



RADM Peter L. Andrus, MC, USNR
National VP for Health Programs

Travel Medicine - Part II

In the first installment of this two-part article on travel medicine, we reviewed necessary immunizations, health records, and a travel first aid kit. This month, we will review some specific travel-related health problems and the necessary steps to manage them.

Getting There

With jet travel through multiple time zones characterizing leisure, business, and military travel, the jet lag syndrome is well recognized by all and has been experienced by most of us. Primary symptoms include fatigue, diminished concentration, daytime drowsiness, insomnia, and alterations in gastrointestinal functions. All result from the interruption of sleep-wake cycles and circadian rhythm and will impact effective functioning for about one day for each time zone crossed in transit. A good night's sleep prior to departure is essential. Since air travel tends to dehydrate, good fluid intake and avoidance of alcohol while under way are essential. Setting watches to the destination time zone and relaxation materials (books, music) are helpful. If a long distance flight is in the offing, use of earplugs and eyeshades to support sleep while en route can be useful. Melatonin has been shown to provide some assistance; directions for use should be followed scrupulously for best effect.

Motion sickness is another common malaise, which is brought on by disruption of the normal relationship between inner ear and visual sensations. Common symptoms known to many include nausea, upper abdominal discomfort, sweating, dizziness, and vomiting. Preventive and palliative measures include avoiding travel on an empty or overly full stomach, visual fixation on a distant horizon, adequate ventilation, and avoiding visual stimuli (reading or watching a movie). In addition, seeking a central position in one's mode of conveyance (over the wings, aisle seat in a plane; in the middle of a ship or boat; front

seat of a car) and limiting head movements are helpful, as are avoidance of tobacco and alcohol. Preventive oral medications for motion sickness include diphenhydramine, meclizine, and dimenhydrinate, which can be gotten without a prescription; all have the potential to produce drowsiness (not a bad thing under most circumstances). Scopolamine patches are available by prescription, but should not be used by children under 12, the elderly, or those with certain medical conditions. You should check with your doctor about its pertinence for you.

Montezuma and Other Woes

Traveler's diarrhea is the most common ailment affecting international travelers of all sorts and is characterized by any or all of the following symptoms: multiple loose or watery stools, abdominal pain and cramps, nausea, vomiting, and blood in the stools. About one quarter short term travelers will experience traveler's diarrhea, while approximately three quarters of longer term sojourners will be afflicted. A wide variety of "bugs" can produce the syndrome. Bacterial causes (e.g., E.coli, Shigella, and Salmonella), parasites (e.g. Giardia), and viruses (e.g., rotavirus) all contribute to the burden of disease. Attack rates are lowest in North America, Europe, Australia, and Japan and much higher in the Middle East, Asia, Africa, and Latin America. Avoidance of uncooked fruits and vegetables and local water sources are essential for prevention. Taking preventive antibiotics is usually inadvisable, due to the risk of allergic reactions or side effects. In the event that symptoms develop, maintaining adequate hydration (fluid replacement) is essential. Promethazine (Phenergan) suppositories will aid against nausea and vomiting; loperamide (Imodium) will reduce frequency and improve consistency of stools. If symptoms persist, an oral antibiotic such as a sulfonamide (e.g., Septra) or a quinolone (e.g., Cipro) may be started. Peptobismol has also proven effective—tablets are lighter to transport than liquid. The traveler should discuss in advance what medications to carry for these problems with his/her primary physician.

Acute mountain sickness (altitude illness) is a common ailment of vacationers on ski holidays and those deployed to operational commitments at altitude. Youth, rapid ascent to altitude, and a past history of mountain sickness

are risk factors. Good physical conditioning is not protective. Common symptoms include headache, irritability, insomnia, fatigue, nausea, vomiting, muscle aches, and edema. Several specific syndromes exist, with cerebral and pulmonary edema representing the most serious. Risk may be increased by use of alcohol and sleeping pills or tranquilizers, and disease likelihood and severity increases at altitudes of 7,000 feet and higher. Slow ascent, good hydration, a high carbohydrate diet, and acetazolamide (Diamox) taken in advance are protective. In the event of symptom onset, reducing altitude or slowing rate of ascent is essential; it may be life saving in the face of severe pulmonary or cerebral symptoms, which would also require treatment with oxygen and steroids. Other symptomatic measures would include simple pain medications for headache and medication for nausea (Phenergan or Compazine). The traveler should consult with his/her physician for further guidance.

Motor vehicles represent similar hazards when in travel status to that while at home. They cause most of the accidental deaths that occur during travel. Current experience of our forces in Iraq confirms this emphatically. Motor vehicle accident rates abroad are much higher than those in the United States, and trauma centers are generally nonexistent in the event of injury. Lack of seat belts, poor vehicular maintenance, riding in non-passenger areas of vehicles, and poor road conditions all contribute as well. Safety measures include use of native drivers or public train or bus transportation where available, insistence on seat belts and properly working safety equipment in rental vehicles, avoidance of night driving, and absolute avoidance of driving under the influence of alcohol or drugs.

Infectious disease entities of concern vary by travel destination. Detailed discussions of these are beyond the scope of this article, but a few comments are in order. Malaria represents the single most important infectious disease entity for travelers on a worldwide basis in terms of risk of mortality. Protective measures are effective and essential; failure to exercise appropriate precautions can be critical, as witnessed by the recent experience of the Marines in Liberia. Preventive measures including permethrin-coated clothing, use of DEET containing insect repellent, bed netting, and oral chemoprophylactic medicines may be

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life saving. Medical providers can offer specific recommendations that are pertinent to the area of travel and provide necessary prescription medications that must be started in advance of travel, continued while in travel status, and upon return. Specific details of side effects of each medicine and the exact dosing schedule vary with the medication chosen. Sexually transmitted diseases, including most notably HIV, are a considerable risk in many areas of international travel. Prudence would dictate abstinence or appropriate protective measures. Other emerging infectious disease threats, such as severe acute respiratory syndrome (SARS), are of concern to travelers. Your primary physician or other health care provider should be able to provide updates. Pretravel health advice, travel alerts and health advisories can also be obtained from the CDC's Web site at <www.cdc.gov/travel>.

I hope this brief, two-part synopsis on travel medicine has been of interest and helpful. Bon voyage!