



LABORATORY 3.1D

Name _____ Date _____

Instructor _____ Section _____

Measuring Cardiorespiratory Fitness: Step Test

To complete this test, you need a step or bench that is approximately 18 inches high, such as a locker room bench or a sturdy chair. The step test lasts for 3 minutes, and then heart rate is assessed in the 3.5 minutes following the test. You will need a metronome to help you maintain the step rate.

To perform this test, you will step up and down at a rate of 30 complete steps per minute. If you set the metronome to 60 tones per minute, you will step with each tone, making a complete step (up, up, down, down) every 2 seconds. Note that it is important that you straighten your knees during the “up” phase of the test. After you complete the test, sit quietly in a chair or on the step bench, and take your heart rate for 30 seconds at the following times:

- 1 to 1.5 minutes post exercise
- 2 to 2.5 minutes post exercise
- 3 to 3.5 minutes post exercise

Maintaining the 30-step-per-minute cadence and accurately taking your heart rate are very important for getting a good estimate from the step test. To determine your fitness category, add the three 30-second heart rates obtained during the period after exercise.

Record your heart rates below, and use Table 3.8 on this page to determine your fitness category.

Test date: _____

Recovery heart rate post exercise (bpm)

1–1.5 min: _____ Total (recovery index): _____

2–2.5 min: _____ Fitness category: _____

3–3.5 min: _____



Throughout the test, make sure to maintain correct form with your back straight.

Scan to view a demonstration video of the step test. ▶



1. Is your fitness classification what you expected based on your current level of activity? If not, why do you think it was higher or lower than expected?
2. Write fitness goals for maintaining or improving your cardiorespiratory endurance.

TABLE 3.8 Norms for Cardiorespiratory Fitness Using the Sum of Three Recovery Heart Rates Obtained Following the Step Test

3-Minute Step Test Recovery Index						
	Superior	Excellent	Good	Average	Poor	Very Poor
Men	95–117	118–132	133–147	148–165	166–192	193–217
Women	95–120	121–135	136–153	154–174	175–204	205–233

Fitness categories are for college-aged men and women (aged 18–25 years) at the University of Florida who performed the test on an 18-inch bench.

To submit the completed lab, save the form to your computer and email it to your instructor or upload it to their digital dropbox as directed.