

Harvard Step Test

Patient's name: Jane Carter Age: 27 Gender: Female
Date: 1/6/25 Examiner: Dr. Michael Davis

What you need

- A step platform, around 20 inches high. Ensure it is sturdy and non-slippery.
- For the modified version for women, reduce the height to 16 inches.
- A stopwatch
- A nearby chair or bench
- A metronome or audio for setting a cadence
- A fitness tracker/heartbeat monitor (optional)
- Comfortable shoes and clothing for the test-taker

Test procedure

1. Set up the step near the chair or bench. If you do not have a step platform, you can use the first step on a staircase or a small tool, as long as it is strong, sturdy, and stable enough.
2. Explain the test; for five minutes, the test-taker will step up and down on the platform at a pace of 30 steps per minute (3 minute test for 24 steps/minute for the modified version for women). They must start at your "Go" signal and only stop when you say "Stop;" they must try to finish it even if they get tired.
3. Once the test-taker understands, commence the test and start the stopwatch immediately. Provide encouragement so that the test-taker continues for the whole five minutes or as long as possible.
4. At the end of five minutes, signal for the test-taker to stop, and immediately sit them down. If they can not finish the test, immediately stop the stopwatch. Even if the test ends prematurely, you may still use this recorded time for calculating the fitness index.
5. Using the fitness tracker, heartbeat monitor, or a manual method, measure and record their heart rate during the following periods:
 - Between 1 and 1.5 minutes of recovery after finishing the test
 - Between 2 and 2.5 minutes of recovery after finishing the test
 - Between 3 and 3.5 minutes of recovery after finishing the test
6. Calculate the test-taker's fitness index using the following formula:
fitness index = $(100 \text{ duration in seconds}) / (2 \text{ sum of heart rates})$



Results and interpretation		
Heart rate at 1-1.5 mins of recovery: 110 bpm		
Heart rate at 2-2.5 mins of recovery: 100 bpm		
Heart rate at 3-3.5 mins of recovery: 90 bpm		
Calculate the results here		
Fitness index = (100 x	180 secs) / (2 x 300)
Fitness index = (18000 secs) / (600)
Fitness index = 30		

Scoring ranges

You may use this data or create your own ranges for your specific population/demographic group.

The table below contains the scoring for different fitness index ranges for adult men during World War II when the test was first created.

Fitness index range	Score
> 96	Excellent
83 - 96	Good
68 - 82	Average
54 - 67	Low
< 54	Poor

Additional notes

Jane reported minor shortness of breath and had difficulty keeping pace by the end of 2 minutes. She mentioned a sedentary lifestyle and expressed interest in starting a low-impact workout routine. Recommended a follow-up test in 8 weeks after a consistent cardiovascular exercise program.

References

Brouha, L. (1943). The Step Test: A simple method for measuring physical fitness for muscular work in young men. *Research Quarterly*, 13, 31–36.

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