have the participant practice to determine the preferred position (best hand over the top).
- After two warm-up practice trials, administer two test trials, measuring the distance between the middle fingers.
- Record scores to the nearest half inch (1 cm). Minus scores (–) represent the distance short of touching the middle fingers; plus scores (+) indicate the degree of overlap. Circle the better score.

STATION 6

8-FOOT UP- AND-GO TEST



PURPOSE:

To assess agility and dynamic balance

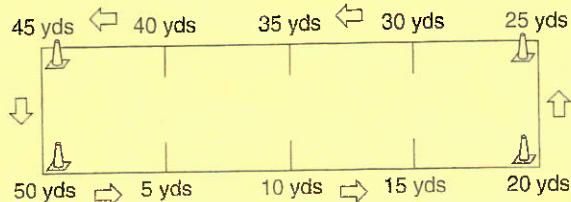
EQUIPMENT:

Folding chair with 17-in. (43.18-cm) seat height, stopwatch, tape measure, and cone (or similar marker)

PROCEDURE:

- Have the participant sit in the middle of the chair, hands on thighs, one foot slightly ahead of the other, body leaning slightly forward.
- On the signal "go" have the participant get up from the chair, walk as quickly as possible around a cone placed 8 feet away, and return to the chair.
- The timer must start the stopwatch exactly on the "go" signal and stop it at the exact time the participant sits in the chair.
- After one practice trial, administer two test trials. The score is the best of two trials, recorded to the nearest tenth of a second.

6-MINUTE WALK TEST



PURPOSE:

To assess aerobic endurance

EQUIPMENT:

Long measuring tape, two stopwatches, four cones, masking tape, popsicle sticks or index cards and pencils (to count laps walked), chairs for waiting participants, name tags

SETUP:

Mark off 50-yard course (20 yards by 5 yards) into 5-yard segments. In metric units, the course is 45.7 meters marked off by 4.57-meter segments.

PROCEDURE:

- Partner-up all participants, using name tags to indicate partner number.
- One partner in each group lines up at the start line for testing. Waiting partners count laps, either by handing the walker a popsicle stick each time a lap is completed or by marking laps on a card.
- Starting (and stopping) times are staggered 10 seconds apart. On signal "go" walkers start one at a time, then walk as fast as they can (within their comfort zone) trying to cover as many yards (laps) as possible in 6 minutes.
- At the end of 6 minutes, stop walkers (one at a time) and have them move to the side. The score is the number of laps walked multiplied by 50 yards (or 45.7 meters), plus the number of extra yards or meters (indicated by the closest 5-yard or 4.57-meter marker).

APPENDIX M

Normal Range of Scores

NORMAL RANGE of Scores for Women*

| Test | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90-94 |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Chair stand (# of stands) | 12-17 | 11-16 | 10-15 | 10-15 | 9-14 | 8-13 | 4-11 |
| Arm curl (# of reps) | 13-19 | 12-18 | 12-17 | 11-17 | 10-16 | 10-15 | 8-13 |
| 6-minute walk** (# of yd) | 545-660 | 500-635 | 480-615 | 435-585 | 385-540 | 340-510 | 275-440 |
| 2-minute step (# of steps) | 75-107 | 73-107 | 68-101 | 68-100 | 60-90 | 55-85 | 44-72 |
| Chair sit-and-reach[†] (in. +/-) | -0.5-+5.0 | -0.5-+4.5 | -1.0-+4.0 | -1.5-+3.5 | -2.0-+3.0 | -2.5-+2.5 | -4.5-+1.0 |
| Back scratch[†] (in. +/-) | -3.0-+1.5 | -3.5-+1.5 | -4.0-+1.0 | -5.0-+0.5 | -5.5-+0.0 | -7.0--1.0 | -8.0--1.0 |
| 8-foot up-and-go (sec) | 6.0-4.4 | 6.4-4.8 | 7.1-4.9 | 7.4-5.2 | 8.7-5.7 | 9.6-6.2 | 11.5-7.3 |

NORMAL RANGE of Scores for Men*

| Test | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90-94 |
|--|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Chair stand (# of stands) | 14-19 | 12-18 | 12-17 | 11-17 | 10-15 | 8-14 | 7-12 |
| Arm curl (# of reps) | 16-22 | 15-21 | 14-21 | 13-19 | 13-19 | 11-17 | 10-14 |
| 6-minute walk** (# of yd) | 610-735 | 560-700 | 545-680 | 470-640 | 445-605 | 380-570 | 305-500 |
| 2-minute step (# of steps) | 87-115 | 86-116 | 80-110 | 73-109 | 71-103 | 59-91 | 52-86 |
| Chair sit-and-reach[†] (in. +/-) | -2.5-+4.0 | -3.0-+3.0 | -3.0-+3.0 | -4.0-+2.0 | -5.5-+1.5 | -5.5-+0.5 | -6.5--0.5 |
| Back scratch[†] (in. +/-) | -6.5-+0.0 | -7.5--1.0 | -8.0--1.0 | -9.0--2.0 | -9.5--2.0 | -9.5--3.0 | -10.5--4.0 |
| 8-foot up-and-go (sec) | 5.6-3.8 | 5.9-4.3 | 6.2-4.4 | 7.2-4.6 | 7.6-5.2 | 8.9-5.5 | 10.0-6.2 |

* Normal range of scores is defined as the middle 50% of each age group (between the 25th and 75th percentiles). Scores above the range would be considered above normal for the age group, and those below the range would be considered below normal.

** Scores are rounded to the nearest 5 yd.

† Scores are rounded to the nearest half inch.

APPENDIX N

Functional Fitness Standards for Older Adults

| Test | AGE GROUPS | | | | | | |
|-----------------------------------|------------|-------|-------|-------|-------|-------|-------|
| | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90-94 |
| Chair stand (# in 30 sec) | | | | | | | |
| Women | 15 | 15 | 14 | 13 | 12 | 11 | 9 |
| Men | 17 | 16 | 15 | 14 | 13 | 11 | 9 |
| Arm curl (# in 30 sec) | | | | | | | |
| Women | 17 | 17 | 16 | 15 | 14 | 13 | 11 |
| Men | 19 | 18 | 17 | 16 | 15 | 13 | 11 |
| 6-minute walk (# of yd) | | | | | | | |
| Women | 625 | 605 | 580 | 550 | 510 | 460 | 400 |
| Men | 680 | 650 | 620 | 580 | 530 | 470 | 400 |
| 2-minute step (# of steps) | | | | | | | |
| Women | 97 | 93 | 89 | 84 | 78 | 70 | 60 |
| Men | 106 | 101 | 95 | 88 | 80 | 71 | 60 |
| 8-foot up-and-go (sec) | | | | | | | |
| Women | 5.0 | 5.3 | 5.6 | 6.0 | 6.5 | 7.1 | 8.0 |
| Men | 4.8 | 5.1 | 5.5 | 5.9 | 6.4 | 7.1 | 8.0 |

The functional fitness standards for each age group are the fitness scores needed to maintain functional mobility and physical fitness until late in life despite normal age-related declines, as described in previously published research (Rikli & Jones, 2012).

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76 yards per lap
456