



JOB RELATED FITNESS TEST

Candidate Guide

MINISTRY OF DEFENCE POLICE

Job Related Fitness Test

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1. INTRODUCTION

Policing has never been an easy job. As a Police Officer you will be required to handle a variety of situations involving physically challenging tasks. For this you need a reasonable level of strength, agility and stamina to deal effectively with situations as well as to defend yourself and others.

One element of the assessment for appointment as a Constable is the job related fitness test. Every candidate **MUST** pass this test if his or her application is to proceed further.

If you fail the job related fitness test you will be allowed to re-take the test after a period of training. If you fail the test for a second time you may have the opportunity to take the test for a third time. If you fail to achieve the required standard on your third attempt your application will fail and you will not be eligible to re-apply for twelve months.

If you prepare and train properly for the test, there is no reason for you to fail.

Once you are appointed you must keep up your level of fitness. Your fitness will be regularly assessed during training. You will again be required to take and pass the job related fitness test during your initial training. **Failure to pass the test at any stage may lead to your discharge.** It is essential therefore that you maintain your fitness level.

The purpose of this booklet is to provide candidates with information on the test, the test procedures and on ways to improve your test score.

2. THE TEST ELEMENTS

Police Officers are sometimes required to perform physically demanding tasks as part of their police duties. It is essential that they possess a standard of physical fitness that will enable them to perform these tasks safely and effectively. It is for this reason that candidates wishing to join the police service must achieve minimum standards of fitness.

In order to assess a candidate's fitness, a programme of tests has been developed by Loughborough University.

Specifically, two tests have been devised to measure the fitness qualities that underlie the physical tasks performed by police officers. These are tests of dynamic strength and endurance fitness. Performance on the tests provides a good indicator of a candidate's capability to perform various tasks. The tests run consecutively and minimum standards must be achieved on each.

The minimum levels required to pass the job related fitness test to level 6 are:

Endurance Fitness (multi-stage shuttle run) - 4 shuttles at level 5 (5/4)

Dynamic Strength - Dyno Machine – Push 34kg – Pull 35kg

TEST 1 – ENDURANCE FITNESS – MULTI-STAGE SHUTTLE RUN (BLEEP TEST)

Police Officers are sometimes required to perform prolonged activities such as foot chases, stair climbing and public order duties. The ability to perform such activities is largely based upon your level of endurance fitness, which is your capacity to continue prolonged physical activity. As such, endurance fitness reflects how efficient your heart and lungs are and is required in any activity which causes you to get out of breath.

The endurance fitness test involves running to and fro along a 15 metre track and placing your leading foot on the end line in time with a series of audio beeps. If you arrive at the end line before the bleep sounds you should turn around, wait for the bleep before resuming running and adjust your speed. The test is progressive in that the timing of the beeps starts slowly but becomes faster so that it becomes more difficult to keep up with the required speed. You will run until you can no longer keep up with the set pace. To pass this element of the test you must reach a minimum of 4 shuttles at level 5.

TEST 2 – DYNAMIC STRENGTH (PUSH/PULL)

Police Officers are required to arrest and restrain struggling or fighting individuals. This can involve a degree of pushing, pulling and grappling. The ability to perform such activities requires dynamic upper body strength. Possessing high levels of dynamic strength will also lessen the chance of injury to the musculo-skeletal system.

The dynamic strength test involves performing five seated chest pushes and five seated back pulls on a machine called a Dyno. The average force of the sum of the five pushes, and the average force of the sum of the five pulls will be recorded.

DYNAMIC TEST FOR PUSHING



You must sit upright with your back firmly against the padding. Your feet must be flat on the ground with your knees set at approximately 90 degrees. A firm grip is taken of the push bar with your hands level with the middle of your sternum.

You will be asked to perform three warm-up efforts, at approximately 80% of maximum effort.

Each warm-up and subsequent test effort is performed to full arm extension.

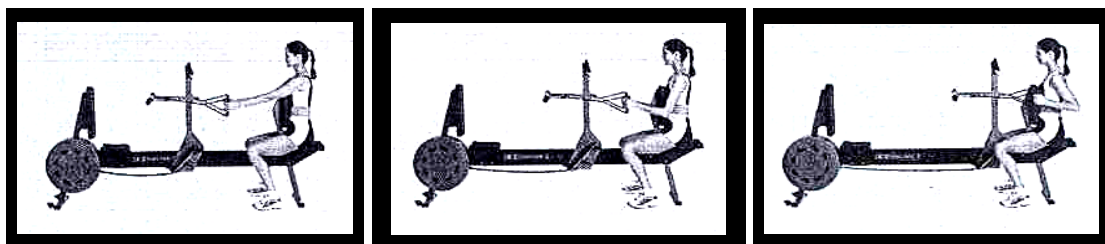
Following the three warm-ups you will be asked to perform FIVE MAXIMUM pushes with three seconds recovery between each.

The AVERAGE force produced during each effort will be displayed on the monitor.

The AVERAGE VALUE of the five efforts will be displayed at the end of the set.

Your average must be 34kg to pass.

DYNAMIC TEST FOR PULLING



This time you will position yourself at the opposite end of the machine. Sit upright with your chest firmly pushed against the padding. Your feet must be flat on the ground with your knees set at approximately 90 degrees. A firm grip is taken of both the pull handles, with your hands level with the middle of your sternum.

You will be asked to perform three warm-up efforts at approximately 80% of maximum effort.

During each warm-up and subsequent test you must pull on the handles until your hands touch your chest.

Following the three warm-ups you will be asked to perform FIVE MAXIMUM pulls with three seconds of recovery (shown on the bottom right of the monitor) between efforts.

The AVERAGE force produced during each effort is displayed on the monitor.

The AVERAGE VALUE of the five efforts will be displayed at the end of the set.

Your average must be 35kg to pass.

3. TRAINING TO IMPROVE YOUR TEST SCORE

HOW TO IMPROVE YOUR SPEED AGILITY TIME

Frequency of Speed – Agility Training

Make sure that you train for speed – agility twice a week with two or three days separating each session. Your session can include any one of the three speed sessions. If you play sport you can probably reduce your speed-agility training to one session a week.

Participation in sporting activities which involve any form of training (and repeated sprints) will also be of benefit to the development of both your speed and agility. There are many sports that fit this criterion such as football, rugby, netball, basketball and tennis. Certain sports are particularly good for agility; these include squash, badminton and tennis.

Basic running speed has a large influence on your speed agility time so one of your main aims should be to improve your running speed. Below are five different training methods that you can use to improve your speed – agility time. Four of these concentrate solely on speed and one on agility.

Acceleration Sprints

This involves a gradual increase in running speed from a rolling start, to jogging, striding out and to maximum sprinting effort. This is followed by a rest interval, which should be a walk or slow jog to allow near or complete recovery before the next repetition. You can try this on a nearby playing field using football or rugby markings as markers for the increases in speed. Begin your training with 6 runs approximately 50 metres in total length. Try to make sure that approximately 15 – 20 metres of this distance is covered at maximum effort. Build up the number of repetitions as your speed and general fitness improve.

Repetition Sprints

This involves sprinting a fixed distance at a constant speed (75 to 100 per cent maximum speed) a number of times followed by rest periods long enough to allow complete recovery. After warming up start your session by sprinting a fixed distance of 20 – 30 metres at 50%, 75% and 90% of your maximum speed with a walk recovery in between. Then perform 6 – 10 sprints at maximum speed. One way that you could vary this training method would be a run uphill. This is known as sprint resisted training and is a useful way to develop your leg power.

Shuttle Runs

Shuttle running is a widely used training method to improve your sprint explosiveness. Shuttle sprints simply involve sprinting to a line 10, 15, 20 metres away and sprinting back. They can be performed either indoors in a gymnasium or outdoors on a field using pitch markings. If you choose to perform shuttle sprints indoors make sure you wear training shoes that provide a good grip.

Speed Drills

One particular exercise that you can do in the comfort of your own home to supplement your sprint training could be to perform on-the-spot running, lifting your knees high and exaggerating your arm movements. This will help to improve your leg speed. Perform 8 – 10 sets running on the spot as fast as possible for 20 seconds, with a 1 minute recovery interval in between.

HOW TO IMPROVE YOUR ENDURANCE FITNESS

To develop and maintain endurance fitness, try to do one or a combination of the activities listed below three times a week with each continuous session lasting 20 – 40 minutes. For those individuals who have not exercised regularly in the past, it is advisable to start with gentle continuous exercise sessions lasting 15 minutes and then build up to 20 minutes or more over a couple of months.

There are many different activities that you can participate in to improve your level of endurance fitness. These can be categorised into sporting activities and rhythmical type exercises.

Sporting Activities

Playing sports regularly such as football, netball, squash and rugby can be an enjoyable way of improving and maintaining your level of endurance fitness. Any sport that causes you to get out of breath and lasts 30 minutes or more will be of benefit. Many sports fit this category. Choose one that will fit in to your lifestyle and which you enjoy. The extent and rate of improvement in endurance fitness from participating in sport will depend upon your initial level of fitness and on how hard you play.

Rhythmical Exercise

The most rapid improvements in endurance fitness are made by engaging in activities that use large muscle groups and thereby create a large aerobic demand. Such activities include jogging, cycling, swimming and rowing. There are three training methods that you can use to improve your level of endurance fitness using rhythmical exercise. These are continued, varied pace and interval training. The following refer to running however they can just as easily be substituted by any other form of rhythmical exercise.

Continuous Training

Involves exercising either continuously for a set time (20 minutes or more) and recording the distances covered, or exercising for a set distance and recording the time taken. For example, with running, the more popular of the two is to jog a set distance (usually a course that starts and finishes at home) and try to reduce the time taken to cover it.

Varied Pace Training

This particular training method involves varying the pace at which you run, interrupting the steady continuous running with occasional faster running of short sprints. In order to be particularly effective it must be well planned. A typical varied pace session could be:

Jogging (5 mins)

Fast evenly paced running (3 mins)

Brisk walking (2 mins)

Evenly paced running with 50 – 60 metre sprints every 200 metres (5 mins)

Jogging (2 mins)

Evenly paced running with occasional small acceleration sprints (3 mins)

Jogging (5 mins)

Rhythmical exercise, skipping and gentle knee raises and stretching to cool down (5 mins)

Interval Training

This involves running for a set time or distance a specified number of times with periods of rest or recovery in between. An example of an interval training session would be to choose your normal running course and run at 75% effort for three minutes followed by a jog or brisk walk (depending on your level of fitness) for two minutes. Repeat this process for the whole course. As your endurance fitness develops the duration of running and recovery can be varied. Alternatively run a set distance within a set time e.g. 800 metres in four minutes with a timed rest recovery in between. This can be performed on a nearby track or field.

HOW TO IMPROVE YOUR DYNAMIC STRENGTH

The best way to improve your dynamic strength in the muscles of the upper body is to perform resistance exercise, which can be achieved by using body weight, free weights or resistance machines. The following exercises can be used to improve the muscles tested during the dynamic strength test.

Full, Kneeling and Extended Kneeling Press-Ups

Perform conventional press-ups, ensuring your hands are shoulder width apart and your arms are vertical. Your head must be fixed with your eyes looking directly down to the floor. You must maintain a straight body position

throughout the action, making sure that you go all the way to touch the sternum (chest bone) on the floor and then fully extending the arms on recovery. Try to breathe in as you push yourself up and breathe out as you lower yourself down.

If you find it difficult to perform a succession of press-ups due to insufficient body strength then begin with practising kneeling press-ups which is a less strenuous alternative. Your arms must be in the same position adopted for the full press-ups (as described). Kneel with your knees immediately below your hips and your feet on the floor. Bend your arms to lower your chest to the floor and return to the front position. Once you have developed sufficient strength to be able to do 10 or more of this, move on to extended kneeling press-ups. This is the same as the kneeling press-up except the knees should be positioned back from the hips, the feet raised and the lower legs crossed. Performing extended knee press-ups on a regular basis will develop your strength enough to be able to perform a standard press-up with the feet on the floor. Try to breathe in as you push yourself up and breathe out as you lower yourself down.

Reverse Pull-Up

You will require a bar securely fixed approximately three feet from the floor. Whilst lying beneath the bar take a firm grip of the bar, ensuring your palms are facing your body. Keeping your body straight, pull yourself up until your chest touches the bar. Slowly return to the start position and repeat procedure. Try to breathe in as you pull yourself up and breathe out as you lower yourself down.

Perform 3 to 4 sets or as many repetitions as you can of each exercise with a 2 minute recovery separating each set. Record the total amount of repetitions that you perform and try to better this in your next session. However, you must make sure that you have the same recovery between each set.

Strength Training

A high degree of strength in the arms, shoulders, chest and back muscles is required to pass the dynamic strength test. To improve strength, the muscles must be made to work against resistance that is not normally encountered, i.e. they must be overloaded. As strength increases, it will be necessary to progressively increase the weight so as to maintain the muscle overload. This is known as progressive resistance.

The following progressive resistance training methods are ideal for strength training and can be used with any weight training exercise that you perform: Begin by establishing the maximum weight at which you can perform 10 repetitions (10 RM- repetitions at maximum weight). Then perform 3 sets of 10 repetitions as follows:

Set one with 50% of the 10 – RM
Set two with 75% of the 10 – RM
Set three with the full 10-RM

When you are able to perform 13 repetitions on the final set, it no longer represents the 10-RM and a heavier load must be used.

This training programme should ideally be implemented three times a week with a full day's rest between sessions.

There are many strength training exercises which will help you build up your strength. It is advisable therefore that you seek advice from a qualified gym instructor or from the Force Physical Training Instructor. Many gymnasiums offer induction courses and information about using various weight training and resistance exercises to improve strength. Exercises such as shoulder presses and bench presses, lap pull downs, seated row and squats are very good for the development of overall strength. The most relevant weight training exercises for the Dyno (which will be used to test your dynamic strength) are the bench press and seated row.

Seek advice from a gym instructor or the Force Physical Training Instructor (PTI) for guidance on how to use free weights or resistance machinery.

4. TRAINING TIPS

Heart rate is a good indicator for controlling the intensity at which you exercise continuously. A suggested level is between 130 – 160 beats per minute. You will find that at this intensity you will be able to sustain a conversation with a partner. Heart rate can be measured simply by taking a pulse. To do this, place two fingers on the underside of your wrist in line with the base of your thumb and count the number of beats in fifteen seconds. Multiply this figure by four to give an estimate of your heart rate per minute. Other tips include:

- (i) Try to train as much as possible with friends as this will make your exercise programme a more enjoyable, safer activity.
- (ii) Try to monitor your progress, distances covered, recovery time taken etc. This will provide feedback on improvements and will give you an incentive to continue training.
- (iii) Set yourself targets that can be realistically achieved. This will help motivate you to train.
- (iv) Do not overdo your training. Start gently and build up gradually over a period of months.

- (v) Try to spread fitness sessions out rather than playing squash, weight training and swimming all in one day and then doing nothing for the rest of the week.

5. WARMING UP AND COOLING DOWN

Before any form of exercise it is important to warm the body up to prepare it for the exercise that will follow. Warming up before exercise will not only prepare the body for physical work but will decrease the risk of injury by increasing muscle temperature, increasing blood flow and stretching muscles and ligaments. The activities performed during warm up should be relatively slow and rhythmical such as light jogging or cycling.

Warm up guidelines

Adopt whole body warm ups which aim to gradually increase body temperature and heart rate – slow running is a good example of this kind of activity.

Carefully stretch all the major muscles paying particular attention to those muscles which will be used during the activity.

Avoid a lag time between warming up and performing the activity.

Ensure the warm up lasts for approximately 10 minutes and does not lead to any feeling of fatigue.

Recovery/Cooling down guidelines

Along with the physical exercise that you perform, adequate recovery time is a very important factor that contributes to overall physical performance. Cooling down after exercise will help you to recover and prevent muscle soreness by removing waste products from the system. Your cool down should consist of light exercise which gradually decreases in intensity, combined with some gentle stretches particularly for the muscles you have just worked.

Following training, the body needs time to recover and make certain adaptations. As a result of these adaptations improvements will be made. Not allowing sufficient recovery time could mean that you will not get the full benefit of the training you have undertaken. Ensure that you have 24 – 48 hours recovery following any form of strength training. If you have not engaged in strength before, or you have not trained for a while, then extend the recovery period to 3 days. Following speed training ensure that you have at least 48 – 72 hours recovery depending upon your initial level of fitness. Expect some muscle soreness following strength training and speed training. This can be minimised by cooling down and stretching following exercise.

6. DEVELOPING YOUR TRAINING PROGRAMME

Now that you have been given information on the tests and on ways to improve your scores on each of them you can plan an individual training programme to guide your training. Training for all three tests following the advice in this booklet need only take 3 hours a week maximum.

The following is an example of a training schedule you could follow which incorporates training for all three tests:

DAY	WARM-UP	ACTIVITY 1	ACTIVITY 2	COOL DOWN
Monday	10mins	Endurance 20 – 40 mins	Speed/Agility 10 –15 mins	10mins
Tuesday	10mins	Push-up/ Reverse pull 10 – 15 mins	Grip 5mins	10mins
Wednesday	10mins	Endurance 20 – 40 mins	Speed/Agility 10 – 15 mins	10mins
Thursday	10mins	Push-Up/Reverse pull 10 – 15 mins	Grip 5mins	10mins
Friday	10mins	Endurance 20 – 40 mins	Speed/Agility 10 – 15 mins	10mins
Saturday	10mins	Push-Up/Reverse pull 10 – 15 mins	Grip 5mins	10mins
Sunday		REST	REST	

This is just an example of a training programme, it may be better to try and develop a programme specific to your individual needs and interests.

For example if you are naturally strong then you would spend less time on weight training and more time on the other elements.

Make sure you include rest days in your training programme to allow for full recovery and to warm up and cool down before and after any activity.

Women tend to perform less well on the test than men. That is not to say that women do not pass the test. However it often takes two attempts at the test and solid training in between. It may help women applicants to adjust their training routine accordingly.

7. SAFETY & HEALTH CONSIDERATIONS

It is advisable to gain medical approval before you commence any exercise programme. The benefits of exercise should far outweigh the risks but if you have any concerns about your health before, during or after your programme then consult your GP.

Suitable clothing and footwear must be worn when training. Avoid exercising when you have a cold or infection. Exercise should be brisk, but don't over do it. Exercise at a comfortable level for longer rather than intensely for a short duration.

8. GENERAL INFORMATION

- (i) If you are feeling unwell on the day of the test, or if you have an injury, you should contact the recruitment office who will aim to reschedule your test.
- (ii) Some Police Forces may run one or more elements of the test outside, so please ensure you have appropriate footwear and clothing.
- (iii) Due to scheduling of the recruitment process, little notice may be given of the test dates, so you should start your training now for your fitness test.
- (iv) If you would like further information or you have any queries regarding the information in this booklet, please contact the recruitment office, contact details for which can be found on the website at www.mod.police.uk