

Chapter 4

Hiking Skills

The suggestions contained in this chapter are intended to help make your hiking safe and enjoyable. Since it is impossible to provide a complete set of guidelines for hiking, the closest one can come to a guarantee for a safe and enjoyable hiking trip remains experience on the part of the leader, gained over time.

Individual hiking skills

Walking with a rucksack is very different to walking without one. Someone who has never walked in the mountains with a rucksack should first practise walking with one during one or two weekend trips before attempting a long trip.

Your walking rhythm

When hiking, speed is much less important than expending energy as economically as possible. A steady walking rhythm is very important, particularly when going uphill. Jerky movements, little jumps, hesitant movements, over striding, and stepping too high all lead to muscle fatigue.

Your legs should swing forward from the hips, without your having to make conscious use of the leg muscles. Your hands should be free to assist with balance and rhythm during movement, particularly when going up or down steep slopes. In order to maintain a good walking rhythm, the same tempo of steps should be maintained on all types of terrain. This means that on even ground longer paces will be given, while on more difficult terrain your paces will be shortened. Remember also that taking smaller steps on a downhill will place less of a strain on the knees and the body, thus conserving energy.

Hiking

- Concentrate on where you put your feet. A momentary lapse of concentration could result in a sprained or broken ankle. Be particularly careful on steep slopes or when boulder hopping.
- Feet should be placed firmly on any solid object such as a rock or a clump of grass.
- When going downhill, the toes can be placed against any projecting firm object, preferably in such a way that the toes are slightly higher than the heel. Move diagonally across the slope when going down a steep slope.
- Although it is enjoyable to run downhill, this can be exhausting and can easily lead to ankle injuries.
- Care must be exercised on steep descents, particularly if you are carrying a full pack. Knees should be kept slightly bent to offset jolting; avoid over striding and keep feet as horizontal as possible.

Group skills

Pre-camp instruction

When dealing with novices or young people, there is a good deal to be said for pre-camp instruction on the use of equipment, basic map and compass technique and safety procedures. A lack of such instruction can result in unnecessary delay and discomfort which can have a very detrimental effect on morale.

The ability to pitch a tent correctly and to use a stove properly, a basic understanding of map and compass work, and knowledge of mountain safety procedures all make for a confident party which will be able to cope with difficult conditions without losing heart and becoming dispirited.

Training hikes

If time for pre-camp instruction is limited, these basic skills should be taught and practised on easy training hikes. A dark, rainy night in the mountains is not the right time to practise putting up an emergency shelter for the first time.

Only an experienced leader should lead a group on a wilderness hike; however, the more experienced the members of the group are, the easier the leader's task becomes. You should therefore try on each trip to educate the group members in all aspects of hiking and mountain safety.

Each hike should be a little harder or longer than the previous one and should incorporate specific training values. These can range from building an emergency bivouac to navigating, using the map and compass. In this way the members of the walking party will all be able to contribute to the safety of the party through knowing the basic techniques and procedures which they may have to use.

You should always appoint a rear man. He is usually, after the leader, the most experienced hiker in the group and is responsible for ensuring that no-one gets left behind. He should keep his position at all times and should alert the leader if the party is becoming spread out.

While a group of novices will normally follow in crocodile style behind the leader, the position you adopt can vary and should depend on the experience of the group and the circumstances at the time. If you walk in the group, you should appoint a dependable and knowledgeable person to walk at the front (see also Leadership Styles in Chapter 12).

Allocating responsibilities during training hikes

Each individual should be given set responsibilities; under your supervision every person should be able to take over the lead position if called upon by you. Thus, each group member is responsible for:

- Assisting with planning the route and recording route details on his route card.
- Continuously observing the surroundings and making use of his map and compass so that he is aware of the precise location of the party.
- If nominated as rear man, keeping his position at all times.
- Staying with the group, or alerting it if he cannot keep up.
- Keeping his equipment clean and serviceable.

Group procedure on difficult terrain

- When going up or down very steep slopes it is much easier and safer to follow a diagonal zig-zag course across and up the slope than to pursue a direct ascent. In this way, you 'cheat' the slope by never walking at the true angle of steepness of the hill.
- Do not take shortcuts while pursuing a zig-zag footpath — this leads to serious erosion of the slope.
- When the group has to move up or down a steep scree slope great care should be taken that no rocks are dislodged. A warning call, such as 'rock below!' should be arranged beforehand.
- Having once gained height, try to maintain it, even if this involves a moderate detour. It is frequently easier to contour round a valley or a spur (i.e. to stay at the same height) than to pursue a direct course cross through the valley or up the spur.
- Though it sometimes may not look like it, a footpath is usually the easiest means of moving between point A and point B. However, you should avoid following a path in the wrong direction just because you want to walk on a footpath!
- At all times energy should be conserved. If a non-stop ascent up a steep slope will exhaust some of the group, rather make short stops on the way up and arrive at the top ready to stride on.

River crossing

A number of dangers are associated with river crossings. A flash flood can quickly turn a tranquil stream into a raging torrent. A lone hiker who tries to cross a river can slip, hit his head on a rock, and drown (another reason for never allowing your party to split up). A strong current can easily trap a person against rocks or in the branches of a submerged tree. It is therefore essential to exercise great caution when crossing any river and to take every precaution to prevent an accident. (Rivers, considered as a mountain hazard, are discussed in Chapter 8.)

Never try to cross a river in flood. The power of a river in full spate is awesome, and the level of the water can rise dramatically at any time. Most South African rivers do not remain in flood for a long time, so that it is usually only necessary to be patient and to wait until the level of the river has dropped to its former level before crossing safely. Beware of sudden surges in the level of the river, though.

Some crossings are straightforward and safe. If there is any doubt about the risk involved, however, you should first consider all the alternatives to crossing and then, if you decide to ford the river, a rope must be used. A lengthy detour is far better than a risky crossing; such a crossing should only be attempted in an emergency, if the alternatives to crossing are more hazardous than the crossing itself.

General principles of river crossing

- Carefully select the best crossing point, using a map. Try to cross it where the main stream splits up into smaller streams. The entry and the exit points should be clear of obstructions. It is very important that the river also should be clear of obstructions — remember that you will feel the true strength of the current the moment when you lodge against the upstream side of any obstacle and that you can easily be trapped there.
- If the crossing cannot be safeguarded by a rope it should not be attempted, unless it is obvious that it can be done in complete safety. Do not try to cross a river wider than one-third of the total length of your rope.

- Brief everybody present and practise the various procedures on dry land first. Ensure that you have a system of signals which are effective next to a noisy river. Arrange clear signs for letting the rope in and out.
- Keep your boots on to protect your feet against the rocks (socks can be removed). Remove baggy clothing to reduce the surface area you present to the current. Keep your rucksack on, with the hip-belt unfastened. Otherwise, your rucksack can be used as a life raft by placing it in a polyethylene bag or putting the items inside it in sealed plastic bags.
- In the river, face upstream, legs spread to improve balance. A stout stick is very useful — it improves balance and can be used to probe for depth.
- If you should fall, do not fight the current. Shed your pack and use it as a flotation device. Gradually work your way to the bank and at all costs stay clear of submerged trees and other obstacles where you can be trapped by the force of the water.
- If you are crossing close to a river mouth, you should determine the direction of flow of the river, which will depend on the tide. At low tide the river will be flowing in the direction of the sea; at high tide the direction of flow can be reversed. The level of the river can also vary significantly, depending on the tide — particularly large changes in the level of the river can occur during spring tide.
- The risk of a shark attack increases if the water is murky, since sharks tend to scavenge in the vicinity of river mouths. You should then rather walk further inland and attempt to cross well away from the river mouth.

The continuous-loop system

This method has been discontinued due to discovered risks – those that know this method should discontinue its use and apply mutual support methods instead. Editor

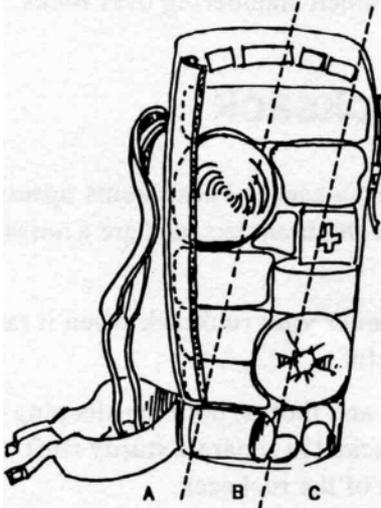
Rucksacks and packing

One of the most difficult hiking skills to acquire is to learn to distinguish between essential and non-essential equipment. Few things can spoil a hiking trip as thoroughly as having to struggle along, weighed down by a pile of things 'that were brought along 'just in case' when, in fact, all these 'extras' simply increase the likelihood of an emergency.

Packing the rucksack

- For the sake of comfort, rain gear, lunch and other items that will be needed during the day should be packed in side pockets or at the top of the rucksack. Use side pockets for items such as a torch, map and compass.
- Packing the rucksack correctly ensures that one can adopt the correct carrying posture. Try to balance the rucksack by packing heavy objects in the middle, or by packing objects of roughly the same mass on opposite sides of the rucksack.
- Try not to pack all the heavy objects right at the top of the rucksack — this makes the rucksack top-heavy and less stable, particularly if it is already sitting high. This could be dangerous in places where balance is important.
- Do not pack sharp or hard objects against your back or against the canvas of the rucksack.

Zone method of packing a rucksack:



Zone A: Closest to centre of gravity — filled with objects of greatest density

Zone B: Middle area — filled with medium density medium-density objects

Zone C: Furthest from centre of gravity - filled with lightweight objects

The correct carrying posture



- Carry the pack high, close to the shoulders.
- Carrying the pack on the hips (left) forces a crouch. If the pack rides high (right), this allows a comfortable upright stance.
- Pack objects such as pots, cutlery and cups firmly in order to prevent them from rattling. Remember to reserve a space for your share of the food and communal equipment (where applicable) when you are packing at home.

- Ensure that all warm clothing, your first-aid kit and your sleeping bag are packed in a watertight fashion, particularly if your sleeping bag is going to be strapped to the outside of the rucksack.
- If you are walking where there is a danger of falling into water (for example, when boulder hopping in a riverbed), it may be wise to unfasten the hip-belt to prevent the rucksack from pulling you down in case you fall into the water. Loosen the hip-belt to allow you to bend over when clambering over rocks.

Using the outside of the rucksack

- Try not to hang objects on the outside of the rucksack. These items upset the proper distribution of weight, catch on bushes and branches, and are a nuisance to people walking behind you.
- A rucksack cover or large plastic bag to pull over your rucksack when it rains, or to prevent dew from soaking it, is very useful.
- To prevent them from being torn by branches and thorns, both the sleeping bag and the closed cell foam mattress should be packed in separate sturdy stuff bags if they are going to be strapped to the outside of the rucksack.

Some general hiking guidelines

Comfortable hiking clothing

In South Africa's sunny weather one can hike in shorts and a T-shirt even during winter. Long pants soon become too warm and are uncomfortable, particularly when climbing. Be careful, however, for sunburn on exposed parts of the body that are not used to the sun. A hat is a partial solution to this problem, and even an umbrella can be considered if the hike is over easy terrain (just ensure that you can tie the umbrella to the rucksack when it is not needed).

Warm clothing must be carried on every hiking trip, even on an easy stroll in the middle of summer — a sudden storm can leave you trapped in rain and mist, or somebody might be injured, requiring you to spend a night outside. A rain jacket or anorak that can protect you from both wind and rain is likewise essential on every trip.

It is important always to keep a dry set of clothing in which to sleep. Wet clothing can frequently be dried out during the night, and it is usually better to begin walking in the morning with damp clothing than to run the risk of allowing your only set of dry clothing to become soaked as well. Do not try to dry wet clothing by placing it in your sleeping bag. If the weather improves, wet clothing can be tied to the outside of your rucksack to dry out.

It is advisable to take along an extra pair of footwear, particularly if you walk in boots. After a day of hiking in boots it is pleasant to put on something else — running shoes or tennis shoes are perfect. The advantage of a pair of running shoes is that they can also be worn in case your boots give you blisters. (See Chapter 1, Camping Equipment, for a discussion of specialised hiking clothing.)

Foot care

Foot care is extremely important. Feet can be kept in good condition by washing them regularly, wearing clean, well-fitting socks, and cutting toenails short and straight. Methylated spirits can be rubbed on the feet before a hiking trip in order to harden the skin.

Anti-fungal footpowder prevents athlete's foot, helps prevent blisters, and makes your feet feel good. It should be applied to your feet, not to the inside of your boots.

Preventing blisters

A blister is caused by friction between the foot and some or other part of a shoe or boot. It can be the result of ill-fitting boots, inadequate socks, loose laces, or merely the fact that the feet are unused to hiking or wearing boots. Although a blister is a relatively minor injury, it can have an effect out of all proportion to its medical significance on a person's hiking ability. Blisters are a very common problem and they should therefore receive serious attention from tour leaders.

If you are leading a group of novices you should check regularly, particularly during the first hour of hiking and during the rest of the first day, whether anybody is developing blisters. Each group member should know that a red, painful spot on his feet should be treated immediately, before it develops into a blister. (The treatment of blisters is dealt with in Chapter 10.)

With regard to preventing blisters caused by boots, consider whether boots are absolutely necessary for the planned activity. For most hiking trips, particularly on hiking trails or on easy terrain, soft half-boot-type shoes or even an old pair of running shoes are more than adequate. Because they are soft, they seldom cause blisters. As mentioned in Chapter 1, though, they provide less ankle support, and you therefore need to watch your step carefully; their soles must provide adequate grip on wet rock. If boots are necessary, for example, if snow might occur in the area where you intend to hike, they should be walked in properly beforehand.

If you know where your boots hurt you, you can take precautions against blisters by placing sticking plaster on your feet before putting them on. The broad white type seems to work the best — it sticks well, particularly when the glueless edge has first been cut off. Moleskin or chiropody felt, on its own or used with sticking plaster, also works very well.

Preventing sunburn

Sunburn is another very common hiking ailment which can spoil any hiking trip: it is not very pleasant to carry a rucksack on a burnt back and shoulders. Avoid sunburn by using a hat, umbrella (on easy terrain), high factor sunscreen lotion (or ultraviolet blocker) and protective clothing. Be particularly careful of the sun when swimming during the hiking trip.

Take note of people with very fair skins in your group. They should wear a hat and shirt during the hottest part of the day and should, in general, try to stay out of the sun. The group medical kit should contain an ointment or balm for topical relief of serious sunburn symptoms (see also Chapter 10).

Water

One can usually safely drink water from little streams high up in the mountains. However, where uncertainty exists regarding the safety of water, water purification tablets or iodine (obtainable at pharmacies and hiking stores) should be added to the water.

The suggested dilution of iodine is four drops of tincture of iodine per litre of water. Water treated with iodine or purification tablets should be left to stand for at least half an hour before being used.

Boiling water for a minimum of ten minutes will also kill any germs. Remember that the length of time for which polluted water should be boiled before it can be considered safe for human consumption depends on the altitude at which you find yourself, since the temperature at which water boils drops with an increase in altitude.

Liquid losses from perspiration and respiration must be replaced, preferably by frequently drinking small amounts of water. In South Africa it is usually necessary to carry along a water bottle on a hike.

If there is sufficient water at the camping sites and water is available for lunch, one litre per half day should be a sufficient amount of water to carry and drink, except in very hot conditions. Thirst can also be prevented to some extent by drinking a considerable amount of water before beginning to hike in the

morning. (See Chapter 8, Mountain Hazards, on how to deal with a shortage of water and how to obtain emergency water supplies.)

Insects

Mosquitoes and ticks are usually the greatest insect nuisance on a hiking trip. Find out whether there is a danger of malaria in the area you intend to visit, and take adequate precautions, where necessary. Insect repellent helps to keep mosquitoes and ticks away, but it should be applied frequently.

Once a tick has bitten you and refuses to drop off it can be removed by smearing paraffin or any oily substance such as butter on it. Infected ticks can, of course, cause tick-bite fever, but no precautions can be taken against the disease.

After an infected tick has bitten a person it takes approximately one week before the first symptoms appear; tick-bite fever is therefore a problem which usually manifests itself only after the trip is over. (Bee and wasp stings are dealt with in Chapter 10, Mountaineering First Aid.)