Physical Ability Testing Procedures & Protocols

INDIANA STATE POLICE

PHYSICAL ABILITY TESTING

Police officers have unique job functions, some of which can be physically demanding. An officer's ability to perform those functions can affect personal and public safety. Physical fitness underlies an officer's ability to perform the frequent and critical job tasks demanded each and every day. The minimum fitness standards identified limit an officer's capacity to safely learn and execute those critical job tasks. Higher levels of fitness are associated with increased performance of physical job tasks required of Indiana State Troopers.

Candidate Processing: Physical Ability Testing (PAT)

The Trooper Candidate PAT is typically conducted during a weekend, approximately six months prior to the beginning of an Indiana State Police Academy class.

Candidates who successfully complete the Oral Interview phase of the selection process are required to participate in the Preliminary Physical Ability Testing phase of the selection process.

Candidates who successfully complete the Background Investigation phase of the selection process are required to participate in the ILEA Entrance Standards phase of the selection process.

PAT Preparation

It is highly recommended that candidates begin a fitness lifestyle in preparation for the PAT well before the selection process begins. Candidates are encouraged to practice the events prior to testing at the official site.

The Indiana State Police emphasizes the importance of physical fitness for all law enforcement personnel and follows the Indiana Law Enforcement Academy's (ILEA) established "Physical Fitness Standards" for both entering into, and graduation from, the Indiana State Police Academy.

To participate in the PAT, candidates must bring the following items:

- A signed Waiver and Statement of Intent (provided by I.S.P.)
- Gym shorts and T-shirt or sweat suit (dress for weather conditions)
- Gym shoes
- Athletic supporter (males), or bra (females)
- Driver's license or other government-issued photo ID

The Preliminary Physical Ability Testing and the ILEA Entrance "Physical Fitness Standards" are displayed below:

PRELIMINARY PHYSICAL ABILITY TESTING	
TESTING DATE – January 26 & 27, 2008	
Vertical Jump	11 inches
One Minute Sit-ups	19
300 Meter Run	98 seconds
Maximum Push-ups	17
1.5 Mile run	22 minutes 43 seconds

ILEA ENTRANCE STANDARDS	
TESTING DATE – April 19 & 20, 2008	
Vertical Jump	13.5 inches
One Minute Sit-ups	24
300 Meter Run	82 seconds
Maximum Push-ups	21
1.5 Mile run	18 minutes 56 seconds

NOTE: <u>Failure of any component will result in immediate dismissal from the selection process</u>.

Strict adherence to the following protocols is **mandatory**.

VERTICAL JUMP

Preliminary Standard – 11 Inches
ILEA Entrance Standard – 13.5 Inches

Purpose

This test measures leg power, which is important in jumping or vaulting objects such as walls and ditches, and in moving heavy objects such as people or vehicles. Scoring is determined by the distance between the applicant's recorded reach and the best of the 3 recorded jumps, in inches.

Procedures (refer to Figures 1 – 4)

1. The applicant is required to stand with either the left or right arm directly under the Vertec vertical jump-testing device. The proctor will adjust the height of the bottom vane to the tip of the fingers of the applicants extended arm. Applicants must warm-up while waiting for assessment.

2. Before jumping, the applicant must be in a position so that either the left or right foot is no more than 12 inches from the Vertec device (standing further away may decrease applicants vertical jump score). The foot closest to the Vertec device must remain stationary prior to the jump. The applicant then jumps as high as possible, reaching upward at the same time, tapping the Vertec vanes with a hand (causing the vanes to move).

3. The best of 3 jumps is recorded on the applicant's data sheet. The proctor scores the jump to the next ½ inch Vertec vane.

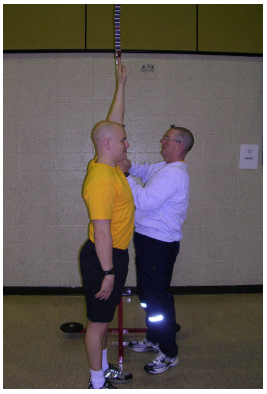
Fig. 1

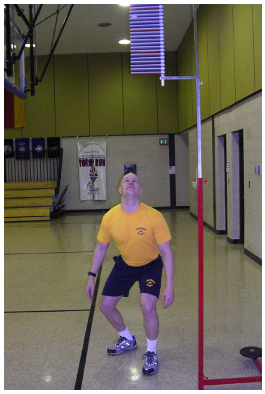
Fig. 2

Fig. 3

Fig. 4

Preparation

A good way to prepare for this component is to do plyometric training. The basic plyometric exercise routine consists of three exercises: double-leg vertical jump, single-leg vertical jump and the double-leg hop. Perform each exercise with 1 – 2 sets of 10 repetitions, 3 – 5 days a week. Do the repetitions ballistically without stopping, resting 3 minutes between each set of each exercise.

Single and Double-Leg Vertical Jump

- Jump vertically as high as possible, thrust your arms upward vigorously and reach as high as possible with one or two hands (think about "hanging" in the air). When your feet hit the ground, jump again immediately without a stutter step. Perform jumping with one leg, and again using both legs. (Emphasis should be placed on maximum height and quick, explosive takeoffs. Repeat this exercise with the opposite leg after a brief rest of 15-30 seconds).

Double-Leg Hop

- Jump off of both legs (shoulder-width apart) striving for the maximum forward distance using a double-arm action. Land in the starting position and immediately repeat the movement.

ONE MINUTE SIT-UP TEST

Preliminary Standard – 19 Sit-ups
ILEA Entrance Standard – 24 Sit-ups

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.

Procedures (refer to Figures 5 – 7)

1. The applicant starts by lying on his or her back, knees bent, heels flat on the floor, with the fingers laced and held behind the head. Avoid pulling on the head with the hands. The buttocks must remain on the floor with no thrusting of the hips. Applicants should keep loose while waiting for start.

2. A proctor holds the feet firmly.

3. The applicant performs as many correct sit-ups as possible in one minute. In the up position, the individual must touch the elbows to the knees and then return to the lying position (shoulder blades touch the floor) before starting the next sit-up.

4. The score is the number of correct sit-ups. Any resting must be done in the up position (up position only).

5. Breathing should be as normal as possible, making sure the participant does not hold his or her breath, as in the Valsalva maneuver.

Fig 5

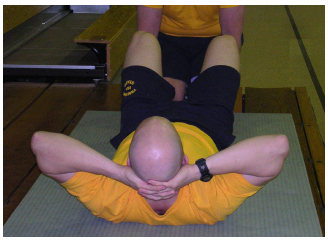

Fig. 6

Fig. 7

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.

NOTE: If you are unable to do at least 5 reps per set, you will need to modify your routines in order to get in sufficient repetitions to address muscular endurance. You should follow a crunch or curl routine for your abdominals, and also get assistance in designing leg exercises (multi-hip machine or leg lifts) to address the hip flexors. Also, you could use an abdominal machine in a fitness facility, using a light enough resistance to get in 15 reps per set for 3 sets.

300-METER RUN TEST

Preliminary Standard – 98 seconds
ILEA Entrance Standard – 82 seconds

Purpose

This is a test of anaerobic capacity, 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. Applicants will line up at the starting line. The proctor will give the command "Go" (audible or visual) and timing will begin.

3. Applicant runs 300 meters at maximal level of effort. Time used to complete the distance is recorded.

4. 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.

Weeks	Distance	Reps	Training Time	Rest Time	Frequency
1 & 2	110 yards	10	IT ÷ 0.80	2 min.	1/week
3 & 4	110 yards	10	IT ÷ 0.80 minus 2-3 seconds	2 min.	1/week
5 & 6	110 yards	10	IT ÷ 0.80 minus 5-6 seconds	2 min.	1/week
7 & 8	220 yards	8	IT ÷ 0.80 x 2	2 min.	1/week
9 & 10	220 yards	8	IT ÷ 0.80 x 2 minus 4 seconds	2 min.	2/week

MAXIMUM PUSH-UP TEST

Preliminary Standard – 17 Push-ups
ILEA Entrance Standard – 21 Push-ups

Purpose

This test measures the muscular endurance of the upper body muscles in the shoulders, chest and back of the upper arms (the extensors). This is important for use of force involving any pushing motion.

Procedures (refer to Figures 8 – 10)

1. The hands are placed shoulder width apart, with fingers pointing forward. Some part of the hands must lie within a vertical line drawn from the outside edge of the shoulders to the floor. The proctor places one fist on the floor below the participant's chest (sternum). Applicants must warm-up while waiting for assessment.

2. Starting from the up position (arms fully extended with elbows locked, both hands and both feet only touching the floor, feet may be together, or up to shoulder width apart), the participant must keep the back straight at all times and lower the body to the floor until the chest (sternum) touches the proctor's fist. The participant then returns to the up position with the elbows fully locked. This is one repetition.

3. Resting is permitted only in the up position only. The back must remain straight while resting.

4. When the participant elects to stop or cannot continue, the total number of correct pushups is recorded as the score. No time limit.

5. Participants who wear glasses should remove them for this event if they do not have a retaining band.

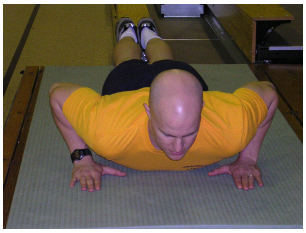

Fig. 8

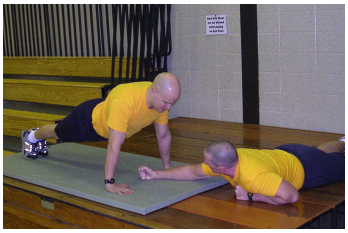

Fig. 9

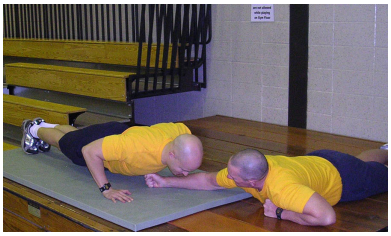

Fig. 10

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 (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 push 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.

   NOTE: If you are unable to do at least 5 reps per set, then you will have to adjust the above calculations on modified push ups (from the knees) in order to keep the number of reps high enough to address muscular endurance. You should also get assistance in designing a strength routine using selectorized machines including chest, arms and trunk exercises.

1.5-MILE RUN/WALK TEST

Preliminary Standard – 22 minutes & 43 seconds
ILEA Entrance Standard – 18 minutes & 56 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. Applicants will line up at the starting line. The proctor will give the command "Go" (audible or visual) and timing will begin.

3. Applicants should not physically touch one another during the run, unless it is to render first aid.

4. Finishing times should 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