Emory University
Pre-departure Training
Physical and Emotional Health
Physical Health Considerations
Staying Healthy While Travelling

We realize that many of you have traveled extensively.

We have attempted to balance that with the needs of those with less travel experience.

Even if you are a highly experienced traveler, it is good to take the time for a refresher.

We welcome feedback.
Remember the Basics

Protect yourself from viruses, bacteria, and parasites.

Be mindful of their sources:
- Food
- Water
- Soil
- Vectors...agents, such as bugs, that carry and transmit infectious pathogens
- Sex, blood, bodily fluids
Health Risk Factors Depend on...

- Country
- Exposure (rural or urban site, day or night activities, availability of safe food and drink)
- Length of stay
- Individual underlying health/illnesses
- Traveler’s behaviors
- Use of prevention strategies
  - Safety
  - Immunizations, Travel Consultation
  - Malaria and other disease prevention
  - Insect precautions
  - Food and water precautions
  - Psychological support
  - STI prevention
Immunizations/Travel Consult: Start early!

- The most important role of a travel consult (although by far not the only one) is to recommend appropriate immunizations.
- Immunizations must be started early enough to complete the series.
- You must have an accurate and complete itinerary if you are going to be vaccinated accurately and completely.
- Remember to have vaccines recorded (Yellow Card) and bring that record with you. Can be required for entry in many countries.
Air travel can be risky

- Dehydration and thrombophlebitis (especially if using oral contraceptives or other medications)

- Preventive measures
  - Aisle seat if possible to allow you to get up freely to walk every 2-3 hours.
  - Avoid alcohol, drink plenty of water (bring bottled water along if allowed).
  - Avoid ice, non-bottled water, and salads on airplanes that fly locally in developing countries.
  - Carry on prescriptions and OTC medications as well as anything else you can’t live without (long trips and/or bags get lost).
Adverse Health Events while Traveling

- Diarrhea is among the most commonly experienced adverse health event that travelers experience.
- Depending on destination, certain illnesses (e.g., malaria and dengue fever) can pose significant risks.
- Contact with blood and other body fluids involves particular infectious disease considerations.
- Mental health and emotional issues are also commonly experienced by travelers.
- Prevention, planning, and awareness can help you and your fellow travelers deal with these challenges.
- If you have any allergies that could require emergency attention:
  - Be sure to bring EpiPen, antihistamine, and any other needed medications with you.
  - Inform your peers of what a reaction looks like, and how to respond.
  - Demonstrate for them how to use EpiPen.
Travelers’ Diarrhea

- Depending on reason, can be much more severe than you may have experienced at home

- Most common medical health problem to affect travelers
  - 60% of travelers to developing countries will experience acute diarrhea

- Usually a self-limited disease requiring symptomatic therapy only
Diarrhea Prevention = Safe Water

- The most practical way to avoid traveler’s diarrhea is to pay careful attention to what you eat and drink.
- The World Health Organization (WHO) Rule: Boil it, cook it, peel it, or forget it!
- Avoid:
  - Tap water
  - Ice (in drinks…alcohol does not sterilize ice!)
  - Mixed drinks
  - Frozen foods (e.g., ice cream)
  - Food or liquids that have been in contact with ice
  - Raw food, including salads
  - Unpeeled fruits or veggies
  - Fresh squeezed juices
  - Smoothies
  - Food from street vendors
  - Unpasteurized dairy products
  - Raw shellfish
- Use clean water
Safe Water

- Drink boiled, bottled, or canned beverages.
  - Caution: Locally bottled water may not always be safe.

- Close mouth while showering, brush teeth with safe water.

- Wash hands frequently, use a no-rinse hand sanitizer or moisturized wipes.

- Employ water purification methods.

© http://www.africaguide.com
South Africa (Peter Frank)
Water Purification Methods

- **Boiling** for one minute is sufficient to kill most bacteria, viruses, and parasites. In cholera-impacted areas, boil water for three minutes.

- **Chlorine** is available as packaged disinfection tablets or as household bleach (inexpensive, readily available in most countries).
  - Bring a cheap dropper bottle to dispense it into your water.
  - Use a clean and sterile water container.
  - Per liter, use either 2 drops and let sit for 45 minutes, or 4 drops and let sit for 15 minutes. If water is cold (refrigerator temperature) and you are concerned about Giardia, let the water sit four times as long to kill Giardia cysts.

- **Filtration** – microfilters with absolute pore sizes of 0.1 to 0.4 μm remove cysts and bacteria, but not most viruses. To ensure virus elimination, chemically treat or boil water after filtering.

- **Other methods** include UV sterilization (portable devices now available) and disinfection using iodine (note adverse health effects) or chlorine dioxide.

Diarrhea Treatment

- A healthy adult needs 1-2 liters of fluid per day. Someone with diarrhea and/or fever needs more.

- Fluids: Non-caffeinated beverages, fruit juices, soft drinks, Oral Rehydration Solution (ORS) mixed with safe water.

- Monitor hydration status by urine color, presence of dizzy spells.
Symptomatic treatment of non-severe diarrhea:

- Pepto-Bismol (can turn stool dark and tongue black)
- If no fever or bloody stools: Cipro, 500mg 2x a day for 1-3 days; Azithromycin, one 1,000 mg dose; or levofloxacin, 500 mg

For unresponsive, severe or bloody diarrhea:

- Ciprofloxacin 500 mg PO BID (twice a day) for 3 days (or Azithromycin)
- Tendonitis and peripheral neuropathy are very serious but rare potential side effects
- If not resolving, seek immediate care

It is not a good idea to give your prescription medication to someone else.

- Some medication (e.g., Cipro) cannot be taken by pregnant women or children.
- You’ll end up partially treating yourself.
Diseases of Concern for Travelers
Preventing Mosquito Bites

- Use air conditioning or window/door screens to keep mosquitoes outside. If you are unable to protect yourself from mosquitoes inside, sleep under a “long-lasting insecticide net (LLIN),” or the best net you can find.

- Avoid standing (e.g., puddles) and still water (e.g., lakes, ponds, swamps).

- Help reduce the number of mosquitoes by emptying standing water from containers such as flowerpots or buckets.

- When weather permits, wear long-sleeved shirts, long pants, and socks.

- Use insect repellents
  - Repellents containing DEET (most effective, concentrations of 20%-50% preferred), picaridin, IR3535, and oil of lemon eucalyptus and para-menthane-diol products provide long-lasting protection.
  - Reapply often.
  - If you use both sunscreen and insect repellent, apply sunscreen first and then repellent.
  - Treat clothing with permethrin or purchase permethrin-treated clothing.

- See related CDC Yellow Book section:
# Malaria

| How you get it | • Being bitten by an infective mosquito. Malaria is a parasitic infection.  
• Not spread from person to person like a cold or the flu; cannot be transmitted sexually or through casual contact. |
| --- | --- |
| Symptoms | • Fever and flu-like illness, including shaking chills, headache, muscle aches, and tiredness.  
• Nausea, vomiting, and diarrhea may also occur, as can anemia and jaundice.  
• If not promptly treated, can very rapidly become a severe and life-threatening disease. |
| Planning | • Check if transmission occurs where you will be traveling, using the CDC’s Malaria Information by Country table. Provides location-specific details on, e.g., drug resistance, recommended medicines. [http://www.cdc.gov/malaria/travelers/country_table](http://www.cdc.gov/malaria/travelers/country_table) |
| Prevention | • If endemic, consider taking both prophylaxis and treatment with you.  
• Follow bite-prevention practices, especially at night. |
| Onset | • Symptoms usually begin 10 days to 4 weeks after infection; as early as 7 days/as late as 1 year later for some.  
• With some types, relapse is possible. |
| If you get it | • Seek the best level of healthcare that is immediately available.  
• Contact ISOS.  
• Begin treatment.  
• Consider obtaining a rapid diagnostic test, but realize they can sometimes be inaccurate or fake. |
### Dengue

| How you get it                                                                 | • Being bitten by an infective mosquito. Dengue is a viral disease.  
|                                                                              | • Cannot be spread directly from person to person. |
| Symptons                                                                     | • High fever, severe headache, severe pain behind the eyes, joint pain, muscle and bone pain, rash, and mild bleeding (e.g., nose or gums bleed, easy bruising).  
|                                                                              | • Dengue hemorrhagic fever (DHF) is a more severe form; can be fatal if unrecognized/not properly treated in a timely manner.  
|                                                                              | • DHF characterized by a fever that lasts 2-7 days, with general signs and symptoms consistent with dengue fever. When the fever declines, symptoms including persistent vomiting, severe abdominal pain, and difficulty breathing may develop. |
| Planning                                                                     | • Check CDC dengue map to assess incidence where you will be traveling: [http://www.healthmap.org/dengue/en/](http://www.healthmap.org/dengue/en/) |
| Prevention                                                                   | • No vaccine available and no medications available to treat a dengue infection.  
|                                                                              | • Follow bite-prevention practices. |
| Onset                                                                        | • Symptoms usually begin 4 - 7 days after the mosquito bite, typically last 3 - 10 days.  
|                                                                              | • With some types, relapse is possible. |
| If you get it                                                                 | • **Use acetaminophen-based pain relievers and avoid those containing ibuprofen, Naproxen, aspirin or aspirin containing drugs.**  
|                                                                              | • Rest, drink plenty of fluids to prevent dehydration, avoid mosquito bites while febrile and consult a physician.  
|                                                                              | • Watch for warning signs as temperature declines 3-7 days after symptoms began. Seek immediate emergency assistance in case of: severe abdominal pain or persistent vomiting; red spots or patches on the skin; bleeding from nose or gums; vomiting blood; black, tarry stools; drowsiness or irritability; pale, cold, or clammy skin; difficulty breathing. |
# Chikungunya

## How you get it
- Being bitten by an infective mosquito. Chikungunya is a viral disease.

## Symptoms
- Most commonly, fever and joint pain.
- Other symptoms may include headache, muscle pain, joint swelling, or rash.
- Does not often result in death, but the symptoms can be severe and disabling.
- Most patients feel better within a week. In some people, the joint pain may persist for months.

## Planning
- Determine if cases have been reported where you will be traveling. [http://www.cdc.gov/chikungunya/geo/index.html](http://www.cdc.gov/chikungunya/geo/index.html)
- People at risk for more severe disease include newborns infected around the time of birth, older adults (≥65 years), and people with medical conditions such as high blood pressure, diabetes, or heart disease.
- Once a person has been infected, they are likely to be protected from future infections.

## Prevention
- There is no vaccine.
- Follow bite-prevention practices. The mosquitoes that spread Chikungunya bite mostly during the day.

## Onset
- Symptoms usually begin 3–7 days after being bitten by an infected mosquito.

## If you get it
- There is no medicine to treat Chikungunya virus infection or disease.
- Decrease the symptoms by getting plenty of rest, drinking fluids to prevent dehydration, and taking medicines, such as ibuprofen, naproxen, acetaminophen, or paracetamol, to relieve fever and pain.
### How you get it
- Being bitten by an infective mosquito. Zika is a viral disease.

### Symptoms
- The most common symptoms of Zika are fever, rash, joint pain, or conjunctivitis (red eyes).
- Other common symptoms include muscle pain and headache.
- The illness is usually mild with symptoms lasting for several days to a week.
- People usually don’t get sick enough to go to the hospital, and they very rarely die of Zika.

### Planning
- If you are pregnant, could be pregnant, or expect to become pregnant, consider deferring travel to impacted regions.
- Any woman of childbearing age should discuss contraceptive use with a doctor.

### Prevention
- Follow mosquito bite-prevention practices. Zika spreaders bite mostly during the day.
- Mosquitoes that spread Zika also spread Dengue and Chikungunya.
- Since Zika can be transmitted through sexual contact, use a condom or don’t have sex.

### Onset
- Incubation period not known; likely a few days to a week.
- Zika virus usually remains in the blood of an infected person for about a week; can be found longer in some people.

### If you get it
- There is no vaccine to prevent or specific medicine to treat Zika infections.
- Treat the symptoms. Get plenty of rest, drink fluids to prevent dehydration, take medicine such as acetaminophen (Tylenol®) to relieve fever and pain.
- Do not take aspirin and other non-steroidal anti-inflammatory drugs.
- If you are taking medicine for another medical condition, talk to your healthcare provider before taking additional medication.
- Prevent mosquito bites during the first week of your illness.
# Schistosomiasis

## How you get it
- Skin contact with contaminated fresh water. Schistosomiasis is a parasitic disease.

## Symptoms
- Within days after becoming infected, you may develop a rash or itchy skin.
- Fever, chills, cough, and muscle aches can begin within 1-2 months of infection. Most people have no symptoms at this early phase of infection.
- Eggs of adult worms usually travel to intestine, liver or bladder, with inflammation/scarring.
- After years of infection, parasite can also damage the liver, intestine, lungs, and bladder.
- (Rare) Eggs in brain/spinal cord can cause seizures, paralysis, spinal cord inflammation.
- Symptoms are caused by reactions to eggs produced by worms, not by the worms.

## Planning
- Know if you are traveling to a part of the world where Schistosomiasis occurs. See: [http://www.cdc.gov/parasites/schistosomiasis/gen_info/faqs.html](http://www.cdc.gov/parasites/schistosomiasis/gen_info/faqs.html)

## Prevention
- There is no vaccine.
- Avoid swimming or wading in freshwater in countries where Schistosomiasis occurs.
- Drink safe water given risk of oral contact with parasite-infected water.
- If water for bathing could be infected water, heat it to a rolling boil for at least one minute.
- Vigorous towel drying after accidental, brief water exposure can help but not reliably.

## Onset
- Within days after becoming infected

## If you get it
- Seek medical care for appropriate diagnosis and treatment.
- Your health care provider may ask you to provide stool or urine samples to see if you have the parasite. A blood sample can also be tested for evidence of infection. For accuracy, must wait 6-8 weeks after last contaminated water exposure before blood sample taken.
- Praziquantel (oral antibiotic) is the recommended treatment drug.
## Soil-Transmitted Helminths

<table>
<thead>
<tr>
<th>How you get it</th>
<th>• Skin contact with soil or ingestion of soil-contaminated foods. Parasitic.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms</td>
<td>• Abdominal pain, pneumonia, cough, anemia, nausea, vomiting, and lack/loss of appetite.</td>
</tr>
<tr>
<td></td>
<td>• Some soil-transmitted helminths can cause lifelong infection.</td>
</tr>
<tr>
<td>Planning</td>
<td>• Know if you are traveling to an area where incidence is common and where there might be human fecal contamination of the soil.</td>
</tr>
<tr>
<td></td>
<td>• Bring shoes that will accommodate your expected activity when exposed to soil.</td>
</tr>
<tr>
<td>Prevention</td>
<td>• Avoid ingesting soil that may be contaminated with human feces, including where human fecal matter or wastewater is used to fertilize crops.</td>
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<tr>
<td></td>
<td>• Always wash your hands and food well.</td>
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<tr>
<td></td>
<td>• Wear shoes at all times.</td>
</tr>
<tr>
<td>Onset</td>
<td>• Varies.</td>
</tr>
<tr>
<td>If you get it</td>
<td>• Seek medical treatment.</td>
</tr>
<tr>
<td></td>
<td>• Standard diagnosis method is identifying eggs in a stool specimen using a microscope.</td>
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<td></td>
<td>• The drugs most commonly used are albendazole and mebendazole.</td>
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## Giardia

<table>
<thead>
<tr>
<th>How you get it</th>
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<tbody>
<tr>
<td>• Swallowing something containing the Giardia parasite. Parasitic.</td>
<td></td>
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<tr>
<td>• Possible sources include: ingesting water (drinking or during activities such as swimming), ice, uncooked food, contact with an infected person.</td>
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<tr>
<td>• Anything that comes into contact with feces from infected humans or animals can become contaminated.</td>
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<table>
<thead>
<tr>
<th>Symptoms</th>
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<tbody>
<tr>
<td>• Diarrhea; gas or flatulence; greasy stool that can float; stomach or abdominal cramps; upset stomach or nausea; dehydration. Weight loss can result.</td>
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<tr>
<td>• Possible to have no symptoms.</td>
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</table>

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<thead>
<tr>
<th>Planning</th>
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<tbody>
<tr>
<td>• Could happen anywhere, even here at home.</td>
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</table>

<table>
<thead>
<tr>
<th>Prevention</th>
<th></th>
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<tbody>
<tr>
<td>• Practice good hygiene.</td>
<td></td>
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<tr>
<td>• Avoid water (drinking or recreational) that may be contaminated.</td>
<td></td>
</tr>
<tr>
<td>• Avoid eating food that may be contaminated.</td>
<td></td>
</tr>
<tr>
<td>• Prevent contact and contamination with feces, including during sex.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Onset</th>
<th></th>
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<tbody>
<tr>
<td>• Symptoms of giardiasis normally begin 1 to 3 weeks after becoming infected.</td>
<td></td>
</tr>
<tr>
<td>• In otherwise healthy people, symptoms may last 2 to 6 weeks or occasionally longer.</td>
<td></td>
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<table>
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<tr>
<th>If you get it</th>
<th></th>
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<tbody>
<tr>
<td>• Seek medical treatment.</td>
<td></td>
</tr>
<tr>
<td>• Standard diagnosis method is via stool sample; multiple samples may be needed.</td>
<td></td>
</tr>
<tr>
<td>• Treatments include metronidazole, tinidazole, and nitazoxanide. Alternatives include paromomycin, quinacrine, and furazolidone. (Some may not be routinely available in US).</td>
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</tbody>
</table>
Beware of wild, stray, and even pet animals.

Rabies vaccination is not routine for pets in most of the world. Any bite or scratch that breaks skin (even minor) or mucous membrane exposures must be cleaned and evaluated immediately for rabies vaccination/immune globulin.

Even previously vaccinated individuals need urgent boosters. Since much of the world does not have easy access to vaccine or rabies immune globulin, this is challenging. Avoid situations that present risk of bites.

B virus also of concern for macaque bites (common in Asia)

Don’t pet, pick up, play with, or adopt any wild, stray, or pet (with unclear vaccination history, etc.) animals overseas. Very bad idea.
Other Medical Considerations
Work with blood and body fluids

- Be sure you have sharps containers at your site or create them (soda can, empty plastic detergent bottle).

- Know whether you have ready access to post-exposure prophylaxis.

- If you have a blood or body fluid exposure:
  - Wash the site thoroughly with soap and water.
  - Do not use caustic antiseptics (may damage tissue and bring white blood cells to the area, increasing infection risk).

- Be sure there is a clear plan at your site about what to do in the event of a blood borne pathogen exposure.
  - May have medication and care for these exposures on site
  - Alternatively, should have a referral clinic or hospital
Under many circumstances, anti-retroviral medication treatment is indicated for a potential HIV exposure (e.g., healthcare setting).

Post-exposure prophylaxis is most effective when started immediately.
- Definitely should be started within 3 days
- Needs to be continued for 4 weeks
- Medical monitoring is necessary

HIV is not the only exposure risk. Be mindful of TB and extreme risks like viral hemorrhagic fevers, MERS.
Blood borne pathogens (continued)

- Performing procedures beyond your level of training puts you at additional risk.

- The CDC Yellow Book includes a chapter on issues like these for health care workers:

- If you have questions after an exposure and have internet access, contact your US-based care provider. As always, ISOS is a critical resource while travelling.
Possible Medications to Bring

- Dependent upon country/region
- Antibiotics for diarrhea: Ciprofloxacin or Azithromycin
- Anti-motility agents: Pepto-Bismol and loperamide (Imodium AD)
- Oral rehydration salts (ORS) packets
- Anti-malarial prophylaxis: Mefloquine, Doxycycline or Malarone
- Be aware of potential side effects of all drugs and their interactions (including that with alcohol)
- Topical antibiotic ointment cream
- Topical antifungal cream/ointment
- Antifungal vaginal cream
- Extra prescription medications for chronic conditions (contact insurance company)
Emotional Health Considerations
Common Mental Health and Emotional Issues

- Loneliness
- Homesickness
- Anxiety
- Culture Shock upon
  - Arrival in Country
  - Return to US
Maintaining mental health while abroad

- Accept that mental health issues can occur while abroad (either new or pre-existing)
- Identify available local mental health resources
- Coping mechanisms important
- Identify and develop peer relationships
- Find a mentor and plan regular meetings
- Journaling can be helpful
- Exercise (safely)
- Do more than study/research
- Look out for each other
- Communicate with family, peers, and advisor which is easier these days (on line)
- Be positive and ask for help
- If you take medication for a mental health issue, be sure to bring enough of it with you and take it, as directed, while abroad
What is Culture Shock?

- It is the natural contradiction between our accustomed patterns of behavior and the psychological conflict of attempting to maintain them in the new cultural environment.

- Time of onset is variable, usually occurs within a few months of entering a new culture.

- Is a normal, healthy psychological reaction, usually mild and transitory.

- To minimize its effects:
  - Accept that it is a real phenomenon
  - Learn to recognize its signs in self and others.

- University of the Pacific SIS
Common Symptoms of Culture Shock

- Extreme homesickness
- Feelings of helplessness/dependency
- Disorientation and isolation
- Depression and sadness
- Hyper-irritability, may include inappropriate anger/hostility
- Sleep and eating disturbances (too little or too much)
- Excessive critical reactions to host culture/stereotyping
- Excessive focusing on physical symptoms
- Excessive drinking and/or recreational drug use
- Loss of focus and ability to complete tasks

- University of the Pacific SIS
Reverse Culture Shock

- The return back to the US can come with similar adjustment challenges.

- For example, you may feel alienated or that people are not interested in what you’ve experienced.

- Approaches that can help
  - Be patient and give yourself time to readjust
  - Share your experiences with supportive people
  - Write about your experiences
  - Stay in touch with people you met abroad
  - Connect with relevant cultural groups here
The Adjustment Process

- University of the Pacific SIS
Insurance Issues while Abroad

- Request access to enough prescription medication to last duration of trip.

- Aetna Student Health Insurance Plan
  - You will need to pay for care and then submit to Aetna for reimbursement.
  - Need help: Your Patient Portal to Kimberly Taylor at:
    www.studenthealth.emory.edu or International SOS.

- Other Insurance Plans: Contact your customer service rep for instructions before you leave, not after.
Need advice, none on site?

If you have at least some internet access, the following can be helpful resources:

- Your Patient Portal at: [www.studenthealth.emory.edu](http://www.studenthealth.emory.edu)
  - Secure email a Student Health provider, including our Travel and Immunization Nurses

- If you are on the Aetna Student Health Insurance Plan, you also have access to worldwide emergency travel assistance and medical assistance through On Call International

- International SOS
  - All Emory-sponsored projects have access to ISOS
Health Resources

CDC Travelers Health Home Page: http://www.cdc.gov/travel/
A range of information, such as:
- Destination-specific guidance
- Travel notices
- Disease directory
- Yellow Book

See your personal physician/provider, especially if chronic medical conditions, chronic medications, allergies (such as those requiring EpiPen) or if you are/could be pregnant

Excellent self-study course on study abroad experience and culture at http://www.pacific.edu/sis/culture/ (probably more geared to undergraduates)

Depending on your insurance, Emory’s TravelWell Clinic
When you get back home

Seek medical care if:

- Fever
- Abdominal pain, diarrhea or weight loss
- Persistent cough
- Skin rash

Tell the clinical provider about your overseas experience, where you were located and potential exposures

Seek psychological care if significant reverse culture shock, depression, ongoing sleep disruption

Emory University Services

- Student Health Services: 1525 Clifton Road, 404.727.7551
- Student Counseling Center: 1462 Clifton Road, Suite 235 (Second Floor) (404) 727-7450
Advice from your peers:

“Identify the closest, cleanest, most professional medical centers near your residence upon arrival.”

“I was about a 5-8 hour drive from the closest modern medical facility.”
Stay healthy and safe!