

The *Lakeland*100



Medical guide for event competitors



This document is intended to be used as a general guide for competitors taking part in the Lakeland100 event only. It has been produced to raise awareness of potential issues during ultra-distance events and is by no means a definitive list. If you require further information regarding the conditions outlined you should seek qualified and professional medical advice. This document has not been written by a medical member of staff.

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1. General health, physical conditioning and medical history

If you have entered the Lakeland100 or 50 mile event the organisers presume that you already have a good level of fitness and experience and that your current medical state and history are all in good order. We recommend that all competitors visit their GP in the weeks prior to the event and complete a general health check, for the sake of a 30 minute appointment it will give you reassurance and it will also inform your GP of the activities you participate in, thereby allowing them to keep more accurate records. If your past medical history includes blood pressure, cardiovascular, cardiopulmonary or any other serious health problems **YOU MUST** visit your GP in advance to inform him of the challenge.

If you are taking any form of medication **YOU MUST** visit your GP in advance and check that there are no potential side-effects which will lead to problems during the event.

Both the 50 and 100 mile events are physically challenging and should not be undertaken without significant thought, planning and preparation. It's unlikely that you will be able to complete the event if you are starting with illness or injury so if you should develop any kind of injury or illness in the weeks preceding the event, defer your entry until 2009 and don't take the risk.

You will be asked to sign a medical disclaimer at registration, please ensure that you are confident of your current health before signing.

2. Common injuries, illness & treatment

There are many common injuries and illnesses which you may suffer as a consequence of competing in the lakeland100 and 50 miles events. This is a list of the most common and is not a definitive list, it has been compiled to raise your awareness of their occurrence.

Foot care:

The silent killer.. something as simple as foot care may well cause you to drop out of the event. Blisters can cause extreme pain and make it impossible for you to run and walk and prevention is always better than any attempt to cure.

Use trusted socks and shoes, especially over rough terrain which will cause shoe 'twisting' and increase likelihood of blisters. If you blister easily consider pre-taping, plasters of Vaseline to reduce likelihood but try in advance. Take a blister treatment pack with you and stop as soon as you feel the start of blisters rather than continuing to the next point.

Sprains and strains:

Uneven terrain increases likelihood of sprains and strains, especially when you are tired and travelling during the night. Wear correct footwear and ensure that they are fastened snug to remove excess movement, consider pre-taping if you are prone to twisted ankles etc but try this beforehand and consult a qualified professional. If you do twist an ankle treatment would include NSAIDS and if available, put it into a cold stream or lake.

Tendonitis:

Tendonitis commonly occurs in the Achilles, feet and knees and symptoms are burning pain which becomes worse as the activity continues. Initial prevention should include starting without any injury but if the condition develops during the event treatment would include NSAIDS and unfortunately... rest!

Trauma:

It is possible that you may fall and the impact may cause trauma such as a broken bone or torn muscle. In this event you will be forced to withdraw but you should be prepared to self-treat as you may be several miles from the next checkpoint. Ensure that you have a first aid kit to include bandages and dressings and you also have sufficient clothing plus emergency blanket / bag to keep warm. If you are unable to move, ask the next competitor to inform the checkpoint marshal and / or use your mobile phone if you have reception to inform the mountain rescue. Phone 999, give them your location and inform them that you are part of the Lakeland100 event.

3. Awareness of ABC and CPR

We hope that you will never have to use ABC or CPR techniques but It is possible that you may find a fellow competitor (or general member of the public) whilst on the route during this or an alternate event and you may need to use these skills. We would encourage all competitors to familiarise themselves with basic ABC and CPR skills. In addition to this document there is an 'emergency situation guidelines' which outlines what to do if you find yourself or someone else in trouble.

4. Dehydration

If the weather is warm there is a high risk of dehydration for all competitors and you should ensure that you drink regularly (guided by your thirst) to prevent its occurrence. There will be water available at all aid stations, carry a water bottle or similar between checkpoints to keep yourself topped up. Dehydration results in lowered blood pressure, elevated HR and a raise in body temperature, all of which will lead to decrease in performance.

Signs of dehydration are:

- Drawn looking appearance
- Pale / pasty skin
- Difficult to find pulse
- Very rapid pulse
- Dizziness, weakness and confusion

The treatment for dehydration is rest and drinking fluids, rehydration should take place slowly as opposed to drinking large amounts within a short time.

5. Hyper-hydration

6. Hyponatremia

Hyper-hydration and hyponatremia has become increasingly common following the common advice for marathon runners to 'drink as much as possible' and 'drink at every aid station'. As a result there have been several deaths of runners who have simply drank too much. By drinking too much you can dilute body salts leading to hyponatremia, common signs are bloated stomach from consuming fluid and possible vomiting of water to clear your

stomach. Whilst it may seem a direct contradiction to the advice in the previous paragraph you should ensure that you drink according to your thirst and don't consume excessive amounts of water which are not required.

7. Hyperthermia

Hyperthermia is a raised body temperature which will generally be caused by hot weather and dehydration which reduces the ability to remove body heat. Hyperthermia symptoms will be elevated HR and body temperature, other symptoms may be masked by its combination with dehydration. The easiest test is body temperature is to use a thermometer, general body temperature ranges from 36.1-37.8°C but exercise will cause it to rise above this range. A rise in temperature to 39°C can be sufficient to cause some form of heat stress but this is different amongst individuals and can depend upon things such as acclimatization and general conditioning.

Heat stroke is a potentially fatal heat disorder and is characterised by a rise in body temperature to 40°C or above. Signs of heat stroke include very hot and dry skin, confusion, dizziness and potential unconsciousness. Sweating may have stopped and the pulse will be weak and rapid.

To avoid heat disorders ensure that you hydrate correctly as explained in previous paragraphs, in addition you should ensure that you protect yourself fully if the forecast is 'hot and sunny'. Use sunscreen and a hat, preferably one which covers the rear of your neck. Recovery from heat stress includes finding shelter from the sun, gradual cooling and rehydration.

8. Hypothermia

Hypothermia is a reduction in body temperature caused by poor weather conditions and general fatigue. Heat is generated within the body by metabolism as a waste product of energy production. If energy production drops due to factors such as low blood sugar then body temperature may also drop. During the night stages, poor weather combined with fatigue will be sufficient to cause hypothermia. One of the biggest factors which leads to hypothermia is 'wind chill' which will be most prominent on high ground.

Signs of hypothermia include incoherent speech, shivering, slow and weak pulse and treatment includes warming up as soon as possible by removing the

affected person from wind chill, changing into dry clothes, raising blood sugar and drinking warm fluids.

9. Muscle tissue damage

Long distance exercise results in muscle tissue damage and the longer the event, the greater the damage. The amount of damage can be offset by the runners level of conditioning and the pacing, hydration and nutritional strategies they choose to adopt. A great deal of research has been done into the use of blood Creatine Kinase (CK) levels as a gauge of tissue damage. CK is an enzyme involved in the production of short term anaerobic energy but damage to muscle cells allows CK to leak into the blood stream. Based on this, scientists use CK as a direct measure of tissue damage. CK levels have been shown to reach extremely high levels in ultra-distance running events and this has been linked to sickness and kidney related problems. It is difficult to diagnose kidney problems as a consequence of raised CK and if you suffer any form of sickness or diarrhoea during this or any other event you should stop and go to the local hospital to ensure a safe recovery. Muscle tissue damage often goes undetected due to the 'DOMS' phenomenon – Delayed Onset of Muscle Soreness. The symptoms of inflammation and pain caused by tissue damage are delayed by 24-48 hours (every marathon runner can confirm that walking downstairs the next day is harder than walking away from the finish line!). Due to this delay in symptoms it is easy not to recognise the damage which is being caused. Hot, painful and swollen legs are symptoms which should not be ignored and any sickness should be reported immediately to a race marshal.

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