



**OFFICE OF THE DIRECTOR
THE UNIVERSITY OF TEXAS SYSTEM POLICE
POLICIES AND PROCEDURES MANUAL**



TITLE: POLICE CADET PHYSICAL FITNESS STANDARDS -- APPLICANTS TO THE UNIVERSITY OF TEXAS SYSTEM POLICE TRAINING ACADEMY		
POLICY NUMBER: B-3	EFFECTIVE DATE: 09/01/04	RESCINDS / AMENDS: II-79-12...1/1/96
RELATED LAWS:	RELATED STANDARD(S) / RULE(S): 22.3.1, 22.3.2, 32.1.4, 33.4.1	

I. PURPOSE:

To establish a uniform physical fitness test to ensure police officer candidates meet the physical requirements of The University of Texas Police Officer position.

II. BACKGROUND:

The Physical Fitness Test (PFT) is established in conformance with the Commission on Accreditation for Law Enforcement Agencies (CALEA) standards. The standards are designed to ensure police applicants and cadets can perform physical tasks related to police officer responsibilities contained in police job descriptions.

The PFT consists of four individual tests to evaluate an applicant's aerobic capacity or endurance and muscular flexibility, strength and endurance. The four tests are: (1) one minute sit-ups, (2) sit and reach, (3) either one minute push-ups or one repetition maximum bench press, and (4) a 1.5 mile run. If the one repetition maximum bench press test is used, a Universal Gym Bench Press Weight Machine must be used. The numbers on the right side of the weights are used.

The tests have been validated by the Cooper Institute for Aerobics Research. Fairness is ensured using performance measures based on the pass rate of the lower fortieth percentile (40%) of the general population. The fortieth percentile (40%) standard represents an individual in fair physical condition and further means sixty percent (60%) of the general population is in better physical condition.

III. POLICY:

A. The Physical Fitness Test is to be given to all persons making application to attend the Basic Peace Officer Course conducted by The University of Texas System Police Academy. All advertising notices for Police Officer positions should include the following language: "Qualified applicants will be required to successfully pass a Physical Fitness Test and must obtain a Physician's Statement of Release prior to testing."

- B. In order to be eligible to attend the Basic Peace Officer Course, an applicant must successfully pass all four tests in the PFT. An applicant who fails all four tests shall be disqualified and removed from further consideration. An applicant who fails any portion of the PFT shall be given the opportunity to retest the failed portion(s) within twenty-four to seventy-two hours. Should the applicant fail this portion(s) again, no further opportunities to retest will be given and the applicant will be disqualified and removed from further consideration. An applicant who is disqualified based on their PFT performance may reapply for subsequent academy classes.
- C. An applicant must score at the levels listed in Appendix A for each of the tests given. The entry-level scores represent the minimum required of an applicant to be eligible to enter the academy and participate safely in the Basic Peace Officer Course.
- D. All cadets will be given the PFT within the first week of the academy. Cadets who fail all four tests will be withdrawn from the academy and instructed to report to their employing institution on the next available workday. Cadets who fail any portion(s) of the PFT shall be given the opportunity to retest the failed portion(s) within twenty-four to forty-eight hours. Cadets who fail this portion(s) again will not be afforded additional opportunities to retest and will be withdrawn from the academy and instructed to report to their employing institution on the next available workday.
- E. Cadets must score at the 50th percentile level, listed in Appendix A, for each test in order to pass the Basic Peace Officer Course requirements and graduate from the academy.

IV. PROCEDURE FOR ADMINISTERING PHYSICAL FITNESS TEST:

A. Pre-Physical Fitness Testing Recommendations:

It is required that a medical clearance from a physician be obtained from the applicant before testing. The medical clearance should be limited to a statement signed by the physician indicating that he/she has reviewed the Physical Fitness Test and has determined that it is safe for the applicant to participate. This is all that is allowed under the Americans with Disabilities Act, unless a conditional offer of employment has been extended to the applicant.

B. Protocols:

The detailed protocols for administering each of the four Physical Fitness Tests are provided and should be strictly followed.

C. Warm-Up and Cool-Down:

Muscles and body systems must be warmed-up before exertion and cooled-down following the exertion. Test administrators should assure that applicants are properly warmed-up and cooled-down on the day the physical fitness tests are administered.

1. Warm-Up:

The warm-up prepares the body for the testing, and helps prevent unnecessary injuries and muscle soreness. The initial phase of a warm-up should take about three to five minutes and include activities such as walking or marching in place. After a general warm-up, a proper amount of time should be spent stretching large muscle groups. The stretching phase of the warm-up should last between ten and fifteen minutes. See Appendix C for specific recommended stretching exercises.

2. Cool-Down:

Abruptly ceasing exercise after a vigorous workout may trap blood in the muscles, if this occurs, it could result in reduced blood circulation to the brain, heart, or other vital organs. This may cause one or more of the following, dizziness, faintness, extra heartbeats and nausea, etc. To prevent this, reduce the heart rate slowly by walking at a fast pace or jogging at a slow pace. Depending upon the duration and intensity of the exercise or workout, the time necessary for the cool-down should be at least five minutes. After the cool-down, it is important to stretch for ten to fifteen minutes to help prevent soreness.

D. First Aid Procedures:

It is important that a person familiar with emergency first aid procedures be present during testing.

E. Protocols For Physical Fitness Test:

The four tests are designed to assess the physical fitness level and capabilities of each applicant. The satisfactory performance on one test does not compensate for failure to satisfactorily perform another. The test will be given in the sequence as listed below, and all four tests must be passed by the applicant.

Each test should be administered once and the score for each applicant placed on the scoring form, see Appendix D.

1. Initial Processing and Warm-up

Materials/ Equipment	Applicant scoring forms, pencils, area large enough to conduct the warm-up routine from Appendix B.
Procedures	<ol style="list-style-type: none"> 1. Give each of the applicants a scoring form. Instruct the applicants to fill out the form and return to the Test Administrator. 2. Move applicants to the warm-up area (if not already there) and conduct warm-up stretching exercises. 3. Following warm-up, start administering the four physical fitness tests.

2. Test #1 Muscular Endurance / Dynamic Strength Test -- One Minute Sit-ups

Materials/ Equipment	Stopwatch, scoring form, pencil, gym mat.
Procedures	<ol style="list-style-type: none"> 1. Instructions to applicants: <p>"This test measures the endurance and strength of the abdominal muscle group. You are to perform as many sit-ups in proper form as you can in one minute. This test will be administered once."</p> 2. Demonstrate the correct technique: <ol style="list-style-type: none"> a. Applicants start by lying on their backs, knees bent, feet flat on the floor, hands together with fingers interlaced and placed behind the neck. b. A partner will hold the feet down firmly. The buttocks will remain on the floor and shall not be raised while performing the sit-ups. c. The applicant performs as many correct sit-ups as possible in one minute. d. In the up position, applicants should touch their elbows to their knees and then return until their shoulder blades touch the floor. This is one repetition. e. If there is any resting while performing the sit-ups, it will be done in the up position. If applicants release their fingers from behind their neck, counting of sit-ups will stop. 3. Record the number of correctly executed sit-ups. Passing scores are found at the end of this section.

3. Test #2 Muscular Flexibility -- Sit and Reach Test

<p>Materials/ Equipment</p>	<p>Scoring form, pencil, sit and reach box, yardstick on box with a fifteen-inch mark at edge. (See attached illustration)</p>
<p>Procedures</p> <p>inches</p>	<ol style="list-style-type: none"> 1. Instructions to applicants: <p>"This test measures the flexibility of the lower back and hamstrings. You will be given three attempts. The best of the three attempts is recorded."</p> 2. Instruct applicants to continue to warm-up. 3. The shoes must be removed. 4. Demonstrate the correct technique: <ol style="list-style-type: none"> a. Sit on the floor with legs fully extended, the soles of the feet placed flat against the box and the feet no wider than eight inches apart. b. The knees remain extended throughout the test. c. The hands are placed exactly together, one hand on top of the other and fingers extended. d. Applicants lean forward without lunging or bobbing and reach as far down the yardstick as possible. The hands must stay together and even. The knees remain extended and do not bend. e. Exhaling during the reach is recommended. 3. Check for improper procedures: <ol style="list-style-type: none"> a. Bouncing, lunging, bobbing, or jerking forward. These movements are not an indicator of flexibility and could cause injury. b. The knees do not remain extended and bend. To correct this, place a hand on an applicant's knees to detect movement. 4. Record the reach to the nearest 1/4-inch. Passing scores are found at the end of this section.

4. Test #3 Muscular Endurance / Dynamic Strength Test -- One Minute Push-ups

<p>Materials/ Equipment</p>	<p>Stopwatch, scoring form, pencil, gym mat.</p>
<p>Procedures</p>	<ol style="list-style-type: none"> 1. Instructions to applicants: <p>"This test measures the endurance and strength of the upper body. You are to perform as many push-ups in proper form as you can in one minute. This test will be administered once."</p> 2. Demonstrate the correct technique: <ol style="list-style-type: none"> a. The hands are placed about shoulder width apart. The Test Administrator or partner lies on the floor next to applicants and places a fist on the floor below an applicant's chest. b. Starting from the up position (elbows fully extended), applicants must keep their back straight at all times and lower themselves to the floor until their chest touches the test administrator's or partner's fist or the applicant's upper arm is parallel to the floor. Applicants then return to the up position. This is one repetition. c. Resting is done in the up position. If an applicant stops and rests on the floor, the counting of push-ups will stop. 3. Check for improper procedures: <ol style="list-style-type: none"> a. Bending the back while performing push-ups. b. Applicants not lowering themselves to the floor until their chest touches the test administrator's or partner's fist or the upper arm is parallel to the floor. 4. Record the number of correctly executed push-ups. Passing scores are found at the end of this section.

5. Test #3 Muscular / Absolute Strength Test -- One Repetition Maximum Bench Press

<p>Materials/ Equipment</p>	<p>Scoring form and pencil. Universal Gym Bench Press Weight Machine with numbers on the right side of the weight plates.</p>
<p>Procedures</p> <p>feet</p> <p>maximum</p>	<ol style="list-style-type: none"> 1. Instructions to applicants: <p>"This test measures upper body muscular strength. Your goal is to lift as much weight possible in one repetition. Lie with your shoulders and buttocks on the bench and your feet flat on the floor. Grip the weight bar slightly more than shoulder width apart, and align it with your mid-chest. Do not arch your back or raise your off the floor during the lift. To execute the press, fully extend your arms, and then control the weight as you return it to the starting position. Exhale while lifting the weight, and inhale while lowering it."</p> 2. Demonstrate the correct technique: <ol style="list-style-type: none"> a. Try to estimate how much weight the applicant can lift in one maximum effort. If there is an estimated maximum weight load, start with a weight about one-half of the estimated maximum weight. If not, use the following guidelines: Males, one half of body weight; Females, 20 pounds or the first weight plate. b. Lie with shoulders and buttocks on the bench and feet flat on the floor. Grip the bar slightly more than shoulder width apart and align the bar at mid-chest. Lift the estimated or selected weight slowly to warm up the muscles. c. Increase the weight lifted in 10 or more pound increments until the maximum weight lifted is achieved. The first two or three lifts are warm ups. It should take five lifts to attain the weight lifted. 3. Check for improper procedures: <ol style="list-style-type: none"> a. Lifting feet off the floor, arching the back while lifting the weights and lifting the shoulders off the bench. b. Not exhaling during the lift. 4. Record the maximum weight lifted by reading the numbers on the right side of the weight plates. Then divide the weight lifted by the applicant's body weight to obtain the scoring ratio.

6. Test #4 Aerobic / Cardiovascular Endurance Test -- 1.5 Mile Run

<p>Materials/ Equipment</p>	<ol style="list-style-type: none"> 1. Stopwatch or clock with a sweep second hand. 2. Scoring form and pencil. 3. An indoor or outdoor track or other suitable running area measured to 1.5 miles. 4. Traffic cones or other equipment to mark start and finish lines.
<p>Procedures</p> <p>applicants completed.</p>	<ol style="list-style-type: none"> 1. On the day of testing, applicants should refrain from smoking or eating for at least two hours prior to the test. 2. Instructions to applicants: "This test measures your cardiovascular or aerobic endurance. This requires a maximum effort on your part. You are asked to complete 1.5-mile distance as quickly as you can. This test will be administered once." 3. Position applicants at the start line. 4. Set stopwatch to zero and start the test with command "Ready, Go." 5. During the test, applicants can be informed of lap times. If several applicants run at once, their individual times at the finish can be called out and recorded later. 6. Clock and record the finish times to the nearest hundredth (1/100) of a second. Passing scores are found at the end of this section. 7. Be sure to observe the applicants during the cool-down. Encourage applicants to walk after their run is completed. Discourage from stopping, lying down or sitting down after the run is

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APPENDIX A

Physical Fitness Test Scores

Physical Fitness Test Scores

TEST					
SCORING PERCENTILE	ONE MINUTE SIT-UPS	SIT and REACH (Inches)	ONE MINUTE PUSH-UPS	ONE RM BENCH PRESS	1.5 MILE RUN (Min:Sec)
10th	18	12.0	10	.55	17:18
20th	22	14.0	12	.60	16:31
25th	24	14.5	14	.62	16:11
30th	25	15.0	15	.65	15:50
35th	26	15.5	16	.66	15:37
40th*	27	16.0	18	.68	15:20
45th	28	16.5	19	.70	14:59
50th**	29	17.0	21	.72	14:46
55th	31	17.5	22	.74	14:28
60th	32	18.0	23	.76	14:15
65th	33	18.5	24	.79	13:54
70th	34	19.0	26	.81	13:35
75th	36	19.5	29	.84	13:13
80th	37	20.0	32	.88	12:51
85th	39	20.5	34	.91	12:20
90th	43	21.5	38	.97	11:38
95th	44	22.0	43	1.06	10:52
99th	45	22.5	62	1.07	9:07

* These scores represent entry-level minimum scores.

** These scores are needed to pass the final PFT during the Academy.

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APPENDIX B

Statement of Release from Physician

PHYSICIAN'S STATEMENT OF RELEASE

Name of Applicant: _____

Date Examined: _____

I have reviewed the physical requirements and guidelines for The University of Texas System Police Physical Fitness Test.

I have examined _____ on this date. It is my opinion that this person **MAY** participate in the exercises listed in The University of Texas System Police Physical Fitness Test.

(Physician's Signature)

(Date)

(Physician's Name -- Printed)

(License Number)

(Business Address)

(City/State/Zip)

(Phone Number)

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APPENDIX C

Stretching Exercises

STRETCHING EXERCISES

UPPER BODY

Stretching exercises for the upper body are important not only to protect you from muscle strain, but also to improve your posture and general appearance. Tight or weak chest and shoulder muscles, for instance, may result in rounded shoulders and bad posture.

1. **SHOULDER STRETCH**

Standing upright, bend your right arm behind your head, and press your right elbow downward with your left hand. Repeat to the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each shoulder.

2. **TRICEPS STRETCH**

Standing upright, swing your right arm leftward across your chest. To enhance a stretch of the right triceps and shoulder, place your arm in the bend of your left elbow and pull with your left arm. Repeat to the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each arm.

FEET

The foot is an amazingly complex structure that provides the strength to support your entire body. A well functioning foot routinely absorbs tremendous force. Walking, for instance, subjects the foot to a force of up to 120 percent of your body weight with each step. Running subjects the foot to even greater loads -- up to five and a half times your body weight.

3. **FOOT STRETCH**

Lying down on the floor face up, legs extended, lift right leg slightly off the floor, follow this sequence: Extend your toes as far as you can, feeling the stretch from your ankle to your toes along the top of your foot. Then turn your foot in to stretch the muscles along the outside of your foot. Pull your toes back toward your shin so that you feel tightness along the sole. Finally, turn out to lengthen the inside muscles. Repeat to the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each foot.

LOWER BACK STRETCHES

The muscles and connective tissues of the lower back support your upper body. The lower back is frequently the site of muscle and connective tissue stress. Poor posture, of course, can exacerbate lower back pain. To relieve pain and reduce stress to the region, perform these exercises.

4. **SINGLE KNEE TO CHEST STRETCH**

Lying down on the floor face up, knees bent, pull one knee to chest until a comfortable stretch is felt in the lower back and buttocks. Repeat with the opposite knee. Hold each stretch for ten to twenty seconds. Repeat two times for each leg.

5. **DOUBLE KNEE TO CHEST STRETCH**

Lying down on the floor face up, knees bent, both knees up to chest until a comfortable stretch is felt in the lower back. Keep back relaxed. Hold each stretch for ten to twenty seconds. Repeat two times.

INNER THIGH STRETCHES

The muscles of the inner thigh and groin area are called the adductors. Many people who regularly exercise, ignore their inner thigh muscles, allowing them to become short and tight. These muscles can be easily injured, resulting in what are commonly called groin pulls. To reduce the chance of injury and to extend the range of motion in your legs, you should routinely stretch your inner thigh muscles with the exercises described below.

6. **GROIN STRETCH**

Sit on the floor, extend both legs out with the soles of both feet together. Pull your feet as close as you can toward your groin area. Place each hand on your ankles. Place your elbows on the inside of your thighs, try to stretch each thigh down until you feel a comfortable stretch. Hold each stretch for ten to twenty seconds. Repeat two times.

7. **INNER THIGH STRETCH**

While lying on your back, extend your feet in the air and spread your legs as far apart as you can. Press down on your inner thigh with your arms. Draw one knee up and support it with your hand as you straighten your other leg, until you will feel a concentrated stretch. Hold each stretch for ten to twenty seconds. Repeat two times.

QUADRICEPS AND HIP FLEXORS

The quadriceps is four thigh muscles that begin on the hipbone and the thighbone and become united on a single tendon that is attached to the kneecap. These muscles work together primarily to straighten the knee. Tight quadriceps and hip flexors can limit your ability to run and jump. In addition, tight hip flexors can tilt your pelvis forward and lead to lordosis, or excessive curvature of the lower back.

8. **QUADRICEPS STRETCH**

While lying on your stomach, extend both legs. Flex your right leg up until your heel touches your buttocks. Hold the leg in this position with your right hand. Repeat for the left side. Hold each stretch for ten to twenty seconds. Repeat two times for each leg.

9. **RUNNER'S STRETCH**

Place right knee on the floor behind left foot. Move left knee forward so that it is positioned over the toes, Place palms on left knee. Without changing the position of the right knee, push hips down toward the floor. Make sure knee and toes are pointing forward and not to the side. Repeat for the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each leg.

HAMSTRING STRETCHES

A group of three large muscles in the back of the thigh, the hamstrings are among the most important muscles of your body since they act to straighten the hip and bend and rotate the knee. Virtually every physical activity makes use of these muscles, and as a result, they are frequently subject to tightness and stress injuries.

10. **HAMSTRING STRETCH**

Lie on your back with your left foot on the floor and the other leg extended in the air. With both hands on either side, grab the ankle of the leg extended in the air and draw the leg towards you as far as you can. Repeat for the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each leg.

11. **MODIFIED HURDLER**

Sit on the floor with one leg extended and the opposite knee bent with foot touching extended leg. Keeping your back straight, lean forward slowly to grasp toes of extended leg. Repeat for the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each leg. This will stretch your hamstrings, lower back, and calf muscles.

CALF MUSCLES

Your calf muscle is composed of two distinct parts, the gastrocnemius and the soleus. The gastrocnemius is the large bulging muscle of the calf. It is connected to the Achilles tendon and is principally involved with lifting the heel off the ground and pushing off for walking, running and jumping. The soleus extends underneath the gastrocnemius and connects to the Achilles tendon. Many people, especially those who run, have inflexible calf muscles. Tight calves can result in Achilles tendonitis, pronation, or inward roll of the foot, and plantar fasciitis, an inflammation of the connective tissue in the sole of the foot.

12. **CALF MUSCLE STRETCH**

Place your arms against a wall, drawing your left knee forward and extending your right leg behind. Keep your right knee locked and your heel on the ground to stretch the gastrocnemius. To stretch the soleus, flex your right knee slightly. Lean into the wall with both feet extended behind you and both knees locked to stretch your left and right gastrocnemius muscles. Flex your knees slightly to include a soleus stretch in both legs. Hold each stretch for ten to twenty seconds. Repeat two times for each leg.

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APPENDIX D

Scoring Form / Assessment Sheet

THE UNIVERSITY OF TEXAS SYSTEM POLICE

PHYSICAL FITNESS TEST

SCORING FORM / ASSESSMENT SHEET

DEPARTMENT: _____ DATE: _____

NAME: _____

SEX: Male _____ Female _____ AGE: _____ HEIGHT: _____ WEIGHT: _____

TEST	SCORES
1 Minute Sit-Up	(number)
Sit and Reach	(inches)
1 Minute Push-Up or 1 RM Bench Press	(number) (weight lifted and ratio)
1.5 Mile Run	(time)

COMMENTS: _____

(Do not Write in Space Below -- Academy Use Only)

TEST	SCORES
Resting Heart Rate	(beats / min.)
Resting Blood Pressure	(SBP mmHg / DBP mmHg)
Step Test	(time / number)
% Body Fat	(%)
Agility Course	(time)
300 Meter Run	(time)

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APPENDIX E

Academy Requirements for Applicants

THE UNIVERSITY OF TEXAS SYSTEM POLICE ACADEMY

NOTICE TO POLICE ACADEMY CANDIDATES

Candidates desiring to attend The University of Texas System Police Academy must pass a Physical Fitness Test (PFT). Candidates who pass all the requirements and are selected to attend the academy will be given the PFT within the first week of class. The PFT has been established in conformance with national police accreditation guidelines. The guidelines are designed to ensure cadets and police officers can perform physical tasks related to police officer responsibilities in a safe and efficient manner.

The PFT consists of a battery of four tests that include: (1) one minute sit-ups, (2) sit and reach, (3) either one minute push-ups or one repetition maximum bench press, and (4) a 1.5 mile run. The minimum passing scores for each of the tests are at the 40th percentile of fitness. The scores are based upon statistics of the general population compiled by the Cooper Institute for Aerobics Research.

Effective January 1, 1996, any cadet attending The University of Texas System Police Academy, who fails to perform each test at the 40th percentile of fitness within the first week of class will be given a second opportunity to pass the failed test within 48 hours. If cadets fail all four tests or an individual test a second time they will be dismissed from the academy and instructed to return to their department. Cadets must reach the 50th percentile of fitness on the final PFT during the academy in order to graduate.

PHYSICAL FITNESS TEST

ONE-MINUTE SIT-UPS MUSCULAR ENDURANCE / DYNAMIC STRENGTH: The score is the number of bent-leg sit-ups correctly performed in one minute. Start by lying on your back, knees bent at about a 45 degree angle, feet flat on the floor, hands together with fingers interlaced and placed behind the neck, not the head. Raise up to touch elbows to knees and then back down to touch shoulder blades to floor or mat. Someone will hold your feet to keep them on the floor. Do Not raise the buttocks off of floor. Do Not release the hands from the back of the neck. Resting is done in the upright position only.

SIT AND REACH FLEXIBILITY: The sit and reach test measures the flexibility of the lower back and the hamstring muscles. The test involves stretching out from a sitting position with arms extended to touch the toes or further. Feet are perpendicular to the floor at about 8 inches (or less) apart with shoes removed. Place hands on top of each other so middle fingers are aligned. Knees must remain straight while reaching. No jerky or lunging movements, the reach must be held for about three seconds. The score is the number of inches one can reach.

ONE-MINUTE PUSH-UPS MUSCULAR ENDURANCE / DYNAMIC STRENGTH: The score is the number of correctly performed push-ups in one minute. The Test Administrator or partner places a fist on the floor below your chest. Hands are placed about shoulder width apart. Starting from the up position (elbows fully extended), you must keep your back straight at all times and lower yourself to the floor until your chest touches the test administrator's or partner's fist or your upper arms are parallel to the floor. Return to the up position. This is one repetition. Resting is done in the up position. If you stop and rest on the floor, the counting of push-ups will stop.

ONE REPETITION

MUSCULAR / ABSOLUTE STRENGTH: The score is ratio between the maximum weight **MAXIMUM BENCH PRESS** lifted and the body weight of the applicant. The equipment needed for accurate scoring is the bench press station of a Universal Gym weight machine. The numbers on the right side of the weights are used to determine the amount lifted. The Test Administrator should estimate the beginning weight each applicant can lift in one maximum effort. This can be estimated for the males at one half to two thirds their body weight and for females at the first or second plate of weights. The applicant will lie on the bench, feet flat on the floor, weight bar aligned with mid-chest, place hands slightly more than shoulder width apart on the weight bar and then lift the weight selected without lifting feet off the floor or arching the back. Then increase the weight progressively until one maximum lift is accomplished. The first two lifts are warm-ups and the maximum weight lifted should be reached by the fifth lift. The score is obtained by dividing the weight lifted by the body weight. Example: The weight of the applicant is 200 pounds. The weight lifted is 160 pounds. Then divide 160 by 200 to get a ratio of .80.

1.5 MILE RUN

AEROBIC / CARDIOVASCULAR ENDURANCE: The score is reflected in minutes and seconds. Run 1.5 miles as fast and safely as you can.

SCORES FOR THE PHYSICAL FITNESS TEST

TEST					
PERCENTILE	ONE MINUTE SIT-UPS	SIT and REACH (Inches)	ONE MINUTE PUSH-UPS	ONE RM BENCH PRESS	1.5 MILE RUN (Min:Sec)
30th	25	15.0	15	.65	15:50
40th*	27	16.0	18	.68	15:20
50th**	29	17.0	21	.72	14:46
60th	32	18.0	23	.76	14:15
70th	34	19.0	26	.81	13:35
80th	37	20.0	32	.88	12:51
90th	43	21.5	38	.97	11:38

* 40th Percentile represents the minimum scored required to be accepted into the Academy.

** 50th Percentile represents the score required to graduate from the Academy.

SUGGESTED TRAINING

The following guidelines are based on a twelve week period preceding testing.

- Preparing for MUSCULAR ENDURANCE / DYNAMIC STRENGTH - One Minute Sit-Up test:

Determine the maximum number of bent-leg sit-ups (hands behind the neck with someone or something holding your feet) you can do in one minute. Exercise 3 times each week. Week 1, do one set of the number (repetitions) done in one minute. Week 2, divide the repetitions in half and do two sets of one half the repetitions. Week 3, do three sets of one half the repetitions. Week 4 and subsequent weeks do three sets of repetitions and add one or two repetitions each week.

- Preparing for FLEXIBILITY - Sit and Reach test:

Performing stretching exercises daily will increase performance in this area. There are two recommended exercises:

Sit-and-Reach - Sit on the ground with legs straight. Slowly extend forward at the waist and extend the fingertips toward the toes while keeping the legs straight. Hold each stretch for 10 to 20 seconds. Do 5 repetitions of the exercise.

Towel Stretch - Sit on the ground with the legs straight. Wrap a towel around the feet holding the ends with each hand. Lean forward and pull gently on the towel extending the torso toward the toes. Hold each stretch for 10 to 20 seconds. Do 5 repetitions of the exercise.

- Preparing for MUSCULAR ENDURANCE / DYNAMIC STRENGTH - One Minute Push-Up test:

Determine the maximum number of push-ups you can do in one minute. Exercise 3 times each week. Week 1, do one set of the number (repetitions) done in one minute. Week 2, divide the repetitions in half and do two sets of one-half the repetitions. Week 3 do three sets of one-half the repetitions. Week 4 and subsequent weeks, do three sets of repetitions and add one or two repetitions each week thereafter.

- Preparing for MUSCULAR / ABSOLUTE STRENGTH - One Repetition Maximum Bench Press test:

Determine the maximum amount of weight that you can lift once. Select 60% to 80% of the one repetition maximum weight for the "beginning weight." Week 1, do one set of the beginning weight. Week 2, do two sets. Week 3, do three sets. Week 4, do three sets. Each set is 8 repetitions to 12 repetitions (reached by the fourth week). After the fourth week, gradually increase the weight every one to two weeks. Exercise 3 times each week.

- Preparing for the AEROBIC / CARDIOVASCULAR ENDURANCE - 1.5 mile run:

Below is a schedule that would enable you to perform a maximum effort for the 1.5 mile run. If you can advance the schedule on a weekly basis, then proceed to the next level. If you can do the distance consistently in less time, this is to your benefit and is encouraged.

WEEK	ACTIVITY	DISTANCE (Miles)	TIME (Minutes)	FREQUENCY (X 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	5
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

STRETCHING EXERCISES

UPPER BODY

Stretching exercises for the upper body are important not only to protect you from muscle strain, but also to improve your posture and general appearance. Tight or weak chest and shoulder muscles, for instance, may result in rounded shoulders and bad posture.

1. SHOULDER STRETCH

Standing upright, bend your right arm behind your head, and press your right elbow downward with your left hand. Repeat to the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each shoulder.

2. TRICEPS STRETCH

Standing upright, swing your right arm leftward across your chest. To enhance a stretch of the right triceps and shoulder, place your arm in the bend of your left elbow and pull with your left arm. Repeat to the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each arm.

FEET

The foot is an amazingly complex structure that provides the strength to support your entire body. A well functioning foot routinely absorbs tremendous force. Walking, for instance, subjects the foot to a force of up to 120 percent of your body weight with each step. Running subjects the foot to even greater loads -- up to five and a half times your body weight.

3. FOOT STRETCH

Lying down on the floor face up, legs extended, lift right leg slightly off the floor, follow this sequence: Extend your toes as far as you can, feeling the stretch from your ankle to your toes along the top of your foot. Then turn your foot in to stretch the muscles along the outside of your foot. Pull your toes back toward your shin so that you feel tightness along the sole. Finally, turn out to lengthen the inside muscles. Repeat to the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each foot.

LOWER BACK STRETCHES

The muscles and connective tissues of the lower back support your upper body. The lower back is frequently the site of muscle and connective-tissue stress. Poor posture, of course, can exacerbate lower back pain. To relieve pain and reduce stress to the region, perform these exercises.

4. SINGLE KNEE TO CHEST STRETCH

Lying down on the floor face up, knees bent, pull one knee to chest until a comfortable stretch is felt in the lower back and buttocks. Repeat with the opposite knee. Hold each stretch for ten to twenty seconds. Repeat two times for each leg.

5. DOUBLE KNEE TO CHEST STRETCH

Lying down on the floor face up, knees bent, both knees up to chest until a comfortable stretch is felt in the lower back. Keep back relaxed. Hold each stretch for ten to twenty seconds. Repeat two times.

INNER THIGH STRETCHES

The muscles of the inner thigh and groin area are called the adductors. Many people who regularly exercise, ignore their inner thigh muscles, allowing them to become short and tight. These muscles can be easily injured, resulting in what are commonly called groin pulls. To reduce the chance of injury and to extend the range of motion in your legs, you should routinely stretch your inner thigh muscles with the exercises described below.

6. **GROIN STRETCH**

Sit on the floor, extend both legs out with the soles of both feet together. Pull your feet as close as you can toward your groin area. Place each hand on your ankles. Place your elbows on the inside of your thighs, try to stretch each thigh down until you feel a comfortable stretch. Hold each stretch for ten to twenty seconds. Repeat two times.

7. **INNER THIGH STRETCH**

While lying on your back, extend your feet in the air and spread your legs as far apart as you can. Press down on your inner thigh with your arms. Draw one knee up and support it with your hand as you straighten your other leg, until you will feel a concentrated stretch. Hold each stretch for ten to twenty seconds. Repeat two times.

QUADRICEPS AND HIP FLEXORS

The quadriceps are four thigh muscles that begin on the hipbone and the thighbone and become united on a single tendon that is attached to the kneecap. These muscles work together primarily to straighten the knee. Tight quadriceps and hip flexors can limit your ability to run and jump. In addition, tight hip flexors can tilt your pelvis forward and lead to lordosis, or excessive curvature of the lower back.

8. **QUADRICEPS STRETCH**

While lying on your stomach, extend both legs. Flex your right leg up until your heel touches your buttocks. Hold the leg in this position with your right hand. Repeat for the left side. Hold each stretch for ten to twenty seconds. Repeat two times for each leg.

9. **RUNNER'S STRETCH**

Place right knee on the floor behind left foot. Move left knee forward so that it is positioned over the toes, Place palms on left knee. Without changing the position of the right knee, push hips down toward the floor. Make sure knee and toes are pointing forward and not to the side. Repeat for the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each leg.

HAMSTRING STRETCHES

A group of three large muscles in the back of the thigh, the hamstrings are among your body's most important muscles since they act to straighten the hip and bend and rotate the knee. Virtually every physical activity make use of these muscles, and as a result they are frequently subject to tightness and stress injuries.

10. **HAMSTRING STRETCH**

Lie on your back with your left foot on the floor and the other leg extended in the air. With both hands on either side, grab the ankle of the leg extended in the air and draw the leg towards you as far as you can. Repeat for the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each leg.

11. **MODIFIED HURDLER**

Sit on the floor with one leg extended and the opposite knee bent with foot touching extended leg. Keeping your back straight, lean forward slowly to grasp toes of extended leg. Repeat for the other side. Hold each stretch for ten to twenty seconds. Repeat two times for each leg. This will stretch your hamstrings, lower back, and calf muscles.

CALF MUSCLES

Your calf muscle is composed of two distinct parts, the gastrocnemius and the soleus. The gastrocnemius is the large bulging muscle of the calf. It is connected to the Achilles tendon and is principally involved with lifting the heel off the ground and pushing off for walking, running and jumping. The soleus extends underneath the gastrocnemius and connects to the Achilles tendon. Many people, especially those who run, have inflexible calf muscles. Tight calves can result in Achilles tendonitis, pronation, or inward roll of the foot, and plantar fasciitis, an inflammation of the connective tissue in the sole of the foot.

12. **CALF MUSCLE STRETCH**

Place your arms against a wall, drawing your left knee forward and extending your right leg behind. Keep your right knee locked and your heel on the ground to stretch the gastrocnemius. To stretch the soleus, flex your right knee slightly. Lean into the wall with both feet extended behind you and both knees locked to stretch your left and right gastrocnemius muscles. Flex your knees slightly to include a soleus stretch in both legs. Hold each stretch for ten to twenty seconds. Repeat two times for each leg.