

VENTURA COUNTY FIRE DEPARTMENT



20 Meter Multistage Fitness Test (Beep Test) Instructions

20 Meter Multistage Fitness Test Instructions

The 20 meter multistage fitness test (MSFT) is a commonly used maximal running aerobic/anaerobic work capacity test. It is also known as the 20 meter shuttle run test, beep or bleep test among other names.

Equipment required: Flat, non-slip surface, marking cones, 20 meter measuring tape, beep test audio, music player, recording sheets.

- **Procedure:** This test involves continuous running between two lines 20 meters apart in time to recorded beeps. For this reason, the test is also often called the “beep” or “bleep” test. The subjects stand behind one of the lines facing the second line, and begin running when instructed by the recording. The speed at the start is quite slow. The subject continues running between the two lines, turning when signaled by the recorded beeps. After about one minute, a sound indicates an increase in speed, and the beeps will be closer together. This continues each minute (level). If the line is reached before the beep sounds, the subject must wait until the beep sounds before continuing. If the line is not reached before the beep sounds, the subject is given a warning and must continue to run to the line, then turn and try to catch up with the pace within two more “beeps”. The test is stopped if the subject fails to reach the line (within 2 meters) for two consecutive ends after a warning.



- **Scoring:** The individual's score is the level and number of shuttles (20 meters) reached before they were unable to keep up with the recording. Record the last level completed (not necessarily the level stopped at).
- This level score can be converted to a VO₂max equivalent score using the Beep test calculator.



20 Meter Beep Test Recording Sheet

Level 1	1 2 3 4 5 6 7
Level 2	1 2 3 4 5 6 7 8
Level 3	1 2 3 4 5 6 7 8
Level 4	1 2 3 4 5 6 7 8 9
Level 5	1 2 3 4 5 6 7 8 9
Level 6	1 2 3 4 5 6 7 8 9 10
Level 7	1 2 3 4 5 6 7 8 9 10
Level 8	1 2 3 4 5 6 7 8 9 10 11
Level 9	1 2 3 4 5 6 7 8 9 10 11
Level 10	1 2 3 4 5 6 7 8 9 10 11
Level 11	1 2 3 4 5 6 7 8 9 10 11 12
Level 12	1 2 3 4 5 6 7 8 9 10 11 12
Level 13	1 2 3 4 5 6 7 8 9 10 11 12 13
Level 14	1 2 3 4 5 6 7 8 9 10 11 12 13
Level 15	1 2 3 4 5 6 7 8 9 10 11 12 13
Level 16	1 2 3 4 5 6 7 8 9 10 11 12 13
Level 17	1 2 3 4 5 6 7 8 9 10 11 12 13
Level 18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Level 19	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Level 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Level 21	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Every time you successfully cover the 20 meter course within the time limit you will place a line through the stage of the beep test.

If you fail to cross the 2 meter line in time, you then place a circle around the stage. You still must touch the 20 meter line and sprint back to the other side to continue the test. If you make it to the 2 meter line before the "beep," you get a line across the stage and continue the test.

If you fail to reach the 2 meter line on 2 consecutive stages, your test is done. Record the last level and stage that you completed.

"You need to successfully reach Level 9, Stage 6 in order to pass the physical ability test"



BEEP TEST SCORE ESTIMATED Vo2MAX

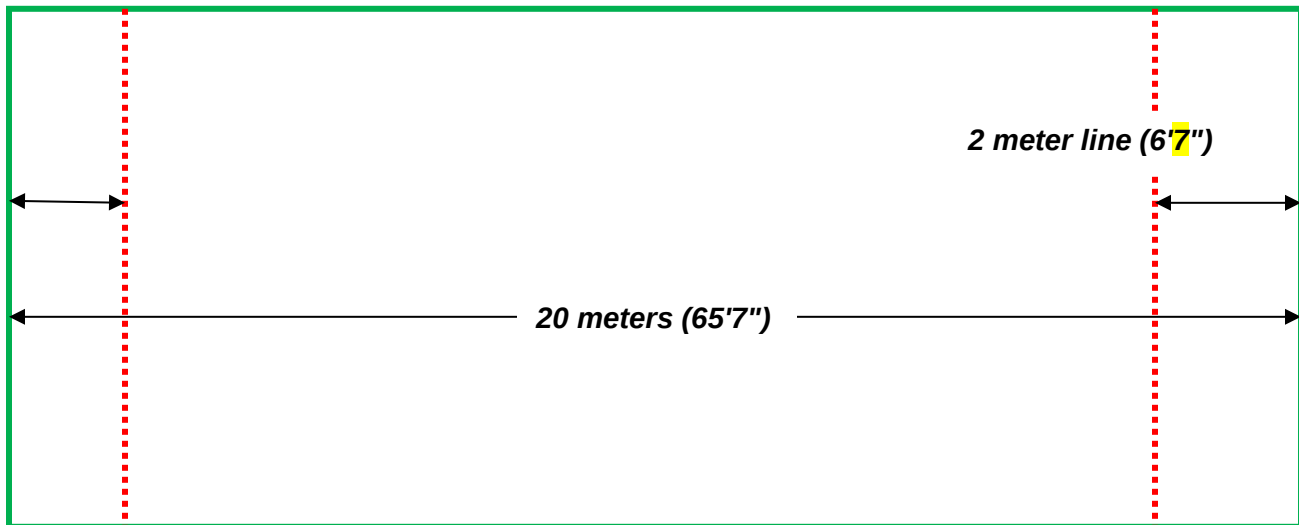
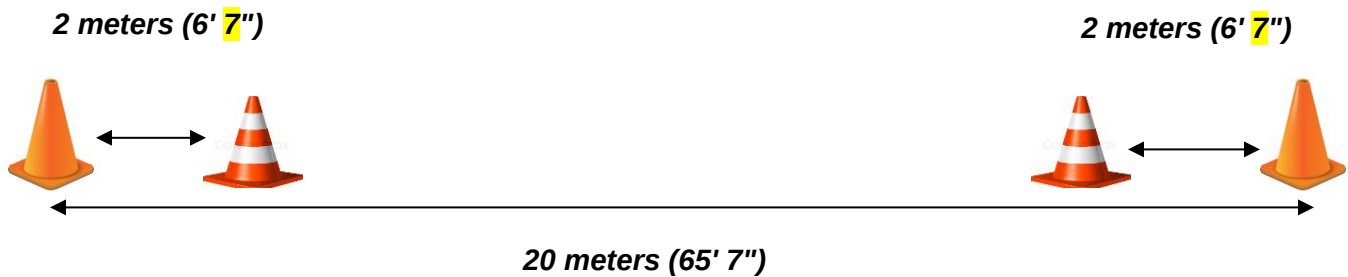
	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8	Stage 9	Stage 10	Stage 11	Stage 12	Stage 13	Stage 14	Stage 15	Stage 16
Level 1	16.1	16.6	17.1	17.5	18.0	18.5	18.9									
Level 2	19.1	20.0	20.4	20.9	21.3	21.8	22.2	22.6								
Level 3	23.0	23.4	23.8	24.2	24.7	25.1	25.5	25.9								
Level 4	26.4	26.8	27.2	27.6	28.0	28.4	28.8	29.2	29.6							
Level 5	29.9	30.3	30.6	31.0	31.4	31.8	32.1	32.5	32.9	33.3						
Level 6	33.3	33.7	34	34.4	34.8	35.1	35.5	35.8	36.2	36.6						
Level 7	36.8	37.1	37.5	37.8	38.1	38.5	38.8	39.2	39.5	39.9						
Level 8	40.2	40.5	40.9	41.2	41.5	41.9	42.2	42.5	42.9	43.2	43.5					
Level 9	43.7	44.0	44.3	44.6	44.9	45.2	45.6	45.9	46.2	46.5	46.8					
Level 10	47.1	47.7	48.0	48.3	48.6	48.9	49.2	49.5	49.9	50.2	50.5					
Level 11	50.6	50.8	51.1	51.4	51.7	52.0	52.3	52.6	52.9	53.9	53.5	53.8				
Level 12	54.0	54.3	54.6	54.9	55.1	55.4	55.7	56.0	56.3	56.6	56.8	57.1				
Level 13	57.5	57.7	58.0	58.3	58.6	58.8	59.1	59.4	59.6	59.9	60.2	60.5	60.7			
Level 14	60.9	61.2	61.4	61.7	62.0	62.2	62.5	62.8	63.0	63.3	63.6	63.8	64.1			
Level 15	64.4	64.5	64.9	65.1	65.4	65.6	65.9	66.2	66.4	66.7	66.9	67.2	67.4			
Level 16	67.8	68.1	68.3	68.6	69.1	69.3	69.5	69.8	70.0	70.3	70.5	70.8	71.0			
Level 17	71.3	71.5	71.7	72.0	72.2	72.5	72.7	72.9	73.2	73.4	73.7	73.9	74.2	74.4		
Level 18	74.4	74.7	75.2	75.4	75.6	75.9	76.1	76.4	76.6	76.8	77.1	77.3	77.5	77.8		
Level 19	78.2	78.6	78.8	79.1	79.3	79.5	79.8	80	80.2	80.4	80.7	80.9	81.1	81.3		
Level 20	81.6	81.8	82.1	82.3	82.5	82.7	82.9	83.2	83.4	83.6	83.8	84.1	84.3	84.5	48.7	84.9
Level 21	85.1	85.3	85.5	85.7	85.9	86.2	86.4	86.6	86.8	87	87.2	87.4	87.7	87.9	88.1	88.3

Additional resources:

1. <http://www.thebeepetest.com/index.html>
2. Apple & Android apps: Beep Test from Topendsports
3. Beep Test Video: <https://vimeo.com/153430634>



Beep Test Layout



The test is stopped if the subject fails to reach the line (within 2 meters) for two consecutive runs.

Recommended surface: Flat surface / non slip that is free of any obstacles:

- Indoor / outdoor basketball court
- Tennis court
- Turf field
- Parking lot