

Commonwealth of Pennsylvania
Municipal Police Officers' Education & Training Commission

Physical Fitness Test Battery Protocols and Guidelines



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Municipal Police Officers' Education and Training Commission (MPOETC)

Physical Fitness Test Battery Protocols and Guidelines

- 1) Police officers in the Commonwealth of Pennsylvania need to be concerned about physical fitness and health. Physical fitness and health effects:
 - A. Ability of police officers to perform essential functions of the job.
 - B. The risk of an officer using excessive force in certain situations.
 - C. The risks to an officer's health associated with a career in law enforcement.
 - D. Legal considerations related to litigation and court challenges.

- 2) The Fitness Test Batteries required of applicants and cadets measure the following areas of physical conditioning that effect police officers.

A. Sit-ups	Muscular Endurance (abdominal)
B. 300 Meter Run	Anaerobic Power (sprinting ability)
C. One (1) RM Bench Press	Muscular Strength (upper body)
D. Push-ups	Muscular Endurance (upper body)
E. 1.5 Mile Run	Aerobic Capacity (cardiorespiratory)

- 3) MPOETC uses the Cooper Health-Based norms and Cooper Health-Based protocols for assessing and testing cadets' physical fitness levels.

- 4) Based on Title 37 § 203.11 Qualifications, MPOETC requires each applicant to achieve a 30th percentile (Cooper standards) in each listed event of the Fitness Test Battery, in the order indicated, prior to being enrolled in a police academy:
 - A. 300 Meter Run
 - B. One (1) RM Bench Press
 - C. One (1) Minute Sit-Up
 - D. 1.5 Mile Run

If a police academy elects to use the One Minute Push-Up physical fitness test, this test must be done after the completion of the physical fitness test for entrance into the academy, according to Title 37 § 203.11 Qualifications.

- 5) MPOETC requires each enrolled cadet to achieve a 50th percentile (Cooper standards) in each listed event of the Final Physical Fitness Test, in the order indicated, prior to graduating from a police academy:
 - A. One (1) Minute Sit-Up
 - B. 300 Meter Run
 - C. One (1) Minute Push-up
 - D. 1.5 Mile Run



- 6) The fitness test battery is designed to measure the cumulative effect on the cadet. Therefore, the complete test battery must be given at one time, on a single day, in the order outlined within established test and safety protocols.
- 7) Due to the cumulative nature of the fitness battery each event must be successfully completed with at least the minimum score before the next event can be attempted. If an individual does not successfully meet the required minimum standard in any event of a fitness battery, the test is immediately terminated and no other events can be attempted at that time.
- 8) By regulation, an applicant must successfully complete the Entrance Fitness Test Battery for enrollment in the police academy.**
- 9) By regulation, if a cadet fails the Final Physical Fitness Test they must repeat the block of instruction and successfully complete the Final Physical Fitness Test to be eligible for graduation.**
- 10) The Final Physical Fitness Test battery shall be given in the following order:
 - A. One Minute Sit-Up test, followed by at least five (5) minutes to recover.
 - B. 300-Meter Run, followed by at least five (5) minutes to recover.
 - C. One Minute Push-up test, followed by at least five (5) minutes to recover.
 - D. 1.5 Mile Run test, followed by at least five (5) minutes to recover.
 - E. All four events must be completed within a two hour time limit.
- 11) All test proctors must be currently certified by MPOETC as a Physical Fitness Instructor or approved by MPOETC to aid in the administration of the Final Physical Fitness Test. This includes all starters, timers, counters, spotters, and holders.
- 12) MPOETC uses generally accepted national standards for safe exercise testing. These guidelines include:
 - A. Employing trained and certified personnel
 - B. Medical screening of all applicants and cadets
 - C. Avoid testing in extreme weather environments (heat, cold, etc.)
 - D. Using proper testing equipment
 - E. Having safety equipment on site and readily available
 - F. Following established, standardized testing protocols
- 13) All test proctors must have current certifications in Basic First Aid, CPR, and the use of an Automatic External Defibrillator (AED).
- 14) All test proctors are responsible for ensuring that a fully stocked Basic First Aid Kit and properly functioning AED are present at all physical fitness tests and assessments. Water and restroom facilities need to be available at the testing location.



- 15) All test proctors are responsible for ensuring a line of communication (telephone or cellular phone) is readily available at all test events in order to summon emergency medical services.
- 16) All test proctors should be familiar with safety standards regarding conducting physical training and testing in extreme weather conditions.
- 17) Physical fitness instructors shall ask all cadets if they are feeling well and are ready to take the Final Physical Fitness Test.
 - A. If a cadet is sick on the day of the Final Physical Fitness Test, the cadet must inform the physical fitness instructor that he/she is not feeling well, and may choose not to take the Final Physical Fitness Test on that date.**
 - 1. Any cadet exercising this option will have seven (7) calendar days to complete the Final Physical Fitness Test.**
 - B. If a cadet has an injury which precludes him/her from taking the Final Physical Fitness Test the Academy Director or designee shall ensure the cadet is directed to obtain medical treatment and a written diagnosis of the injury for inclusion with the injury report.**
 - 1. The cadet must provide the police academy with written medical clearance from their doctor within 90 days of the injury stating the cadet is allowed to participate in physical fitness training and/or testing.**
 - 2. The cadet will have seven (7) days from the date they are cleared to attempt the Final Physical Fitness Test.**
 - 3. Failure to obtain and present medical clearance within 90 days constitutes a failure of the test and the cadet will be required to re-take the block of instruction before testing.**
- 18) The Executive Director of MPOETC can, in consultation with an Academy Director, authorize a deviation from these protocols when deemed appropriate based on unique or unusual circumstances. Documentation of any such deviation must be retained by the Academy.



ENTRANCE FITNESS TEST REQUIREMENTS

Entrance Exam (30% Cooper)	Male Standards by Age					Female Standards by Age				
	18-29	30-39	40-49	50-59	60+	18-29	30-39	40-49	50-59	60+
300 Meter Run (Time)	62.1	63	77	87	87	75	82	106.7	106.7	106.7
Bench Press (% body weight)	0.93	0.83	0.76	0.68	0.63	0.56	0.51	0.47	0.42	0.4
Sit Ups (1 Min Reps)	35	32	27	21	17	30	22	17	12	4
1.5 Mile Run (Time)	13:15	13:44	14:34	15:50	15:50	15:46	16:42	17:29	19:10	19:10

Testing Order:

300 Meter Run
Bench Press
Sit Ups
1.5 Mile Run

This is a cumulative test and all events must be completed within two (2) hours.

All applicants should be afforded a minimum rest time of five (5) minutes between events.

If an applicant does not fall into one of the listed age categories, special authorization must be obtained from MPOETC before testing can be accomplished.

Applicants are required to pass the Entrance Fitness Test with a score at the 30th percentile (chart above) in each event based on their age at the time of testing.

If an applicant is unsuccessful in any event, testing is immediately ended (failure) and no other events can be attempted at that time.



300 Meter Run (Applicants)

- This is a test of anaerobic power.
- Equipment: Two (2) stopwatches and 300 meter flat, measured running surface.
- If using a regular 440-yard oval track, the finish line will be 300 meters (328 yards) from the starting line on the inside lane.
- Read the following protocols to the applicants and demonstrate the event, pointing out any common errors.
 - Participants should be given three (3) to five (5) minutes to warm-up.
 - The starter is responsible for ensuring all applicants are lined up at the starting line.
 - The timer will take a position at the finish line and will keep and operate an official stopwatch and a back-up stopwatch. The event is measured in seconds.
 - Upon the command "Go" by the starter, the applicants will begin running at maximum effort.
 - The timer will begin recording the event time on the command "Go" and will continue until the last applicant crosses the finish line.
- In order to successfully complete this event, the applicant must finish the course at or under the required time for their age and gender.
- Comments:
 - 300 Meters = 328 Yards = 984 Feet.
 - Yards X 0.9144 = Meters.
 - Meters X 1.0933 = Yards.



Bench Press # 1 (DVR Machine) (Applicants)

- This is a test of absolute upper body strength.
- Equipment: Universal DVR Bench Press Machine and a scale.
- Weigh applicants in pounds. Multiply body weight by the appropriate age and gender adjusted percentile ratio. Using the bench press conversion charts for DVR, determine the applicant's standard weight. If no corresponding plate can be found on the right side of the DVR Machine's weight stack, round the standard weight down to the next lower plate.
- Read the following protocols to the applicants and demonstrate the event, pointing out common errors.
 - Recommend a warm-up attempt at approximately half of the standard weight.
 - Each applicant will take a position on the bench with the DVR machine's handles at the mid-line of the chest. The handles should be adjusted so elbows are at 90 degrees and hands are positioned slightly wider than shoulders. Maintain a natural arch of the back and keep feet flat on the floor.
 - Exhale during exertion pressing the weight up to a "soft lock" of the elbows one time and then gently lower the weight back to the resting position.
 - Progressively increase the weight until the applicant has successfully pressed the standard weight. Applicants have up to six (6) attempts, including all warm-ups to successfully press the standard weight.
 - Applicants may elect to try the standard weight on their first attempt, however must be advised of the risk of injury before being allowed to proceed.
 - During the lift, participants may not arch their buttocks off of the bench or move their feet. If they do, the attempt does not count.
- In order to successfully complete this event, the applicant must successfully lift the required standard weight one time.
- When using the Universal DVR Bench Press Machine, record the event with the numbers on the right side of the weight stack.



Bench Press # 2 (Free Weights) (Applicants)

- This is a test of absolute upper body strength.
- Equipment: Free weight bar, flat bench, plates, scale, and two (2) spotters.
- Weigh applicants in pounds. Multiply body weight by the appropriate age and gender adjusted percentile ratio. Using the bench press conversion charts for free weights, determine the applicant's standard weight. If the exact standard weight cannot be placed on the bar, it is permissible to round down to a weight that is closest to the standard weight the cadet must press (lift). The weight should not be rounded down by more than four (4) pounds.
- Read the following protocols to the participants and demonstrate the event, pointing out common errors.
 - Recommend a warm-up attempt at approximately half of the standard weight.
 - Each applicant will take a position on the bench with their eyes aligned under the bar and gripping the bar slightly wider than their shoulders. Maintain a natural arch of the back and keep feet flat on the floor.
 - The two (2) spotters, positioned at each end of the bar, should lower the bar until the applicant's elbows reach 90 degrees with the bar positioned at the mid-line of the participant's chest, but not resting on the chest. (Participants may not be used as spotters.)
 - Exhale during exertion pressing the weight up to a "soft lock" of the elbows one (1) time. During the pressing phase, the spotters may not physically assist the applicant in lifting the weight. After each attempt the spotters should rack the bar.
 - Progressively increase the weight until the applicant has successfully pressed the standard weight. Applicants have up to six (6) attempts, including all warm-ups to successfully press the standard weight.
 - Applicants may elect to try the standard weight on their first attempt, however must be advised of the risk of injury before being allowed to proceed.
 - During the lift, participants may not arch their buttocks off of the bench or move their feet. If they do, the attempt does not count.
- In order to successfully complete this event, the applicant must successfully lift the required standard weight one time.



Sit-Up Protocol (Applicants)

- This is a test of abdominal muscular endurance.
- Equipment: Two (2) stopwatches and floor mats.
- This event requires at least one instructor to count repetitions and time the event and a second instructor to hold the applicant's feet.
- Applicants shall not be used to hold the feet of other individuals. A mechanical device or bar may not be used to secure the participant's feet.
- Read the following protocols to the applicants and demonstrate the event, pointing out common errors.
 - Applicants must lay flat on their back on a floor mat with their knees bent at approximately a 90° angle and the soles of their feet flat on the ground. An instructor will hold the applicant's feet down firmly.
 - Applicants should place their hands behind their head with the fingers interlocked. The hands may not be on the top of the head or on the neck. The head should remain in a neutral position. Applicants buttocks shall remain flat on the ground in order to avoid "kipping" of the hips and the fingers must remain interlocked. All resting must be done in the "up" position, otherwise the test is terminated.
 - Upon the command "Go" by the event timer, applicants will have one (1) minute to complete the required number of correct repetitions. For a repetition to count, applicants must curl their upper body until their elbows contact their knees, and then lower themselves until their shoulder blades contact the floor mat. Breathing should remain normal throughout the exercise.
 - The event timer will verbally announce the "30 seconds" mark, the "45 seconds" mark, and then count down the final five (5) seconds of the event.
 - The event can be ended by the repetition counter with the completion of the required number of correct repetitions, by the event timer when one (1) minute has elapsed, or if the applicant is unable to complete the required number of correct repetitions.
- In order to successfully complete this event, the applicant must successfully complete the required number of correct repetitions within one (1) minute.



1.5 Mile Run (Applicants)

- This is a test of aerobic capacity or $\dot{V}O_2$ max.
- Equipment: Two (2) stopwatches and 1.5 mile flat, measured running surface.
- If using a regular 440-yard oval track, six (6) complete laps on the inside lane equals 1.5 miles.
- Read the following protocols to the applicants and demonstrate the event, pointing out any common errors.
 - Applicants should not eat a heavy meal or smoke prior for several hours prior to the test and should be given three (3) to five (5) minutes to warm-up.
 - The starter is responsible for ensuring all applicants are lined up at the starting line.
 - The timer will take a position at the finish line and will keep and operate an official stopwatch and a back-up stopwatch. The event is measured in seconds.
 - Upon the command “Go” by the starter, the applicants will begin running. The timer will call out each lap split time as the applicant passes the start/finish line.
 - The timer will begin recording the event time on the command “Go” and will continue until the last applicant crosses the finish line.
 - During the event, applicants may not be physically assisted by another runner or leave the running surface.
- In order to successfully complete this event, the applicant must finish the course at or under the required time for their age and gender
- Comments:
 - 5,280 Feet = 1,760 Yards = 1,609.3 Meters = 1.0 Mile.
 - 7,920 Feet = 2,640 Yards = 2,414.0 Meters = 1.5 Miles.



One Minute Full Body Push – Up Test (Supplemental Only) (Applicants)

NOTE: This test can only be used to determine if the applicant can do a push-up. It cannot be utilized as part of the 30th percentile entrance test.

- This is a test of upper body muscular endurance
- Equipment: Stopwatch
- Read the following protocols to the applicants and demonstrate the event, pointing out any common errors.
 - The applicant shall place their hands slightly wider than shoulder width apart, with fingers pointing forward, palms of the hand touching the ground/floor/mat. (Knuckle or fingertip push-ups are not permitted for this test.)
 - With the applicant in the up position, a proctor will place a three-inch sponge on the floor or ground where the sternum would touch.
 - Starting from the up position (elbows extended), keeping the back straight at all times, the applicant must lower the body to the floor until the chest touches the sponge and return to the up position. This completes one repetition. (The Cooper Institute does **NOT** recommend using the Modified Push-up Test.)
 - One (1) proctor counts the repetitions and ensures the test is being performed according to the protocol. The other proctor monitors the time.
 - Resting must only be done in the up position. Both hands and feet (toes) must remain in contact with the floor at all times. Applicants must not arch their back during the test
- In order to successfully complete this event, the applicant must successfully complete the required number of correct repetitions within one (1) minute.



GRADUATION FITNESS TEST REQUIREMENTS

Graduation Exam (50% Cooper)	Male Standards by Age					Female Standards by Age				
	18-29	30-39	40-49	50-59	60+	18-29	30-39	40-49	50-59	60+
Sit-up (1 Min Reps)	40	36	31	26	20	35	27	22	17	8
300 Meter Run (Time)	56	57	67.6	80	80	64	74	86	86	86
Push-up (1 Min Reps)	33	27	21	15	15	18	14	11	11	11
1.5 Mile Run (Time)	11:58	12:24	13:12	14:23	14:23	14:04	14:34	15:34	17:19	17:19

Testing Order:

- 1 Minute Sit-up
- 300 Meter Run
- 1 Minute Push-up
- 1.5 Mile Run

This is a cumulative test and all events must be completed within two (2) hours.

All cadets should be afforded a minimum rest time of five (5) minutes between events.

If a cadet does not fall into one of the listed age categories, special authorization must be obtained from MPOETC before testing can be accomplished.

Cadets are required to pass the Final Physical Fitness Test with a score at the 50th percentile (chart above) in each event based on their age at the time of testing.

If a cadet is unsuccessful in any event testing is immediately ended (failure) and no other events can be attempted at that time.



Sit-Up Protocol (Cadets)

- This is a test of abdominal muscular endurance.
- Equipment: Two (2) stopwatches and floor mats.
- This event requires at least one instructor to count repetitions and time the event and a second instructor to hold the cadet's feet.
- Cadets shall not be used to hold the feet of other individuals. A mechanical device or bar may not be used to secure the participant's feet.
- Read the following protocols to the cadets and demonstrate the event, pointing out common errors.
 - Cadets must lay flat on their back on a floor mat with their knees bent at approximately a 90° angle and the soles of their feet flat on the ground. An instructor will hold the applicant's feet down firmly.
 - Cadets should place their hands behind their head with the fingers interlocked. The hands may not be on the top of the head or on the neck. The head should remain in a neutral position. Cadets buttocks shall remain flat on the ground in order to avoid "kipping" of the hips and the fingers must remain interlocked. All resting must be done in the "up" position, otherwise the test is terminated.
 - Upon the command "Go" by the event timer, cadets will have one (1) minute to complete the required number of correct repetitions. For a repetition to count, cadets must curl their upper body until their elbows contact their knees, and then lower themselves until their shoulder blades contact the floor mat. Breathing should remain normal throughout the exercise.
 - The event timer will verbally announce the "30 seconds" mark, the "45 seconds" mark, and then count down the final five (5) seconds of the event.
 - The event can be ended by the repetition counter with the completion of the required number of correct repetitions, by the event timer when one (1) minute has elapsed, or if the cadet is unable to complete the required number of correct repetitions.
- In order to successfully complete this event, the cadet must successfully complete the required number of correct repetitions within one (1) minute.



300 Meter Run (Cadets)

- This is a test of anaerobic power.
- Equipment: Two (2) stopwatches and 300 meter flat, measured running surface.
- If using a regular 440-yard oval track, the finish line will be 300 meters (328 yards) from the starting line on the inside lane.
- Read the following protocols to the cadets and demonstrate the event, pointing out any common errors.
 - Cadets should be given three (3) to five (5) minutes to warm-up.
 - The starter is responsible for ensuring all cadets are lined up at the starting line.
 - The timer will take a position at the finish line and will keep and operate an official stopwatch and a back-up stopwatch. The event is measured in seconds.
 - Upon the command “Go” by the starter, the cadets will begin running at maximum effort.
 - The timer will begin recording the event time on the command “Go” and will continue until the last cadet crosses the finish line.
- In order to successfully complete this event, the cadet must finish the course at or under the required time for their age and gender.
- Comments:
 - 300 Meters = 328 Yards = 984 Feet.
 - Yards X 0.9144 = Meters.
 - Meters X 1.0933 = Yards.



One Minute Full Body Push – Up Test (Cadets)

- This is a test of upper body muscular endurance
- Equipment: Stopwatch
- Read the following protocols to the cadets and demonstrate the event, pointing out any common errors.
 - The cadet shall place their hands slightly wider than shoulder width apart, with fingers pointing forward, palms of the hand touching the ground/floor/mat. (Knuckle or fingertip push-ups are not permitted for this test.)
 - With the cadet in the up position, a proctor will place a three-inch sponge on the floor or ground where the sternum would touch.
 - Starting from the up position (elbows extended), keeping the back straight at all times, the cadet must lower the body to the floor until the chest touches the sponge and return to the up position. This completes one repetition. (The Cooper Institute does **NOT** recommend using the Modified Push-up Test.)
 - One (1) proctor counts the repetitions and ensures the test is being performed according to the protocol. The other proctor monitors the time.
 - Resting must only be done in the up position. Both hands and feet (toes) must remain in contact with the floor at all times. Cadets must not arch their back during the test
- In order to successfully complete this event, the cadet must successfully complete the required number of correct repetitions within one (1) minute.



1.5 Mile Run (Cadets)

- This is a test of aerobic capacity or VO_2 max.
- Equipment: Two (2) stopwatches and 1.5 mile flat, measured running surface.
- If using a regular 440-yard oval track, six (6) complete laps on the inside lane equals 1.5 miles.
- Read the following protocols to the cadets and demonstrate the event, pointing out any common errors.
 - Cadets should not eat a heavy meal or smoke prior for several hours prior to the test and should be given three (3) to five (5) minutes to warm-up.
 - The starter is responsible for ensuring all cadets are lined up at the starting line.
 - The timer will take a position at the finish line and will keep and operate an official stopwatch and a back-up stopwatch. The event is measured in seconds.
 - Upon the command "Go" by the starter, the cadets will begin running. The timer will call out each lap split time as the cadet passes the start/finish line.
 - The timer will begin recording the event time on the command "Go" and will continue until the last cadet crosses the finish line.
 - During the event, cadets may not be physically assisted by another runner or leave the running surface.
- In order to successfully complete this event, the cadet must finish the course at or under the required time for their age and gender
- Comments:
 - 5,280 Feet = 1,760 Yards = 1,609.3 Meters = 1.0 Mile.
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