

Climbing 8000m Peaks - Part One

by Roland Hunter on 31 October 2005

At some stage, most climbers will ponder the idea of summitting an 8000m peak. But how do you go about actually doing it? In this two-part article, Roland Hunter highlights some of the things to consider if you are thinking of joining an expedition, or of planning your own. You can use this information to decide on your best approach, or to contact a commercial company about the services they provide. Roland is an experienced Himalayan mountaineer and expedition organiser, and is the founder of The Mountain Company.



Everest summit beckons

Five years ago I felt it was time to venture further afield and attempt one of the 8000m mountains. There are fourteen of these giants, located in the Himalaya of Nepal and Tibet and in the Karakoram of Pakistan. I ended up joining two expeditions, one to Everest in 2001 and the other to Kanchenjunga in 2003, and then organised an expedition to Broad Peak in the summer of 2004.

Many people think that you need huge sums of money to go on these trips but this is not always true. There were fourteen of us on the Broad Peak team and the expedition ended up costing each member US\$4000 (the climbing permit was half price in 2004).

The normal expedition approach is siege style with established camps linked by fixed rope, although over the last ten years some groups have adopted an increasingly lightweight approach by using no supplemental oxygen or high altitude sherpas.

Expedition organisation

Your first choice is to think about what type of expedition you would like to join. There are several western-based companies which can organise either a professionally led or fully guided expedition, and there are local trekking agencies based in Kathmandu and Islamabad who provide logistical support.

There are a range of factors which might influence your decision: your previous mountaineering experience (in particular above 8000m); cost; whether you have a group of like-minded friends to go with; and the amount of time you have available for organising the expedition. The planning for an expedition might start a year or more before departure and will probably involve a lot of work but can also be very satisfying.

Local operator:

There are many local agencies based in Islamabad for climbing in Pakistan, and in Kathmandu for both Nepal and Tibet. It is worth obtaining in writing exactly what services are included although generally this will be travel to base camp and base camp support. You will pay extra for supplemental oxygen and climbing sherpas/high altitude porters.

This is the cheapest option but you will have to organise all of the logistics on the mountain such as fixed rope, mountain tents and rescue equipment. A liaison officer will be assigned to your expedition and you will be responsible for paying him and providing



The planning finally pays off...
Rongok glacier from Everest

his equipment.

Professionally led expedition:

A professionally led expedition will include a western leader to organise the logistics. He will not be guiding on the mountain but will help coordinate the group's movement between camps; i.e. you should be confident in your ability to make independent decisions while climbing at altitude. There is a range in the quantity and quality of services provided – some will include weather reports, internet service at base camp, climbing sherpas, satellite phone, mountain communications and safety/first aid facilities.

Fully guided expedition:

A fully guided commercial expedition should include a comprehensive range of services and a western guide with a strong team of sherpas on the mountain. The main differences between the guiding companies will be the ratio of guides to clients, the amount of supplemental oxygen (if required) and their experience of guiding on a particular mountain.

Clearly the downside of all expeditions to 8000m peaks is the time and the expense involved, but it is interesting to note that there have been very few expeditions cancelled due to lack of funds. It is often the case that at the last moment some innovative way of raising the cash is found.

I am surprised how often expeditions run out of time. This happens frequently on Everest resulting in many disappointed and frustrated team members – especially when they find out another team summited the week after they left base camp! Ask for the exact dates of the expeditions and find out if it is possible to extend the time if required.

Which 8000m mountain?

Now that you have an idea about the type of expedition you might like to join, the next question is where to go.

The 8000m mountains are located in Nepal, Pakistan and Tibet (China) with the heights ranging from Shishapangma at 8012m to Mt Everest at 8848m. There is a significant difference in climbing the lower 8000m mountains compared to the highest five – climbing with no supplemental oxygen feels exponentially harder for every step above 8000m!



Broad Peak (8047m) – possible objective for a first expedition

Good objectives for a first expedition to an 8000m peak are Cho Oyu, Shishapangma, Broad Peak and Gasherbrum II. These four are at the lower end of the altitude range and their standard routes are less challenging than some of the others. But they should not be underestimated. For example, there is a low rate of success in climbing to the very top of Broad Peak as there is a long ridge above 8000m from the foresummit to the true summit at 8047m; and on Shishapangma there is also a difficult climb from the Central summit to the Main summit.

Your choice of suitable objective should take into account both your previous experience and the type of experience you are looking for. If your main objective is to summit an 8000m mountain then it might be better to go on the standard route of one of the popular mountains in peak season (pre monsoon in Nepal and the summer in the Karakoram). Your chances of getting to the top will be higher with several other expeditions out there at the same time; you can share the task of fixing rope and you might team up with other climbers for a summit push.

If you are looking to avoid the crowds and to climb independently on an 8000m peak it is still possible. For example there are relatively few expeditions going to Kanchenjunga each year, and if you decide to keep away from the standard routes on the north or south side you would definitely be on your own!

Or how about climbing Everest in the post monsoon period? There are very few expeditions to Everest in September and October so you would probably have the route to yourself – hardly what most people expect on Everest these days! The conditions are generally not as good as pre monsoon but it is still possible (Bonington's 1975 Everest southwest face expedition summited on September 24).



Summits of the Kanchenjunga massif

And if you are searching for a real adventure then why not climb an 8000m satellite peak? They might not have the cachet of the main summits but are worthy objectives nevertheless. Take the Kanchenjunga massif for example; here there are three other mountains over 8000m next to the Kanchenjunga Main summit at 8586m: Kanchenjunga Central has had only twenty-five ascents, Kanchenjunga South thirty-one, and Yalung Kang fifty. I recommend the excellent guidebook 'Kanchenjunga Himal' by Jan Kielkowski for more information on the huge possibilities in this region.

Personal equipment

I won't give a detailed equipment list here, but will mention a few items that have worked well for me. I believe one of the most important factors when selecting equipment for high altitude climbing is the weight.

Down gear:

I do not take a heavy sleeping bag on the hill but prefer to go for a lightweight bag with quality down and good design (PHD Minim 400 Down Sleeping Bag 670g). At higher camps I wear a down suit so a warmer bag is not necessary and at lower altitude I wear my clothes along with a down vest (PHD Minimus Down Vest 250g) and down booties (Xero Down Boots 180g).

Tents:

A good mountain tent is required for Camps 1 and 2, and I normally use a Mountain Hardwear Trango 2 (4.14kg). These camps get the most use and will be pitched for weeks at a time so the weight is less important than having a strong tent capable of handling high winds.

It is useful to have a lightweight tent that can be used at top camp to launch a summit attempt. One of the strongest tents around is the Bibler I tent (2.25kg) but another option would be a Black Diamond Firstlight (1.2kg). The design of the Firstlight is based on the Bibler tent (as Black Diamond now own Bibler) but uses ultra-light materials. The Firstlight is a bivouac tent that would be ideal to carry on a summit attempt to get out of the wind for a while and make a brew.

Ice axes:

I like to bring a mountaineering iceaxe and a third tool so that I can move in a variety of snow and ice conditions. I do not use the third tool very often but it is useful to have when climbing on ice at slopes of over 35-40 degrees with a heavy pack. There is a significant weight saving compared to bringing a technical tool. I use an Ushba Altai titanium (335g) and Camp Micro 2 (400g).

Pack:

I like to take a simple lightweight pack for load carrying on the mountain. I use a Berghaus Extrem Expedition 80-litre pack (1.7kg).

Boots:

I have used Everest Onesport boots on all 8000m expeditions and they have always kept my feet warm. The disadvantages are they are quite heavy and bulky so are not very effective for technical climbing. They are also expensive. I believe there are some new high altitude boots on the market, which are less heavy, but I have not yet used these.

Base camp

Like the walk-in, base camp is a good time to meet people and consolidate friendships. But it can become a frustrating place to sit out poor weather. On all three of my 8000m expeditions I waited for three weeks in base camp for conditions to improve on the mountain.

Be prepared for this! Bring along books, music, cards and games – some people even bring coursework or learn a language. The boredom associated with long periods of inactivity is often one of the main reasons for people giving up and going home early.



View of Everest from base camp

Find out whether you will be sharing a tent with another team member at base camp. I believe it is important to have your own personal space and most expedition organisers will supply personal tents but some still expect people to share. It also reduces the chances of catching flu or a cold from your tent mate.

Food

An expedition can last many weeks. Food is vital not only for maintaining energy levels but also for keeping group morale high. On Broad Peak we bought a yak and had steak for evening meals, often with a pepper sauce thanks to our great cook!

Before you end up at base camp, ask about the cook's experience and his range of menus. Also find out if there is going to be a resupply of fresh vegetables and other items during the expedition.



Snacking at base camp

Often it is not the main meals that people complain about but the lack of snack food available during the day – you might spend days at a time in the mess tent and it can be a long wait between meals! A well-provisioned expedition will have crisps, biscuits, chocolate and nuts for everyone to eat throughout the day.

While on the hill the altitude will affect your appetite but it is still possible to eat well by thinking carefully about what food to bring with you. Try to avoid oily or greasy food or anything with a strong flavour. There are a number of options for meals but my preference is boil in the bag (e.g. Wayfarer meals). The drawback is that, at 300g for a main meal, they are quite heavy but

I think they are well worth it as they taste so good and are easy to prepare. Cooking at altitude is always difficult but with these meals one can heat the packet then use the water for a brew afterwards – and there are no dirty pans to wash up!

In the second part of this article, we will look at the vitals for success on any 8000m mountain: climbing strategies and acclimatisation, altitude medication, rescue precautions, good communications, and porter welfare.

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Climbing 8000m Peaks: Part Two

by Roland Hunter on 14 November 2005

In the second part of his article on climbing 8000m peaks, Roland Hunter examines the key points for success on the world's highest mountains: climbing strategies and acclimatisation, altitude medication, rescue precautions, good communications, and porter welfare. Roland is an experienced Himalayan mountaineer and expedition organiser, and is the founder of The Mountain Company.

Climbing strategies and fixed rope

In practice if there are fixed ropes on the mountain almost everyone will use them, despite some people's initial reservations. Conditions change quickly on the route as the season progresses. For example, at the beginning of our Broad Peak expedition there was a moderate snow slope leading to Camp 1, but just two days later this snow had melted to leave water ice below. Many people were surprised by the conditions as they descended after spending two nights at Camp 2. Everyone used the fixed rope on this section as down climbing on the ice was quite difficult and self arrest would have been impossible after a fall.

Fixed rope on the route means progress up and down the mountain is still possible even in poor weather and climbers can if necessary descend quickly to the safety of base camp. Another consideration is the safety of porters and sherpas (see below) – the expedition should minimise their risk while they are working on the mountain. They will often be carry heavy loads along the route and having fixed rope in place will add to their security. On parts of the route where fixed rope is not used it is a good idea to use bamboo wands (with bright flagging attached) to help mark the route.



Fixed ropes on Kanchenjunga – on the route to Camp 1



Climber carrying bamboo wands used for marking the route

One of the common causes of friction between team members and different expeditions is about who is going to fix the rope on the route. On Everest north side there are normally one or two commercial operators who fix most of the route to the summit. All other expeditions are asked to contribute to this cost but in practice they very rarely pay anything.

In 2005 the Chinese Mountaineering Association decided to subcontract this work to one expedition and then collect US\$100 per climber from other expeditions. This level of organisation is unlikely to happen on other 8000m mountains and will generally

depend upon discussions between team leaders at base camp.

Acclimatisation and altitude

The most significant characteristic of climbing at high altitude is the lower air pressure. Air pressure is the determining factor for the oxygen saturation in the blood, and a drop in air pressure will lead to a reduction of available oxygen for the body. This is why climbing at altitude is such hard work!

Fortunately the body has mechanisms for adapting to these conditions. In the short term we start to breathe faster and deeper, and over time physiological changes occur in the blood allowing more oxygen to be absorbed.



Building up... Camp 2, Everest northside

Some teams have adopted an increasingly lightweight approach by using no supplemental oxygen. Gary Pfisterer, an American climber, used this style on his numerous 8000m expeditions. In 2000 Gary organised a very successful climb to K2 when six members summited and in 1998 to Kanchenjunga when his wife Ginette Harrison climbed to the summit (the only woman to climb Kanchenjunga and survive). I was fortunate to join Gary's expedition to the south side of Kanchenjunga in 2003.

Acclimatisation schedule:

The build-up and establishment of camps on the mountain normally follows a standard schedule and gives time for your body to adjust to the change in altitude. Our climbing plan on Broad Peak was as follows:

- Carry group equipment to Camp 1 (5500m) and descend to base camp (5100m).
- Carry personal gear to Camp 1 (5500m), spend the night and next day descend to base camp (5200m).
- Several rest days at base camp (5100m).
- Carry group equipment to Camp 1 (5500m), continue to Camp 2 (6300m) next day and spend two nights before descending to base camp.
- Several rest days at base camp (5100m).
- Climb to Camp 2 (6300m), next day make a carry to Camp 3 (7200m) and descend to base camp (5100m).
- A couple of days of rest at base camp (5100m).
- Climb to Camp 2 (6300m), next day continue to Camp 3 (7200m) and spend two nights before descending to base camp.
- Several rest days at base camp (5100m).
- You should now be fit and acclimatised so with suitable weather and conditions the next time up could be a summit push (8047m).

In practice it is often difficult to rigidly adhere to this plan. On Broad Peak we were delayed by the rescue of a climber with severe altitude sickness and then we had a long period of poor weather. At the end of July we received a forecast of four good days so we moved up the mountain, knowing this was probably our only chance for a summit attempt that season.

Pulse oximeter and blood saturation:

On leaving Camp 3 for the summit I was feeling very tired but was not sure if this was worse than the usual exertions of climbing at that altitude. I measured the oxygen saturation of my blood and found it was well below the typical range of oxygen saturation at this altitude (typically from 70% to 85%). If I had not seen this reading I might have continued until my situation got much worse.

You can measure your blood oxygen saturation by using a pulse oximeter. The reading gives the percentage of haemoglobin molecules carrying oxygen. There are now compact pulse oximeters available at a reasonable price. I have found oximeters to be useful in monitoring the acclimatisation of a group on a trek or climb. Often there is a tendency for members to play down any symptoms of altitude



Using an oximeter. This instrument can be a useful indicator of altitude problems

sickness whereas the oximeter gives an objective measurement. This is not an absolute indicator of altitude problems but an experienced leader can combine this with other observations to determine what action should be taken.

Altitude medication:

It is important that every climber carries a personal supply of altitude medication while climbing. There are three main drugs to bring: diamox, nifedipine/viagra, and dexamethasone. These should be used in conjunction with other treatments and actions – such as a rapid descent, use of medical oxygen and/or a portable altitude chamber (PAC).

Diamox can reduce the symptoms of acute mountain sickness (AMS). A dose of 250mg every eight hours can be effective, and it can also be taken as a preventative with a reduced dose of 125mg every eight hours.

Nifedipine can prevent and treat high altitude pulmonary oedema (HAPE) with a dose of 10mg to 20mg every eight hours. Viagra has recently been shown to be effective at treating HAPE.

Dexamethasone can help relieve the symptoms of high altitude cerebral oedema (HACE) by taking 8mg initially then 4mg every six hours. It is a good idea to have injectable dexamethasone for use with an unconscious person who is unable to swallow pills.

Rescue and evacuation

There is a range of problems experienced on 8000m expeditions but a large number tend to be altitude related. It is vital that there are plans in place for rescue and evacuation.

On Broad Peak my team got involved in the rescue of a climber from another expedition. At Camp 2 (6400m) he was unconscious and our expedition doctor diagnosed HAPE and HACE. The next day he was brought down the mountain and evacuated by helicopter to a hospital in Skardu.



Relaxing at base camp. Even here, recovery from HACE might not be possible

The rescue worked because we managed to get him off the mountain quickly (using the fixed ropes) and because we had the right equipment and medication to give him. Most base camps are still at an altitude where recovery from HACE is not possible, and in our case the climber was put inside a portable altitude chamber with a supply of medical oxygen while waiting for the helicopter rescue.

In Pakistan a rapid evacuation by helicopter can only be arranged if a US\$4000 bond has been paid at the beginning of the expedition. The helicopters are owned by the Pakistani army and will only fly if they have the required funds in their bank, so even if you have good insurance there could be a delay. The other advantage of paying the bond is that they give you a briefing in Islamabad about helicopter evacuation and the necessary equipment for making a landing zone (a wind sock and an H pad).

Communications

It is essential to have a satellite phone for coordinating an evacuation by helicopter. It can also be helpful for organising a resupply of provisions or a recruitment of porters at the end of the expedition. On Broad Peak in 2004 there was a shortage of porters due to a number of large expeditions on K2 for the 50th anniversary, so we used the satellite phone to contact several local villages to find out if there was anyone interested in portering for us.



For keeping in touch with the outside world – a solar panel, satellite phone and PDA

On Broad Peak we had a Thuraya Hughes 7101 satellite phone, which is light (220g) and not much bigger than a mobile phone. We also took a lightweight solar panel to recharge the batteries. A very useful service available on a satellite phone is SMS text messaging. Not only is this an inexpensive way to keep in contact with family and friends but you can also get free text weather forecasts from Everestnews.com. We took the Thuraya satellite phone to Camp 3 on Broad Peak and received forecasts every day.

It is possible to link the satellite phone to a PDA in order to send and receive emails as well as accessing the internet. Explorersweb.com have developed software called Contact 3.0 which can be used for sending emails and dispatches back to a website. They also sell a complete package of hardware for expeditions, plus technical support – which could save a lot of time trying to configure the setup by yourself!



For keeping in touch with the team – compact VHF radios

It is also important to have the means to communicate between the different teams on the mountain. There are various compact VHF radios available which have a sufficient range from base camp to the top camps (but not on Everest north side). Every camp on the mountain should have a radio but it is better for all climbers to have one. In this way everyone can always communicate with each other – especially useful on summit days when people might be moving at different speeds. At other times on the expedition it is worth setting up fixed times for radio calls between all the camps.

Porter working conditions

Porter welfare is an area often neglected by expedition organisers although there has been an increasing awareness over the last few years. It seems only fair to treat the porters with care and respect; after all, their hard work will contribute to the success of the expedition. The International Porter Protection Group (IPPG) has five guidelines to help protect porters who work on climbing and trekking expeditions:

- Adequate clothing should be provided to porters for their protection in bad weather and at high altitude. This means windproof jacket and trousers, fleece jacket, long johns, suitable footwear (leather boots in snow), socks, hat, gloves and sunglasses.
- Above the tree line, porters should have access to shelter, either a room in a lodge or tent (the trekkers' mess tent is not good enough as porters are often left hanging around till dinner is finished), a sleeping pad and a blanket (or sleeping bag). They should also be provided with food and warm drinks, or cooking equipment and fuel.
- Porters should be provided with the same standard of medical care as you would expect for yourself, including insurance.
- Porters should not be paid off because of illness or injury without the leader or the trekkers assessing their condition carefully. Sirdars must let their trek leader or the trekkers know if they are paying off a sick porter. Failure to do this has resulted in many deaths. Seriously

ill porters should be sent down with someone who speaks their language and understands their illness along with a letter describing their complaint. Sufficient funds should be provided to cover the cost of their rescue and treatment. They should never be sent down alone.

- No porter should be asked to carry a load that is too heavy for their physical abilities. Weight limits may need to be adjusted for altitude, trail and weather conditions. Good judgement and careful observation is needed to make this decision. And if you are going to a remote area, select strong and experienced porters!

See www.ippg.net for more information. The Mountain Company are Camp 1 financial sponsors of IPPG.



Attempting one of the highest mountains in the world is a great personal challenge. But joining an expedition is about more than the climbing. It gives you a reason to visit other countries, encounter different cultures and meet interesting people in incredible landscapes. From the planning to the walk-in and from base camp to summit, it is a unique and unforgettable experience.

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