Undergraduate Medicine International Electives
Personal Health and Safety
Oct/2018

Health Screening Office
https://fhs.mcmaster.ca/healthscreening/
905-525-9140 ext 22249, hrsadmin@mcmaster.ca
International travel health and safety issues

• Infectious diseases
• Physical injury
• Environmental hazards
• Sexual Health
• Mental health
• Post travel illness

Resources:

2018 Journal of Travel Medicine: Protecting the health of medical students on international electives in low-resource settings

Government of Canada: Travel Health and Safety

General guidelines

• Be aware of the infections you may encounter during travel and the mode of transmission.
• Visit a travel clinic and family physician/student health clinic for any required vaccinations and/or medications.
• Arrange for international travel health insurance.
• Pack a travel health kit. Consider taking personal protective equipment (masks, gloves, gowns) with you if resources at the placement site are limited.
• Observe routine practices in the health care setting to prevent infection. Outside the clinical setting, take precautions to avoid infection from food, water, insect vectors or animals.
• Be aware of the prevalence of and post-exposure protocols for blood borne viruses (Hepatitis B, Hepatitis C, HIV) and tuberculosis in the area you are visiting. Report any possible exposure immediately.
• Take precautions to avoid injury (particularly traffic collisions), excessive sun exposure, or dehydration.
• On return, seek medical advice for any illness that may be related to your travel. Have a post-exposure tuberculin skin test (TST) if required.
Baseline protection

McMaster medical students have protection against the following infections:

- Tetanus
- Diphtheria
- Polio
- Pertussis
- Measles
- Mumps
- Rubella
- Varicella
- Hepatitis B (except vaccine non-responders and carriers)

Have your Year One Health Screening Record, immunization records and serology reports available with you in case they are needed by your placement site.
Examples of travel related infections

• Food and water transmission
  – Cholera
  – E. Coli
  – Hepatitis A
  – Schistosomiasis
  – Typhoid

• Vector-borne illness
  (insect transmission)
  – Chagas disease
  – Dengue fever
  – Japanese encephalitis
  – Leishmaniasis
  – Malaria
  – Yellow Fever
  – Zika virus

• Blood borne viruses
  – Hepatitis B
  – Hepatitis C
  – HIV

• Animal transmission
  – Avian influenza
  – Leptospirosis
  – Rabies

• Human to human transmission
  – Ebola (also animal transmission)
  – Influenza
  – Meningococcal disease
  – Sexually transmitted infections
  – Tuberculosis (TB)
Pre-departure prevention

**Immunizations**
- Meningococcal disease
- Hepatitis A
- Japanese encephalitis
- Rabies
- Typhoid fever
- Yellow fever

**Medications**
- Cholera/ETEC (enterotoxigenic E. coli)
- Malaria

Resources:
- Government of Canada travel vaccination recommendations by destination
- WHO Vaccination requirements and recommendations for international travellers, including yellow fever and malaria
Contact a local travel health clinic at least two to three months prior to departure to ensure that you are adequately prepared. Some vaccinations and medications may also be obtained from your family physician or campus student health clinic. **Note**: Travel health is not covered by OHIP.

- Hamilton region:  

- Waterloo region:  

- St. Catharines:  
Travel health kit

- Antibiotic for self-treatment of mild traveller’s diarrhea or UTI
- Over-the-counter medications
  - Pain and fever medication (ibuprofen, acetaminophen)
  - Stomach and intestinal medication, such as antacids and laxatives
  - Antihistamine (diphenhydramine, cetirizine) +/- Epi-pen
  - Anti-diarrheal medication (loperamide)
  - Anti-motion sickness medication (dimenhydrinate)
- Sunscreen
- Antibacterial/antifungal/hydrocortisone ointments or creams
- Cough drops
- Hand sanitizer
- Insect repellent (DEET)
- Water purification tablets
- First-aid supplies (bandages, gauze)
- Gloves, N-95 mask
- Needles or syringes if required for medical reasons (take more than enough to last for your entire trip and carry a medical certificate).
Preventing infection during an elective

Health care setting:
• Always observe Routine Practices.
• If you do not feel safe, withdraw from the situation.
• Only perform procedures you feel competent to do.

General precautions:
• Wash hands with soap or sanitizer before eating, after handling money, and after using the washroom.
• Eat foods that are cooked and served hot, be mindful of unpasteurized dairy products, food at street vendors, seafood, and salads.
• Use bottled water, or bring water purification tablets from Canada, or boil water for at least one minute.
• Avoid ice that isn’t made with bottled water.
• Avoid swimming in freshwater, particularly in slow moving water.
• Use an insecticide treated mosquito net.
• Wear shoes, pants, and a long sleeve shirt during peak mosquito hours.
• Use a repellent with an appropriate DEET concentration.
• Avoid areas with standing water where mosquitoes lay their eggs.
Blood borne viruses Hepatitis B, Hepatitis C, HIV

• Be aware of blood-borne virus prevalence rates in the area you are visiting.
• Students known to have a blood borne infection need to consult with the McMaster Associate Dean of Undergraduate Medical Education pre-departure so that appropriate measures can be put in place.
• Only perform exposure-prone procedures if competent to do so.
• Be aware of post-exposure protocols at your placement. Report any possible exposure immediately.
• Students who are not immune to Hepatitis B (vaccine non-responder) should receive passive immunization with immune globulin post-exposure. The efficacy of immune globulin decreases significantly 48 hours after exposure.
• Post-exposure prophylaxis (PEP) can potentially reduce the risk of HIV infection. It may be less effective if initiated more than 72 hours after exposure. No effective PEP exists for Hepatitis C.

Resources:
World Health Organization: HIV PEP
Tuberculosis (TB)

- Be aware of the prevalence of TB in the area you are visiting.
- Be attentive to symptoms of active TB disease in the clinical setting.
- Wear an N-95 mask when attending patients with suspected or confirmed active TB disease.
- Students with previous **negative** baseline TB screening may require a tuberculin skin test (TST) after returning from their elective:
  - Download the **McMaster Post-Exposure TB Update** form.
  - A TST is required eight weeks post-exposure for students who had unprotected exposure to a patient with suspected or confirmed active TB disease, or for students who attended an elective in a country with a high risk of exposure to TB (> 30 cases per 100,000 population). See rate in first column in **WHO TB Report**.
  - It is safe to attend clinical placement while waiting to have a post-exposure TST as long as there are no symptoms of active TB disease in the interim. If the TST converts to positive, students must withdraw from clinical activities until they are cleared by the Health Screening Office.
  - Submit the completed form or official records (only if a TST is required) to the Health Screening Office.
Physical Injury

• The risk of death from injury while on elective is far higher than from infectious disease.
• Road traffic collisions are the commonest cause of death, followed by drowning and falls. Criminal injury, including muggings and robberies, are a risk as medical students from developed countries may be perceived by locals as wealthy and therefore, a ready target.
• Emergency and evacuation medical services are often underdeveloped or absent in developing countries.
• To mitigate risk:
  – Observe road safety advice
  – Dress in a manner that is culturally appropriate
  – Avoid wearing expensive jewellery or watches
  – Avoid travelling alone
  – Stay in well-lit areas
  – Inform others of your planned travel itinerary
  – Use reputable accommodation
  – Keep copies of important documents and bank card numbers separately
Summary of other health and safety issues

Environmental hazards
• Sunburn, heat illness, water and food safety

Sexual health
• Contraception, sexually transmitted infections, sexual assault

Mental health
• Pre-existing or underlying mental illness
• Physiological stressors (heat, dehydration, ill-health)
• Environmental stressors (unfamiliar surroundings, loss of social support network)
• Cultural issues (language barriers, extreme poverty, culture shock)
• Occupational factors (exposure to severe illness and death, feelings of incompetence, poor patient outcomes and lack of clinical support or resources, pressure from peers or supervisors).

Post travel illness
• Seek medical advice if you are ill after returning from your elective.
• Withdraw from clinical activities and report immediately if you develop symptoms of a possible communicable infection.