

## ***EDUCATION OF LAY MOUNTAINEERS. ARE WE TEACHING THE RIGHT THINGS ?***

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In any remote area distance from experienced medical help is the norm and even the most experienced wilderness physician would be limited in his ability to help by climate, altitude and lack of facilities. There are many courses now available for the lay mountaineer in all aspects of Mountain Medicine and numerous texts of varying quality offering advice. Most of these have been written, edited or devised by doctors and are based on their own personal experience of medicine in the field.

Over the last twenty years the remote mountain areas of the world have become increasingly available to more and more mountaineers and trekkers, either travelling under their own steam or on commercial trips with the associated commercial pressures and duty of care. Are we offering these people appropriate advice on preventative travel medicine and on self-care when away from normal first world facilities? Traditionally guides and other mountaineers have been given quite good first aid trauma training, but most medical problems abroad are due to gastrointestinal ailments and a lot of the trauma requiring medical repatriation is caused by cars.

A literature review, primarily using medline from 1992 to 1998, revealed 35 references with key words such as Mountain, First Aid, Altitude, Remote Area, Pulmonary and Cerebral Oedema. Of these 16 were read in full after assessment of their abstracts.. It is difficult to obtain data on medical problems affecting mountaineers on a global basis. I feel that his data is essential for planning any remote area medical course or instructional manual.

Data from rescue teams is biased by the fact that a decision has been made to involve outside assistance, which may be due to the severity of the problem, but equally may reflect the inexperience of the party involved. A survey of accidents in the Sierra Nevada in the U.S.A. attempted to overcome this by also looking at receiving hospitals and coroner records, but could not include many minor but potentially annoying problems (1). A retrospective postal survey of trekkers on the Appalachian Trail in the U.S.A. gives valuable data on minor medical problems in low altitude long distance walkers (2) and this produced suggestions for first aid kit contents (3). The most comprehensive data on wilderness illness and injuries covering the American continent, with over 358,210 person days of wilderness activity up to 6959m, has been produced from records of the National Outdoor Leadership School in the U.S.A. (4), but this only represents students on highly controlled training courses.

Data is available from rescue teams (5,6,7,8) but truly remote or high altitude areas frequently have no rescue facilities (9). The fact that mountaineering and trekking teams in the Himalayas originate from so many different countries makes data collection difficult (10, 11).

In 1998 I conducted a postal survey of all members of the British Association of Mountain Guides (BAMG) which is affiliated to the Union Internationale des Associations des Guides de Montagne (UIAGM) (12). I received 65 replies which represented 40% of the membership. This covered guides who were active on all continents of the world up to a maximum altitude of 8848m. Many put in excess of 100 active mountain days per year and special interests covered all aspects of mountaineering from short technical rock routes to high altitude expedition work and included ski mountaineering. When asked to list the five last medical problems encountered, limb injuries were top of the list with 57 cases, closely followed by 45 cases of altitude illness (20 of AMS, 16 of HAPE and 9 of HACE), then 23 cases of diarrhoea and vomiting, 21 blisters, 20 cuts and bruises, 19 knee injuries and 15 cases of frostbite and 15 head injuries. I suspect that this is fairly representative of any sample of internationally active mountaineers.

When asked what five aspects of Mountain Medicine this group of highly experienced mountaineers wished they had more information available, drug use was top of the list with 37 requests, altitude illness had 36 replies, water purification had 16, travel immunisation 15, and trauma only 13. For these guides this seems to indicate a fair degree of confidence when dealing with limb trauma, but less confidence when dealing with the medical side of remote area and high altitude problems. A breakdown of the figures for requested drug information showed that "general information" rated 19, analgesic use had 11 requests and antibiotic use 7 with drugs for altitude problems rating 6 requests.

It is good to see that the message that drug use is not the ultimate key to altitude problems seem to be understood, but it would worry me if I was injured that adequate analgesia may not be available. Is it in the remit of the ISMM to address some of these issues? We must continue to educate all mountaineers regarding altitude illness but should we also disseminate more information about general travel medicine to prevent problems when on expeditions or treks? Would we dare to tackle the complex international regulations governing therapeutic drug use and the potential medico-legal minefield of use of prescription only medicines such as dexamethasone, nifedipine or nalbuphine in remote foreign mountain ranges by unqualified first aiders? It already happens, it can be lifesaving, it is essential, we often condone it but have we got the guts to acknowledge it openly? Training and protocols must be the key to providing these tools to the people who need them. It is interesting that when one questions medico-legal experts on this subject they all pontificate until one asks if they would want these drugs to be administered to them if they were ill or injured on a remote mountainside. They universally want them to be available but are unwilling to stand up and be named (13).

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1. McLennan JG, Ungersma J, Mountaineering Accidents in the Sierra Nevada. Am J Sports Med 1983; 11; 160-163.
2. Crouse BJ, Josephs D. Health Care needs of Appalachian Trail Hikers. J Fam Pract 1993; 36: 521-525.

3. Poretz SL. First Aid supplies for backpacking. Br J Sports Med 1992; 26: 48-50.
4. Gentile DA, Morris JA, Schimelpfenig, T et al. Wilderness Injuries and Illness. Ann Emerg Med 1992;21:853-861.
5. Guly HR. Medical Aspects of the work of a Moorland Rescue Team. Br J Sports Med 1996: 30; 206-263
6. Malacrida RL, Anselmi LC, Genoni M, et al. Helicopter mountain rescue of patients with head injury and/or multiple injuries in southern Switzerland 1980-1990. Injury 1993; 24: 451-453.
7. Annual Handbook of the Mountain Rescue Committee published by the Mountain Rescue Committee, 13 Brackon Grove, Ulverston, Cumbria, LA12 0XG, England.
8. Kerr G W, Scottish Mountain Rescue Casualties in 1994 and 1995: an analysis. Pre-Hospital Immediate Care 1998;2:206-208.
9. Villar RN, Casualties on Everest - an evacuation problem. Injury 1986;17;138-142.
10. Pollard A, Clarke C. Death during mountaineering at extreme altitude. Lancet.1988: 1; 1277.
11. Shlim DR, Houston R, Helicopter Rescues and Deaths among Trekkers in Nepal. JAMA 1989; 261: 1017-1019.
12. Hillebrandt.D.K. The Medical Educational Needs of British Mountain Guides Operating Internationally. Project for The Diploma In Travel Medicine, University of Glasgow. July 1998.
13. Anon. Personal Communication 1997.