

Health Guidelines

COSTA RICA

GENERAL INFORMATION

To protect your health in Costa Rica, 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 Nicaragua 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 particular drugs. Any further questions or concerns should be directed to the US Centers for Disease Control and Prevention (CDC) in Atlanta (www.cdc.gov/travel) or to your own physician.



PREVENTION OF INSECT-BORNE ILLNESS

Personal Protective Measures

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

- Wear long-sleeved shirts and long pants.
- Use mosquito netting over bedding.
 - 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.

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. 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. There are no vaccines or medications available to prevent or treat Zika infections therefore participants should be vigilant in using insect precautions and personal protection measures against day-biting mosquitoes (see insect precautions section above). The Zika virus has been linked to thousands of babies being born with underdeveloped brains (though conclusive evidence is lacking at present). CDC recommends that pregnant women (in any trimester) consider postponing travel to countries where the Zika virus is prevalent.

PREVENTION OF FOOD- AND WATER-BORNE ILLNESSES

Diarrhea-producing infections

“Traveler’s diarrhea” is the most common form of diarrhea in Costa Rica. 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 beverages (coffee, tea).
- Water that reached a rolling boil for at least one minute at sea level (longer at higher altitudes).
- Carbonated mineral water.

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 from large commercial dairies.

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.

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 could be administered 2–3 weeks prior to travel.

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



OTHER DISEASES

Rabies

Rabies is a viral disease almost always caused by animal bites (especially dogs and bats). Risk occurs in Costa Rica and, therefore, you should take measures to prevent it. Given the serious danger posed by rabies as a uniformly fatal disease, follow these important guidelines:

- Consider pre-exposure immunization (if available).
- Avoid bites from all animals and especially avoid handling or feeding 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**, the sooner the better; depending on the location of the bite, you may have little time.
- If at all 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.

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 for consideration by the CDC. 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.

AIDS and Blood Supplies

AIDS is a concern worldwide. AIDS is an acquired immune deficiency that can result in life-threatening infections. The HIV virus is transmitted by way of bodily fluids from an infected person. Other potential routes of infected blood transmission such as tattooing, body piercing and needle sharing must be strictly avoided.

IMMUNIZATIONS FOR NICARAGUA & CUBA

Immunizations fall under two categories: 1) those that are required for admission to The Experiment and 2) those that are recommended to protect your health and well-being by building up your immune defenses against specific prevalent diseases. In addition, certain basic immunizations are required by US law.

The physician administering the inoculations should record all immunizations on the International Certificate of Vaccination or Prophylaxis (ICVP, also known as the WHO card). The WHO card should be kept with you at all times while in the host country. *If*

for some reason you are unable to obtain a WHO card or your WHO card is lost it will be sufficient to carry a copy of your immunization record with you.

Required (for participation in program):

- **MMR (measles, mumps, rubella):** You will need to be immunized if you have not had 2 doses of live measles vaccine.
- **Tetanus, diphtheria, pertussis:** The primary child series is required. Boosters (Td or Tdap) are effective for 10 years.

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

- **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.
- **Rabies:** Follow carefully the special instructions in the section on rabies.
- **Hepatitis A:** Hepatitis A vaccine that 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 any chronic or immunocompromising conditions e.g. asthma, and cystic fibrosis.



With reasonable attention to health and hygiene rules, your stay in Costa Rica 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 Experimenters. 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!