

Safety Precautions Summarised

Before you set out

- Carry a map at least 1:63,360 (1 in) or 1:50,000 in scale.
- Have with you spare warm clothing, especially gloves, balaclava and spare sweater as well as windproof and waterproof outer garments.
- Carry emergency rations (and don't eat them en route).
- Carry a whistle, torch and small first aid kit in case of accident.
- Leave information of your route and then keep to it. For example, at your Youth Hostel, Hotel, Guest House, or at a Police Station, Information Centre or Mountain Rescue Post, or best, on day trips, at home.
- Until you have a great deal of experience never go out on mountains alone - the safest number is four or more.
- Know where the local Mountain Rescue Posts and nearest telephones are situated.

Planning your route

- Estimate the time that it will take, and make sure that you have sufficient hours of daylight, leaving a wide safety margin for any miscalculation or delay.

Remember that the weather can change very quickly; if conditions are bad in the valley they will be considerably worse higher up, and a walk that you found easy in summer may be very different in winter. Always plan your route in relation to the prevailing conditions and be very cautious about what you attempt in bad weather.

- Do not overestimate your own stamina or ability.
- Treat the hills with very great respect in snow conditions and do not go up snow-covered mountains unless

whether to stop or continue. If the latter, decide in which direction you ought to go, and then trust your compass. If a member of the group is exhausted or if you find that darkness is descending and you are still on the mountain, it is better not to try to get down in the dark unless the whole group can move on and you are on a path or quite certain of the route. Map reading at night is extremely difficult and one cannot tell the difference between a boulder and a precipice. Accept the fact that you are out 'for the night', look around for some shelter from the wind and make yourself as comfortable as possible. You should, of course, be carrying spare clothing and emergency rations.

If the weather and the visibility are good you will be able to descend next morning to another valley. Then get word to your original destination before a search party is sent out. If at dawn the weather and visibility are poor, so that you feel it is still too dangerous to attempt to move, then give the International Distress Signal in case a rescue party is searching for you.

Emergency Bivouacs

Choose a sheltered spot out of the wind or if necessary build a wind-break out of the rocks.

- Put on your spare clothing with dry clothes next to your skin. Use your rucksack or rope to sit on. A groundsheet, plastic mac, or a thick bag of industrial polythene of not less than gauge 500 will protect you against the wind and rain and it is a good idea always to carry one of these in your rucksack. Bags of this thickness are used regularly in high mountain bivouacs and could in emergency save life in this country. Do *not* use the thin polythene bags that can be bought in most stores for covering clothing or storing blankets.
- If it is very cold, try to stay awake and keep warm by frequently exercising arms and legs. Make sure that none of your clothing is restricting circulation, particularly at extremities. Slacken your boot laces.

2 you are familiar with snow and ice climbing technique and the use of an ice axe. Plan your day accordingly.

Out on the hills

- Never let anyone get left behind - a party should always stay together, moving at the pace of the slowest.
- Never be afraid of turning back if weather conditions worsen or you realise that the route is too long or too hard for you.
- If you wear boots soled with composition rubber, be sure that you are aware of their limitations - slippery on wet grass, lichen, mossy or greasy rock, ice or hard snow.
- On a steep slope be very careful not to dislodge loose rocks on to those below. When rock scrambling, a party should keep close together so that if a stone is dislodged it will not have had much time to gather momentum should it hit one of the party below. On a scree slope it is best to zig-zag or adopt an arrowhead formation.

On the descent

The majority of mountaineering accidents occur on the descent from a peak when, once the climb is over, there is a tendency to become hasty and careless. Particular points to note are:

- Don't take a short cut - invariably the path takes the safest, easiest and quickest way.
- Always descend the longer, more gradual side of a mountain; scrambling down steep rocky ground can be very dangerous.
- Never run, slide or glissade down a slope unless you can see a clear way to the bottom.
- Do not follow streams downhill. They may end in a waterfall.

If you get lost

Stay together, sit down, keep calm. Carefully work out from the map your approximate position and consider

4 Bivouacs on Snow

Snow shelters can provide protection against the weather and much information is now available on their construction in various books and booklets, some of which are listed in Appendix II. The making of snow shelters can be time consuming and if possible a good allowance of time for construction should be made.

- A useful method is to dig or cut a cave into a slope, keeping the entrance small and hollowing the cave out inside with an arched roof. A shelter of this kind will give complete protection from the wind and, once inside, bodily warmth will soon raise the temperature above freezing point.
- If on level snow, excavate a hole 2 ft deep and then use your ice axe to scrape the snow into a compact wall or walls for a wind break. Ice axes and ground sheets can then be used to form a cover or lean-to shelter.



'Choose a sheltered spot!'

Summary

Most accidents in mountains are due to one or more of the following reasons:

- Carelessness
- Over-estimation of one's physical stamina or technical ability
- Lack of observation
- Lack of knowledge
- Failure to act together as a group

This booklet gives a brief outline of the basic knowledge necessary for safe movement in mountain country, and you must now acquire that knowledge and add to it. The many books listed in the bibliography will help in this. Only you yourself can guard against the first two dangers or causes of accidents.

When you go out walking or climbing, always go prepared for the unexpected - a sudden change in the weather, a delay or setback which leads to an unforeseen night out in the open. Remember that if you are wholly unprepared a night out in winter conditions can be fatal.

7 messenger must carry and give the following information concerning the accident.

- Exact position, giving six-figure grid reference or, if this is not feasible, as much information as possible to enable a rescue party to go straight to the injured person. In a rock-climbing accident, he must know the name of the cliff, the route and the pitch, so that the rescue party will know whether to approach from the bottom or the top.
- Time of the accident.
- How many people are injured.
- Nature of the injuries.

If the injured person has to be left alone whilst you fetch help, first give him all your spare clothing to keep him warm. If his injuries permit, move him to a good sheltered position, otherwise erect a wind-break around him. It may be many hours before a rescue party reaches him, the weather may worsen and he may easily die of shock and exposure in the meantime unless you take very careful precautions.

If he is conscious, reassure him and leave him a torch and whistle with which to guide the rescue party to his aid. If unconscious, belay him to a rock if possible to prevent him from falling farther or from wandering off in a dazed condition if he gains consciousness. It is wise to leave a cheering message before you leave him in case he should regain consciousness. If possible mark the position of the patient with a bright piece of clothing and, if you possess a rope, lay it out in a long line so that a party may come across it. A cairn of stones will be better than no position mark at all.

When you have done everything possible for the patient, go and fetch help, descending quickly but carefully.

6 Procedure - Accident or Illness

- Do any immediate First Aid that is necessary. Stop any bleeding by applying clean dressings and bandaging firmly. If the patient is unconscious, make sure that he is not choking with his tongue blocking the back of his throat.
- Make the patient as comfortable as possible and treat for shock. Keep him warm, putting spare clothing etc. as insulation underneath him. Warm sweet drinks should be given to those who are conscious and suffering from exhaustion or exposure. Never give drinks to anyone with chest, abdominal or head injuries, or any injured patient who may be transported to hospital quickly and put under an anaesthetic. If a long carry of many hours is expected then warm sugary drinks may be a life saver in case of shock and when no morphia is available. (For further advice on First Aid see following chapter.)
- Give the International Alpine Distress Signal - six blasts on a whistle (or six shouts or flashes of a torch) followed by a pause of a minute then a repetition of the six blasts, shouts or whistles. Keep giving this signal system. If your signals are eventually heard you should hear an answering whistle - three blasts followed by a pause of a minute, repeated several times.

If by any chance your whistle or torch is missing and your voice doesn't carry because of wind, you can wave a white or coloured cloth.

- If your signal does not produce assistance, one (or two if possible) of the party must go down and contact the Police or the nearest Mountain Rescue Post. You should already be familiar with these; they may be marked on maps or listed in rock climbing guide books, though locations sometimes change or should be checked. The

8 First Aid

Every party on the hills should carry a first aid pack. This should contain as a minimum: plasters (for blisters and cuts); lint or gauze (for dressings etc); Acriflavine cream (antiseptic and soothing cream useful for burns, cuts, etc); aspirin etc (for headaches and pain) and a selection of bandages.

Salt is a very useful commodity in mountains and may sometimes relieve cramp. A solution of salt makes a good dressing for cuts, burns and sprains.

Treatment

Medical treatment is obviously best left in the hands of a doctor or someone highly skilled in First Aid but, if an accident does occur, it may be necessary for an unskilled person to give immediate first aid before a rescue party can be summoned. Every mountaineer should therefore learn at least the rudiments of First Aid, and this can be done through the St. John Ambulance Association, the British Red Cross Society or, in Scotland, the St. Andrew's Ambulance Association.

The notes below are intended purely as a simple guide for the layman faced with a mountain accident.

General Principles

- Check the airway. Check it frequently and keep it clear.
- Stop any bleeding and apply dressing to open wounds.
- Do *not* move the patient unless you are quite sure that there is no injury to the spine.

- Treat for shock. Keep warm and relieve pain.
- Immobilize broken limbs to relieve pain and prevent further damage.
- Do *not* experiment. When in doubt, do as little First Aid as possible since an unskilled person can do considerable damage by applying the wrong treatment.

Shock

Shock is present in almost all cases of accident. The symptoms are pallor, weak and rapid pulse, cold, clammy skin, and a hunger for air. Make the patient comfortable and insulate him from the cold ground. Reassure him, allay anxiety and relieve pain. NEVER overheat a shocked patient.

Burns and Scalds

Use a dry sterile dressing on the wound and treat the patient for pain and shock. Leave any adhering clothing on a burn. Remove hot wet clothing from a scald.

Cuts and Wounds

Cut away clothing to make sure there is no dangerous bleeding if it is suspected. Stop any bleeding by applying direct pressure on the wound with a clean dressing or pad and then bandage.

Sprained, Twisted and Dislocated Ankles

In general, do not remove boot - it forms an excellent splint and sufficient relief from swelling can usually be obtained by loosening the laces. If boot is removed apply cold compress and bandage firmly to limit swelling.

Cramp

Massage the affected part and apply warmth. It may sometimes be relieved by drinking a salt solution or eating a few grains.

or bandage the leg to a splint (or ice axe) if available. Avoid moving the injured leg and do not try to straighten.

Collar Bone. Place the hand near the other collar bone and bandage the whole shoulder and arm to the chest.

Spine. On no account move the patient. A spinal injury is often difficult to diagnose, but signs are pain in the back or numbness in the legs. If in the slightest doubt, treat as a spinal injury, and do not move until you have plenty of helpers and a proper stretcher.

Neck. Carefully lay the patient flat on his back. Place a pair of boots, one on each side of the head, with the soles facing outwards and the uppers crossing under the nape of the neck. Narrow triangular bandages can then be tied firmly round the boots and head across the forehead and chin.

Jaw. Support the jaw with the hand, then bandage. Don't allow the patient to lie back or he will choke as he cannot swallow.

Head Injuries

Check the airway frequently and keep it clear. Stop any bleeding by applying a sterile pad and bandaging firmly, then place the patient in the recovery position.

Unconscious Patient

Do *not* administer drinks or morphia. Make sure breathing is not obstructed and remove any dentures. Turn the patient on his side in the coma position to prevent the tongue falling back and obstructing the airway and to help the drainage of secretions.

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Frostbite

Early or superficial frostbite is best treated by applying body warmth or breathing on the cold parts until sensation returns. The warm skin of the crutch or the armpit is good or if possible immersing the part in warm water. Once frostbitten part has been rewarmed, keep it warm. *DO NOT RUB.* Treatment of deep or established frostbite should be delayed until hospital treatment can be given. Protect the parts from rubbing or banging for the tissue is devitalised and will readily tear.

Snakebite

The only poisonous snake in Britain is the adder, but it is a frequenter of hill districts.

● The commonest symptoms are fright and fear of death. Reassurance is vital. *Death from Snake bite is extremely rare.*

● Keep the patient at rest.

● Immobilise the bitten part as for a fracture and apply a firm bandage on the heart side of the bite.

● Administer analgesia (eg. aspirin) but no morphia.

Fractures

Fractures must be immobilized before the patient is carried down on a stretcher, but if you have no experience or training in First Aid, it is probably better not to try to immobilize a fracture before the Rescue Party arrives unless it is causing the patient extreme pain. Do *not* try to straighten a broken limb.

Arm. Bandage the upper arm to the chest (if splints are available, first bandage these to the arm), and either put the forearm in a sling or bandage it also to the chest whichever is the more comfortable for the patient.

Leg. Bandage the injured leg to the sound one at the ankles, knees and hips, padding well between the knees

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Heat Exhaustion

Reduce temperature by moving into cool shade, using cold water and/or helping respiration by increasing air movement - fanning. Apply preventive action - ie. the giving of salt in solution.

Exposure

Exposure is caused by exhaustion and a severe chilling of the body surface, usually in windy and wet conditions. This is one of the most common reasons for rescue calls in mountains and must be guarded against continually. Additional information can be found in *Mountain Hypothermia*, issued by the BMC.

Signs and Symptoms:

- Complaints of cold, tiredness, cramp.
- Mental and physical lethargy. Lack of understanding of simple questions and directions.
- Slurring of speech.
- Irrational or violent behaviour.
- Abnormality of vision.
- Collapse and coma.

These may not all be present nor in the order given.

All cases should be treated immediately, for mild cases can rapidly become very serious. Suspect others, and yourself, of being mild cases and protect the party from being reduced to the same condition.

Prevention:

- Wear good clothing including windproof and waterproof garments.
- Avoid getting overtired.
- Do not go too long without energy-giving foods.
- If any member of a party is becoming tired, cold and wet, the group should go down into a more sheltered area.

13 **Treatment:**

STOP. Provide shelter from the elements causing exposure. Having found a sheltered spot, put up a tent or use the emergency bivouac provided by rucksac and 8 ft x 4 ft 500 gauge polythene bag. Give the patient prolonged rest.

● Immediately insulate the patient from further heat loss. Insulation from the cold ground is particularly important. Cover for head, face and neck is a great help.

● Place the patient in a horizontal position and if possible place a warm companion alongside him.

● Warm food and warm sugary drinks are valuable if the patient is conscious (eg. sugar, glucose, condensed milk).

● Anxiety and mental stress is often an important contributory factor. Be cheerful and encouraging.

● If there is no breathing in severe cases, mouth to mouth resuscitation should be given until normal breathing is obtained.

DO NOT rub the patient to restore circulation.

DO NOT allow further exertion and thereby use up essential energy.

DO NOT give alcohol.

If in any doubt send for help but prompt action, good equipment and good leadership will provide the important safeguards against exposure.

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Mountain Rescue

It is the great tradition of all those people who use the mountains and hills for their own pleasure to offer their help in the event of an accident. At least six people at a time are required to carry a stretcher and these six require changing frequently if the carry is to be made with safety. If you feel sufficiently competent and are sure that you will be of help and not a danger, it is your duty to offer your help to the organiser of a rescue party.

There are several mountain rescue teams in the United Kingdom which are well equipped and trained. These include a number of RAF teams whose primary duty is towards those involved in crashed aircraft. Nevertheless, with the civilian teams, they have a fine record of rescue work in our hills.

Some teams are made up at the time of an accident with a nucleus of experienced local mountaineers and others who may be available. Further help is given by the local police and first aid societies, as well as rescue teams.

The Mountain Rescue Committee have set up a series of first aid posts in the hills, where special stretchers and equipment are kept. In case of accident contact the police or the voluntary post supervisor; they will organise the call-out of available mountaineers or a trained team.

Rescue Posts

Lists of rescue posts, supervisors and other useful information is given in the booklet *Mountain Rescue and Cave Rescue*, available from the Honorary Secretary, The Mountain Rescue Committee, 9 Milldale Avenue, Temple Meads, Buxton, Derbyshire SK17 9BE, price 30p + post age. It is revised annually.