

Expedition Medicine comes of age

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An expedition has been defined as a journey undertaken by a group of people with a definite objective¹ or as an organised journey or voyage, especially for a scientific or military purpose.² Expedition medicine, the medical care of participants in expeditions, has been described as one of the four supporting pillars of travel medicine.³ It encompasses a wide range of topics ranging from tropical diseases to high altitude physiology and medicine, in environments ranging from hot climates to polar travel and from marine and diving environments to deserts. In addition it includes trauma care, planning and logistics, teamwork and leadership and medicolegal considerations.

Research into the problems of expedition travel, particularly at high altitude, has been undertaken since at least 1920, when Kellas⁴ conducted a field study on an expedition to Kamet (7756 metres), later climbed by Shipton and Smyth in 1931. Kellas's work came to an untimely end when he died on the approach to Everest in 1921, but his work on the use of oxygen at high altitude and the work of Finch⁵ led to the use of oxygen during the ill-fated 1922 and 1924 British expeditions which attempted the first ascent of Everest (8848 metres), the latter now best remembered for the deaths of Mallory and Irvine and the still open question of whether they reached the summit before the fatal outcome.

Probably the next significant research landmark was the Himalayan Scientific and Mountaineering Expedition 1960-62,⁶ which celebrates its 50th anniversary this year, in which a British group carried out physiological investigations at base camp (4500 metres), the Silver Hut (5880metres) and camps 3 and 5 on Makalu (6350metres and 7400metres). Since then research has continued apace, and in 2007 the Caudwell Xtreme Everest team⁷ climbed Everest from the south, via the South East Ridge, setting up laboratories at Base Camp (5300metres), in the Western Cwm (6400metres) and doing experiments on the South Col (7950metres). The climbing team also sampled arterial blood on the Balcony at 8400metres.

When the author took part in his first expedition, to Kalanka (6931 metres) in the Garhwal Himalaya in 1974, there was little or no training in expedition medicine available. Thanks to the dedication of a relatively small band of enthusiasts there are now courses available for doctors, nurses, medical students and paramedics from organisations such as Expedition Medicine⁸ and Wilderness Medical Training⁹ covering high altitude, desert, jungle, diving and polar expeditions. A Diploma in Mountain Medicine is now awarded by the University of Leicester and under-written by Medical Expeditions (Medex).¹⁰ The Diploma covers not only high altitude physiology and medicine and other aspects of travel medicine but also practical mountain skills.

In addition to training courses there are many published texts, some of which are listed at the end of this article to which the aspiring expedition doctor, nurse or medic can refer, all of which contain valuable information.

With the exception of the Diploma in Mountain Medicine, academic recognition of expedition medicine as a specialty has been slow to emerge but the latest step in the

recognition of this specialist area of travel medicine has come with the establishment of a Sub-Faculty of Expedition Medicine of the Australasian College of Tropical Medicine.¹¹ The Sub-Faculty recognises a matrix of knowledge including diving, hyperbaric and marine medicine, tropical and travel medicine, environmental medicine, epidemiology, specific locations and type of expeditions, expedition illness and injury, retrieval medicine as crisis management, hazards of flora and fauna, generic skills and medicolegal aspect of expeditions. With the establishment of the faculty the specialty of Expedition Medicine has now surely come of age and has achieved the academic recognition that it deserves.

Bibliography

The following list is not exhaustive but contains some of the most useful texts currently available:

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7 <http://www.xtreme-everest.co.uk> accessed 28/06/2010.

8 <http://expeditionmedicine.co.uk> accessed 28/06/2010.

9 <http://www.wildernessmedicaltraining.co.uk> accessed 28/06/2010.

10 <http://www.medex.org.uk> accessed 28/06/2010.

11 Leggat PA, Shaw MTM. Professional organisation profile: A Sub-Faculty of expedition medicine for Australasia. *Trav Med & Inf Dis* 2010;8(3):190-3