

Springdale Fire Department
Policy & Procedures Manual
Volume 1 – Administration
Section 105 – Health and Wellness
105.1.1 – Procedure for Conducting Fitness Appraisals

Procedure For Body Composition (Level I)

1. Using the right side of the body. Be sure of each anatomical site.
2. Pinch from the top – measure from the bottom.
3. Identify the site, push in, gather the fold, separate the tissue.
4. Position caliper perpendicular to fold, just below fingers. Go halfway into the fold.
5. Measure each site until you get two readings that agree.
6. Sum the sites and use the chart to determine percent body fat.

Order and Location of Skinfold Measurements: (MALE)

1. CHEST – diagonal fold on the lateral border of the pectoralis major muscle, halfway between the nipple and shoulder crease. The right arm should remain down at the side.
2. ABDOMEN – vertical fold adjacent to the umbilicus
3. THIGH – vertical fold at the middle and front of thigh; halfway between the greater trochanter and top of patella. The weight should be primarily on the left leg, with right knee slightly flexed.

Order and Location of Skinfold Measurements: (FEMALE)

1. TRICEPS – vertical fold over the belly of the triceps halfway between the acromion and olecranon side.
2. SUPRAILIAC – diagonal fold just above the iliac crest; slightly anterior to the middle of the side.
3. THIGH - vertical fold at the middle and front of thigh; halfway between the greater trochanter and top of patella. The weight should be primarily on the left leg, with right knee slightly flexed.

Procedure For 3 Minute Step Test (Level II)

Equipment:

1. 12” bench for stepping
2. Stopwatch for timing test and counting heart rate
3. Metronome to help maintain cadence in proper stepping rate

Procedure:

1. The step test should be administered before any other test that would elevate heart rate.
2. Personnel should step up and down (up-up-down-down) with cadence with the metronome (metronome setting of 96) for 3 minutes.
3. Immediately after the three minutes of stepping, personnel should sit down. A 60 second heart rate is taken starting within five seconds after the completion of stepping.
4. Score is total 60 second pulse rate following the 3 minutes of stepping.

Protocol for Cardiorespiratory Fitness Testing (Level III)

Equipment:

1. Stopwatch
2. Indoor or Outdoor track measured to 1.5 miles
3. Testing forms

Procedure for 1.5 Mile Run Test:

1. Personnel should warm up and stretch thoroughly prior to test.
2. Personnel then runs/walks 1.5 miles as fast as possible. If using a 440 yard track is used, 6 laps must be completed using the inside most lanes.
3. During the administration of the test, personnel can be informed of their lap times. Finish times should be called out and recorded.
4. Upon completion of the test, a mandatory cool down period is enforced. Personnel should walk slowly for about 5 minutes after the run.

Protocol for Absolute Strength Testing (Level III)

Procedures Using Smith Machine:

1. Start with hands slightly wider than shoulder width apart and with personnel's elbows at 90 degrees
Starting weight- 2/3 body weight if unknown
2. Instruct personnel to press weight once for an easy warm up.
3. Progressively increase the resistance until weight can no longer be lifted.
4. The score for this test is the maximal number of pounds lifted in one rep.
5. Divide the number of pounds pressed by body weight to obtain ratio
6. Use the norms to determine fitness category

Protocol For Muscular Endurance Testing (Level III)

Sit Up Test:

1. Personnel start by lying on the back, knees bent, heels flat on the floor, with hands cupped behind ears to avoid pulling on the head with hands.
2. A Fitness Coordinator will hold feet down firmly.
3. Personnel will then perform as many correct sit ups as possible in one minute.
4. In the up position, personnel should touch elbows to knees and the return until the shoulder blades touch the floor.
5. Score is the total number of correct sit ups. Any resting shall be done in the up position

Push Up Test:

1. The hands are placed slightly wider than shoulder width apart, with fingers pointing forward. A Fitness Coordinator will place one fist on the floor below the personnel's chest. **If a male is testing a female, a 3 inch sponge should be placed under the sternum to substitute for the fist.**
2. Starting in the up position (elbows extended), personnel must keep back straight at all times and lower body to the floor until chest touches the administrator's fist. Personnel the return to the up position. This is one repetition.
3. Resting should be done only in the up position. Both hands must remain in contact with the floor at all times.

4. The total number of correct push ups in one minute is recorded as the score.

Protocol For Flexibility Testing (Level III)

Sit and Reach Test:

1. Personnel should warm up
2. The shoes must be removed
3. The feet are placed squarely against the box with feet no wider than eight inches apart. Toes are pointed directly toward ceiling.
4. The knees remain extended throughout the test
5. The beginning mark is set at 15" on the box
6. Personnel should then lean forward without lunging and reach as far as possible. The hands must stay together and even and the stretch must be held for one second. Neck remains in the neutral position.
7. Record the reach to the nearest ¼ inch.
8. Three attempts are allowed; the best of three attempts is recorded.