

HEALTH GUIDELINES

A group of about ten people is walking across a wide, rocky riverbed. The riverbed is composed of numerous smooth, grey stones of various sizes. The background is a dense, lush green forest with tall trees and thick undergrowth. The sky is blue with scattered white clouds. The people are dressed in casual outdoor attire, including t-shirts, shorts, and hats. Some are wearing yellow boots, suggesting a field or research setting.

& REQUIREMENTS

Ecuador: Comparative Ecology and Conservation

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BRIEF SUMMARY

Prior to Departure:

- Schedule an appointment with your primary care doctor or a travel medicine clinic at least 8 weeks prior to departure.
- Take an adequate quantity of all your necessary and prescription medications to last your entire stay.
- Ensure you are up to date on all routine vaccines. An annual flu shot and covid vaccine is recommended if available.
- Discuss your specific travel itinerary (including various in-country locations you plan to visit) with your physician and discuss:
 - Recommended vaccines including but not limited to: typhoid, TDap booster.
 - Prevention and treatment of traveler's diarrhea.
 - Malaria prophylaxis.

While you are in Ecuador:

- Take measures to prevent traveler's diarrhea.
- Take preventive measures to avoid mosquito bites.
- Do not travel alone and maintain an awareness of your surroundings at all times.
- Remember motor vehicle accidents remain the biggest risk for international travelers. Ride in the back seat, wear seatbelts, and do not be afraid to ask your driver to slow down.
- Use condoms if you are sexually active.
- While traveling abroad, minimize high-risk behaviors.
- Notify your Academic Director if you become ill.

GENERAL INFORMATION

To protect your health in Ecuador, you need certain pre-departure immunizations followed by reasonable health precautions while in the country. The following health guidelines and requirements are based on years of experience and the current recommendations from the US Centers for Disease Control and Prevention. They are designed to inform you of health concerns that may be present in Ecuador especially as you venture to smaller cities off the usual tourist track, or spend time in small villages and rural areas for extended periods. Although no information sheet can address every conceivable contingency, the following health guidelines and requirements are an attempt to provide you with a standard, which if followed, should optimize good health during your stay abroad.

You may find that local customs and practice, as well as varying US physicians' approaches, at times conflict with these guidelines. It is essential that you review these health guidelines and requirements with your physician, to discuss individual issues such as pre-existing medical problems and allergies to specific drugs. Any further questions or concerns should be directed to the US Centers for Disease Control and Prevention (CDC) (www.cdc.gov/travel) or to your own physician.



SIT Study Abroad programs may venture off the usual tourist track. Pay careful attention to health and safety guidelines.

PREVENTION OF INSECT-BORNE ILLNESSES

Malaria

Since malaria is not a problem in Quito and the surrounding sierra (including the Cloud Forest excursion), malaria prophylaxis is not required for these parts of the program. However, you are at potential risk at lower altitudes (including your excursion to the Amazon), so for full protection you should take your first pill before any travel to the Amazon and continue for four weeks after your return to non-malarial regions. Also, if you plan on doing your Independent Study Project (ISP) in a malaria area you must protect yourself.

CDC guidelines suggest that prevention of malaria is possible if you carefully follow personal protective measures as described below and take one of the following antimalarial drugs (listed alphabetically) as directed by your health care provider:

atovaquone/proguanil (Malarone), doxycycline, mefloquine, or tafenoquine (Arakoda). G6PD testing is required prior to tafenoquine use. **The selection should be discussed with your physician or health-care provider.** If, in spite of adherence to these preventive measures, you develop symptoms of malaria, prompt medical attention lessens the severity of the illness.

Personal Protective Measures

The following insect precautions should be followed, especially after dark, to prevent mosquito bites that may transmit malaria:

- Wear long-sleeved shirts and long pants.
- Use insect repellents on bedding and netting. (e.g. permethrin – commonly known as Permanone).
- Use insect repellents on skin and clothing. DEET-containing products (e.g. Off, Off Deep Woods, Jungle Juice, and Muskol) may be used on skin in concentrations up to 30–40% and on clothing in higher concentrations. Permethrin (Permanone) may also be used on clothing.

SIT Study Abroad suggests that if you have further questions, do not hesitate to contact the Malarial Division of CDC at 888-232-3228 for recorded information or visit the CDC website:

<http://www.cdc.gov/malaria/travelers/index.html>

Dengue

Dengue is a viral disease and is transmitted by mosquitoes which bite primarily in the daytime. It occurs in urban as well as rural areas. No risk exists in Quito. There is no licensed vaccine against it, but personal protective measures against mosquito bites are effective in prevention. Insect repellents, protective clothing such as long-sleeved shirts and pants, are therefore essential. The disease causes considerable discomfort (fever, body aching), but is self-limited in adults.

Chikungunya

Chikungunya is an arboviral infection that is transmitted by day-biting *Aedes* mosquitoes. It is prevalent in tropical Africa and Asia, parts of Central and South America, and the Caribbean. Low risk exists in Ecuador at elevations below 2,300m (7,500 ft); mainly in Guayas Province. Symptoms are typically fever and joint pain. There is no licensed vaccine against it, but insect precautions and personal protective measures (especially during peak times (early morning and late afternoon) are the main prevention strategy.

Zika

Zika is a viral infection that is also transmitted by the bite of the *Aedes* mosquitoes. Symptoms include mild fever, rash, conjunctivitis (red eyes), joint or muscle pain and headache. The disease causes considerable discomfort, but is mild and self-limited, lasting for several days to a week. Low risk exists in Ecuador at elevations below 2,300m (7,500 ft). There are no vaccines or medications available to prevent or treat Zika infections therefore students should be vigilant in using insect precautions and personal protection measures against day-biting mosquitoes (see insect precautions section above). CDC recommends that pregnant women consider postponing travel to countries where the Zika virus is prevalent.

Leishmaniasis (Cutaneous and Mucocutaneous)

Leishmaniasis is a protozoon infection that causes skin ulcers and is transmitted by the bite of sand flies and occurs especially in Amazonian regions. Insect precautions are recommended.

Yellow Fever

This is a viral disease transmitted by mosquitoes that occurs only in parts of Africa and South America. Yellow fever is characterized by severe hepatitis with fever. It may be prevented by avoiding mosquito bites (personal protective measures) and by getting the vaccination shots that are available at any yellow fever vaccination center (consult your physician for the nearest center).

PREVENTION OF FOOD- AND WATER-BORNE ILLNESSES

Diarrhea-Producing Infections

“Traveler’s diarrhea” is the most common form of diarrhea in Ecuador. This is a self-limited diarrhea lasting from a few to several days, characterized by watery, non-bloody bowel movements. Traveler’s diarrhea usually requires no treatment other than fluid replacement including ORS (the World Health Organization’s oral rehydration solution which comes in package form) or other homemade solutions such as 1 teaspoon salt, 1/2 teaspoon baking soda, and 2–3 tablespoons sugar or honey in 1 liter of **clean** water; or carbonated soda diluted by one half. Antidiarrheals such as Imodium or Lomotil may be used short-term in some circumstances. Pepto Bismol in large amounts and certain antibiotics (doxycycline, sulfa-TMP, ciprofloxacin) can prevent or attenuate the infection. Antibiotics are indicated for more severe cases of traveler’s diarrhea.

More protracted and disabling diarrheal illnesses may be due to giardiasis and amoebic dysentery (caused by parasites) and bacillary dysentery (caused by bacteria), including cholera and typhoid. These infections (as well as “traveler’s diarrhea”) are caused by contaminated food and water. Therefore, the best way to avoid such infections is to respect certain do’s and don’ts:

DO WASH your hands scrupulously with non-contaminated water and soap before eating and snacking.

DO DRINK

- Bottled or canned beverages (water, soda, soft drinks) from a trusted source (ensure caps are sealed).
- Hot coffee, tea.
- Water that reached a rolling boil for at least one minute at sea level (longer at higher altitudes).

DON’T DRINK

- Tap water, even in ice; don’t risk using it for brushing your teeth either.
- Tap water in larger cities is often safe, but the water in rural areas is probably not, so be sure to check with a reliable source before using, and if in any doubt, take all the recommended precautions.

DO USE

- Commercial iodide or tinctured liquid iodine to treat water, **ONLY** if bottled water (from a trusted source) is not available and boiling water is not possible. Chlorine in various forms is less reliable than iodine. These provide substantial protection when added to tap water.



DO EAT

- Cooked vegetables, fruits with thick covering (citrus, bananas, and melons); and well-washed raw fruits and vegetables.
- Meat or fish that is thoroughly cooked (pork and lamb should be very well done).
- Pasteurized dairy products.

DON'T EAT

- Unwashed or unpeeled raw fruits and vegetables.
- Fruits that do not have a thick, disposable outside covering.
- Rare or raw meat or fish or shellfish.
- Dairy products from small, independent vendors without pasteurizing facilities, including food of any kind that has been left out in the sun, especially custards, creams, and mayonnaise.
- Raw (unpasteurized) milk or milk products. Tuberculosis and brucellosis, both serious diseases are transmitted in this way, so the consumption of unpasteurized milk and milk products should be strictly avoided.

There may be times when refusing an offer of food or beverage, even a drink with ice or avoiding a salad will be considered rude. You must decide for yourself, but polite refusals, thought out in advance, are often handy. Discuss these alternatives with your Academic Director(s).

A note on swimming: Avoid swimming or wading in fresh water. Many parasites and bacteria live in water and can cause serious illness. Properly chlorinated pools and salt water are generally safe from infectious diseases.

Leptospirosis

This is a bacterial infection caused by the *Leptospira* bacteria. The disease is spread through direct contact with the urine, blood or tissue from infected animals or rodents or through water, soil, or food contaminated with their urine. It's most common in warm climates. Travelers who come in contact with the disease may experience symptoms of high fever, headache, bleeding, muscle pain, chills, red eyes, and vomiting. Without treatment, leptospirosis can lead to kidney and liver damage and even death. This disease is treated with antibiotics (doxycycline, penicillin) to clear the infection.

Typhoid Fever

Typhoid is an infection caused by a particular species of the salmonella bacterium. It is spread by contaminated food and water. Symptoms include fever, severe toxicity, rash, and in about half the cases, bloody diarrhea. Untreated, there is a 30%

mortality rate. Vaccines are 60–70% effective in prevention. One vaccine involves a single injection, with immunity lasting 2 years. A second one is administered orally every other day for 4 doses, and lasts 5 years. Antibiotic resistance has been developing, but treatment of the disease with certain well-known antibiotics is usually effective. As with all diarrheal illnesses, careful dietary discretion continues to be the main line of defense.

Hepatitis A

Hepatitis A is a highly contagious virus that causes liver inflammation. It is most commonly spread through contaminated food and water. Most Americans have not previously been exposed to the hepatitis A virus and are at risk of contracting the disease during travel to areas where the disease is more prevalent. A very effective vaccine is available and should be administered 2–3 weeks prior to travel.

OTHER ILLNESSES

Altitude

Quito is over 9000 ft. above sea level and many points you visit are higher. Even healthy, athletic individuals may become ill at altitudes over 10,000 ft. Common symptoms are unbearable headache and severe shortness of breath out of proportion to the mild fatigue most people experience while becoming acclimatized. Ascending gradually and resting during the first 12-24 hours can minimize the risk of altitude sickness. You may also wish to consult your physician about obtaining some acetazolamide (Diamox). Note that this is contraindicated for those allergic to sulfa drugs and that this possibility should be discussed with your physician. Also note that alcohol and sedatives may have greater effect at high altitudes.

Any symptoms of severe altitude illness should result in *immediate* descent. Individuals with chronic heart and lung disorders, such as asthma, and any other preexisting medical condition including sickle cell or diabetes should consult a physician before traveling to high altitudes. If your physician has given approval for high altitude travel, do let us know about the condition so that we can advise the Academic Director(s) and our local doctors

accordingly. Bring full medical notes with you to help local doctors in case of need.



Prevention of Animal Bites and Infections

Rabies is a viral disease almost always caused by animal bites. Dog rabies is rare in Ecuador; risk however exists from bats and other terrestrial animals. Nevertheless, *strict adherence to the following is important for a safe and rabies-free experience:*

- Avoid bites from all animals and especially avoid handling or feeding bats, puppies, kittens, monkeys, or other animals. They can have rabies before it is obvious.
- If you have been bitten or have had direct contact with the saliva of a suspected rabid animal, immediately wash the affected area with a soap solution and running water thoroughly to neutralize and to rinse out the virus. **Then proceed immediately for post-exposure treatment.**
- If possible, the animal should be captured and kept under cautious surveillance until the diagnosis and therapy are completed. If capture is not possible, a clear description of the animal and the circumstance of contact should be carefully recorded.

Tuberculosis

Tuberculosis (TB) is a bacterial disease spread by airborne droplets from a person with untreated pulmonary TB or by ingestion of TB-contaminated unpasteurized milk products. Transmission is more likely in conditions of crowding and poverty. A TB skin test can indicate prior exposure to tuberculosis and is recommended prior to travel (unless already known to be positive). A repeat test is also

recommended after returning to the US even if the pre-departure test was negative.

Hepatitis B

Hepatitis B is a serious and often chronic viral infection of the liver. Since this type of hepatitis is most often acquired from contact with infected blood, sexual contact (as with HIV), or skin-to-skin contact of mutual open cuts and sores, appropriate precautions to avoid these types of exposure are necessary. This includes avoiding getting tattoos, or ear/body piercings and avoiding cuddling children with sores or draining insect bites. A series of three immunizing injections is recommended. This series should be initiated as early as possible so that at least two doses are taken prior to departure. This will provide partial protection. The third shot should be taken five months after the second dose, and may be given after returning home to achieve full, long-lasting immunity. An accelerated schedule can also be used as an alternative.

HIV/AIDS and Blood Supplies

HIV/AIDS is a concern worldwide. The HIV virus is transmitted by way of bodily fluids from an infected person. HIV is spread mainly by having anal or vaginal sex or sharing drug injection equipment with a person who has HIV. AIDS is an acquired immune deficiency that can result in life-threatening infections and is the most advanced stage of the HIV infection. It is the student's responsibility to protect him /herself from acquiring the disease through sexual transmission. Students anticipating even the possibility of sexual activity are strongly urged to bring their own condom supply. Other potential routes of infected blood transmission such as tattooing, body piercing and needle sharing must be strictly avoided.

With regard to blood transfusions, our Academic Directors have identified hospitals, through consultation with the local US embassy, where safe blood is available. In a life-threatening situation, the risks versus benefits of an emergency blood transfusion must be examined carefully and a decision made based on the best information available at the time.

Coronavirus COVID-19

COVID-19 is a newly identified respiratory virus that is spread through direct contact with an infected person as well as through respiratory droplets produced when an infected person coughs or sneezes. The World Health Organization (WHO) has declared this disease a global pandemic for the worldwide spread of a new disease for which most people do not have immunity. Symptoms of COVID-19 may appear **2-14 days after exposure** and may include fever, cough, and shortness of breath. The illness can also cause muscle or body aches, sore throat, vomiting and diarrhea. Reported illnesses have ranged from mild symptoms to severe illness and death for confirmed coronavirus disease (COVID-19) cases. *There is currently a vaccine to protect against the coronavirus disease 2019 (COVID-19). CDC states that a person is considered fully vaccinated two weeks after receiving the last recommended dose of vaccine.*

The best way to protect yourself is to obtain the COVID 19 vaccine (if available) and to continue to follow COVID 19 precautions!

- **Clean your hands often**-wash your hands carefully and frequently with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing. If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry. Avoid touching your eyes, nose, and mouth with unwashed hands.
- **Cover your mouth and nose** with a tissue when you cough or sneeze or use the inside of your elbow. Throw used tissues in the trash.
- **Clean AND disinfect** frequently touched surfaces daily. This includes tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, and sinks.
- **Avoid close contact. Practice physical distancing**-stay at least 6 feet apart. Put distance between yourself and other people if possible.
- **Inform your Academic Director immediately** if you have a pulmonary disease or any respiratory illness; have a fever or feeling sick; if you have been in close contact with a person known to have COVID-19; and/or have recently traveled from an area with widespread or ongoing community spread of COVID-19.

- **Contact ISOS and a medical doctor**, if you develop symptoms.
- **Avoid travel if you are sick or have a fever.** Your Academic Director will make appropriate accommodations for students who are ill.
- **Wear a facemask**, especially when you are around other people (e.g., sharing a room or vehicle) and before you enter a healthcare provider's office.
- **Most importantly, stay connected:** especially during your Independent Study Project or Internship. Communicate daily with your SIT Academic Director. SIT continues to update its contingency and evacuation plans to ensure that we are prepared to take appropriate action in the event of a change in circumstances.

SIT recommends that students check the country's consular website for up-to-date information on entry and exit requirements.

IMMUNIZATIONS FOR ECUADOR

Immunizations are recommended to protect your health and well-being by building up your immune defenses against specific prevalent diseases. Plan ahead at least 8 weeks, since some immunizations require more than one dose for effectiveness. *SIT recommends that you bring a copy of your immunization record with you and insert this document in your passport so that it is easily accessible.*

REQUIRED (for participation in program):

- **COVID 19:** Immunity is provided against COVID 19 disease two weeks after being fully vaccinated.

RECOMMENDED (as a health precaution-consult your physician):

- **MMR (measles, mumps, rubella):** Two (2) doses of live measles vaccine are recommended.
- **Tetanus, diphtheria, pertussis:** The primary child series is recommended. Boosters (Td or Tdap) are effective for 10 years. If you are uncertain when you had your last injection, we recommend another booster.

- **Varicella (chicken pox):** you should have received the vaccine or have documentation of having chicken pox
- **Yellow fever:** This program has a rainforest excursion and yellow fever immunization is recommended.
- **Hepatitis A:** Hepatitis A vaccine, which provides long-term immunity, is recommended.
- **Hepatitis B:** A series of 3 immunization injections is recommended. See section on Hepatitis B.
- **Influenza:** Influenza vaccine should be considered for any individual wishing to decrease risk of influenza or non-specific respiratory illness especially those who are at high risk for complications from influenza including those with asthma, COPD, diabetes, chronic cardiovascular disease and immunocompromised conditions.
- **Typhoid:** This vaccine is strongly urged as a viable protective measure. The vaccine is given either orally or by injection. Discuss the relative merits of each with your doctor.

With reasonable attention to health and hygiene rules, your stay in the Ecuador should be a healthy one. Aside from minor ailments due to adjustments to the new food, water and climate, this is the experience of the large majority of SIT Study Abroad students. We do, however, recommend you see your physician on returning to the US in order to test for any possible lingering infection contracted overseas.

Take good care of yourself!

