



















Materials

Table 1 shows the materials needed to perform the six tests for the assessment of balance (i.e., one-legged balance test), speed (i.e., 20 m linear sprint test), proxies of upper (i.e., ball push test), and lower limbs muscle power (i.e., standing long jump test), change-of-direction speed (i.e., star run test), and cardiorespiratory endurance (i.e., 6 min run test).

Table 1 Materials required for the EMOTIKON test battery.

Balance	Speed	Proxy of upper limbs muscle power	Proxy of lower limbs muscle power	Change-of-direction speed	Cardiorespiratory endurance
One-legged balance test	20 m linear sprint test	Ball push test	Standing long jump test	Star run test	6 min run test
	   4 x 	   1kg	 	   5 x 	   6 x 

1. One-legged balance test

Aim:

- assessment of static balance with eyes closed

Material:

- stopwatch

General information:

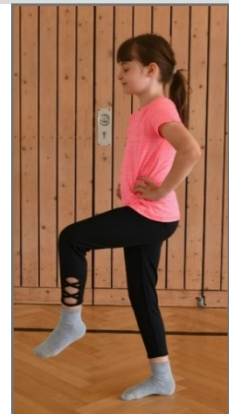
- test is performed without shoes
- the instructor demonstrates the test prior to test performance
- two participants do the test simultaneously
- if standing time is shorter than 5 seconds, a second test trial has to be conducted

Dependent variable:

- standing time (s) - to the nearest one second with a maximum of 60 seconds

Test performance:

- participant stands on the preferred leg determined following the Lateral Preference Inventory for footedness¹. The preferred leg is the leg on which the participant stands when kicking a ball
- the moving leg is flexed to 90 degrees in the knee
- hands are akimbo

**Test termination:**

- the foot of the moving leg touches the ground
- participant moves the supporting foot from the initial test position
- participant opens the eyes
- hands leave hips

¹ Coren S (1993) The lateral preference inventory for measurement of handedness, footedness, eyedness, and earedness: Norms for young adults. Bull Psychon Soc 31:1–3. <https://doi.org/10.3758/BF03334122>

2. 20-m linear sprint test

Aim:

- assessment of speed

Material:

- stopwatch, measuring tape, tape, 4 pylons

General information:

- starting line and finish line should be marked using a pylon and tape
- two test trials

Dependent variable:

- time for test completion (s) - to the nearest 1/10 second
- best test trial in terms of the time until test completion

Test performance:

- after an acoustic signal, the participant has to sprint as fast as possible over a distance of 20-m



Test termination:

- false (early) start
- participant stops before the finish line

3. Ball push test

Aim:

- assessment of a proxy of upper limbs muscle power

Material:

- 1-kg medicine ball, measuring tape, tape

General information:

- starting line should be marked using the tape
- two test trials

Dependent variable:

- pushing distance (m) - to the nearest ten centimeters
- best test trial in terms of the longest pushing distance

Test performance:

- from a standing position, the participant has to push the ball as far as possible starting in front of the chest
- the participant has to push the ball with both hands

**Test termination:**

- participant pushes the ball with one hand/arm only
- participant steps over the starting line with his/her feet

4. Standing long jump test

Aim:

- assessment of a proxy of lower limbs muscle power

Material:

- measuring tape, tape

General information:

- starting line should be marked using the tape
- two test trials

Dependent variable:

- jump distance between start line and heel of the posterior foot (cm) - to the nearest one centimeter
- best test trial in terms of the longest jump distance

Test performance:

- the participant has to jump as far as possible from a frontal position
- arm swing prior and during the jump is allowed
- the participant has to land on both feet



Test termination:

- hands touch the floor after landing

5. Star run test

Aim:

- assessment of change-of-direction speed

Material:

- 5 pylons, measuring tape, tape, stopwatch

General information:

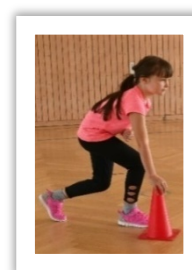
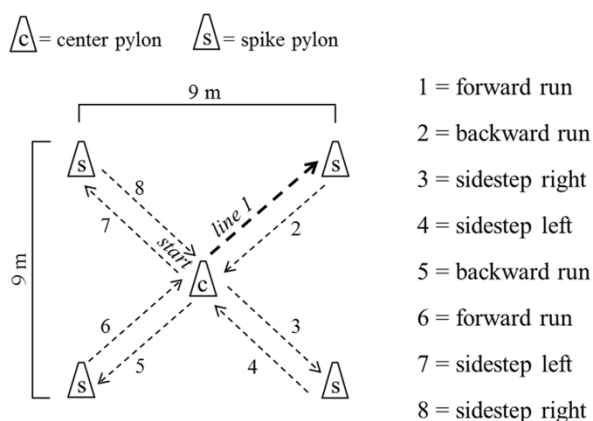
- place the pylons according to the figure below
- two test trials

Dependent variable:

- time for test completion (s) - to the nearest 1/10 second
- best test trial in terms of time until test completion

Test performance:

- participant starts at pylon „c” without an acoustic signal
- participant has to complete the test with different running techniques (i.e., running forwards, running backwards, sidesteps) as quickly as possible according to the figure below
- each pylon within the test must be touched with the hand



Test termination:

- wrong running technique
- no touching of the pylons

6. 6 min run test

Aim:

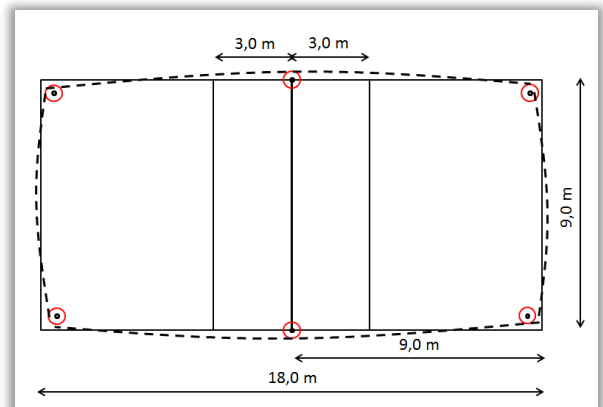
- assessment of cardiorespiratory endurance

Material:

- stopwatch, 6 pylons, measuring tape, tape

General information:

- mark the corners of a volleyball field (18 m x 9 m)
- one test trial



Dependent variable:

- maximal distance covered (m) - to the nearest nine meter

Test performance:

- after an acoustic signal, the participant has to run the furthest distance during the six minutes test time around a volleyball field at a self-paced velocity
- if the participant is between two pylons after the 6 minutes, the individual it is allowed to run to the next pylon
- the test instructor provides split time every minute



Test termination:

- participant does not run around the volleyball field (pylons)

In 2016, the assessment of flexibility (i.e., stand and reach test) was replaced through the one-legged balance test. However, some schools still and additionally perform the stand and reach test.

7. Stand and reach test

Aim:

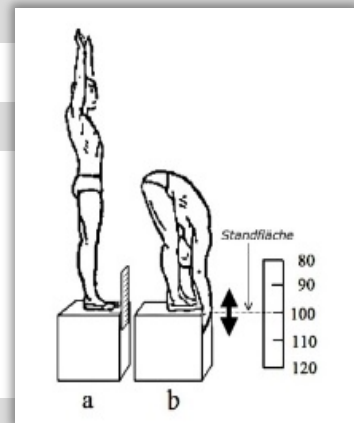
- assessment of flexibility

Material:

- measuring tape, box

General information:

- a centimeter-scale is fixed on the box
- 100 cm correspond to the edge of the box
- two test trials

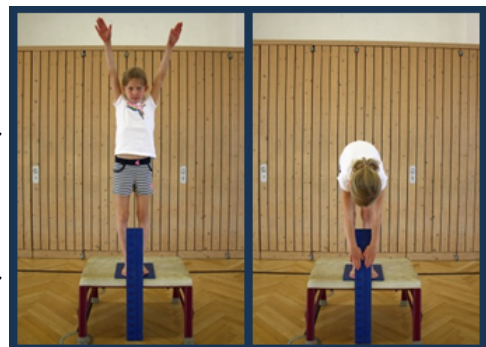


Dependent variable:

- centimeters reached on the scale (cm) - to the nearest one centimeter
- best test trial in terms of the centimeters reached on the scale

Test performance:

- participant stands barefoot with feet together on the edge of a box
- participant holds his arms stretched out and shoulder wide above his head
- while exhaling, the upper body is bent forward with stretched legs and the fingertips brought down as far as possible along the centimeter-scale



Test termination:

- knees are flexed while the upper body is bent forward