

Supplies

- 12-in Step
- Stop Watch
- Stethoscope
- Metronome (96 bpm cadence)

Setup

Setup each station with one step, one stop watch, one stethoscope, one metronome set to 96 bpm cadence and one chair for the participant. Privacy screens are not generally provided for step test stations. Ensure you are setup on a smooth, flat surface on which the step does not slip when utilized.

Definition & Purpose

The 3-minute step test is used to measure cardiovascular fitness. Cardiovascular Fitness is the ability of the heart and lungs to efficiently supply oxygen and nutrients to working muscles, allowing individuals to do physical activity over a long period of time. Assessment is based on heart rate recovery (bpm) and results are provided relevant to participant age and gender.

Special Considerations

Attire: Participants should wear comfortable attire and athletic or other flat shoes to participate. Participants must wear shoes for the test and are not allowed to participate if wearing high heels.

Caffeine & Nicotine: Caffeine and nicotine can affect heart rate. If an individual has consumed caffeine or used nicotine products prior to the test their results may be impacted. Please educate participants on this.

Step Size: The step test size (12 inches) is the same for all individuals.

Fasting: Individuals should not fast prior to the step test. If individuals have fasted, encourage them to eat a nutritional snack prior to participating in the step test.

Participation: Individuals with disabilities or health concerns should not participate in the step test. Individuals with a blood pressure above 130/80 mmHg should not participate in the step test. All participants must have a blood pressure taken prior to participating in the step test. Participants must provide written consent to the test prior to participation.

Measurement

- Provide an overview of the step test and demonstration for the participant.
 - Demonstrate stepping on the step up and down, alternating left and right steps (up, up, down down/left, right, left right) to the cadence of 96 bpm, matching the metronomes pace.
 - Instruct the participant that they will need to step for 3 minutes and then immediately sit in the chair.
 - Let the participant know that you will be taking their heart rate for 1 minute while they are seated, after stepping.
- Set the metronome to 96 bpm.
- Allow the participant to practice stepping for 15 seconds.
- Once the participant is comfortable tell them to begin and start the stop watch.
 - Remind the participant to keep pace with the metronome.
 - Participants must keep to the beat, completing 24 step cycles per minute. If the participant cannot keep the pace, stop the test.
 - Assess the participant throughout the test and stop the test if it is unsafe to continue, for example if the participant is fatigued, light-headed, dizzy, or unstable, etc.).
- The participant should continue stepping for 3 minutes.
- Upon completion of the 3-minute test, instruct the participant to take a seat in the chair.
- Five seconds immediately following the test, count the participant's heart rate by placing a stethoscope on the participant's chest or back. Count the heart rate for one full minute.
- Record the recovery heart rate on the participant's consent form, handout, and/or aggregate form.

Step Test Screening

Clinical Procedure

Interpreting Results

Age/ Result	Excellent		Good		Above Average		Average		Below Average		Poor		Very Poor	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
18-25	50-77	52-82	78-85	83-94	86-93	95-102	94-100	103-111	101-108	112-120	109-121	121-132	122-157	133-169
26-35	51-77	58-82	78-86	83-93	87-94	94-102	95-102	103-111	103-111	112-120	112-123	121-131	124-161	132-171
36-45	49-77	51-86	78-88	87-97	89-95	98-105	96-106	106-113	107-114	114-121	115-126	122-134	127-163	135-169
46-55	56-84	63-92	85-93	93-102	94-101	103-111	102-111	112-118	112-119	119-124	120-128	125-134	129-159	135-171
56-65	60-81	60-94	82-95	95-104	96-101	105-111	102-109	112-118	110-117	119-127	118-129	128-137	130-154	138-174
66+	59-83	70-93	84-92	94-102	93-102	103-113	103-111	114-121	112-119	122-126	120-127	127-133	128-151	134-155

The 1-minute post-exercise heart rate is the participant's score for the test. The score determines a fitness rating ranging from excellent to very poor.

Source: Adapted from YMCA Fitness Testing and Assessment Manual, ACSM's Health/Fitness Facility Standards and Guidelines.

Participant Experience

Ensure participants feel welcomed, encouraged, and educated by following the steps below.

Welcome

- Welcome the participant and introduce yourself
- Explain the 3-minute step test and demonstrate the test for the participant

Ask don't Tell

- Ask the participant if they are ready prior to starting the test
- Ask the participant to tell you if they start feeling fatigued, light-headed, dizzy, or unbalanced
- Kindly remind the participant to keep pace with the metronome

Watch for Signs

- If a participant seems unwell, stop the test
 - Participants with health concerns should not participate
 - Participants with blood pressure over 130/80 mmHg should not participate

Guide to the Next Station/Service

- Guide the participant to the next station/service ensuring they know what is being offered next and where to go to participate in the service

Important Tips

- Provide encouragement throughout the test to help the participants keep going.
- Ensure participants are dressed appropriately to complete the test.
- Count the participants heart beat for a full minute after the test. Do not count for less time and multiply to get to one minute. It is important to count for the entire minute, as that is the true recovery heartrate.

