

Physical Preparation

Our Spirit Pty Ltd conducts two forms of physical preparation. The first is the remote preparation program, the second is our fully supervised preparation program. It is compulsory that all clients, irrespective of current fitness levels, complete either the remote or the supervised preparation program.

Every client who has attended the full preparation or remote program has successfully completed the Black Cat Track.

Remote Preparation Program

Introduction

This section contains the Physical Training Program for our remote clients. The program has been designed specifically for the Black Cat Track. The Physical Training Program is a proven program utilising tried and tested training techniques along with innovative concepts which we have developed to suit the Black Cat Track. As part of our quality control process the program has been continuously validated and refined over the years.

The importance of your individual preparation cannot be emphasised enough. Adherence to a specifically designed and structured training program can mean the difference between an exciting and adventurous activity and an enduring and arduous slog.

Our Spirit Pty Ltd understands that you are a busy person and often your schedule will get in the way of your training program. We empathise with you and have made a conscious effort to simplify your preparation

Preliminaries

Prior to commencing any type of Physical Training it is essential that you consult with your local doctor to have a medical check-up.

Specifically, please explain that you are about to commence a Pre-Trek Physical Training Program in preparation to walk the Black Cat Track. Explain what is involved in walking the track from the information we have provided to you along with the Black Cat Preparation Guide.

We will also require you to log on to our website and under membership, fitness assessment, enter the required fitness background data requested.

Training Principles (FITT)

There are two basic types of training principles often referred to: overload and progression.

Overload training relates to the increased stress or load placed upon the body that is more than it is usually accustomed to. Overload training manipulates the training variables of frequency, intensity, time and type (FITT).

Progression training relates to what, when and how the load is increased through adjusting the components of frequency, intensity or time.

The FITT Principle describes how to safely apply the principles of overload and progression:

Frequency:

How often we are going to train throughout the week. A safe frequency is three to five times a week dependent on the phase (what week) of training.

Intensity:

How hard we are going to exercise during a session. Intensity can be measured in different ways. For example, monitoring heart rate is one way to gauge intensity during aerobic endurance activities. In our training we will also use Rate of Perceived Exertion (RPE). This is explained in more detail later in the document.

Time/Duration

How long the session is going to be. As with the other aspects of the FITT principle, time varies depending on the phase of training.

Type specificity:

This refers to the specific physical activity (Black Cat Track vs marathon) chosen to improve our fitness. For example, an individual wishing to increase arm strength must exercise the triceps and biceps, while an individual wishing to walk the Black Cat Track will need to increase their aerobic endurance and subsequently needs to hike, weight load walk, swim or other aerobically challenging activities.

Most importantly, through our understanding of the training principals we acknowledge that incremental and progressive weight load walking (carrying a pack) and hill work are the keys to successful trekking. Yes HILLS, HILLS and more HILLS! When do we do them (timing – phase of training), how do we do them (technique up and down), and why are we doing them (specific training). All these are answered within the training program.

Three Month Training Program

The training program has been designed to assist your physical preparation for the Black Cat Track.

The program runs for 12 weeks, with progressive weight load walking at the core for your preparation. The program also includes specifically designed circuits (we promise you will understand and appreciate these circuits whilst you are on the track!).

It is not necessary to start at week one if you are capable of meeting demands in week three. However, keep in mind that a progressive and gradual build-up of training intensity will prevent injuries, in particular overuse injuries like heel spurs / plantar fasciitis, achilles and calf associated problems, so don't over-do things when selecting a starting point.

This program is aimed at getting participants prepared for the Track, from both a physical and psychological perspective. Obviously, the better your base level of fitness and providing you train smart, listen to your body and respond accordingly, the easier the trek will be. As the heading suggests you have three months of specific, quality training to get yourself physically and mentally prepared for your trek.



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Things to keep in mind when training

Starting Point

It is important to put things into perspective right now. You are training for the Black Cat Track and need to be both physically and mentally prepared for the adventure. You need to ask yourself: where is my fitness level right now in relation to this specific training program? If you are a marathon runner or an elite athlete / footballer then you are fit, there is no disputing it. You are fit for your chosen sport. But you are not specifically fit for the Black Cat Track.

If you assume that you are extremely fit (based on your fitness level in other activities) and therefore decide to commence the Black Cat training program at week four or five you will increase your chances of developing overuse injuries, which unfortunately will not show until two to four weeks later. You only need to do the math to realise with the time allocated for you to recover / rehabilitate / recondition you may have missed your trek. It is strongly recommended you be conservative in your initial assessment of your fitness level.

Injury

At any point throughout your training if you sustain an injury we want you to have it attended to promptly and to advise us (regardless if it is of a minor nature) immediately. We will then be able to provide critical information and advice to you so that you can maintain the momentum in your program in the most effective and efficient manner.

Recovery

Recovery is an integral component of any training program. Usually we find that along with over-training, it is the least adhered to component of a training program – subsequently there is an increase in injury and failure rates.

It is a skill to find the balance between training intensity / volume and programmed recovery periods. It is important to understand that recovery does more than rest the muscles or the body. It must assist in improving our overall fitness and moving closer to the overall objective.

The Black Cat training program allows recovery periods, so treat them with the importance they deserve and use them.

Most importantly, listen to your body. If you are feeling tired or are starting to feel run down then - rest even if it is not scheduled on the program. It is better to have one or two days off than one or two weeks when you become injured or sick. Work on the principles that if you are feeling below 70%, do not train.

Over-training

As is the case with recovery, it is essential to consider the problem of over-training when scheduling a program. Over-training can have a detrimental effect on the outcome of your Black Cat training program.

Over-training is usually brought about by an inappropriate, rapid increase in the intensity, volume or frequency of training. Limited or inadequate recovery between sessions can also lead to over-training.

Flexibility of the program

The program we provide is a guide and we understand all of our clients have hectic schedules from both a work and family / social perspective. Subsequently, if you need to alter the program to suit your particular situation— then do it. Then as soon as possible, rejoin the program. It is advisable to contact us so we can assist you when you rejoin the program.

Peaking

Peaking is described as working your training program so that you are at your best when the activity is on, not before or after. The Black Cat program is designed for you to peak for your trip.

Warm up

A warm up is done to prepare your body and mind for what is about to come. The physiological benefits gained from a thorough warm up are said to last from 45 to 80 minutes. The warm up is therefore an integral component of the training session. The warm up raises the body temperature and causes increased blood flow to the muscles, making the muscle fibres become more supple and less resistant to movement. The warm up should take about 10 to 15 minutes (the colder the temperature, the longer the warm up needs to be) and should involve whole body movements, e.g. running forwards, backwards, sideways, stretching, etc. This should be done for at least 5 minutes followed by range of movement exercises and light stretching. Remember to design the warm up around the exercises you are about to undertake.

Cool down

The cool down is done at the end of the main activity you have been doing. Firstly, you should get your heart rate back to rest rate by slow walking or jogging. Once you feel comfortable, begin doing your specific stretching routine which is outlined in the program. These stretches must be completed before and after each training session. Personal and additional stretches can be added but the set stretching routine must be completed first.

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Heart Rate

To attain peak fitness you must exercise within your Target Heart Rate (THR) range for at least 30 minutes per session.

To calculate your THR use the following formula.

- Subtract your age from 220, this equals your Maximum Heart Rate (MHR)
- Calculate 75% of your MHR, this is your Target Heart Rate (THR)
- Calculate 70% and 85% of your MHR, this is your Training Zone (TZ)

EXAMPLE - 30 year old male:

$$220 - 30 = 190 \text{ MHR}$$

$$\frac{190 \times 75}{100} = 143 \text{ THR}$$

$$\frac{190 \times 70}{100} = 133 \text{ TZ}$$

$$\frac{190 \times 85}{100} = 162$$

This person would need to exercise between **133 and 162** beats per minute for at least 30 minutes to achieve the best result on designated 'hard days'.

It is possible for your heart rate to go over the maximum heart rate, because the figure of 220 is an average worked out through group testing. An important thing to remember is that if you train over your target heart range, you will probably find you will burn out quicker and will not be able to maintain the set rate required.

On your easy days your pulse need only reach about 60% of your maximum heart rate.

How to take your heart rate

Determining Pulse Rate

Heart rate monitors are the most accurate, reliable and simplistic way to determine training heart rate. If your budget allows it, the purchase of a heart rate monitor is recommended. When using traditional methods, the most convenient place to measure the pulse is at the carotid artery, which is located at the side of your neck just under the jawbone. You can also measure your pulse at your radial artery, which is located on the inside of your wrist. Place the tips of two fingers below the base of your thumb and count the number of beats for fifteen seconds, starting with zero. Multiply the number by four to establish your pulse in beats per minute. Do not take this measurement with your thumb. e.g. A pulse rate of 30 beats in 15 seconds = 120 beats per minute.

The Rating of Perceived Exertion (RPE)

The Rating of Perceived Exertion (RPE) scale, is a scale from 1 – 10 that is used to determine an individual's rating of physical exertion/exercise intensity at a particular time. The scale rates from 1 – nothing at all, to 10 – maximum effort. The RPE is a reliable and valid indicator to measure exercise tolerance. The RPE also correlates strongly with exercise heart rates.

Firstly, the RPE provides people of all fitness levels with easy guidelines regarding exercise intensity. Secondly, it provides a means of monitoring exercise intensity when heart rate is not a good indicator of exercise intensity (eg. person on β -blockers, which decreases heart rate at all intensities). Thirdly, it helps us to understand how intense you may “mentally” feel the exercise is versus how you “physically” (heart rate response) react to the exercise level.

Rating of Perceived Exertion Scale

- 1. Nothing at all**
- 2. Very, very easy**
- 3. Very easy**
- 4. Easy**
- 5. Moderate (comfortable)**
- 6. Somewhat Hard**
- 7. Hard**
- 8. Very Hard**
- 9. Very, very hard**
- 10. Maximum**

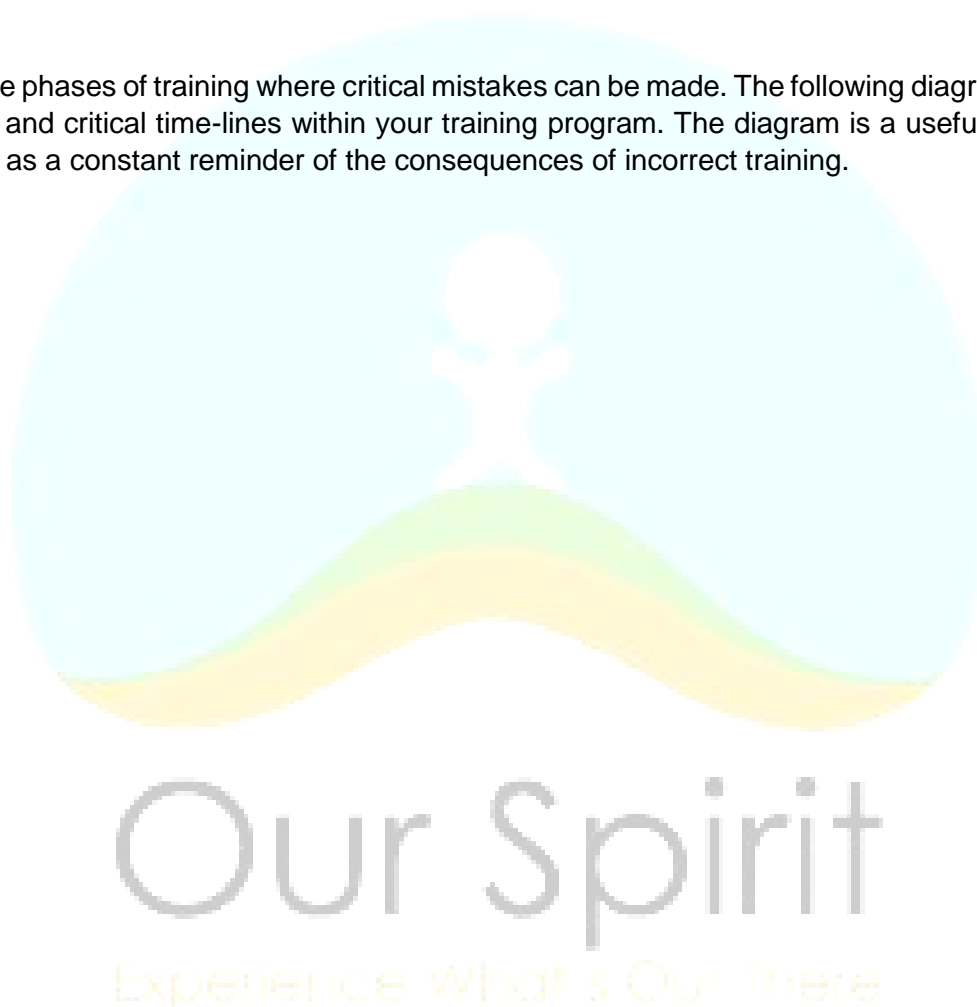
These RPE scales in conjunction with Heart Rate readings are used regularly to monitor individuals throughout the training program. You will be asked for information in relation to the scales during our conversations.

Phases of Training

Throughout the training program there are six notable phases of training:

1. **Introduction**
2. **Improvement** (initial improvement in physical performance)
3. **Adaptation** to training (body adjusting to training requirements from a physical perspective)
4. **Feel good** (mental adjustment to workload, movement in confidence, esteem, outlook etc.)
5. **Increase** in training intensity
6. **Goal achieved** (successful completion of the Black Cat Track)

During these phases of training where critical mistakes can be made. The following diagram highlights the phases and critical time-lines within your training program. The diagram is a useful tool to have around you as a constant reminder of the consequences of incorrect training.



BLACK CAT PHASES OF TRAINING



❖ Overuse injury:

Increase in training volume, Increase in intensity, incorrect start point, not use to the specific type of training

Overtraining:

Overtraining is usually brought about by an inappropriate rapid increase in the intensity, volume and/or frequency of training. Limited / inadequate recovery

Causes

- Excessive increase in volume, intensity and frequency and or physical labour
- Dietary deficiencies
- Sleep deprivation
- Lack of recovery periods
- Over exertion in non training activities

What to look for - Signs and Symptoms

- An unexpected drop in performance
- Development of overuse injuries, persistent joint or muscular soreness and or pain
- Increase risk of injury fatigue and
- Lack of concentration
- Loss of appetite
- Loss of muscle mass
- Insomnia

Usually the initial signs of overtraining are ignored and more commonly people tend to train harder. The appropriate action is to be aware of the signs and symptoms and temporarily reduce the training load.

**Quality training + smart, efficient & effective training + recovery periods
= success in training**

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NOTES:

Fluids/dehydration

Water is the key component of our body; it makes up for approximately 83% of our blood, 76% of our muscles, 75% of our brain and even 25% of your bones. Put simply, if we were to avoid drinking for a few days we would not survive. Therefore, fluid intake is essential within our training program and our trek.

Water makes up approximately 50–60% of body weight. Subsequently, any loss of water via the body's cooling mechanism, sweat, is going to impact on the body's ability to perform. If the body is not properly hydrated we expose it to a variety of health risks. If you have inadequate fluid intake, cells within your body pull water from your blood stream which impacts on your heart, making it work harder. Ensure that you drink plenty of fluids before, during and after training. Your kidneys cannot purify your blood effectively when you are dehydrated, which places stress on them, your liver and other vital organs.

You must ensure that you drink plenty of fluids before, during and after training. Plain water is usually the best form of fluid intake; some energy drinks have high concentrations of sugar in them to give you an instant, but short, energy high. Drink 400mls (two glasses) of water in the 15 minutes before training. This will ensure your body is well stocked with fluid at the beginning of the activity.

Schedule drinks regularly throughout the activity. So ensure you have a water bottle or camel-pak easily accessible. You should drink to thirst ... in your newsletters' we will discuss further hydration / heat exhaustion, heat stroke and hyponatremia.

Keep drinking water after training as your body will still require further fluid replacement. Keep drinking until you pass clear urine.

Diet While Training

Endeavour to maintain a well balanced diet throughout the preparation period. If you are overweight to begin with, do not make the mistake of cutting carbohydrates from your diet (**see Part 3 - Nutrition Guide**), as it will leave you feeling drained, with an accompanying loss of strength and stamina. The intensity of the program will ensure you shed weight in a safe and natural manner.

Step up Assessment

INTRODUCTION

Assessing and measuring are the means of collecting information upon which subsequent performance evaluations and decisions are made.

Objective

The objective of this assessment is to monitor the development of your cardiovascular system.

Required Resources

To undertake this assessment you will require:

- Gym bench (45cm high)
- Stop watch
- Assistant (where possible)

How to conduct the assessment

The Harvard Step Test is conducted as follows:

- Step up on to a standard gym bench once every two seconds for five minutes – 30 steps per minute or a total of 150 steps. If possible have someone to help you keep to the required pace.
- On completion of the assessment record your pulse rate + time
- One minute after finishing the test - take and record you pulse rate (bpm) – Pulse 1
- Two minutes after finishing the test - take and record you pulse rate (bpm) – Pulse 2
- Three minutes after finishing the test - take and record you pulse rate (bpm) – Pulse 3

NB: Please be aware; if your form or technique starts to waiver or you start to feel uncomfortable you are to cease the assessment and then record your heart rates as prescribed.

In this case; when you forward your results you need to inform us of the duration of the assessment, along with your pulse rate at the completion of assessment and at the three intervals.

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Example:

1.	Record time for the assessment	3 min 35sec
2.	On completion of assessment heart rate	158 bpm
3.	First minute heart rate	140 bpm
4.	Second minute heart rate	130 bpm
5.	Third minute heart rate	110 bpm

Forward your results to Our Spirit Pty Ltd (cut and paste) to info@ourspirit.com.au

REMEMBER:

- If your form or technique starts to waiver - 'STOP'
- You start to feel uncomfortable 'STOP'
- You cannot maintain the cadence 'STOP'

If any of the above occurs you are to cease the assessment and then record your time and heart rates as prescribed.



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