

# Physical Ability Testing Procedures & Protocols

## PHYSICAL ABILITY TESTING

Law enforcement officers have unique job functions, some of which can be physically demanding and dangerous. Validation studies performed on first responder agencies over the past three decades have consistently shown that successful completion of certain physical tasks is rated as critical to job performance, regardless of how frequently they are performed. An officer's ability to successfully perform these critical job-related tasks is directly related to the individual's current level of physical fitness and can affect personal and public safety. Thus, it is indisputable that physical fitness is job-related for law enforcement officers. Training for critical job-related tasks is often more vigorous and demanding than the day-to-day job functions that the officer faces. The minimum fitness standards identified below are the requisite levels for an officer to effectively learn the frequent and critical job-related tasks. Higher levels of fitness are associated with better performance of critical job-related tasks.

### **Physical Ability Test Preparation**

Whereas many training routines can be used to improve performance in the Physical Ability Test (PAT), participants should keep in mind that physical training is specific. That is, one improves in activities practiced. If one wishes to optimize push-up performance, push-ups should be included in the training program. Many other exercises can also be included to strengthen the chest, shoulders, and arms, but push-ups should be included in the routine. Ideally, muscles and the cardiovascular system should be gradually and progressively trained over several weeks or months to achieve desired fitness gains. Physical adaptations occur gradually in response to regular, consistent overloads, i.e. doing more than your body is accustomed to doing. It is important to bear in mind that every individual adapts at a different rate- a stimulus resulting in an appropriate, moderate overload to one person may be too much or too little for another person. A participant who has been inactive for a significant period of time should plan to take six to twelve weeks to train for the PAT.

The training routine should include exercises to train cardiorespiratory endurance, upper body strength and muscular endurance, abdominal muscular endurance, leg power, and anaerobic power. Strength exercises should be performed about every other day, or three days per week, to allow adequate recovery and positive adaptations to occur. Cardiorespiratory endurance exercises can be performed more often and up to five days per week. Anaerobic (high intensity) training should be done once per week, and can be performed instead of a cardio-respiratory training session. For flexibility enhancement, good back health, and injury prevention, stretching exercises should be performed before and especially after training sessions, as well as on days off.

The PAT is comprised of four tests:

- 1.5-Mile Run
- Push-Ups (One Minute)
- Sit-Ups (One Minute)
- 300-Meter Run

**NOTE: Failure of any component will result in immediate dismissal from the selection process.**

## 1.5-MILE RUN

**Applicant Maximum Time- 15 minutes 20 Seconds**

### Purpose

This test is a measure of cardiorespiratory endurance or aerobic power, which is determined by the body's ability to transport and utilize oxygen to produce energy. This is important for performing tasks involving stamina and endurance (pursuits, searches, prolonged use of force situations, etc.) and for minimizing the risk of cardiovascular health problems. The objective in the 1.5 mile run is to cover the distance as fast as possible.

### Procedures

1. Warm up and stretching shall precede testing. Applicants must warm-up while waiting for assessment.
2. To begin the test applicants will gather at the starting line. At the signal (audible or visual), begin to run as fast as possible until you reach the finish line or complete the correct number of laps.
3. Applicants should not physically touch one another during the run, unless it is to render first aid. If at any time participants run astray of the described course or utilize any external assistance, the test will be terminated and results will not be recorded.
4. Finishing times will be called out in minutes and seconds.
5. Upon completion of the run, applicants must cool down by walking for approximately 5 minutes to prevent venous pooling (i.e., pooling of the blood in the lower extremities which reduces the return of blood to the heart and may cause cardiac arrhythmia).

**Preparation** To prepare for this test, you need to gradually increase your running endurance. The schedule below is a proven, progressive routine. Begin at the level you can accommodate; and if you can advance the schedule on a weekly basis, then proceed to the next level. If you can do the distance in less time, then do so.

Week	Activity	Distance in Miles	Duration in Minutes	Times per Week
1	Walk	1	17 - 20	5
2	Walk	1.5	25 - 29	5
3	Walk	2	32 - 35	5
4	Walk	2	28 - 30	5
5	Walk/Jog	2	27	5
6	Walk/Jog	2	26	5

7	Walk/Jog	2	25	4
8	Walk/Jog	2	24	4
9	Jog	2	23	4
10	Jog	2	22	4
11	Jog	2	21	4
12	Jog	2	20	4

## PUSH-UPS

### Applicant Minimum Repetitions – 18 Push-ups in 1 minute

#### Purpose

This test measures the muscular strength/endurance of the upper body muscles; specifically the anterior deltoid, pectoralis major and triceps used in high intensity self defense and arrest simulation training. This is important for use of force involving pushing motion, breaking one's fall to the ground, use of the baton, etc. The test will count the number of correct push-ups completed in 1 minute.

#### Procedures (refer to Figures 1 – 3)

1. Prior to beginning the test, the applicant will lie face down on the ground, feet together, hands shoulder width apart, and fingers pointed forward. The body will form a straight line from the ankles, through the knees, hips, back, and shoulders to the head.
2. To start the test you will be in the up position where the body forms a straight line from the head to the ankles, arms at soft extension, and feet together. A proctor or partner will place his or her fist under the applicant's chest in the middle of the sternum to verify that the down position has been obtained. If testing a female, a female partner or a 3 inch high sponge will be used in place of the fist. Applicants should warm-up while waiting for assessment.
3. If it is necessary to rest during the test, you may only rest in the up position while maintaining the proper form of a straight line from the head to the ankles, arms at soft extension, and feet together.
4. Breathing during the test should remain as normal as possible by exhaling on the way up and inhaling on the way down. At no time should you hold your breath.
5. A correct push-up will be counted each time the applicant goes from the up position to the down position where the chest touches the fist or sponge and returns to the up position with the arms at soft extension while maintaining proper form. Correct push-ups will be indicated by the partner or proctor announcing the number completed or the proctor will indicate why the repetition should not be counted.
5. If at any time the form described above is broken by raising or piking the buttocks, sagging the midsection of the body, arching the back, lifting a hand or foot, not going all the way down or up, lifting the neck or any other item outside of the form described previously, then the incorrect push-ups will not be counted. If the continual incorrect form is deemed unsafe to your health, the test may be terminated and the total number of correct push-ups will be recorded as the score.
6. Participants who wear glasses should remove them for this event if they do not have a retaining band.



Fig. 1



Fig. 2



Fig. 3

### Preparation

1. Determine the maximum number of correct push ups you can do in one minute.
2. Multiply that number by .75 (75%). Round off the result to the lowest number. This will be the number of repetitions (push-ups) you will do per set.
3. Perform the number of push -ups (correct form) determined in the calculation done in #2 above.
4. Rest no longer than 60 seconds and do another set of repetitions.
5. Repeat #4 and #5 until you have done 3 to 5 sets of repetitions. Even though the last sets may be difficult, maintain proper form. If you have to hesitate longer on the floor on the last sets to get in the full number, then do so but rest no longer than necessary. It is important that you get in all the repetitions.
6. Do this routine every other day. Increase the number of reps per set by 1 or 2 each week and reassess after 2 weeks and repeat with #1.

## SIT-UPS

### Applicant Minimum Repetitions – 27 Sit-ups in 1 minute

#### Purpose

This test measures the muscular endurance of the abdominal muscles. This is important for performing tasks that involve the use of force, and it helps maintain good posture and minimizes lower back problems. This test will be performed on a mat or carpeted surface. The test will count the number of correct sit-ups completed in the 1 minute.

#### Procedures (refer to Figures 4-6)

1. To start the test the applicant will be lying on the ground with their knees bent, feet flat on the floor and hands interlaced and held behind the head. The neck should remain in a neutral position without pulling or yanking on the head with the hands. A proctor or a partner will hold the applicant's feet down firmly with only his or her hands. Applicants should keep loose while waiting for start.
2. The up position is obtained when the elbows touch the knees. The down position is obtained when the shoulder blades touch the floor.

3. If it is necessary to rest during the test, you may only do so in the up position, while maintaining the hands behind the head. Breathing during the test should remain as normal as possible by exhaling on the way up and inhaling on the way down. At no time should you hold your breath. A correct sit-up will be counted each time the up position is met while maintaining proper form. Correct sit-ups will be indicated by a counter verbally announcing the number completed or if not counted, then the counter will indicate why not counted. If you stop for more than 3 seconds and in the down (starting) position, the event will be terminated. Correct performance is important.

4. If at any time the form described above is broken by raising the buttocks, unlocking the hands, not going all the way up, pulling on the head, or any other item outside of the form describe previously, then the incorrect sit-ups will not be counted. If the continual incorrect form is deemed unsafe to your health, then the test may be terminated and the total number of correct sit-ups will be recorded as the score.



Fig. 4



Fig. 5



Fig. 6

### Preparation

1. Determine the number of correct sit-ups you can do in one minute.
2. Multiply that number by .75 (75%). Round off the result to the lowest number. This will be the number of repetitions (sit-ups) you will do per set.
3. Warm up with some light activity of your choice, such as a stationary bike, walking or jogging on the treadmill, light calisthenics, etc.
4. Perform the number of sit-ups (correct form) determined in the calculation done in #2 above.
5. Rest no longer than 60 seconds, and do another set of repetitions.
6. Repeat #4 and #5 until you have done 3 to 5 sets of repetitions. Even though the last sets may be difficult, maintain proper form. If you have to hesitate longer on the floor on the last sets to get in the full number, then do so, but rest no longer than necessary. It is important that you get in all the repetitions.
7. Do this routine every other day. Increase the number of reps per set by 1 or 2 each week and reassess after 2 weeks and repeat with #1.

# 300-METER RUN

**Applicant Maximum Allowed Time – 1 min 8 seconds**

## Purpose

This is a test of anaerobic power, which is important for performing short, intense bursts of effort such as foot pursuits, rescues and use of force situations.

## Procedures

1. Warm up and stretching shall precede testing. Applicants must warm-up while waiting for assessment.
2. To begin the test applicants will gather at the starting line. At the signal (audible or visual), begin to run as fast as possible until you reach the finish line
3. As you cross the finish line, the applicant's time will be recorded in minutes and seconds.
4. If at any time members run astray of the described course or utilize any external assistance or participate in procedures not listed above, the test will be terminated and the results will not be recorded.
5. Applicants should walk for 3 – 5 minutes immediately following test to cool down before proceeding on to the next test. This is an important safety practice.

## Preparation

To prepare for this component, it is a good idea to do interval training. The first step is to time yourself for an all-out effort at 110 yards. This is called your initial time (IT). The second step is to divide your IT by 0.80 to get your training time. Then follow the schedule below

<b>Weeks</b>	<b>Distance</b>	<b>Reps</b>	<b>Training Time</b>	<b>Rest Time</b>	<b>Frequency</b>
1 & 2	110 yards	10	$IT \div 0.80$	2 min.	1/week
3 & 4	110 yards	10	$IT \div 0.80$ minus 2-3 seconds	2 min.	1/week
5 & 6	110 yards	10	$IT \div 0.80$ minus 5-6 seconds	2 min.	1/week
7 & 8	220 yards	8	$IT \div 0.80 \times 2$	2 min.	1/week
9 & 10	220 yards	8	$IT \div 0.80 \times 2$ minus 4 seconds	2 min.	2/week