

Baltimore City Fire Department

Physical Ability Test Preparation Guide

INTRODUCTION



Congratulations on making it to the next step of becoming a member of the Baltimore City Fire Department! Firefighting and Emergency Medical Services require a lot of physical strength and endurance. All new members are required to complete firefighting certifications as part of their initial training. To ensure we only select candidates that have the ability to be successful in fire training, we will administer this physical ability test (PAT) created by Fire & Police Selection, Inc.

This guide will provide details on the physical ability test, general cardiovascular and muscular strength information and exercises, as well as specific, event-related activities that will help you be successful. It also includes safety-related fitness information like hydration and proper warm-up. **READ THIS GUIDE THOROUGHLY.** You will find the key to success for this PAT is preparation.

SCHEDULE

Prior to April 2016 you will be notified by U.S. mail and email of an exam date/time based on your rank on the list of eligible candidates. If you do not receive any information for a PAT exam we may have not made it to your score on the list yet. If you have questions regarding your placement in the list or need to update your contact information you can call Fire Department Human Resources at 410-396-3080.

The first series of the PAT is scheduled to start in April of 2016. On your scheduled date/time you will be expected to arrive early and be prepared. Your letter will have the details necessary to do this. Upon arrival you will receive an exam orientation where you watch a video and observe the exam as it is performed by a BCFD member. You will have a chance to ask questions but **you will NOT be able to practice**. After this orientation and observation you will take your test.

WARNING: *Failure to follow the suggestions of this guide may result in a failure of the exam! Take these suggestions seriously. If you do not have any firefighting experience, you should pay VERY close attention to these suggestions.*

Baltimore City Fire Department

Physical Ability Test Preparation Guide

ABOUT THE PAT

The PAT is a continuous, timed test that consists of ten (10) stations. Each station was validated by Baltimore City Fire Department members for its importance and relevance to the work of a firefighter. It is important that you as the candidate understand the details of each event and prepare yourself as much as possible prior to your exam date because **you will NOT be able to practice.**

Each candidate will wear firefighting gloves, helmet, firefighting coat, and breathing apparatus at the start of the test and for the duration of the PAT. The breathing apparatus will have a backpack-like shoulder harness with a waist belt and it will weigh approximately 24 pounds. All of this equipment will be provided for the candidate at the testing site. Once the candidate confirms the equipment is suitably sized they will start the test. It is YOUR responsibility as the candidate to inform a proctor if equipment does not fit BEFORE starting your test.

You are not allowed to run between test events. You will walk between stations and the time you are walking is included in the overall test time. You may run, safely, within test events. You may choose to stop the test at any time, but you will be disqualified.

PAT STATIONS

The ten stations, in order, with a brief description are:

Event 1: Dry Hose Deployment

Candidate advances a hose line for 100 feet with a total of 44 pounds of dry weight. This event simulates extending a dry offensive hose line from an apparatus to a fire scene for firefighting operations.

Event 2: Charged Hose Deployment

Candidate advances a hose line for 70 feet. This event simulates extending a charged offensive hose line to the seat of a fire for firefighting operations.

Event 3: Halyard Raise

Candidate raises and lowers the fly section of a 24-foot extension ladder with a halyard (rope). The pull resistance of the ladder is approximately 26 pounds. This event simulates raising and lowering the fly of a 24-foot ladder in order to access higher floors for rescue, ventilation, and other firefighting operations.

Event 4: Roof Walk

Candidate ascends and descends a 12-foot distance walking/crawling on the rungs of a 14-foot roof ladder while carrying a simulated 20-pound chain saw. This event simulates walking on a roof ladder with the appropriate equipment in order to perform ventilation operations.

Event 5: Attic Crawl

Candidate crawls a distance of 20 feet across a simulated attic area while carrying a simulated flashlight in his/her hands. This event simulates walking/crawling on joists in an attic to search for the extension of a fire.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

PAT STATIONS, Continued

Event 6: Roof Ventilation

Candidate stands on a pitched rooftop and strikes the roof 30 times with a 10-pound sledgehammer. This event simulates making a ventilation opening in a roof with an axe or sledgehammer in order to ventilate a fire.

Event 7: Victim Removal

Candidate carries or drags a dummy for 20 feet. This event simulates removing an injured or unconscious victim from a hazardous area.

Event 8: Ladder Removal/Carry

Candidate removes a 16-foot roof ladder from mounted hooks, carries the ladder 38 feet around a diamond shaped course, and replaces the ladder to the mounted hooks. The weight of the ladder is 60 pounds. This event simulates removing a ladder from an apparatus, carrying it to the site of use, and replacing it to the apparatus.

Event 9: Crawling Search

Candidate crawls on the ground floor for a distance of 50 feet. This event simulates crawling while conducting search and rescue, hose deployment, or attic operations in a burning structure.

Event 10: Stair Climb with Hose

Candidate ascends and descends four flights of stairs with a 48-pound hose bundle. This event simulates climbing stairs with a hose bundle in order to fight fires in multiple-story buildings.

PAT VIDEO

On the web site is a link with a video of the exam. The video has eleven (11) stations. The BCFD PAT only has ten (10) stations. You should note that there are two main differences between the BCFD PAT and the video, otherwise the events and requirements described are the same. The differences are:

1. **Event #10 – Crawling Search** and **Event #9- Stair Climb with Hose** are performed in reverse order from the video. This means when you take the test the Crawling Search will be Event #9 and the Stair Climb with Hose will be Event #10.
2. The BCFD PAT does **NOT** include **Event # 11- Hose Hoist**. This means once you complete the descent for Event #10- Stair Climb with Hose your exam will be complete.

PLEASE SEE VIDEO POSTED WITH THIS GUIDE.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

WHAT DO I NEED TO DO TO BE SUCCESSFUL?

To be successful on this PAT you need to be prepared. Since the PAT is testing your physical ability, fitness is the key to success. This fitness includes cardiovascular fitness, muscular strength and endurance, and flexibility. Another important factor in your fitness preparation is incorporating exercises that simulate the PAT events whenever practical. This muscle memory may allow you to perform the events more easily on test day.

Descriptions of cardiovascular strength and muscular strength and endurance, as well as specific exercises are listed in the next few sections. In general, every workout you do should start with a warm-up which includes flexibility training. In addition to these overall fitness components, you should consider safety during your workouts by ensuring proper hydration and adequate rest.

HYDRATION

People often think of hydration while they are working out, but it actually starts BEFORE your workout and continues even after your workout is finished. Water or caffeine free, clear liquids are adequate hydration. Be mindful of excessive sports drink consumption, as it can lead to cramping and/or diarrhea. One sign that you are properly hydrating is if your urine is light yellow or clear. Below are recommendations from the American Council on Exercise regarding hydration (Bryant, 2003):

WHEN TO DRINK	HOW MUCH FLUID
Before working out	17-20 ounces
During workout	7-10 ounces every 10-20 minutes
After working out	About 20 ounces per pound of weight lost

REST

It may seem counter intuitive to a workout program, but you need to rest your body at least one day per week so that it can recover. This rest allows your body to repair muscles, which is a necessary part of the training process. Also, high intensity training should have 1 day between sessions. This rest cycle is taken into account in the sample training program provided. Rest and its importance are also discussed in the "Preparation Schedule" section.

WARM-UP/FLEXIBILITY

Your warm up should be similar to your actual workout, but much easier. The warm-up allows your body time to get ready for the more intense version of the activity that will come during the workout. Warming up in this fashion safely prepares your body for the activity planned during the workout. A warm-up decreases your chances for injury, decreases tension, improves flexibility, and may even improve your performance (Bryant, 2003). A cardiovascular workout warm-up should include a slower, less intense, version of the planned activity. For example, if you plan on running, your warm-up should consist of a light jog or walk.

After a few minutes of activity you can move to the stretching portion of the warm-up. You should perform each stretch exercise twice. During the first stretch, hold the stretch for 10 seconds where you feel mild tension. Next, during the second stretch, move a little further where you feel more tension and hold for another 10 seconds. When stretching, always be sure to move slowly, avoid bouncing, breath slowly, and relax (Bryant, 2003). Refer to the "Stretch Exercises" section at the end of this manual to see list of sample stretches.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

CARDIOVASCULAR FITNESS

Having good overall cardiovascular fitness will greatly benefit the candidate. There are many types of exercises that can be used to develop good cardiovascular fitness: aerobics, biking, running, hiking, stair climbing, swimming, basketball, etc. Some of these require special equipment or skills that not all candidates have.

Running is a free, efficient and effective way to increase cardiovascular fitness. Running is also a major form of exercise used by Baltimore City Fire Academy Instructors during recruit Physical Training. For these reasons, the schedule in this guide uses running as the major cardiovascular fitness component.

Safety is important when running. Always start your run with a warm-up (see “Warm-up/Flexibility” section). Supportive, athletic shoes and proper clothing are also part of being safe. This clothing should be selected based on the current weather. Dressing in layers is preferred in cold temperatures so that you can remove layers to suit your comfort level. When running at night or near traffic, ALWAYS be sure to wear a high visibility outer layer that is light in color and reflective if possible. Be mindful of where you are running. If you are running on uneven or rocky terrain you should slow your pace so you can avoid injury. Running with a partner can provide added safety and motivation. Reach out to fit family members or friends to be your running partner. They will be excited to help you work towards your career goals!

MUSCULAR STRENGTH/ENDURANCE

Muscular strength is required to be successful on the PAT. The various stations of the PAT require the candidates to lift, carry, and pull loads from 24 pounds to 165 pounds. Some stations require muscular endurance, where the candidate repeats the same motion a number of times. Strength training will help improve muscular strength and endurance.

The schedule in this guide uses a strength training circuit. Refer to the “Strength Exercises” section at the end of this manual for the list of training circuit exercises. A circuit allows for minimal rest (less than 30 seconds). This is a more realistic simulation of the rest time the candidate would receive in real life and may help the candidate be better prepared for the intensity of the test stations. Ideally each candidate has access to a state-of-the-art fitness facility. This is not always the case. Additional, low-cost exercise alternatives are included where practical.

Safety is important with strength training to prevent injury. Always start your workout session with a warm-up (see “Warm-Up/Flexibility”). Be sure to start lifting lighter weights and progress only after you know you are ready. If you are not tired on the last repetition, you are ready to increase the weight. Follow the instructions in the exercise and maintain proper form. If you cannot maintain the form, decrease the weight. Use a partner when lifting heavy weights or weight bars. They can encourage you and stabilize your lift when needed. Always use a controlled motion in both directions. Don’t jerk or swing during a lift. This momentum takes away from the targeted muscle and can cause injury.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

PREPARATION SCHEDULE

Below is a preparation schedule that takes into account the importance of cardiovascular training, strength/weight training, and practicing PAT-specific exercises. This schedule is not the only way to train for the PAT. Completion of the recommended fitness preparation is not a guarantee that a candidate will successfully complete the PAT or a guarantee of employment with the BCFD.

The schedule is based on 8 weeks preparation. The schedule increases cardiovascular training by 10% per week and decreases duration for an active rest on the 4th and 8th week. Ideally you would be scheduled for your PAT at the conclusion of the 8th week. You may have more or less time to prepare. You can modify it to fit your fitness schedule. You can also separate workouts to fit your needs (i.e. run in the morning and strength in the afternoon). A proper warm-up should accompany each workout session.

You will notice that each week there are 2 short runs, 2 long runs, 2 intervals, 2-3 strength training sessions, 1-2 PAT-specific exercise sessions, and 1 rest. These sessions are interchangeable based on your schedule. If you decide to alter this schedule, remember you should always leave yourself 1 day between interval sessions and 1 day between weightlifting sessions (Bryant, 2003). This recovery time is necessary for your body to heal. If you do not allow for this recovery in your schedule you may experience fatigue or injury, and you may find it very difficult to improve. The suggested schedule is below. Each of the workout sessions is described in more detail at the end of the schedule.

Week #	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	Short, 15-minute Run/walk and Weights	Long, 30-minute Run/walk	Intervals for 12 minutes and Weights	Short, 15-minute Run/Walk, try PAT-specific exercises	Long, 30-minute Run/Walk	Intervals for 12 minutes and Weights	Rest
2	Short, 17-minute Run/walk and Weights	Long, 33-minute Run/walk	Intervals for 13 minutes and Weights	Short, 17-minute Run/Walk, and PAT-specific exercises	Long, 33-minute Run/Walk	Intervals for 13 minutes and Weights	Rest
3	Short, 18-minute Run/walk and Weights	Long, 36-minute Run/walk	Intervals for 14 minutes and Weights	Short, 18-minute Run/Walk, and PAT-specific exercises	Long, 36-minute Run/Walk	Intervals for 14 minutes and Weights	Rest
4 (Active Rest Week)	Short, 13-minute Run/walk and Weights	Long, 27-minute Run/walk	Intervals for 11 minutes and Weights	Short, 13-minute Run/Walk, and PAT-specific exercises	Long, 27-minute Run/Walk	Intervals for 11 minutes and Weights	Rest

Baltimore City Fire Department

Physical Ability Test Preparation Guide

Week #	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
5	Short, 18-minute Run and PAT-specific exercises	Long, 36-minute Run	Intervals for 14 minutes and Weights	Short, 18-minute Run, and PAT-specific exercises	Long, 36-minute Run	Intervals for 14 minutes and Weights	Rest
6	Short, 20-minute Run and PAT-specific exercises	Long, 39-minute Run	Intervals for 15 minutes and Weights	Short, 20-minute Run, and PAT-specific exercises	Long, 39-minute Run	Intervals for 15 minutes and Weights	Rest
7	Short, 22-minute Run and PAT-specific exercises	Long, 43-minute Run	Intervals for 17 minutes and Weights	Short, 22-minute Run, and PAT-specific exercises	Long, 43-minute Run	Intervals for 17 minutes and Weights	Rest
8 (Active Rest Week/ PAT EXAM Week)	Short, 16-minute Run and PAT-specific exercises	Long, 32-minute Run	Rest	Short, 16-minute Run, and PAT-specific exercises	Rest	Rest	Rest

DESCRIPTION OF WORKOUTS

Short Run: The Short Run or Short Run/Walk is on days 1 and 4 of each week. For the first 4 weeks of the schedule you will see run/walk on these days. This is to allow the new runner to work their way up to a non-stop run for weeks 5-8. Ideally you can run for the time indicated at a pace that allows you to have a conversation. If you cannot run for the full time indicated, you should run for as long as you can and remember the time. Then allow yourself a short, 1 minute walk to recover. After 1 minute, go back to running, always running for at least 1 minute at a time. Alternate running/walking until the required time for that session is reached. In the next session, try to increase the duration of your run(s) by about 30 seconds. Recording your maximum run time is important so that you can try to increase it each session.

Long Run: The Long Run or Long Run/Walk is on days 2 and 5 of each week. For the first 4 weeks of the schedule you will see run/walk on these days. This is to allow the new runner to work their way up to a non-stop run for weeks 5-8. Ideally you can run for the time indicated at a pace that allows you to have a conversation. If you cannot run for the full time indicated, you should run for as long as you can and remember the time. Then allow yourself a short, 1 minute walk to recover. After 1 minute, go back to running, always running for at least 1 minute at a time. Alternate running/walking until the required time for that session is reached. In the next session, try to increase the duration of your run(s) by about 30 seconds. Recording your maximum run time is important so that you can try to increase it each session.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

Strength: For the Strength sessions, you can use the exercises provided in a circuit-style workout. This means you should move from one exercise to the other with less than 30 seconds rest between. Photos of low-cost exercises with the relevant stations they apply to and fitness facility variations are discussed in the “Strength Exercises” section at the end of this manual. Ideally a candidate can perform three full rotations of the circuit and 10-12 repetitions of each exercise. To start out you should perform one rotation of 10-12 repetitions of each exercise. When you are no longer sore for 24-48 hours after strength training, you can progress to a second and eventually a third rotation through the circuit (Bryant, 2003). You should always be tired on the last repetition of that exercise, but you should still be able to keep your form/position. If you are not tired on the last repetition, you need to increase the weight/resistance. If you cannot perform the exercise as described, you need to decrease the weight/resistance.

The weight/resistance used will depend on your available resources. Ideally each candidate would have access to a fitness facility with endless weight/resistance options. This is not the case for all candidates. Resistance bands and dumbbells can be low cost options for most candidates. Resistance can be increase with a resistance band by stepping further away from the anchor point or putting slack in the band and standing on it, depending on the exercise. Dumbbells are also lower in cost, but you will be limited by the weight range you have on hand. Dumbbells and resistance bands can even be combined for the same exercise to increase resistance without purchasing more weights. In some exercises the dumbbell weight could be substituted with another easily accessible household item, such as a canned good. It may be difficult to increase the weight/resistance when you must find alternative household items for weightlifting, but these options are better than not doing anything.

Recording your repetitions, weight, and number of rotations through the circuit will help you improve over the 8 week period. It will also help you determine your active rest workout. As stated previously, the number of full rotations through each circuit will depend on your individual ability, but ideally it will be 3 rotations. Whatever your ability is, you should perform one less rotation of the circuit during your workout in week 4 and week 8. This is to provide an active rest for your body. You can use the same weights and repetitions as the previous week, just do one less rotation. For example, if you did 3 rotations in week 3, you should only do 2 rotations of the circuit in week 4. If for some reason you are in week 3 and still can only do 1 rotation through the circuit, you should still do a full rotation in week 4, but perform 2 fewer repetitions of each exercise.

Intervals: Interval training will help increase your speed over time and is a very valuable tool for cardiovascular fitness improvement. Intervals alternate high intensity with low intensity activity. For the new runner, this may be running and walking. The “run” of the interval session should be faster and more difficult than the short run or long run session. It may be easier to think of those sessions as a jog, and this interval training as a run. For the experienced runner, an interval may be a fast run and a slow run or jog. For the PAT candidate, an interval may be a slow run and climbing stairs. For the first 4 weeks the candidate can use the format on the next page for interval training.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

Interval Training Format

Week #	Interval
1	Run "somewhat hard" for 1 minute, jog or walk for 1 minute. During your run you should be able to talk, but not easily (3-4 word sentences). Continue for time indicated on the schedule.
2	Run "somewhat hard" for 90 seconds, jog or walk for 1 minute. During your run you should be able to talk, but not easily (3-4 word sentences). Continue for time indicated on the schedule.
3	Run "somewhat hard" for 90 seconds, jog or walk for 30 seconds. During your run you should be able to talk, but not easily (3-4 word sentences). Continue for time indicated on the schedule.
4	Run "somewhat hard" for 90 seconds, jog or walk for 30 seconds. During your run you should be able to talk, but not easily (approximately 3-word sentences). Continue for time indicated on the schedule.

For the next 4 weeks the intervals should change as follows:

Week #	Interval
5	Run stairs or climb hills at a "somewhat hard" pace for 90 seconds, jog for 1 minute. During your stairs you should be able to talk, but not easily (3-4 word sentences). Continue for time indicated on the schedule.
6	Run stairs or climb hills at a "somewhat hard" pace for 2 minutes, jog for 1 minute. During your stairs you should be able to talk, but not easily (3-4 word sentences). Continue for time indicated on the schedule.
7	Run stairs or climb hills at a "somewhat hard" pace for 2 minutes, jog for 30 seconds. During your stairs you should be able to talk, but not easily (3-4 word sentences). Continue for time indicated on the schedule.
8	No intervals scheduled

PAT-Specific Exercises: For the PAT-Specific exercises, you can use the exercises provided at the end of this guide in the "PAT-Specific Exercises" section. You will find a description of ways to simulate each PAT station at home. You may need to be creative with the resources you have to try and re-create the stations. For example, not everyone has a ladder or hose to practice with. You will need to do the best you can to recreate the motions and weights seen in the video with the equipment you have access to. This will help prepare your muscles for the event. Like the circuit workout, you can perform these exercises one after the other with a very short, 15 second or 20 foot walk between exercises. It is important that you limit your rest between exercises because you will get a similar, short walk between stations for the actual test.

You are ready to use the additional, 24 pound weighted backpack or vest once you are able to complete all the stations and you are no longer sore 24-48 hours afterward. Your perception of stations that are easy or hard may change after you start using additional weight.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

For the first 4 weeks the candidate can use the format below for PAT-Specific training:

Week #	PAT Exercises
1	Try all PAT station simulations in order without any added weight/backpack. Take notes on what you thought was easy and what was hard.
2	Review your notes on the PAT stations from the last week. Practice the stations you thought were hard 1 time each. Add the weight vest if you are ready to. Then perform all stations in order once. Take notes on what you think is easy/hard as before.
3	Review your notes on the PAT stations from the last week. Practice the stations you thought were hard 2 times each. Add the weight vest if you are ready to. Then perform all stations in order once. Take notes on what you think is easy/hard as before.
4	Add the weight vest if you are ready to. Perform all stations in order once. Take notes on what you think is easy/hard as before.

For the next 4 weeks the PAT exercises workout should change as follows:

Week #	PAT Exercises
5	Review your notes on the PAT stations from the last week. Practice the stations you thought were hard 2 times each. Add the weight vest if you are ready to. Then perform all stations in order once. Take notes on what you think is easy/hard as before.
6	Review your notes on the PAT stations from the last week. Add the weight vest if you are ready to (before practicing anything). Practice the stations you thought were hard 1 time each. Then perform all stations in order once. Take notes on what you think is easy/hard as before.
7	Review your notes on the PAT stations from the last week. Add the weight vest if you are ready to (before practicing anything). Practice the stations you thought were hard 1 time each. Then perform all stations in order TWICE. Take notes on what you think is easy/hard as before.
8	Review your notes on the PAT stations from the last week. Add the weight vest if you are ready to (before practicing anything). Practice the stations you thought were hard 1 time each. Then perform all stations in order TWICE.

Rest: This workout includes two types of rest: a weekly day of rest and a monthly week of active rest. It is important that you rest at least one day per week. This will allow your body to recover and come back even stronger. Failure to include this rest could result in poor performance and increase risk of injury. You will notice that an active rest is built-in to the workout in weeks 4 and 8. In these weeks you will workout for a shorter duration or perform less rotations depending on the planned activity. It may seem like you are taking things too easy this week, but follow the plan. After week 4 you should come back in week 5 feeling refreshed and ready. After week 8 you should feel refreshed and ready to conquer the test!

CONCLUSION

We hope you use this Preparation Guide to achieve success on the PAT. Try not to be overwhelmed. You should have at least 8 weeks to prepare. We have seen numerous candidates improve their fitness and pass a physical agility test in just 8 weeks when they practiced and followed a workout guide. You can do it too, but only if you work hard. Good Luck on your fitness goals, and good luck on the test!

Baltimore City Fire Department Physical Ability Test Preparation Guide

REFERENCES

Bryant, C.X. & D.J. Green (Eds.). (2003). *ACE Personal Trainer Manual*. San Diego, CA: American Council on Exercise.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

STRETCH EXERCISES

1. Standing Hamstring Stretch

- Stand with feet shoulder width apart, slight bend in knees, arms at sides
- Fold over at the hips so knees remain slightly bent and fingertips touch the shins or ground
- Hold for 10 seconds
- Return to starting position
- Repeat and hold 10 seconds, going slightly past your first attempt



2. Quadriceps Stretch

- Stand with one foot flat on the ground and the opposite grasp your foot at the ankle, pulling it behind your buttocks
- Make sure your knee is pointing towards the ground and your hips are square/facing forward
- Hold for 10 seconds
- Repeat on the other side
- Repeat each side again and hold 10 seconds, going slightly past your first attempt
- If you cannot balance, use your free hand to support yourself on a wall, chair, or railing



3. Calf Stretch

- Stand shoulder width apart or more
- Bend one knee and straighten the other while reaching towards the toe of the straight leg
- Pull on the toe to feel slight tension
- Hold for 10 seconds
- Repeat on the other side
- Repeat each side again and hold 10 seconds, going slightly past your first attempt



4. Upper Back Stretch

- Stand with feet shoulder width apart or more and knees bent
- Interlace the hands and relax the upper back, pushing the hands outward while rotating the palms
- Hold for 10 seconds
- Return to starting position
- Repeat and hold 10 seconds, going slightly past your first attempt

Baltimore City Fire Department

Physical Ability Test Preparation Guide

5. Chest Stretch

- Stand with one shoulder next to a wall
- Raise your arm so it is parallel to the ground and place your palm on the wall
- Rotate until you feel slight tension on the chest muscle of the arm being used
- Hold for 10 seconds
- Repeat on the other side
- Repeat each side again and hold 10 seconds, going slightly past your first attempt



7. Shoulder Stretch

- Place one arm across your chest and parallel to the ground
- Use the opposite arm to provide slight tension in the shoulder
- Hold for 10 seconds
- Repeat on the other side
- Repeat each side again and hold 10 seconds, going slightly past your first attempt

6. Triceps Stretch

- Please one arm behind your head and place your palm between your shoulder blades
- Use the opposite hand to provide slight tension in the triceps/back of your arm
- Hold for 10 seconds
- Repeat on the other side
- Repeat each side again and hold 10 seconds, going slightly past your first attempt



8. Hip and Back Stretch

- Sit on your buttocks with one leg in front of you and the other crossed over, foot flat on the ground
- Rotate the upper body so that the opposite elbow is touching the crossed leg
- Use this arm and rotation to provide slight tension in the hip and the back
- Hold for 10 seconds
- Repeat on the other side
- Repeat each side again and hold 10 seconds, going slightly past your first attempt

Baltimore City Fire Department

Physical Ability Test Preparation Guide

9. Seated Hamstring Stretch

- Sit on your buttocks with both feet in front of you, legs straight, knees slightly bent
- Fold forward at the hips and reach your hands toward your feet, resting your hands on your feet or shins
- Hold for 10 seconds
- Return to starting position
- Repeat and hold 10 seconds, going slightly past your first attempt



10. Groin Stretch

- Sit on your buttocks with the bottom of both feet touching and your elbows on your thighs
- Push down slightly with your elbows to provide slight tension in your groin muscle Hold for 10 seconds
- Return to starting position
- Repeat and hold 10 seconds, going slightly past your first attempt

Baltimore City Fire Department

Physical Ability Test Preparation Guide

Strength Exercises:

1. Push Ups (Stations 2, 4, 5, 8, 9)

Form:

- Place feet and hands on floor shoulder width apart, hands under the shoulders and elbows straight, looking just in front of the finger tips. Your body should make a straight line from your heels to your head.
- Inhale while lowering your body, bending at the elbow until the upper arm is parallel to the ground.
- Exhale while slowly returning to the starting position.
- Your abdominal muscles should be engaged throughout the exercise and your spine should be in neutral alignment.
- If you cannot perform the exercise with the proper form you may start from your knees instead. Your body should make a straight line from your knees to your head.
- Facility Variation: If you have access to a gym, a similar exercise can be performed using a bench press or chest press machine. Consult the facility for proper use.



2. Shoulder Press (Stations 3, 5, 8, 9, 10)

Form:

- Stand with your feet shoulder width apart or more, toes pointing forward, arms at your shoulders, palms facing inward, elbows pointing down, slight bend in your knees, buttocks tight.
- Standing on and holding a resistance band, or holding dumbbells, exhale while pushing both arms overhead, leaving a slight bend in the elbows.
- During the movement keep your head looking forward, chest out, shoulders rolled back.
- Inhale while slowly lowering the weight back to the starting position.
- Be sure to control the motion.
- Facility Variation: If you have access to a gym, a similar exercise can be performed using a military/shoulder press machine. Consult the facility for proper use.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

3. Curls (Stations 2, 3, 6, 7, 8, 10)

Form:

- Stand with your feet shoulder width apart or more, toes pointing forward, arms at your side, slight bend in your knees, buttocks tight
- Standing on and holding a resistance band, or holding dumbbells, exhale while curling both palms up towards the shoulder, bending at the elbow
- During the movement keep your head looking forward, chest out, shoulders rolled back
- Inhale while slowly lowering the weight back to the starting position
- Be sure to control the motion. Do NOT use the upper body to “rock” the weights up



4. Chin Ups/Lat Pull Down (Stations 2, 3, 6, 7, 8, 10)

Form:

- Grip a secure, horizontal bar with your palms facing towards you and your hands 6 to 12 inches apart.
- Start with your arms fully extended and feet off the ground, exhale and pull yourself up until your chin passes the bar.
- Inhale while slowly lowering yourself to the starting position.
- Throughout the exercise you should try to keep the shoulder blades together.
- If you cannot perform this exercise with the proper form, try using a sturdy chair to rest 1 foot on and work up to the unassisted chin up.
- If you cannot perform this exercise and you have a resistance band, secure it around a bar or behind a door to do a lat pull down instead. Keep your feet shoulder width apart or more and knees slightly bent.
- Facility Variation: If you have access to a gym, a similar exercise can be performed using an assisted chin up machine or a lat pull down machine. Consult the facility for proper use.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

5. Chair Squats (Stations 1, 2, 4, 7, 8, 10)

Form:

- Stand in front of a chair with your feet shoulder width apart or more, toes pointing forward, arms in front of you
- Inhale and squat slowly until your buttocks just barely touches the chair (do NOT sit).
- During the movement keep your head looking forward, chest out, shoulders rolled back.
- Exhale while returning to starting (standing) position, repeat.
- When you are ready, add resistance. You will need to change the arm position to hold the weights close to your body, either in front of your chest or on your shoulders. Be sure to maintain form.
- Facility Variation: If you have access to a gym, a similar exercise can be performed using a squat machine or seated leg press machine. Consult the facility for proper use.



6. Bird Dog (Stations 1 through 10)

Form:

- Kneel on all fours with knees and hands shoulder width apart, hands under the shoulders and elbows straight, back parallel to the ground, looking just in front of the finger tips.
- Exhale while slowly raising the opposite arm and leg until they are parallel to the ground.
- Inhale and slowly return to the starting position. Perform the exercise again using the other leg and arm. That completes one repetition.
- Be sure to keep the hips parallel to the ground. Do NOT rotate them or twist during the exercise.
- Your abdominal muscles should be engaged throughout the exercise and your spine should be in neutral alignment. Do NOT “arch” your lower back.
- When you are ready, do the same exercise but start with both feet on the ground shoulder width apart instead on your knees, similar to a push-up position.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

7. Forearm Curls/ Squeeze (Stations 1 through 8)

Form:

- Stand with your feet shoulder width apart or more, toes pointing forward, arms bent 90 degrees at the elbow (lower arm parallel to the ground), slight bend in your knees, buttocks tight.
- Standing on and holding a resistance band, or holding dumbbells, exhale while curling both palms up towards the shoulder, bending ONLY at the wrist (keep the rest of the lower arm parallel to the ground).
- Inhale while returning to the starting position.
- Other variations of this exercise include squeezing tennis balls or squeezing exercise hand grips.



8. Ab Crunch (Stations 1 through 10)

Form:

- Lie on your back, knees bent, feet flat, arms at your sides, palms down.
- Exhale while slowly rolling your shoulders up until your shoulder blades are completely off the ground, hovering your palms just off the ground.
- Inhale and return to the starting position.
- Be sure to keep your head and neck in neutral alignment. You can do this by trying to point your chin to your knees instead of your chest during the exercise.
- Do NOT use momentum to lift yourself up, or use your upper body to “rock” back and forth.

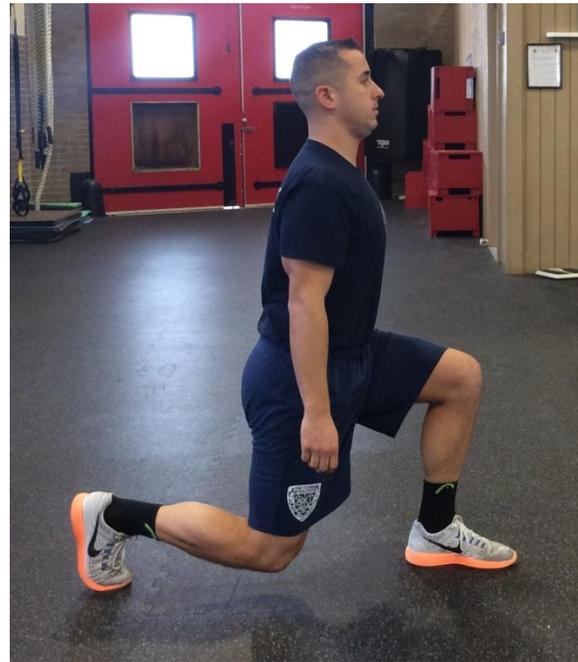
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Physical Ability Test Preparation Guide

9. Squat Lunges (Stations 1, 2, 4, 7, 8, 10)

Form:

- Stand with feet shoulder width apart, toes pointing forward, arms at your sides, slight bend in your knees, buttocks tight.
- Step forward with one foot about 2 feet in front of you. Both the heel and toes of the front foot should be on the ground.
- Inhale while bending both knees until they are 90 degrees, slowly lowering yourself until just before your knee touches the ground.
- Exhale while standing up.
- Return to the starting position. Perform the exercise again with the opposite foot. That completes one repetition.
- The spine should stay neutral and upright the entire time. Do not lean forward with your chest.
- Be sure to keep the front knee behind the front toes at all times. If it goes past the toes, you should take a longer step.
- As you become more comfortable with the exercise you can combine the forward step and lowering to be a more fluid notion, but always more slowly and keep your form.
- When you are ready you can add resistance, but be sure to keep the form.



10. Dips (Stations 2, 3, 6, 7, 8)

Form:

- Place your hands on a chair or bench shoulder width or slightly more with your legs straight in front of you, heels on the ground.
- Inhale while bending at the elbow and lower yourself toward the ground until the upper arm is parallel to the ground.
- Exhale while pushing yourself up to the starting position.
- Be sure to keep your spine in a neutral position and upright the entire time.
- Elbow should point straight back, not out to the sides during the exercise.
- If you cannot perform the exercise with proper form, you may move your heels inward, bending the knees slightly. You should not allow the knee to extend past the toes.
- Facility Variation: If you have access to a gym, a similar exercise can be performed using a dip machine. Consult the facility for proper use.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

11. Row (Stations 2, 3, 5, 6, 7, 8, 9, 10)

Form:

- Stand with feet shoulder width apart, toes pointing forward, arms at your sides, slight bend in your knees, buttocks tight, and bent over at the hips 90 degrees.
- Standing on and holding a resistance band, or holding dumbbells, exhale while pulling both hands to your chest, bending at the elbows and trying to touch the shoulder blades together, palms inward.
- During the movement keep your head looking forward, chest out, shoulders rolled back, and back neutral.
- Inhale while slowly lowering the weight back to the starting position.
- Be sure to control the motion.
- Facility Variation: If you have access to a gym, a similar exercise can be performed using a row machine. Consult the facility for proper use.



12. Superman (Stations 1 through 10)

Form:

- Lie on your stomach with arms in front of you and legs straight and lift your hands, feet, and knees slightly off of the ground.
- Inhale while raising your opposite leg and arm in a swimming-like motion.
- Exhale while slowly returning to the starting position.
- Repeat each side to complete one repetition.
- Be sure to keep your head and neck in neutral alignment.
- Facility Variation: If you have access to a gym, a similar exercise can be performed using a back extension machine. Consult the facility for proper use.

Baltimore City Fire Department

Physical Ability Test Preparation Guide

PAT Specific Exercises

Event 1- Dry Hose Deployment: Use a rope and attach 44 pounds of weight to one end. You can use tire or a sturdy bag or sack and fill it with weights or bricks. It is important that you practice traveling 100 feet quickly with the rope over your shoulder and the weight dragging on the ground. You should include turns and obstacles in your 100 foot travel, like trees or trash cans.

Event 2- Charged Hose Deployment: Use a rope and attach 100 pounds of weight to one end. Practice traveling 70 feet quickly with the rope over your shoulder and the weight dragging on the ground as you did for station 1. Immediately after 70 feet drop down and practice crawling while holding a 10 pound sledgehammer for about 40 feet. The crawl with the sledgehammer helps simulate crawling while holding a charged hose line because you will create a loop in the line as part of the course, allowing slack and less dragging for your crawl.

Event 3- Halyard Raise: Use a rope and attach 26 pounds of weight to one end. Throw the other end of the rope over a bar or tree branch that is about 15 feet above ground. Practice raising and lowering the bag using a hand-over-hand motion. Your shoulders and arms should be doing the work for this exercise. Keep your back upright and in a neutral position. Do NOT bend over at the hips or lean over. Do NOT squat to raise the bag.

Event 4- Roof Walk: Walk up 12 steps while holding a 20 pound weight in one hand. At the top step, do not turn around, and walk backwards to the starting position. If you need to touch either hand on the ground to walk backwards you may. Do NOT use any railings, only touch the ground/steps.

Event 5- Attic Crawl: Lay a tarp, sheet or towels over 12, 2 inch diameter sticks, pipes, or rods spaced about 16 inches apart to simulate joists. Crawl 20 feet over the tarp while carrying an object that is 1 foot long and 2 inches in diameter (flashlight, pipe, wooden rod, etc.) You should keep the weight of your body on the simulated joists at all times. If you prefer you can “crab walk” but you must stay low and stay on the joists.

Event 6- Roof Ventilation: Use a 10-pound sledgehammer to strike a tire 30 times with one foot in front of the other. Each strike must start with the tool above your head and end with hitting the tire.

Event 7- Victim Removal: Attach 165 pounds to a rope with two loops so there is one loop for each hand. Drag the weight for 10 feet, maneuver it around an obstacle (tree, trash can, cone, etc.) and then drag it back to the starting point. You may use one or both hands to drag the weight, or you may lift and carry the weight.

Event 8- Ladder Removal/Carry: Secure a 60 pound object on a shelf or mount about 5 feet high (an actual ladder is preferred, but you could use a heavy sand bag, roof shingles, dirt, two buckets on a stick, or other object). Pick up the 60 pound object and walk in a 40-foot diamond shape, each side of the diamond should be 10 feet long. Return the object to the starting position. When walking you can carry the object either on your shoulder or at your side. If you must reposition, you can place the object down, adjust, and pick it back up. You can only readjust the weight/object twice.

Event 9- Crawling Search: Crawl on the ground in a rectangular shape for 50 feet.

Event 10- Stair Climb with Hose: Climb 4 stories with a 48 pound object over your shoulder (you can use a weighted bag or sack, shingles, sand bag, etc.). When you are at the top of the 4th story (the 5th floor), return to the starting position still carrying the weight. You may skip steps during the climb up but you may NOT skip steps on the way back down.