



**PHYSICAL READINESS TEST
PROCEDURAL MANUAL**

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URMMA PHYSICAL READINESS TEST BOOKLET

Table of Contents

	Page
Physical Readiness Test	
Testing site preparation	2
Test day procedures	4
Specific test procedures and scripts	6
Forms	11
Job Task Simulation Test	
Background	19
Job task scenario	20
Test administration	20

TESTING SITE PREPARATION

1. Identify possible testing sites. The fitness testing area should include a flat area large enough to conduct the 1.5 mile run, and areas for the push-up, sit-up, and vertical jump. If the agency does not have its own facility, possible sources for testing sites include colleges, junior colleges, high schools, training academies, fire training facilities, and military bases.

2. If you are having trouble finding the ideal testing site, prioritize the short falls. For example, if one site has everything but access to the vertical jump, and another has everything except a track, can you move the vertical jump to the first site?

3. Coordinate to use the facility for as many days as the testing is scheduled for plus one. This provides some flexibility for inclement weather and make up testing for those unable to make the primary test date.

4. Coordinate for both on site medical coverage, such as an EMT, and notify the nearest hospital of the testing dates in case there is a requirement for more advanced medical assistance. Make sure the EMT has at least a first aid kit. Ensure there is one vehicle on site earmarked for emergency evacuation.

5. Ensure you have a means of reliable communication, along with a list of emergency phone numbers.

6. Coordinate for transportation if the testing must be conducted at different sites.

7. Materials needed for the testing, with possible sources:
 - a. Mats for the sit-up test – local gym or high school.
 - b. Vertical jump – two possibilities. Traditionally, we have taped a yardstick to the wall and used it to measure the standing and jumping reaches. Some facilities have chalked boards mounted on the wall to facilitate making that observation. Or you may purchase a testing apparatus called the VERTEC that eliminates the need for jumping against a wall and marking the standing and jumping heights.
 - c. Preferably, you will administer 1.5 mile run on a track. Check to determine if the track is 440 yards or 400 meters. If the track was built within the last 20 years it is probably 400 meters. It is worth rolling the measuring wheel around the track one time to be sure. A quarter mile is 1320 feet, while

400 meters is 1312. Obviously 1.5 miles is six laps around a 440 yard track. For the 400 meter tracks, 1.5 miles is six laps plus 42 feet.

- d. If you must use an out and back course, be sure that it is flat and unobstructed. Also consider how this choice will affect your manning capabilities. Will you have enough instructors to put one at the start and turn points, observe the runners throughout the course to ensure their safety, provide a trial vehicle in case of injuries along the route, keep track of finishing times, etc? Check with local running clubs for numbers to identify the runners.
 - e. Water source. If fountains are not available at the test site, provide a jug. Possible sources include local fire/police stations, schools, local running clubs, and local fitness clubs. If you go this route, remember cups.
 - f. At least two stop watches.
 - g. Clipboards and pens for recording scores.
8. If you do not have enough fitness coordinators to effectively run the test site, other officers can help with recording scores. But for the push up and sit up, make sure only fitness coordinators grade those events.
9. If possible, rehearse the fitness coordinators the day before the testing. If not possible, have them report 30 minutes early to ensure they know who is demonstrating and grading each event, and that they can do the demonstration correctly.
10. All participants should be tested in the same order across events. For example if Officer# 1 is the first to do the vertical, he/she will be the first to do all other events.
11. Provide each participant a copy of the briefing letter (see form 1) explaining the times, location etc. of testing prior to the testing.
12. Print up copies of all forms.
- # 1 Participant Briefing Letter
 - # 2 Coordinator Assignments
 - # 3 Physical Fitness Assessment Score Sheet – front page
 - # 3 PAR – Q – back page
 - # 4 Coordinator Instructions for PAR-Q
 - # 5 Master Score Sheet
 - # 6 Run lap sheet

TEST DAY PROCEDURES

1. For the purposes of this example, assume 25 officers or applicants are scheduled each testing day with five coordinators available. Double check with the coordinators assigned to lead the warm up, demonstrate the vertical jump, bench press, sit up, and push up. [see form 2]
2. In this example everyone reports at 7:30am. They fill out their score sheets and PAR-Q [see form 3]. Print these back to back so you only have one piece of paper]. Form 4 provides some sample questions for “Yes” answers.
3. Conduct a briefing [Test scripts].
4. Have a coordinator conduct a group warm up for 5 – 10 minutes.
5. Demonstrate the vertical jump. Line everyone up in front of the vertical jump (one or two coordinators) at 8:00 am. Have someone go down the line and record each name on the master score sheet [see form 5].
6. After everyone has completed vertical jump, demonstrate the sit up and push up.
7. For the sit up have one sit up lane for each coordinator. In this example, assume five coordinators. The first 5 officers who did the vertical jump get down on the mat in lanes 1 through 5 with the next 5 hold their ankles. Officers 11 -16 are the third heat, and so forth. The first heat holds ankles for the fifth heat. Have each heat stay in place until a coordinator or an admin person records the scores on the master score sheet. You can finish the sit up in less than ten minutes.
8. After the rest period, the coordinator from lane 1 will administer the push to each person in lane 1, the lane 2 coordinator grades lane 2, and so forth. Provide a score sheet [see sample] for each coordinator to record his lane’s scores until they can be transferred to the master score sheet.
9. Start the clock for the 30 minute rest before the 1.5 mile run when the last person finishes the push up. Use two clocks for the run (one back up), and have coordinators will keep track of the laps and time for each of “their” folks on the run [form 6 - make a copy of that form and cut it up into as many pieces as there are coordinators.]
10. Recognize that if the Vertec is used for the vertical jump a higher jump height is required (19 inches as opposed to 16 inches with the yardstick). This is because the Vertec jumping apparatus angle stimulates higher jumps. It produces a difference of about 3 inches.

11. Brief participants as to the standards

Vertical jump = 16 inches (19 inches with a Vertec)
1 minute sit up = 35
Maximum push up = 25
1.5-mile run = 15:54

12. Follow the standard testing sequence

<u>TIME</u>	<u>EVENT</u>
3 minutes	1. Warm-up 2. Vertical jump 5. Sit ups
10 minutes	5. Rest 6. Push ups
30 minutes	7. Rest
2 minutes	8. Warm-up 9. 1.5-mile run
5 minutes	10. Cool down

SPECIFIC TEST PROCEDURES AND SCRIPTS

Vertical jump

“The first event is the vertical jump, a measure of lower body explosive power. It is an important area for pursuit tasks that require jumping and vaulting.”

With a Vertec

When using VERTEC - **“Watch this demonstration. Stand under the test apparatus, and reach up as high as you can with one arm while placing your bicep next to your ear. The apparatus will be lowered to your fingertips. Take one step back with either foot. Then step forward, and jump, reaching as high as possible, and hit the tabs. Or you may jump from both feet without taking a step. Your score is the highest tab you reach, and will be recorded to the half-inch. You will have three attempts for this event. Are there any questions?”**

Instructor tips:

As each participant approaches the area for the VJ, take her/his score sheet. With the jump mat do not count a jump if the individual tucks his/her knees. If using the Vertec or yardstick record the standing reach. When using the yardstick, you will have to pay close attention to accurately measure the jumping reach. Record each attempt, and subtract the standing reach from the best jumping reach. Record the score on the individual's sheet. This is the individual's score for the VJ.

Equipment

- Vertec

Procedural tasks with a Vertec

- a) Subject stands under the Vertec, reaches up as high as possible keeping bicep against the ear, and Coordinator adjusts the frame to mark his/her standing reach.
- b) Subject takes one warm up jump then makes three jumps for a score.
- c) Coordinator moves tabs to one side to reduce resistance.
- d) Subject takes one step back with either foot, steps forward then jumps as high as possible hitting the highest vane OR a subject may jump with both feet and not take a step.
- e) Score is the inches to the nearest 1/2 inch.
- f) The best of three (3) trials is the score.

With a yardstick

When using a yardstick - **“Watch this demonstration. Stand next to the wall, and reach up as high as you can with one arm while placing your bicep next to your ear. The coordinator will record your standing reach. Move one half step away from the wall. Take one step back with either foot. Then step forward, and jump, reaching as high as possible, and hit the yardstick. Or you may jump from both feet without taking a step. You will have three attempts for this event. Your score is the difference between your standing and jumping reach, and will be recorded to the nearest half inch. Are there any questions?”**

Instructor tips:

As each participant approaches the area for the VJ, take her/his score sheet. Record the standing reach. When using the yardstick, you will have to pay close attention to accurately measure the jumping reach. Record each attempt, and subtract the standing reach from the best jumping reach. This is the individual’s score for the VJ.

Equipment

- Yardstick taped to a smooth wall.
- Chalk dust or chalk for marking extension when jumping.

Procedural tasks with a yardstick

- a) Subject stands with one side toward the wall and reaches up as high as possible to mark his/her standing reach.
- b) Subject steps back with either foot, steps forward then jumps as high as possible and marks the spot on the wall above his/her standing reach mark OR a subject may jump with both feet and not take a step.
- c) Score is the inches to the nearest 1/2 inch.
- d) The best of three trials is the score.

One-minute Sit-up Test

“The second event is the one-minute sit up, which measures the muscular endurance of the abdominal muscles, an important area for many physical tasks and injury prevention. “

“Watch this demonstration. Lie on your back, with your knees bent at approximately a 90-degree angle. Your feet may be together or apart, but the heels must stay in contact with the surface. Your partner will hold your ankles. The tips of your fingers must stay behind the ears, although you may interlock your fingers if desired. When the instructor says “GO”, lift your upper body (head and torso) by bending at the waist, move your elbows to or past your

kneecaps. Return to the starting position, with your shoulder blades touching the surface. That will constitute one repetition. If you arch your back, lift your buttocks from the mat, move your finger tips forward of your ears, fail to touch the knees, stop to rest in the down position, or fail to touch your shoulders to the mat, you will receive a warning. For any subsequent violation, the repetition will not count. You will have one minute to do as many sit-ups as possible. The instructor will announce 45, 30, 15 seconds, and count out the last ten seconds. Your score is the number of correct sit-ups. Are there any questions?"

Instructor tips:

Have a demonstrator execute several correct sit-ups while you are reading the directions. Repeat the demo after finishing the instructions. During the second demo, point out common errors. Divide the participants into as many groups as there are coordinators. Coordinators will position themselves at a 45 degree angle to the left front of the participant being tested. From that position you should be able to observe that the elbows touch or pass the knees, fingers remain behind the ears, the shoulders touch the mat, the heels remain in contact with the floor, and that the buttocks remain on the mat.

Equipment:

- Mat
- Stopwatch

Procedural tasks:

- a) The subject starts by lying on his back, knees bent, heels flat on the floor. Finger tips stay behind the ears.
- b) A partner holds the feet down.
- c) The subject then performs as many correct sit-ups as possible in one minute.
- d) In the up position, the individual must touch or pass the kneecaps with the elbows, then return the shoulders to the mat before starting the next sit up.
- e) The subject cannot raise the buttocks from the ground and when returning to the down position the shoulder blades must touch the ground.
- f) Score is total number of correct sit-ups in 1 minute.

Maximum Push-up Test

“The third event is the push-up, a measure of the muscular endurance of the upper body (chest, shoulders, and triceps). This is an important component of fitness for many tasks such as use of force, lifting, carrying, and pushing.”

“Watch this demonstration. Assume the front-leaning rest position by placing your hands on the surface just outside a straight line down from the shoulders. The back, buttocks, and legs must be in a generally straight line from the head to the heels. The feet may be together or up to twelve inches apart. When the instructor says “GO”, lower your body by bending the elbows until the tops of the upper arms, shoulders, and upper back are aligned and parallel to the ground. Return to the starting position by soft-locking your elbows. This constitutes one repetition. You may rest in the up position. If you arch your back, fail to keep your body relatively straight or soft lock your elbows, you will receive a warning. For any subsequent violation, the repetition will not count. There is no time limit. Do as many correct repetitions as possible. Your score is the number of correct push-ups. Are there any questions?”

Instructor tips:

Have a demonstrator execute several correct push-ups while you are reading the directions. Repeat the demo after finishing the instructions. During the second demo, point out common errors. Lightly touch the back of the elbow to ensure they are locking out. Coordinators should position themselves at a 45-degree angle to the left front of the participant being tested. From that position you should be able to observe that the body remains in a generally straight line, the upper arms and shoulders are parallel to the ground in the down position, and the elbows lock out upon return the starting position.

Procedural tasks:

- a) The subject starts in the front leaning rest position. Hands are slightly more than shoulder width apart, feet are 12" apart or less
- b) The subject lowers self until the upper arms are parallel to the ground, then pushes up again.
- c) The back must be kept straight throughout the exercise.
- d) There is no time limit.

1.5 Mile run

“The forth event is the 1.5 mile run, a measure of cardiovascular endurance or aerobic power. This is an important component of fitness for running pursuits and use of force situations lasting more than two minutes.”

You will line up behind the starting line. At the command “GO” start running at a sub maximal pace. To complete the run, you will start here and run (describe the course). Your goal is to complete the 1.5 miles in as fast a time as you can. As you complete each lap your time and number of laps to go will be announced. You may walk, but try to keep running for the entire distance. You may run

alongside another runner for help with the pace, but you may not physically assist or be assisted by another runner. After the run do not sit down or standstill but walk slowly for a lap. Your score is the time it takes to complete the 1.5 miles. Are there any questions?"

Instructor tips:

Have a monitor on the other side of the track. Coordinators will record times for each person in their group. If no numbers are available, have each person call out their name as they complete each lap.

Equipment:

- Marked level course. On a 440 yard track the test is 6 laps. On a 400 meter track the test is 6 laps plus 42 feet.
- Stop watch
- Numbered vests if available

Procedural tasks:

- a) Have subjects warm up.
- b) Subjects should be instructed to cover the distance as fast as possible.
- c) At the command "GO" time is started.
- d) Score is time to run the course.
- e) A cool down is required after running.

FORMS

FORM 1: PARTICIPANT BRIEFING LETTER

To: (Name of Participant) _____

Division: _____

Date: _____

The _____ Police Department is conducting our semi-annual physical fitness testing on _____. Test events and standards are:

Vertical jump = 16 inches (19 inches with a Vertec)

1 minute sit up = 35

Maximum push up = 25

1.5-mile run = 15:54

The testing will last approximately four hours. This is your duty position for that time.

We recommend that you eat a light breakfast or lunch and refrain from any coffee or cigarettes. Water will be provided at the test site, however, you may prefer to bring your own or another electrolyte replacement drinks. Likewise, you may want to bring snacks to boost your energy levels through the test period.

Wear exercise clothes and exercise shoes to the testing site. For the job-task simulation tests, you will wear your duty uniform or suitable substitute.

Site for testing: _____

Reporting time: _____

If you have any questions you can reach me at _____.

Fitness Coordinator

FORM 2: COORDINATOR ASSIGNMENTS

Warm up leader: _____

Vertical jump Demo: Jumper: _____ Scorer: _____

Testing: Scorer: _____ Recorder: _____

Sit up Demo: Sitter: _____ Holder: _____ Scorer: _____

Testing: Timer: _____ (each coordinator scores a lane of officers; that lane becomes their group for the push up and 1.5 mile run)

Push up

Demo: Pusher: _____ Scorer: _____

Testing: Each coordinator tests the persons they tested for the sit up

1.5 mile run: Each coordinator keeps track of the laps and times for their group

FORM 3 (FRONT): PHYSICAL FITNESS ASSESSMENT SCORE SHEET

- 1. NAME: _____
- 2. CURRENT DUTY POSITION: _____
- 3. YEARS OF SERVICE: _____
- 4. AGE: _____
- 5. GENDER: 1 = male, 2 = female _____
- 6. HEIGHT: (in inches) _____
- 7. WEIGHT: (in pounds) _____
- 8. Do you use tobacco? 1 = yes, 2 = no _____
- 9. How many days a week do you exercise? 0,1,2,3,4,5,6,7 _____

FITNESS TESTS

9. VERTICAL JUMP: (to nearest 1/2 inch)

A. Using yardstick: Best jumping reach: _____

(1). Measure and enter standing reach: Standing reach: _____

(2). Subtract standing from best jumping reach: VJ score: _____

(3). Record each jumping reach: trial 1 _____ trial 2 _____ trial 3 _____

(4). Enter best jumping reach above.

B. Using Vertec:

(1). Record each jumping reach: trial 1 _____ trial 2 _____ trial 3 _____

(2). Enter best trial jump. VJ score: _____

GIVE THIS FORM TO COORDINATOR

Coordinator = Transfer best vertical jump to MASTER SCORE SHEET.

Form 3 (BACK): PAR-Q

YES NO

___ ___ 1. Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by a doctor?

___ ___ 2. Do you feel pain in your chest when you do physical activity?

___ ___ 3. In the past month, have you had chest pain when you were not doing physical activity?

___ ___ 4. Do you lose your balance because of dizziness or do you ever lose consciousness?

___ ___ 5. Do you have a bone or joint problem (for example, back, knee, or hip) that could be made worse by a change in your physical activity?

___ ___ 6. Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?

___ ___ 7. Do you know of any other reason why you should not do physical activity?

“I have read, understood and completed this questionnaire. Any questions I had were answered to my full satisfaction.”

Name: _____ Date: _____

Signature: _____

Cleared for testing: Yes ___ No ___ Coordinator: _____

FORM 4: PAR Q Coordinator instructions

In the space below each question, record the information about the “Yes” response. Ask the following questions about “Yes” responses:

#1. Has your doctor encouraged or discouraged you from exercising?

#2. Describe the pain. Is your doctor aware of the pain? Has your doctor encouraged or discouraged you from exercising because of this pain?

#3. Describe the pain. Is your doctor aware of the pain? Has your doctor encouraged or discouraged you from exercising because of this pain?

#4. Is your doctor aware of this condition? Has your doctor encouraged or discouraged you from exercising?

#5. Is your doctor aware of the problem? Has your doctor encouraged or discouraged you from exercising because of it?

#6. Has your doctor encouraged or discouraged you from exercising while taking this medication?

#7. What is the reason?

If you have any reservations about clearing the individual for participation, do not clear for testing and require a doctor’s clearance.

FORM 6: 1.5 MILE LAP SHEETS

Name 1 2 3 4 5 6 Time

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BACKGROUND

Three job task simulation test (JTST) scenarios were defined in the URMMA study that contained most of the frequent and critical tasks that emerged from the job task analysis. 198 incumbent officers from the URMMA agencies took the three JTST scenarios and the physical fitness tests. Specificity and sensitivity analyses were applied to their test data that viewed the predictability of each fitness score against performance on the three JTST scenarios. The first and second scenarios (a roadway clearance and extraction scenario) did not yield any predictive cut points that significantly predicted who could and could not perform the tasks at a minimally effective level. Only the third scenario (pursuit and arrest) provided significant predictability. Because of this, if the JTST scenarios were to be used as the physical readiness tests instead of the physical fitness tests only the third JTST scenario should be used.

This Procedural Manual provides the specific guidelines for setting up and administering the URMMA JTST.

JOB TASK SCENARIO

General instructions

“The job-task simulation test was developed based on input from a randomly selected sample of 289 Officers of URMMA Departments. They rated tasks for frequency and criticality, and provided quantifying data. The results indicated that the physical tasks and demands were very similar across all positions. This test measures the ability to perform those physical tasks of the job that officers rated as essential and important.”

PURSUIT AND ARREST SCENARIO

“The participant is charged with pursuing and restraining a fleeing perpetrator. The various obstacles are simulations of barriers that officers may encounter during a pursuit situation.” The total course is 1500 feet (500 yards).

“At the command GO you will run 30 yards (90 feet) to a fence. Climb over the 6 foot fence and run 20 yards (60 feet) to stairs. Run up and down 12 steps three times. Run 30 yards (90 feet) to track. Run 340 yards (1020 feet) on track to a traffic cone. Turn and run 10 feet and jump a ditch 4 feet apart (marked by 4 traffic cones). Run 60 feet. Then serpentine around 10 cones spaced 10 feet apart (total distance 100 feet). Turn and run 10 feet. Jump over a 4 ft. sawhorse or hurdle, then run 60 feet to 190 lbs. dummy.

The dummy is on its back. Roll dummy onto stomach and while down on one knee pull resistance tubing with each arm to midline of the dummy (tubing held by two test administrators each side of dummy) . Stand up and lift dummy up to knees. Your score is the time it takes to complete these tasks. Watch this demonstration. Do you have any questions?” To meet the standard you must complete the course and all tasks in less than 4 minutes and 25 seconds.

Test administration

Situation The officer is charged with pursuing and restraining a fugitive. The various obstacles are simulations of both urban and rural barriers that may need to be surmounted in a pursuit situation.

Tasks PURSUING

1. Subject starts at traffic cone and runs 30 yards (90 feet) to a fence.
2. Subject goes over a six (6) foot fence and runs 20 yards (60 feet) to stairs (marked by traffic cone)
3. Runs up and down 12 steps x 3 times
4. Runs 30 yards (90 feet) to track. (marked by 1 traffic cone).
5. Runs 1020 feet (340 yards) on track to a traffic cone.
6. Subject turns and runs 10 feet
7. Jumps a ditch 4 feet apart (marked by 4 traffic cones).
8. Runs 60 feet
9. Serpentine around 10 cones spaced 10 feet apart.(total distance 100 feet)
10. Turns and runs 10 feet.
11. Jumps over a 4 ft. foot sawhorse or hurdle
12. runs 60 feet to 190 lb. dummy

RESTRAINING

13. Dummy is on his back
14. Subject rolls dummy onto stomach
15. While down on one knee, pull resistance tubing with each arm to midline of the body. (simulation of cuffing)
16. Stands up and lifts 190 lb. dummy up to knees up position.

Equipment

Subject to be tested

1. Dressed in sweat suit or duty uniform.
2. Belt, gun, radio, vest, baton

Setting the testing situation

1. Fence adjacent to track.
2. 440 yard or 400 meter track.
3. 4 ft. sawhorses or hurdle
4. 18 traffic cones.
5. Two rubber resistance bands tubing.
6. 190 lb. dummy
7. 2 assistants to hold rubber tubing and blocking bag
8. Stop watch.

Measurement Time in minutes and seconds

Instructor tips

A coordinator should accompany each participant through the course. Key tasks are to guide the officer through the course, especially the serpentines. When the officer lifts the dummy up the time is recorded.

Effective passing time = 4:25

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