

## Chapter 1 : Expedition Medicine | The Institute for Diving Medicine

*University Of Exeter Medical School NEXT INTAKE - SEPTEMBER This unique International Diploma and Masters programme in Extreme Medicine encompassing Expedition Medicine, Disaster & Humanitarian Medicine and Pre-Hospital care delivered in partnership with Russel Group University.*

Director, Wilderness Education Group These two nearly synonymous terms refer broadly to the practice of medicine in austere and remote environments. Either way, a pretty cool way to practice medicine. It is within this context that we can identify three broad aspects to expedition and wilderness medicine: Thus, depending upon the types of environment visited, the modes of transport used, and the purpose of the trip, one may find significant overlaps with military medicine, aviation medicine, maritime medicine, travel and tropical medicine, and sports medicine and physiology. This may include cold injuries, heat illness, high altitude illness, hyperbaric and diving medicine, and toxinology. A horrible accident or serious incident unless it is another group! Treatments are mostly simple complaints: How much more so when even greater limitations in equipment, pathology, and imaging force you to use just your clinical judgement, and when isolation forces you to reassess your priorities and re-think the risks? The effective practice of Expedition and Wilderness Medicine requires a large degree of pragmatism and improvisation, the ability to confidently make decisions without all the information you would ideally like to have, and then to act upon them. There is an ever increasing body of research, education, and practical opportunities in the field of Expedition and Wilderness Medicine. A choice of two great tomes awaits the avid reader. Not only do they contain just about everything you might want to know, they are heavy enough to hold a tent down in the most severe of storms! If you want something detailed enough as a reference, yet small enough to take with you, then the second edition of the Oxford Handbook of Expedition and Wilderness Medicine would be hard to beat. If you are after something to fit in your back pocket, or to recommend to non-medical folk, then Pocket Wilderness Medicine and First Aid by Jim Duff and Peter Gormly is probably the pick of the bunch. There is now a wide array of useful information freely available on the internet. As we develop a series of posts on various topics we will include some specific resources. The Adventure Medic is an online magazine with regular articles, reports, videos that tend to make one feel inadequate and a jobs and volunteering section. The Expedition Medical Cell at the Royal Geographical Society has a number of useful resources including free access to the Expedition Handbook, a list of vacancies for expeditions, and information on courses. Courses and Educational Programs There are numerous providers of expedition and wilderness medicine courses around the world. These vary from short first aid courses for the lay person to extensive post-graduate education designed for health professionals. They are a great way to stimulate or consolidate your interest in expedition and wilderness medicine. Here are a few to choose from, with a focus on those closest to home.

### Chapter 2 : Expedition Medicine - College of Health and Medicine | University of Tasmania

*Listings and reviews of expedition medicine courses, wilderness medicine courses, mountain medicine courses, travel medicine courses and tropical medicine courses. Please note that these dates are supplied by the course providers, so details may be subject to change without our knowing.*

But, spurred on by increasing pressure within the NHS and looking for medical experience elsewhere, medical professionals of all ages are looking to broaden their horizons and work in more unusual areas and adventure medicine is one such area. The format of the course – which combines lectures with practical learning – will push attendees mentally and physically over four days, which will culminate in a large-scale search and rescue exercise in the famous Lake District landscape. Although it takes place in the UK, the four-day crash course will give participants a grounding in a number of different areas of non-hospital medicine that are useful on different sorts of expeditions: They will also cover areas like team leadership in extremes, communications systems and pre-expedition planning and casualty evacuation, which they may be unfamiliar with. They could provide medical support for scientists working in Antarctica, or with more training go on to work in other exciting areas such as deserts, high mountains or in conflict zones. Of course, any significant marine journey will take people far from the nearest hospitals and emergency services, and in this isolated situation a particular set of skills is required to stay safe. From 7 to 10 May in Plymouth, Devon, a group of medics and oceanic explorers from around the world will undertake an ocean-specific medicine course so that they can keep people safe in the rapidly growing world of oceanic sports and adventure travel. The course will give participants an understanding of conditions likely to occur whilst on a marine based expedition, oceanic sporting event or pan-ocean sailing expeditions. Putting together the course, World Extreme Medicine consulted with world-renowned ocean explorers, divers, pan-ocean sailors, rowers, open water swimmers and its own expedition experts to create a unique and comprehensive syllabus. He is also a British Association of Immediate Care responder and experienced expedition medic. Catherine Buckland is a commercial diver and dive instructor who has spent the last decade working in the marine industry, either working as a diver or diver medic, teaching diving or power boating among other marine based qualifications. This work is varied and takes her to challenging environments where all the skills and experience need to be put in place. Chris Booker is a marine biologist and offshore commercial diver. He also teaches maritime courses, skippers boats and works as a dive medic technician. Consultant Physican – Infectious Disease: As Staff Specialist in Infectious Diseases your responsibilities will include but are not limited to: Andrew recently spoke with RedBull. Blogging for all the right reasons. This is a frank and brave blog, but one that is of great value to the writer and will hopefully help many others along the way. You must have US citizenship, a US medical license and a love for dark snowy places. The clinical load will is light, but the opportunity to work in this remote location should appeal to physicians interested in extreme and altitude medicine. This role provides a number of rare experiences like a view of the Aurora Australis and Milky Way from a perspective few others are fortunate experience. This expedition will follow the Lemosho route. The medic must be a fully qualified doctor – altitude experience and expedition medicine course attendance is preferred, but not essential and expenses for the trip will be covered. Blogs, vlogs interviews etc. Thank you for reading our news!

*The article is on expedition medicine, but it is intended to be interesting as well as useful to non-medics especially. Many light weight parties go to altitude or to remote areas without having a doctor or nurse in the party.*

Adventure travel often includes mountaineering, backpacking, cycling, diving, surfing, or river rafting. Travelers may be working, providing humanitarian relief, or completing scientific research. The risks and consequences of injury and illness are often significantly increased in wilderness and expedition travel compared with other types of travel for several reasons: Destinations may be remote and lack access to care. Communication is often limited. Weather, climate, and terrain can be extreme. Travelers exert themselves physically, increasing caloric, fluid, and sleep requirements. Trips are often long: Expeditions are often goal oriented, which can cause travelers to exceed safety limits. Trip Type Obtain details about the type, length, and remoteness of the trip. Guided trips may eliminate some of the need for complex logistics planning on the part of the traveler. However, participants in guided trips should ask key questions of the trip organizers including: Guide experience Type of medical kit carried by guides Contingency plan for emergencies Recommended medications and medical supplies to be carried by participants Type of insurance recommended Medical training of guides In a few cases, such as polar cruises and Mount Everest expeditions, a formal medical officer with a comprehensive medical kit may be available. Confirm if the skill level of the participant matches the trip type: Those with less experience or visiting a location for the first time should be encouraged to go on a guided trip. For self-planned trips, the travel medicine practitioner may need to augment a comprehensive medical kit with prescription medication and offer more support with logistics, evacuation planning, and insurance. Personal Health Requirements Adequate nutrition, hydration, and sleep may be difficult to obtain, especially with increased demand because of weather, terrain, and exertion. Travelers should pay attention during the planning stages to how food and water will be obtained on the journey. Pretravel screening should be completed for conditions that can be exacerbated by high altitude, extreme heat, extreme cold, exertion, and other environmental hazards. These include diabetes particularly insulin-dependent diabetes , asthma, any cardiac disease such as hypertension, arrhythmias, and coronary artery disease , chronic pain treated with opiates, recent surgery, anaphylaxis-level allergy, oxygen-dependent emphysema, and sleep apnea. Travelers who have battery-operated devices, such as a continuous positive airway pressure machine or an insulin pump, should be cautioned about device failure and have a backup plan. A past history of environmental illness—altitude illness, hypothermia, frostbite, heat exhaustion, or anaphylaxis—likely puts one at increased risk for recurrence. Medical clearance for participation may be required for a guided trip. The treating physician should complete medical clearance for travelers with chronic disease. Travel health practitioners can complete pretravel medical clearance if it is a usual function of their practice and the patient has no chronic disease or medications. If possible, travelers should get medications for chronic illness from the treating physician. For example, travelers with preexisting asthma should obtain their routine, rescue, and emergency self-treatment medications from the treating physician. Money and Insurance Rescue, evacuation, and repatriation may require upfront payment, especially with aeromedical transport from remote locations. Travelers should bring sufficient emergency cash and a credit card with high credit and cash advance limits. Insurance is widely variable and comes in many forms, but insurance does not guarantee rescue. Insurance may be contingent on limits including preexisting conditions, deductibles, maximum expenditures, and medical control approval. Insurers may also not authorize helicopter or air-planes for in-country transport or repatriation. Insurance companies may deny claims involving chronic illness, drugs, alcohol, pregnancy, mental health, and acts of war or civil unrest. Types of insurance include: Domestic health insurance, which may or may not be effective outside a home country. Travel insurance, which often includes medical, trip cancellation, evacuation, and repatriation benefits, but may exclude coverage for wilderness rescue and adventure sports like mountaineering, skiing, and diving. An adventure sports rider is available with some travel insurance policies, so travelers should confirm coverage for adventure sports. Wilderness rescue insurance usually separate from travel insurance , such as policies through North American

mountaineering clubs, outdoor and professional associations, and scuba dive organizations. Short-term rescue insurance is available in some countries, for example, through local helicopter rescue companies, ski resorts, and guides. Comprehensive expedition policies, including travel, medical, rescue, security, and repatriation services. Training If travelers have time before disembarking, they should consider completing a first aid and basic life support course. Such courses can be found through local community colleges and fire departments. Emergency Resources Before they go, travelers should know emergency escape routes, local rescue resources, embassy contacts, and local medical facilities. If travel medicine practitioners are willing to accept phone calls, emails, and text messages from travelers who are abroad, give out contact information and approximate time of response. Make sure travelers understand this is not a substitute for local emergency care. In a travel medicine encounter, physicians may only have a brief moment to educate travelers. Depending on the type, duration, and location of trip, a few key pearls may be worth discussing: Travelers should understand basic wound care, seek help with signs of infection—redness, swelling, pus, and warmth—and be educated on self-treatment with antibiotics. For hypothermia, cessation of shivering and mental status changes are dangerous signs. Snakes, spiders, scorpions, ticks, and jellyfish can deliver toxic venom, inoculate microbes, and cause anaphylaxis. For anaphylaxis also caused by food, treatment with epinephrine can be life-saving if administered immediately. Regional antivenoms exist around the world for certain venomous snakes, spiders, scorpions, and jellyfish. Travel to high altitude may require prevention and treatment with acetazolamide, dexamethasone, and other medications. Mental status changes and ataxia are ominous signs of high-altitude cerebral edema. Breathlessness at rest is the sign of life-threatening high-altitude pulmonary edema. Importantly, not all North American cell phones are compatible with international networks. Travelers should check with their cell carrier before departing. Alternatively, an unlocked not restricted to any carrier global-compatible cell phone can be used with a local SIM card in the country of travel. If one does not have a global-compatible phone and SIM card capability, travelers can buy an inexpensive local phone, which is best for travelers who expect frequent use of their phone, especially for data and local calls. Phones and SIM cards are usually available at kiosks and stores in major cities and in some airports. In some countries, registration to obtain a local SIM card requires fingerprinting and a passport picture. Advise travelers that restrictions exist and permits are required in many countries regarding use of handheld radios and satellite phones; they should check local restrictions prior to departing. Remind travelers that electronics are not foolproof; often they are limited by battery power, dense cloud cover, deep canyons, government restrictions, and physical damage caused by impact, water, or extreme temperatures. A backup power source, such as a solar or dynamo charger, is useful. For extreme terrain and remote locations, adventurers should carry and know how to use a GPS unit or have GPS app installed on their phone, compass, altimeter, or local topographic map the latter may need to be acquired in-country. Clothing Remind travelers that clothing helps prevent heat and cold illness as well as bites and stings from insects and arthropods. Cold weather clothing should be polyester, nylon, Merino wool, or, in some circumstances, goose down. Layering typically consists of a base layer, insulating layers of heavy-pile polyester or nylon-encased polyester goose down suffices if traveling to a location that is dry and cold, and a windproof, waterproof outer layer of tightly woven nylon with a durable water-repellent coating. Gloves, hat, neck warmer, warm socks, and goggles are vital to cover all exposed skin. For hot weather, sun- and insect-protective clothing is important including loose-fitting, lightweight clothing made from nylon, polyester, or a cotton blend. Long-sleeve shirts and long pants offer the most protection. A wide brim sun hat and a bandana protect the head and neck. Clothing should be sprayed with permethrin to ward off insects and arthropods. Footwear should be activity-specific boots or shoes, equally important in a marine or mountain environment. Emergency Kits Expedition and wilderness adventures often require a comprehensive, yet compact, personal emergency kit for survival, medical care, and equipment repair. In addition to a basic travel health kit see Chapter 2, Travel Health Kits, travelers should consider packing additional items due to the remote nature of their travel. Items may include additional first aid supplies such as a pocket-size CPR mask, safety supplies, and a more robust variety of medications see below. Standard kits may also need to be augmented for specific activities like undersea, ocean, jungle, polar, and high-altitude travel. If travelers are on guided trips, they may only need a small personal medical kit. A list of recommended supplies and drugs,

including antibiotic, analgesic, and anaphylaxis medications, should be available from the guide company and will likely need to be prescribed at the travel medicine encounter. Before they go, travelers should identify any available group emergency equipment such as an automatic external defibrillator, a portable stretcher, portable hyperbaric chamber, oxygen, and comprehensive medical kit. Be cautious if asked to prescribe medications for guides to be stocked in the expedition medical kit intended for use on clients. Third-party use of prescription medication is unlawful in most jurisdictions and best left for the guide company medical director. This may require prophylactic and self-treatment with antibiotics. In addition to medications recommended in a basic travel health kit see Chapter 2, Travel Health Kits , travelers should consider a more comprehensive medication supply including opiate pain medication, ophthalmologic antibiotic ointment and anesthetic, and nondrowsy antihistamines. These items can help in an emergency situation. Useful items include the following: Headlight with extra batteries Emergency sleeping sack or tarp Duct tape.

### Chapter 4 : Expedition Medicine | Clinical Gate

*Free Online Wilderness, Expedition & Humanitarian Medicine Magazine #FOAMed.*

### Chapter 5 : Wilderness & Expedition Medicine - Chapter 8 - Yellow Book | Travelers' Health | CDC

*It's a wrap!! Another brilliant group of medics sent on their way to #adventures with a kit bag full of #ExpeditionMedicine skills all delivered with WEM's unique style of humour, quirkiness and real-world.*

### Chapter 6 : Wilderness and Adventure Medicine

*Traditionally, the vast majority of doctors and nurses in the UK have spent their entire careers working within the confines of hospitals and clinics or in the case of paramedics out on the road.*

### Chapter 7 : Expedition medicine, part 1 | Trek and Mountain

*Expedition medicine is frequently practiced in challenging and hostile environments. A successful EMO must be capable of functioning autonomously and confidently in such environments and must possess appropriate expedition skills to permit the EMO to work effectively, without jeopardizing the safety of the expedition members.*

### Chapter 8 : Expedition medicine | Health Careers

*Wilderness Medicine, edited by Paul Auerbach is the first of these, and Expedition and Wilderness Medicine edited by Bledsoe, Manyak, and Townes is the other. If you want something detailed enough as a reference, yet small enough to take with you, then the second edition of the Oxford Handbook of Expedition and Wilderness Medicine would be hard.*

### Chapter 9 : Expedition Medicine – www.nxgvision.com

*Expedition Medicine Diving Expedition Consultation Dr. Partrick is available for consulting services relating to scientific expeditions where diving is employed, both as a General Medical Consultant as well as a Dive Medical Officer.*