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How to Check the Quality of a Commercially Organized Trek or Expedition

Intended for Doctors, Trekking or Expedition Company Operators and Potential Clients

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“Never visit a country where you would not be prepared for your initial medical care to be carried out in the local health facilities”
(an experienced traveller)

“I manage tears more than I manage injuries”
(an experienced commercial expedition leader and 8000m mountaineer)

Content

1 Introduction

As the number of mountaineers who are joining organised treks or expeditions continues to increase, so does the incidence of altitude-related diseases. Shlim (1992) stated that 77% of deaths that were caused by high altitude pulmonary oedema (HAPE) or cerebral oedema (HACE) occurred in organized trekking groups - but only 40% of all trekkers were part of an organized tour [1]. In other words in 1992: an individual's risk of dying from an altitude-related problem was increased by 5.0 times at the moment of booking! As recent data suggest the situation is still the same (ADEMED Expedition 2008 and 2011 (data not yet publishes), www.ademed.de). Technically simple high altitude treks and peaks with easy access such as Kilimanjaro, Aconcagua, or the Everest trek (with fly-in to Lukla) are still potentially dangerous because of the rapid ascent profile undertaken by many trekkers and offered by many trekking companies [2].

The following points should assist mountaineering tourists to check whether their organization has taken reasonable account of the potential health risks when planning a trip itinerary. It is hoped that by raising the awareness of the health risks involved in high altitude trips, itineraries will become safer.

Do not be afraid to ask probing questions when booking a trek or mountaineering expedition. It is your money that is being spent and your life that may be at risk.

2 Ascent profiles

Does the trip comply with the “Gold Standard” of not climbing too high too fast? According to the Wilderness Medicine Society consensus guidelines [3] this gold standard is not to ascend more than 500m to a new sleeping altitude each day after reaching 3000m, and taking one rest day with no increase in sleeping altitude every 3 or 4 days. Many authorities would disagree with some aspects of the WMS guidelines especially on prophylactic drug use at altitude [3].

Prior to the new WMS guidelines the figures of a daily increase of sleeping latitude of 300m was frequently quoted and many authorities still stand by this whilst acknowledging that there is massive individual variation in acclimatisation rates. The origin of

this “rule” is discussed in West, Schoene and Milledge’s book [4].

Special care should be exercised on trips that start walking from high roads as in Tibet or parts of South America where the second night may be spent at 3500m or more [5].

Any commercial trek or expedition should make allowance for the normal slow acclimatiser booked on their trip and have some flexibility in their itinerary.

3 Booking information

A reputable company should be able and willing to provide the following information:

3.1 General Information

1) A general outline of the trek or expedition to give a true picture of both the company and the trip.
2) Detailed information on the ascent profile possibly presented graphically with an itinerary indicating any days available in case of delays due to weather, health or local travel problems.
3) Specific demands of the trip such as grade of climb, hours of expected daily walking, technical difficulty of climb or trek and physical demands (see table one).
4) Details of previous success rates on the same trip and details of any problems previously encountered.
5) Details of the food provision and training and experience of any cooking team.
6) Details of toilet facilities to be expected.
7) Is the language of the group and of the country spoken / understood by staff members, porters and all the clients?
    a. If not: is a person always available who translates fluently?

3.2 Insurance

1) Advice on how to obtain comprehensive insurance which must include search and rescue (which may involve a helicopter if justified and available), health care, and repatriation costs. It must be with a company that is fully aware of the risks of the trip, expedition, country and altitude involved.

2) What insurance cover or arrangements are made for the protection of porters and local in country staff which should allow for life cover, evacuation and in country health care?

3.3 Health

1) Is there a pre trip client health assessment? This may be by simple questionnaire but for more complex cases involving clients with pre existing medical conditions advice should be backed up by advice from an experienced expedition doctor or travel medicine expert. Clients with pre existing conditions must be responsible to taking and storing their own medication with back up for emergencies such as loss or theft.

2) Is there advice on immunisations and avoidance of traveller's illness? This should include aspects such as basic hygiene and water purification, malaria prevention advice if relevant to the area?

3) Is the company aware of health facilities available in country and near to the trip objective? Do they have an evacuation plan if needed for clients or staff to reach appropriate facilities? Is this system totally reliant on modern technology such as Satellite phones or helicopters which can fail in difficult circumstances?

4) Is the trip leader or guide fully trained, qualified and experienced in remote area and altitude first aid and relevant rescue techniques? Many guides do not have this advanced knowledge and training and self assessment of skills is usually inadequate [6].

5) If there is a physician with the group who is expected to care for the group does he or she have specific experience &/or training in remote area mountain medicine. Has this know-ledge been kept up to date?

6) Does the trip carry an appropriate remote area medical kit? If so what drugs

does it contain to treat infections, pain and to buy time for descent in the event of altitude illness? Are the staff trained in the use of prescription medication? Frequently companies do not do this [7], [8].

7) If the trip carries emergency oxygen and/or a hyperbaric chamber is somebody on the staff trained in how to use it [7]?

8) In the event of a client, staff member or porter becoming ill are there sufficient experienced staff for one to stay with the patient or safely accompany them to a health care facility whilst one with adequate skills continues with the group?

9) Does the company encourage the use of drugs to aid acclimatisation (eg acetazolamide)? If so are the risks of this or other medication explained? Why do they not adhere to the golden rule of not going too high too fast and allowing natural acclimatisation? However there may be some destinations where this is sensible (eg. driving to altitude to then await natural acclimatisation) or some clients where this is sensible (eg. those with medically verified previous problems).

4 Company Communication

1) If the company answers questions based on the above selection criteria with comments such as “No problem”, “No risk” or we have “never had any problems” ask yourself if they are being realistic.

2) Has the company asked the potential client about previous mountain and altitude experience in addition to the health assessment?

3) Does the company have somebody with experience to answer specific questions? Not a call centre.

4) Does the company arrange a pre departure meeting for the trek or expedition group with staff available to answer any questions?

5 Local Staff

Does the company understand and adhere to the principles of care of their employed staff as outlined in the International Porter Protection Group (IPPG) guidelines (see chapter 7). All staff should be looked after for to the same standard of care provided for the company clients (www.ippg.net).

6 Conclusions

Clients may pay more for slower treks and have to take more precious holiday allocation for the trip, but reputable companies do plan a sensible ascent profile with appropriate time for acclimatization to minimize the risk of altitude sickness. This extra time and money should enable their clients to enjoy, rather than endure, the holiday of a lifetime rather than to experience the final holiday of a lifetime. Hopefully many clients will be tempted to return to the high mountains!

7 Appendix 1: Typical phrasing to describe the demands of a tour and how to interpret them

Phrasing	Interpretation	Examples
"Easy hiking at moderate altitude"	• Altitude of maximal 2,500-3,000m • Maximal 1,000m altitude per day • Walking per day maximal 6 hours	• Toscana • Island hiking (Azores, Mallorca, Teneriffa) • Alpine hiking from hut to hut
"Mountaineering up to 6,000m without difficult terrain"	• About 8-10 hours walking per day • Increased demands caused by altitude • Experience in alpine hiking necessary • Adequate physical fitness (>2.5 W/kg body weight) and good health status necessary	• Kilimanjaro • Mt. Kenya circular route
"Trekking without particular demands"	• No or easy summits up to about 5,600m • About 4-8 (maximal 10) hours walking per day • Adequate physical fitness (>2 W/kg body weight) and good health status necessary	• Annapurna trail
"Round trip with sightseeing and some ambitious summits up to 6,000m"	• About 10-12 hours walking time when summiting • Increased demands caused by altitude • Experience in alpine hiking necessary • Adequate physical fitness (>2.5 W/kg body weight) and good health status necessary	• Volcanos in Mexico or the easier ones in South America • Mt. Ararat
"Difficult alpine tour"	• Alpine experience absolute necessary • Expect time for ascents of up to 10 hours (plus several hours for descent) • Good health status and excellent physical fitness necessary • Will power and good mental health necessary	• Chimborazzo • Elbrus • Long alpine traverses
"Extreme trekking with expedition nature"	• Glacier traverses, often difficult terrain • Alpine experience necessary • Hiking hours per day: 10 – 12 • Excellent physical fitness necessary	• Konkordia trekking
"Expeditions up to 7,500m"	• Only for experienced mountaineers who are able to act autonomous and who have an excellent physical fitness and mental health • Ability to toil oneself • Team spirit • Long-term experience in the Western Alps or comparable mountains • Climbing time per day sometimes >12 hours	• Mt. McKinley • Pik Lenin
(continued next page)		

Table 1 (cont.)

Phrasing	Interpretation	Examples
"Expeditions to summits >7,500m"	• Threshold of professional mountaineering. • Very experienced mountaineers who are able to act autonomous and who present with excellent physical fitness and mental health only. • Some parts of the trip involve difficult terrain and need extended experience in handling safety equipment • Extreme mental strength needed • Great ability to problem solve, as often there will be no chance of rescue in case of emergency!	• Peaks >8,000m • Traverse of Mt. McKinley

8 Appendix 2: Guidelines of the International Porter Protection Group (IPPG)

1. Clothing that is appropriate for season and altitudes encountered must be provided to porters for protection from cold, rain and snow. This may mean: windproof jacket and trousers, fleece jacket, long johns, suitable footwear (leather boots in snow), socks, hat, gloves and sunglasses.
2. Above the tree line porters should have a dedicated shelter, either a room in a lodge or a tent (the trekkers' mess tent is no good as it is not available till late evening), a sleeping pad and a blanket (or sleeping bag). They should be provided with food and warm drinks, or cooking equipment and fuel.
3. Porters should be provided with the same standard of medical care as you would expect for yourself, and life insurance.
4. Porters should not be paid off because of illness/injury without the leader or the trekkers assessing their condition carefully. The person in charge of the porters (sirdar) must let their trek leader or the trekkers know if a sick porter is about to be paid off. Failure to do this has resulted in many deaths. Sick/injured porters should never be sent down alone, but with someone who speaks their language and understands their problem, along with a letter describing their complaint. Sufficient funds should be provided to cover cost of rescue and treatment.
5. No porter should be asked to carry a load that is too heavy for their physical abilities (maximum: 20 kg on Kilimanjaro, 25 kg in Peru and Pakistan, 30 kg in Nepal). Weight limits may need to be adjusted for altitude, trail and weather conditions; experience is needed to make this decision.

From: www.ippg.net, accession date Aug. 3rd, 2008

9 References

1. Shlim, DR and J Gallie, The causes of death among trekkers in Nepal. Int J Sports Med, 1992. 13 Suppl 1: p. S74-6.
2. Shah, NM, et al., Are UK commercial expeditions complying with wilderness medical society guidelines on ascent rates to altitude? J Travel Med, 2011. 18(3): p. 214-6.
3. Luks, AM, et al., Wilderness Medical Society consensus guidelines for the prevention and treatment of acute altitude illness. Wilderness Environ Med, 2010. 21(2): p. 146-55.
4. West, JB, RB Schoene, and JS Milledge, High altitude medicine and physiology. 2007, Hodder Arnold: London.
5. Kupper, T, Organisierte Berg- und Trekkingtouren - ein faires Geschäft? Rundbrief der Österr. Ges. f. Alpin- & Höhenmed, 1998. 18: p. 5.
6. Kupper, T, et al., First aid knowledge of alpine mountaineers. Resuscitation, 2003. 58(2): p. 159-169.
7. Kupper, T, U Gieseler, and J Milledge. Consensus Statement of the UIAA Medical Commission Vol.3: Portable Hyperbaric Chambers. 2008; www.theuiaa.org/medical_advice.html.
8. Pattenden, HA, et al., Do British commercial mountaineering expeditions carry drugs to treat high altitude illnesses? J Travel Med, 2012. 19(4): p. 250-2.

10 Further Reading

British Standard recommendation for adventurous holidays, available at:

- http://www.rgs.org/OurWork/Advocacy+and+Policy/Outdoor+learning+and+fieldwork+policy/British+Standards+initiative.htm
- http://www.bsi-global.com/en/About-BSI/News-Room/BSI-News-Content/General/News-Content/
- http://www.rgs.org/NR/rdonlyres/F6E00DD0-D8AB-42EE-B298-41064020463A/0/InformationaboutstandardsandBS8848.pdf

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The actual version has been completely rewritten by D. Hillebrandt and was approved at the MedCom's annual meeting in 2012 in Whistler / Canada.