

20m Shuttle Run Ramp Test (Beep Test)

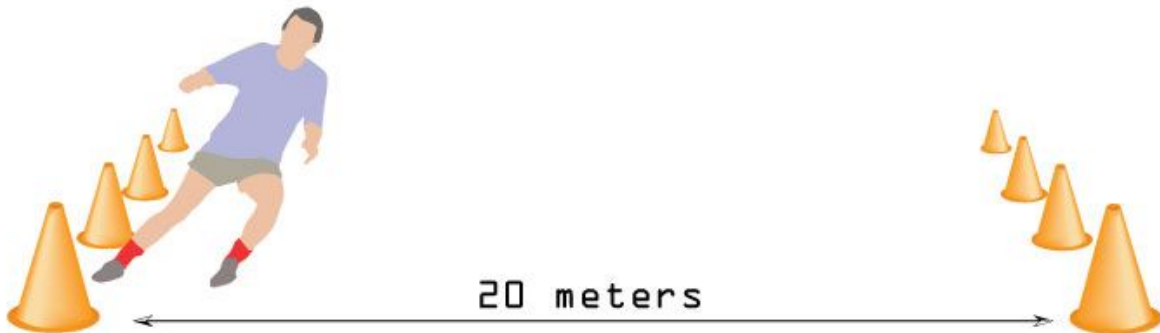
Equipment Requirement

PNOE unit, audio track, bluetooth speaker, 20m flat non-slippery surface, >20m tape measure, two cones, arm strap for phone (for the customer to ensure connection between phone and PNOE device is maintained during the test. The audio track is available in the Science Room.

Test Description

The Beep Test is performed over a distance of 20 meters. This distance is marked out with two cones or two lines (e.g. marked with chalk or tape) which are placed exactly 20 meters apart.

To start, the participant positions themselves adjacent to one of the cones. The participant then starts on the audio command and must touch the opposite cone (or place any part of a foot on the marked line), keeping in tempo with the beeps. If they arrive early, they must wait for the beep before continuing to the next cone.



<https://www.youtube.com/watch?v=aftiZ6JDCGU>

There are 21-levels on the full beep test and each level has a set amount of stages to complete. The higher the level the greater the number of stages to complete e.g. Level -1 has 7 stages, level -11 has 12 stages and the final level -21 has 16 stages. Each level goes for approximately 1-minute. Each increase in level is accompanied by an increase in the beep tempo (beeps get closer together). The test starts at 8.5 km/hr (level-1) and increases by 0.5km/hr at each level. There is a multi-beep to mark changes in levels. See table below for stages and speeds of each level.

The tester should allow the customer to view the above video of the test before their test and be able to practice using the audio track until confident with the procedure prior to their actual test.

A three minute warm up should be completed prior to the test by completing the 20m shuttle at a tempo that results in a heart rate between 100-110 bpm.

If the participant is unable to get to the next cone before the scheduled beep, the test continues as long as the participant is successful in playing "catch up" and can reach the next cone before the next beep. However, if the participant fails to reach the cones on two consecutive beeps, the test ends. The participant does not have to finish a level once started. At the top end, we are looking for a RER >1.15 and a breathing frequency of >49 breaths/minute. This is a maximum effort test, so encourage the participant to continue to a

maximum effort (10/10 RPE). After they have reached their highest effort and stop, they must remain motionless for 2 minutes (inactive recovery) before stopping the test.

Level	Stages	Speed (kph)
1	7	8.5
2	8	9
3	8	9.5
4	9	10
5	9	10.5
6	10	11
7	10	11.5
8	11	12
9	11	12.5
10	11	13
11	12	13.5
12	12	14
13	13	14.5
14	13	15
15	13	15.5
16	14	16
17	14	16.5
18	15	17
19	15	17.5
20	16	18
21	16	18.5

Considerations

This test is not recommended for older deconditioned customers or those with issues with acceleration/deceleration or changes of direction (e.g. knee instability). You should consider the mCAFT step test for these clients.