



Introduction

An organized approach is required to provide current and appropriate recommendations to international travellers. Risks for travellers depend on their destination(s), the time of year during which they are travelling, their mode of travel, their accommodations, activities during travel, length of trip and their personal health. An extensive history is usually required before recommendations for immunization and prophylaxis can be made. The following resources should be used to make decisions regarding immunization and malaria chemoprophylaxis recommendations.

- The CDC “Yellow Book” Health Information for International Travel.
- The Canadian Immunization Guide, 5th Edition for routine immunizations.
- The Committee to Advise on Tropical Medicine and Travel (CATMAT) Malaria Guidelines (1995).
- Additional information can be obtained from the CDC “Blue Pages” and the Canadian Communicable Diseases Weekly Report (CCDR).

Travel services should be provided by designated staff who are current in the field. Questions arising due to unusual itineraries or health problems can be directed to the Medical Officer of Health or the Regional Health Authority’s Manager of Communicable Disease Control.

List of Web Sites

CDC Home Travel Information Page

<http://www.cdc.gov/travel/travel.html>

- includes information on disease outbreaks around the world, geographic health recommendations, the complete text of *The Yellow Book — Health Information for International Travel*, and information on specific diseases for travellers.
- updated on a regular basis.

Laboratory Center for Disease Control (LCDC)

http://www.hc-sc.gc.ca/hpb/lcdc/hp_eng.html

- valuable site containing a variety of immunization information useful for health care professionals.

Of special note:

Travel Medicine Program

http://www.hc-sc.gc.ca/hpb/lcdc/osh/tmp_e.html

- includes health hazard advisories and travel health recommendations
- links to other related sites, such as WHO and the CDC

Canada Communicable Disease Report

<http://www.hc-sc.gc.ca/hpb/lcdc/publicat/ccdr/98vol24/index.html>

- complete text of the LCDC’s biweekly publication
- primary source for details on updates to the Canadian Immunization Guide

International Society of Travel Medicine News Service

<http://www.istm.org/newsserv.html>

- convenient summary of listings from the World Health Organization and the Centers for Disease Control and Prevention regarding current disease outbreaks round the world
- updated daily

Protocol for Travel Immunization and Prophylaxis

1. Informed consent for immunization services and the general immunization apply to travellers' immunization.
2. Travel immunization, malaria medications prescribed and health teaching provided to the traveller must be documented.
3. Children born on or after January 1, 1980 must have their immunizations documented on MIMS using the usual method.
4. Travellers should be provided with record of immunization received.

General Information

The following should be considered for all travellers:

1. The traveller should be up-to-date for all routine immunizations. Refer to the current Canadian Immunization Guide.
2. A yellow fever immunization certificate may be a condition of entry into the destination country. See the CDC "Yellow Book" for specific information.
3. Malaria prophylaxis may be necessary. Refer to CATMAT Malaria Guidelines.
4. The most up-to-date information must be checked to determine whether or not epidemics are occurring in the destination countries. For example, meningococcal meningitis is a risk for travellers to sub-Saharan Africa at the present time and immunization is recommended. Refer to CDC and LCDC web sites.
5. Special circumstances invariably affect the recommendations for travellers. For example, hepatitis B vaccine is not routinely recommended to travellers to endemic areas. However, if the stay is long, or the traveller will be in contact with blood and/or body fluids of indigenous peoples, immunization may be appropriate. The same considerations apply to rabies vaccine.

Food-borne Illness

Enterically transmitted diseases are highly endemic in the developing world. Transmission may occur from direct person-to-person contact (fecal-oral route), fecally contaminated water, ice, or milk products, or shellfish harvested in contaminated waters. Likewise, food-borne illnesses can be acquired from eating uncooked fruits and vegetables.

1. Avoid salads and raw fruits and vegetables not peeled by self;
2. Avoid water and ice cubes made from local water if unsure of purity. Drink bottled water or adequately treated water only. Beverages made of boiled water are considered safe, as are carbonated and canned beverages;
3. Drink only pasteurized milk;
4. Avoid shellfish unless very well cooked. The practice of steaming bi-valves until they open or other quick cooking methods do not allow sufficient cooking time to inactivate potential pathogens.

Handwashing is critical in the prevention of spread of food-borne illnesses.

Malaria

Malaria is caused by four species of Plasmodia, which are transmitted by the bite of an infected female Anopheles mosquito. These mosquitoes are basically nocturnal and feed from dusk until dawn. Fever, myalgia, and malaise are common symptoms of malaria and can occur as early as eight days to several weeks after being bitten.

Malaria transmission occurs with differing intensity throughout the world, and is confined to areas between 15 degrees south and north of the equator. Central and South America, the Indian subcontinent, South-East Asia and Africa are areas where malaria transmission occurs. As a rule, travellers to rural areas who are out of doors after dusk are at more risk of malaria.

The mode of travel, the length of stay and the conditions under which travellers will live determine both the risk of contracting malaria and the preventive measures to be taken. Preventive measures consist of personal protection and chemoprophylaxis.

Personal measures include:

1. Avoid contact with mosquitoes, i.e., stay inside from dusk 'til dawn.
2. Wear long sleeves and trousers.
3. Utilize insect repellent containing DEET (N, N-diethyltoluamide) on exposed skin.
4. Use insect spray in living/sleeping quarters. A synthetic pyrethroid is suggested.
5. Use an impregnated mosquito net over beds.
6. Screened windows are recommended.

* DEET is absorbed through the skin into the systemic circulation. Topical and allergic skin reactions have been reported. Very rarely, toxic encephalopathy has occurred with excessive or prolonged use, particularly in children. Ingestion of DEET can be fatal. It is recommended that high concentrations of DEET be avoided. Emphasis should be placed on avoiding exposure to mosquito bites, particularly in children. An insect repellent containing 30% DEET is recommended for travellers to areas where malaria is a risk.

Malaria chemoprophylaxis is a complicated topic. The practitioner should take into account the patient's medical history and general health and utilize the CATMAT's Malaria Guidelines when choosing the malaria medication for their client.

Traveller's Concerns

Any travellers who have chronic or acute medical conditions should take these into consideration when travelling. Travellers who take prescription medication should carry an adequate supply, as well as an extra pair of glasses or lens prescription.

Travellers with a chronic medical condition should consider getting a medical alert bracelet.

Traveller's Diarrhea

Diarrhea is a two-fold or greater increase in unformed bowel movements usually with cramps and nausea. It is caused by a multitude of organisms: bacteria, viruses, protozoa, and parasites. It is usually self-limiting and up to 50% of travellers report some disease. Travellers who experience bloody diarrhea, diarrhea associated with a high fever and/or dehydration, or diarrhea persisting for longer than five days, should seek prompt medical consultation (whether the symptoms occur during travel or on return to Canada). Infants and children dehydrate very quickly.

Treatment of mild to moderate diarrhea of a few days duration consists of:

adults – safe fluids such as fruit juices and rice water, and pepto-bismol tablets every six hours for a maximum of eight doses.

children – safe fluids including oral rehydration products.

Sexually Transmitted Diseases

Travellers should be made aware of the risk of sexually transmitted diseases or infections. Of concern are penicillin-resistant strains of gonorrhea which have become more prevalent in some countries in Southeast Asia, East and West Africa, Caribbean and Central and South America, Hepatitis B and of course no country is free of AIDS/HIV. The use of condoms and safer sex practices is strongly recommended. Travellers should be encouraged to seek qualified medical attention if sexual exposure occurs.