

Hypothermia.

Several years ago, over 25 now, during the Edale Skyline Fell Race I myself succumbed to exposure or Hypothermia as the condition is known. Conditions on that day were pretty grim and several runners were in a bad way at the end, many of them fell runners with years and years of experience like myself. I collapsed in a pretty remote spot near to Edale Cross although luckily in my case I was near to the checkpoint and was spotted by the marshals who happened to be the local Mountain Rescue Team. When I came to I was inside a tent, inside a sleeping bag with a male member of the team in the bag with me, the aim of the exercise being to raise my body core temperature. Luckily I was in good hands tended by people who knew what they were doing and was treated quickly. I was later strapped into a stretcher and taken of the hill down Jacobs Ladder, not a pleasant experience!

The purpose of this story is to convey to runners and other users of the “great outdoors “ that hypothermia can happen to anyone even those who may consider themselves to be “experienced” and it is therefore useful to understand its symptoms treatment and prevention.

Man is a Homeotherm, that is to say he endeavours to maintain a constant body temperature irrespective of the surrounding temperature. In colder climates that is achieved by heat production and heat conservation. The human body consists of an inner hot core surrounded by a cooler outer shell. The core consists of the brain and other vital organs, heart , lungs, kidneys, liver etc. This core is maintained at a constant 37 degrees C. The outer shell is what is left, the skin, fat, muscle and limbs and is normally 3-5 degrees C cooler than the core.

In a cold environment therefore the shell may be regarded as a buffer zone between the inner core and the outside world, protecting the body’s vital organs necessary for survival from any catastrophic fall in temperature. Hypothermia is the name given to the condition which arises when there is a progressive fall in core temperature which if not checked leads to unconsciousness, respiratory and cardiac failure and ultimately death !

37 degrees C Normal core temperature.

35 degrees C Symptoms of Hypothermia, shivering etc.

33 degrees C skin temperature

31 degrees C Unconsciousness, although response to stimulation.

30 degrees C Coma

28 degrees C Death.

It is most important to remember that it is a combination of exhaustion, cold, anxiety and mental stress which is especially dangerous, all of which might well be experienced whilst competing in a fell race or even simply out training.

Causes of hypothermia should be considered in two categories, those factors which relate to the environment (weather etc) and those which relate to the individual. As individuals we have little control over the weather although before venturing out onto the hills weather conditions should be assessed carefully before deciding your route or activity or what should be worn or carried. Important factors which should be considered are the effects of wind, causing windchill and lowering the temperature considerably and a combination of wind and wet, the deadly duo. Most cases of exposure on British hills and mountains occur in wet and windy conditions.

Choice of clothing is therefore an important consideration. Modern clothing is usually lightweight and well designed to combat conditions such as windchill. It is a fact that lots of heat is lost through the head and also through the thighs. The very barest minimum to worn or carried whilst out training on our hills in winter would be full body windproof/waterproof cover and a hat and gloves, also consider carrying energy food. Exhaustion is another factor relating to the onset of hypothermia and is usually caused by attempting too much, not being fit enough for the task or by not having eaten enough to replace the energy used up. This is a dangerous condition as it implies

that the body is unable to mobilise and maintain normal core temperature. Some form of energy food should be carried to combat the effects of exhaustion. Purpose made energy food bars or gels can now be purchased and Kendal Mint Cake can be recommended as a quick fix for the dreaded “bonk” whilst bananas are a natural source of energy. Mars or other chocolate bars might well also be considered.

Recognition and the treatment of hypothermia are important, the symptoms being ordinary at first and becoming more pronounced or easier to recognise as the condition becomes more severe. At first it is a matter of becoming cold and tired, numbness of hands and feet and shivering. This would be followed by unexpected irrational behaviour, physical or mental lethargy and failure to respond to or understand questions, slurring of speech, violent outbursts of unexpected energy with physical resistance to restraint, lack of muscle co-ordination and falling down. Failure of , or abnormal vision in focussing should be treated with extreme seriousness. All of the above symptoms may not be noticed, other symptoms include muscle cramps and light-headedness.

Young people are particularly vulnerable as their physical and mental reserves are less than those of adults. Once the early symptoms have been recognised shelter should be sought and every effort made to prevent further heat loss. Changing out of wet clothing or adding additional clothing is advisable whilst a hot drink and food are essential, the aim being to prevent the body’s core temperature from falling even more. Once the patient is sufficiently recovered every effort should be made to return them to safety.

I have been unfortunate to have been running in 3 fell races where people have died, 2 from hypothermia in “poor” rather than extreme conditions, not in the winter months and both of those runners I would describe as experienced. The purpose of this article is to perhaps make runners more aware of the potential dangers involved and take precautions to prevent it happening to you. Know your route or have the necessary skills to navigate to safety if you become lost or disorientated, wear or carry the clothing appropriate for the weather conditions or the forecasted weather conditions, understand the symptoms, treatment and prevention of hypothermia, carry energy food and a whistle, and ensure that you are fit and well enough to take on your planned task.

Graham Wright 2008

Ref. Mountaincraft and Leadership.

By Eric Langmuir. Published by The Scottish Sports Council.