

Malaria

Every year, millions of United States residents travel to countries where malaria is present; about 800 cases of malaria are diagnosed in these returning travelers each year. From 1985-2002, 78 U.S. travelers died from malaria.

Persons who are traveling to malaria risk areas can almost always prevent this potentially deadly disease if they correctly take an effective antimalarial drug and follow measures to prevent mosquito bites.

Know the symptoms

Despite these protective measures, travelers may become infected with malaria. Malaria symptoms can include:

- Fever
- Chills
- Headaches
- Flu-like symptoms
- Muscle aches
- Fatigue
- Diarrhea
- Yellowing of the skin and whites of the eye (jaundice)

When symptoms appears, seek immediate medical attention:

Malaria is always a serious disease and may be a deadly illness. Travelers who become ill with fever or flu-like illness either while traveling in a malaria-risk area or after returning home (for up to 1 year) should seek immediate medical attention and should tell the physician their travel history.



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



Malaria Medication

_____ **MEFLOQUINE** (Take 1 Tab weekly starting 1-2 weeks prior to malaria exposure, during exposure and for 4 weeks after exposure ends)

_____ **CHLOROQUINE** (Take 1 Tab weekly starting 1-2 weeks prior to malaria exposure, during exposure and for 4 weeks after exposure ends)

_____ **DOXYCYCLINE** (Take 1 cap daily Starting 2 days prior to malaria exposure, during exposure and for 4 weeks after exposure ends)

_____ **MALARONE** (Take 1 tab daily starting 2 days prior to malaria exposure, during exposure and for 7 days after exposure ends)

_____ **PRIMAQUINE** (Take 2 tabs daily for 14 days after the end of malaria exposure)

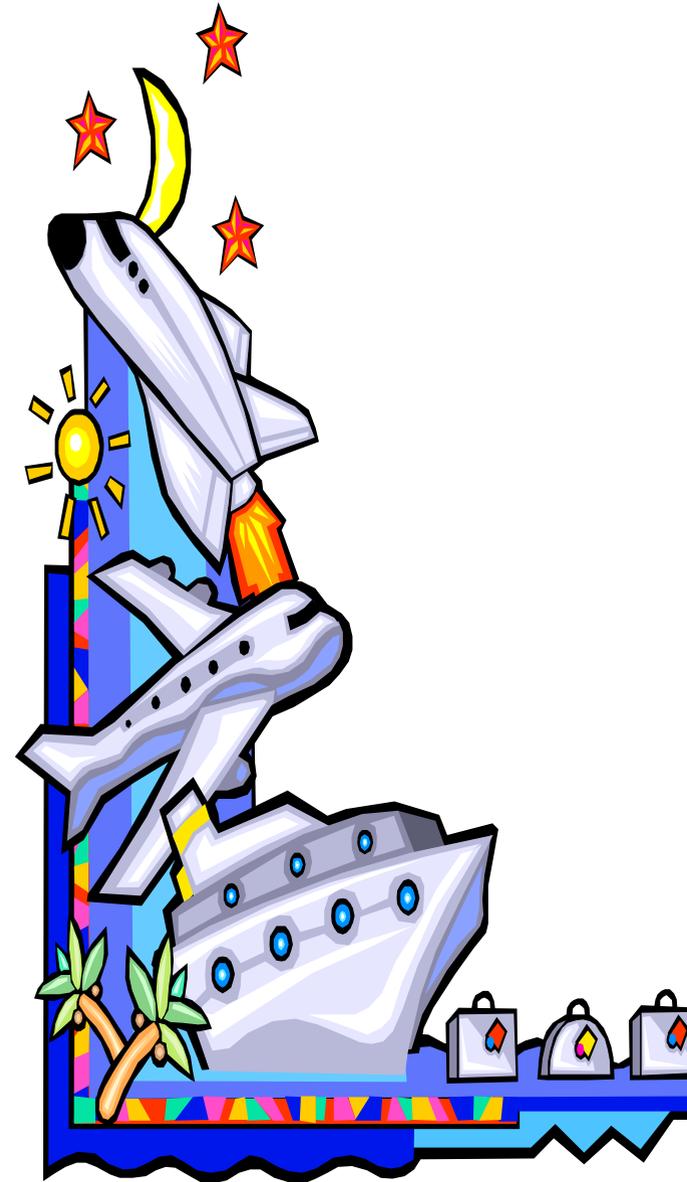


Travelers' Health Kit

- Personal prescription medications (stored in original containers with clear labels)
- Antibacterial hand wipes or alcohol-based sanitizer
- Antimalarial medication, if applicable
 - Cough suppressants
 - Acetaminophen, aspirin, ibuprofen, or other medications for pain or fever (if not allergic)
 - Digital thermometer
 - Antacids
- Insect repellents containing **DEET**
 - Permethrin treated clothing
 - Mosquito netting
 - Sunscreen
- Basic first-aid items (adhesive bandages, gauze, ace wrap, antiseptic, tweezers, scissors, cotton-tipped applicators)
- Eye drops (lubricant – natural tears)



International Travel Clinic Travel Health Advisory



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Insect Safety

The best form of protection from infection transmitted by insects or other biting pests is use of avoidance measures and **permethrin** and **DEET**-containing repellants. Travelers who may be exposed to biting insects, especially mosquitoes, should take precautions to protect their exposed skin. Wearing long sleeve shirts and pants is optimal, although this may not be practical in more tropical climates. Light-colored clothing is preferred. Clothing should be treated with **permethrin** and all exposed skin with **DEET**-containing repellants.

Permethrin is a product that can be used on clothing (skin contact is to be avoided) to repel insects and bugs. This agent can be used on clothing, mosquito netting and other screening when traveling to particularly high-risk areas.

We recommend the use of insect repellants that contain at least **30-35% DEET** (N, N-Diethyl-m-toluamide), (30% for children). Higher concentrations are clearly more effective, but have an increased risk of local skin reactions/irritation. Some products contain both sunscreens and DEET and may be easier to apply as a single agent. Many products are available at your local retail stores.

Mosquito netting is indicated for individuals participating in more adventuresome endeavors and trekking, but not necessary in well air-conditioned modern hotels in larger cities.

Travelers' Diarrhea

PREVENTION



The following recommendations can minimize but never completely eliminate the risk of travelers' diarrhea:

- Careful selection of foods and beverages can minimize the risk of acquiring travelers' diarrhea.
- Try to consume foods that are freshly cooked and steaming hot.
- Never drink beverages that have been diluted with water (fruit juices), or place ice cubes in your beverages.
- Other risky foods are raw or undercooked meats and seafood, raw vegetables and unpeeled fruits.
- Foods in high-risk destinations that are purchased from street vendors pose a particular high risk for traveler's diarrhea.
- Reheated prepared foods, buffet items and unpasteurized dairy products maybe considered high-risk foods.
- Safe beverages include those that are bottled and sealed or carbonated.
- Boiled beverages and those appropriately treated with iodine or chlorine can be safely be consumed.



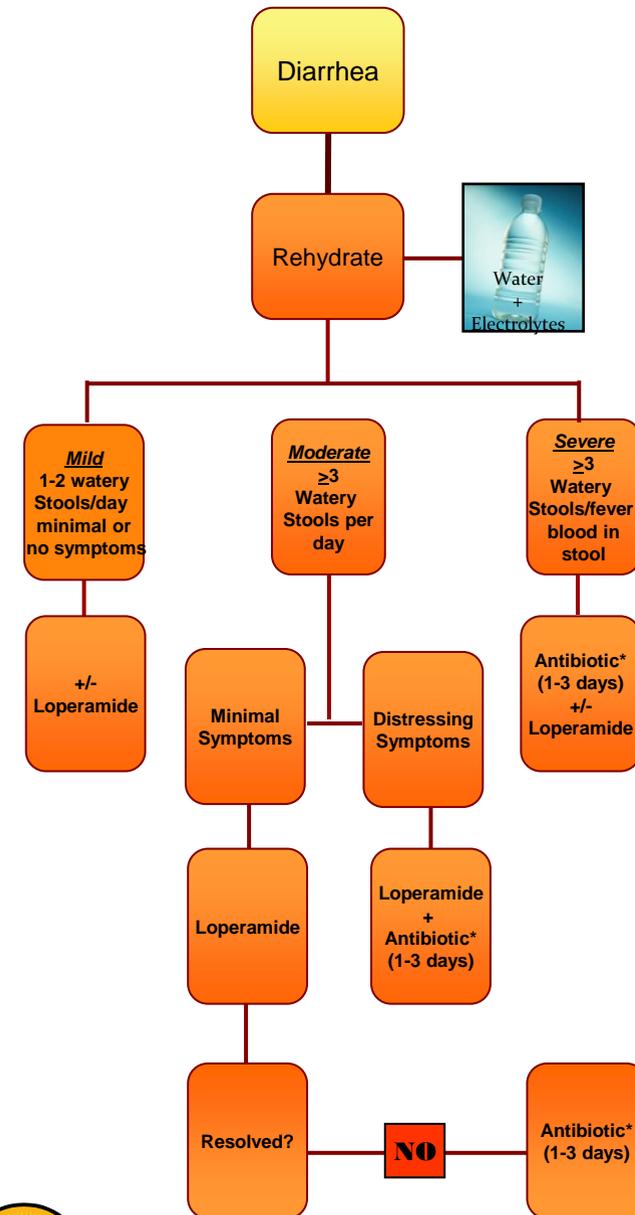
Food Safety

- Travelers' diarrhea affects up to 30-70% of the 50 million travelers going from developed to developing countries.
- Drink only from bottled beverages and do not use ice cubes made from tap water.
- Drink coffee/tea with boiled water.
- It is optimal if you personally uncap all bottled beverages.
- Consume only steaming hot food, and thoroughly cooked meats and sea food.
- Eat only fruits you can peel; steamed or cooked vegetables.
- Avoid uncooked foods like lettuce (salads) and other raw vegetables.
- Brush your teeth with bottled water if the water is questionably unsafe to consume; do not run toothbrush under running tap water.
- Consume only pasteurized dairy products; white colored cheeses may be made from goat or sheep in many developing countries, and thus may not be pasteurized.

**BOIL IT,
COOK IT,
PEEL IT,
OR
FORGET IT!**



Travelers' Diarrhea Treatment



Medication(s) prescribed for your trip:

- **Loperamide** (Immodium) – may be substituted with other antidiarrheal medications
- **Antibiotic*** (for severe travelers' diarrhea)
- **Ciprofloxacin** (1 tab twice a day for 1-3 days)
- **Azithromycin** (2 tabs daily for 1-5 days)
- **Septa DS** (1 tab twice a day for 3 days)
- **Other medication(s):**
- **Acetazolamide** (Diamox) for altitude sickness
- **Meclizine** (for motion sickness)
- **Scopolamine** (patch - for motion sickness)
- **Zolpidem** (Ambien) for sleep

DENGUE FEVER

Dengue fever and hemorrhagic fever (DHF) are viral diseases transmitted by *Aedes* mosquitoes, usually *Ae. Aegypti*. Dengue, a rapidly expanding disease in most tropical and subtropical areas of the world, has become the most important mosquito transmitted disease of humans. More than 2.5 billion people now live in areas at risk of infection. As of 2004, dengue fever is endemic in most tropical countries of the South Pacific, Asia, the Caribbean, the Americas, and Africa.

It has two peak periods of biting activity; in the morning for several hours after daybreak and in the late afternoon for several hours before dark. The mosquito may feed at any time during the day, especially indoors, in shady areas, or when it is overcast. Mosquito breeding sites include artificial water containers such as discarded tires, uncovered barrels, buckets, flower vases or pots, cans, and cisterns.

Dengue fever is characterized by sudden onset of symptoms such as high fevers, severe frontal headache, joint and muscle pain, after an incubation period of 3-14 days (commonly 4-7 days). Other symptoms may be nausea, vomiting and rash. The rash appears 3-5 days after onset of fever and can spread from the torso to the arms, legs, and face. Dengue can also present as a severe, sometimes fatal disease characterized by profuse bleeding and low blood pressure (dengue hemorrhagic fever).

No vaccine or oral medication is available for prevention at this time. Travelers can reduce the risk of acquiring dengue by staying in well-screened or air-conditioned areas when possible, wearing clothing that adequately covers the arms and legs, and applying insect repellent to both skin and clothing. The most effective repellents are those containing DEET.

