



En Route to the Top of the World: Wilderness Medicine Update on Everest

OCT 1 - 21, 2009

KHUMBU VALLEY, NEPAL

In Association with Berg Adventures International

This conference provides 18 AMA PRA Category 1 Credits and up to 20.5 FAWM Credits, accredited through the Wilderness Medical Society (WMS)

Course Objectives & Curriculum specifics

- a) To educate participants in the pathophysiology, recognition, and treatment of a variety of medical problems commonly encountered in wilderness environments and settings remote from hospital or definitive care.
- b) To help establish a set of treatment priorities for care of the sick or injured in wilderness settings.
- c) To educate participants in basic aspects of improvised care, rescue, and evacuation.
- d) To teach participants field skills enabling a physician to be more capable in a setting remote from definitive care. Some of these topics include wilderness survival skills, planning an expedition medical kit, field water disinfection, and improvisational medical skills.
- e) To educate participants about psychologic aspects of wilderness emergencies.
- f) To educate participants about some of the current recommendations regarding prophylaxis and treatment for wilderness and adventure travelers.
- g) To discuss and review recent investigative studies and literature on wilderness medical topics.

The course objectives are communicated to the learner through brochures and course info packets mailed to each registrant in advance. Please note: curriculum and faculty subject to change.

Narrative Description of Each Topic

PATIENT ASSESSMENT & TREATMENT IN WILDERNESS SETTINGS

Initial patient assessment and treatment priorities in remote settings

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the initial assessment and management of medical and trauma patients encountered in a wilderness setting.

ALTITUDE ILLNESS

Acute Mountain Sickness ADVANCES IN PREVENTION AND TREATMENT

Pathophysiology, diagnosis, and treatment of altitude illness

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the initial assessment and management of AMS.

ALTITUDE ILLNESS - 2

High Altitude Pulmonary Edema(HAPE) and High Altitude Cerebral Edema (HACE): ADVANCES IN DIAGNOSIS AND TREATMENT

Pathophysiology, diagnosis, and treatment of HAPE and HACE

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the initial assessment and management of severe high-altitude illness.

BACKCOUNTRY MEDICAL KITS

Detailed discussion of medical supplies needed in remote environments

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the planning and provisioning of a backcountry medical kit.

IMPROVISED TRAUMA CARE

Improvised trauma management away from the hospital setting.

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the initial assessment and management of trauma patients encountered in a wilderness setting.

HYPOTHERMIA

Pathophysiology, diagnosis and treatment of hypothermia

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the assessment, diagnosis and management of hypothermia.

FROSTBITE AND OTHER COLD INJURIES

Pathophysiology, diagnosis and treatment of cold injury

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the prehospital and hospital assessment and management of frostbite.

LIGHTNING INJURIES

Pathophysiology, diagnosis and treatment. Safety and avoidance.

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the assessment, management and prevention of lightning injuries.

MANAGEMENT OF FRACTURES & DISLOCATIONS

Diagnosis and treatment of orthopedic injuries in the backcountry

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the initial assessment and management of orthopedic injuries in a wilderness setting.

WILDERNESS WOUND MANAGEMENT

Diagnosis and treatment of soft tissue injuries in the backcountry

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the initial assessment and management of soft tissue injuries in a wilderness setting.

BITES AND STINGS

Pathophysiology, diagnosis and treatment of common envenomations by insects and snakes.

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the initial assessment and management of bites and stings in the wilderness setting.

WILD ANIMAL ATTACKS

Treatment and avoidance wild animal wounds / attacks

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the assessment, management and prevention of wild animal attacks.

CASE STUDIES REVIEW WITH THE Himalayan Rescue Association (HRA) doctors

Meet the HRA doctors working at Pheriche clinic; tour the facility, discuss memorable cases, learn about their special approach to critical problems in this real wilderness environment.



Measurable objectives: Upon completion of this lecture participants should be able to list illness and injury patterns that develop in an austere high altitude environment and the different approach to treatment of traveling and indigenous patients.

TRAVELER'S DIARRHEA, GIARDIASIS & OTHER WATERBORNE WILDERNESS INFECTIONS

Pathophysiology, diagnosis, treatment, and prevention of waterborne infections

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe priorities in the diagnosis, treatment and prevention of traveler's diarrhea and common waterborne infections.

CASE STUDIES IN EXPEDITION MEDICINE

An interactive case discussion of common expedition problems and their treatment and evacuation strategies.

Measurable objectives: Upon completion of this lecture participants should be able to describe controversial areas of expedition medicine, such as provisioning, responsibilities of health care providers to expedition members, and potential legal liability.

WILDERNESS OPHTHALMOLOGY

Pathophysiology, diagnosis and treatment of eye problems that occur in wilderness settings.

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe the wilderness assessment and management common ophthalmologic problems.

CASE STUDIES IN EVEREST BASE CAMP

Special considerations in diagnosing and treating medical problems that develop in a mountaineering population. This lecture will take place in Everest base camp with the expedition physician caring for a climbing team.

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe the management of common medical problems in mountaineering expeditions.

Avalanche Safety and Rescue

Measurable objectives: Upon completion of this lecture participants should be able to explain and describe avalanche hazards and also priorities in the initial assessment and management of avalanche victims.

BACKCOUNTRY WATER DISINFECTION

How to effectively purify and disinfect surface water. Participants may have the opportunity to test different water purifiers and learn about chemical and natural water purification techniques.



Measurable objectives: Upon completion of this lecture participants should be able to list different methods of creating potable water from nonpotable water and delineate the pitfalls associated with each of the methods.

Proposed Lecture / Discussion Topics to be presented by Wally Berg

Location: Pumori Base Camp, two nights

Facilities: Berg Adventures Medical Tent, "Lounge" Tent and Communications Tent

Outdoors: Glacial moraine and seracs near base camp

Tour of Base Camp conducted by Expedition Leader Berg to include "daily life at B.C." topics: meal preparation, sanitation, communication with the upper mountain, reception of yak drivers and porters from down valley, management of visiting trekking groups. Health, morale and operations considerations in a small "city" at 17,500'.

Importance of communication. VHF Radios, satellite phones, internet. Technical, legal and practical protocol will be addressed.

Selected "**War Stories**" from a 20 year Everest veteran. Memorable and instructive rescue histories from some previous expeditions. The stories will have a theme of presenting background factors of government regulation, cultural factors of Sherpa and Nepalese culture, media management.

"**Environmental Everest**", an anecdotal history of perceptions about the impact of foreign climbers on Everest, actions taken, and regulations instated.

"**Bodies on Everest**" The evolution of attitudes in Nepal from a time when handling and transporting corpses contradicted all legal, religious and practical conventions to recent times when teams have forfeited their garbage deposits for leaving deceased members on the mountain.

Ethics of High Altitude Rescue from a mountaineering leader's perspective. Historical overview. Team organization, responsibilities to climbers, families, Sherpas, the sport of mountaineering.

Role of the Expedition Leader as a liaison between Nepalese Government, climbers, Sherpa community, foreign tourists. Everest Base Camp becomes center stage for two months for a diverse group of people. Successful mountaineering goals are sought by climbers and climbing Sherpas, financial goals are sought by Sherpas, Sherpa communities down valley, and the Nepalese Government. Fulfillment of Lifetime dreams are sought daily by countless trekkers who are completing a week's long journey to this famous location.

"**The Seven Summits**": **Comparison of Base Camps and Medical Programs:** Wally Berg has led multiple ascents of all the seven continental high points. He will present a brief comparative description of life on each of these mountains and the differences in environment, health care and rescue.

Field component: After hands on demonstration of some litter and rescue supplies kept at Base Camp presented by Madeleine and Wally participants will walk on to the glacial ice between the Khumbu Icefall route and Base Camp. No special foot ware or climbing equipment required. If enough climbing Sherpas are in Base Camp from the upper mountain a technical lower can be demonstrated.

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For full details contact Jim Barr, President of Track & Trail Adventures
at 888.308.3007 toll free or jim@tandtadventures.com

Faculty



LUANNE FREER, MD, FACEP, FAWM:

Emergency physician, Founder and director, Everest base camp medical clinic; Medical director Yellowstone National Park and Midway Atoll National Wildlife Refuge for Medcor Inc; Past president, Wilderness Medical Society. Has taught Wilderness Medicine courses for physicians around the world for 12 years.

ERIC JOHNSON, MD, FAAFP, FAWM:

Director of Emergency Services, Teton Valley Hospital, ID. Lifetime member & immediate Past-President of the Wilderness Medical Society. Longstanding commitment to education in wilderness medicine, and recurrent volunteer to the Himalayan Rescue Association.



Both Johnson and Freer were featured by the BBC in a recent documentary on their efforts with the Everest Base Camp Medical Clinic.

<http://www.youtube.com/watch?v=Xr2emT0be90>



WALLY BERG- FOUR TIME EVEREST SUMMITTER AND FOUNDER BERG ADVENTURES INTERNATIONAL

Defined by his peers as “one of the world’s premier mountaineers,” Wally is a member of a small, elite group of high-altitude climbers. He has summited Everest four times. Wally and climbing partner Scott Fischer were the first Americans to reach the top of Lhotse, the world’s fourth-highest peak.

During the 1990’s, Berg became the foremost “Seven Summits” guide, making it possible for many climbers to ascend the highest peak on each of the seven continents. A constant trademark of Wally’s expeditions is that every journey is undertaken with humility to the landscape and respect for local cultures.

Among the world’s foremost expedition leaders, Wally led the International Everest Expedition in 1992 and the American Everest “GPS” Expedition in 1998. On the latter expedition he installed a base plate for a Global Positioning System (GPS) receiver at Bishop’s Rock, just forty feet below the summit of Everest, and activated a Trimble 4800 receiver to capture geographic data from the highest fixed point on the planet.

Wally organized and led “One Team – One Mountain: Berg Adventures Everest Expedition 2006.” The journey was highlighted by the spectacular ski descent from the summit of Everest by Kit and Rob DesLauriers, and photographer Jimmy Chin.

With his inquisitive nature, his tenacity and his resourcefulness in wild places, Wally’s scientific and project-oriented trips surpass expectations. In 2000, Wally’s Embree Glacier Exploratory Expedition in Antarctica (a prestigious Explorers Club “Flag Expedition”), surveyed a previously unvisited region of the Ellsworth Mountains, completing first ascents and gathering data for NASA and for researchers at the Massachusetts Institute of Technology.

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the Wilderness Medical Society (WMS) and Track & Trail Adventures Inc. The Wilderness Medical Society is accredited by the ACCME to provide continuing medical education for physicians.

Designation Statement:

The Wilderness Medical Society designates this educational activity for a maximum of 18 AMA PRA Category 1 Credits. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Full disclosure statement:

All faculty members participating in continuing medical education activities sponsored by Track & Trail Adventures Inc are expected to disclose to the participants any real or apparent conflict of



interest related to the content of their presentation. Full disclosure of faculty relationships will be made at the activity.

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