

DISASTER PREPARATION / SAFE TRAVEL  
September 9, 2005

Disasters, natural or otherwise, create substantial problems with medical/health implications:

1. Water Supply: disrupted
2. Increased free-standing water
3. Unburied, decaying corpses
4. Shelter unavailable (from sun, rain, heat)
5. Food supply: questionable availability/quality
6. Crime: social, law enforcement disruption
7. Communications: disruption of any reliable connection to others except by satellite-based systems
8. Medication shortage

In the weeks and months post-disaster, social and disease-related problems will occur. Most of these will remain localized in the areas of physical destruction, although mosquito-borne disease incidence and risk will almost certainly increase in adjacent areas downwind: malaria, Japanese encephalitis, dengue, West Nile virus, Yellow fever, etc. (depending on which infectious agents are endemic to the area).

To be properly prepared, travelers should well consider the following:

1. **Bottled water:** Although physically cumbersome, carrying water for short trips makes the most sense. Foreign-bottled water may not be up to acceptable standards of purity. With relief efforts underway, US-produced bottled water may be available from such support organizations.  
*Note: Do not brush teeth with local water and avoid bathing in it. Consider a personal H<sub>2</sub>O purification device (filtration/sterilization) or H<sub>2</sub>O sterilization chemicals (iodine, etc.).*
2. **Food:** Take prepackaged, easily preserved dry foods – “PowerBars”, grain-based snacks (granola, etc.), dried fruit, heat resistant candy, etc.  
*Note: If you can procure packaged food from relief organizations while there, you probably can rely on its safety.*
3. **Shelter:** Consider taking mosquito netting and a sleeping mat/bag.
4. **Medications:**
  - a. Antimalarials: Are a must. In ordinary circumstances, highly dangerous, resistant malaria is endemic to all the affected areas. As time goes by, the density of infected mosquitoes will increase with the increase of free-standing water, large number of homeless people serving as a reservoir for malaria incubation, and a lack of antimalarial medications for prevention and treatment locally.
  - b. **Travel Medicine Kits:** Medications to address,
    - i. Anti-nausea
    - ii. Anti-diarrheal
    - iii. Pain – moderate and severe
    - iv. Fever
    - v. Wound cleansing
    - vi. Bandages
    - vii. Anti-inflammatory
    - viii. Decongestant
    - ix. Sunscreen

**International Medicine Center  
Disaster Preparation / Safe Travel  
September 1, 2005**

- x. Antibiotics: Antibiotics directed at bacterial gastroenteritis (dysentery), respiratory infection, and soft tissue infection (from skin trauma) should be carried. It can be assumed that medications will be unavailable and that access to medical expertise will be marginal. In addition, with an illness evolving, ability to arrange means of travel quickly to obtain medical evaluation may not be practical.
- xi. DEET insect repellent**
- xii. Permethrin Insecticide (clothing)**

**5. Immunizations:**

*Note: There is no cholera vaccine available in the U.S., and the vaccine currently available is not highly effective.*

- a. Gamma globulin
- b. Hepatitis A
- c. Hepatitis B
- d. Typhoid
- e. Tetanus/Diphtheria
- f. Influenza
- g. Polio
- h. Japanese encephalitis
- i. Rabies

**6. Personal items:**

- a. Toilet paper
- b. Soap
- c. Toothpaste
- d. Female menstrual products
- e. Sunglasses / extra reading glasses
- f. Tape recorder
- g. Digital camera (with spare batteries)
- h. Digital phone (with charger)
- i. Camping knife
- j. Personal digital assistant (and batteries)
- k. Global Positioning System device
- l. Footwear (suited for uneven terrain, demanding activity)
- m. H<sub>2</sub>O purification device (filtration/sterilization)

**7. Crime:** Notify your embassy of your arrival and planned itinerary, with updates en route. Also, provide this information to others at home as much as possible through e-mail. Have copies of travel documents (passport, visa, credit cards, and any other important identifying and contact information) in a secured website with password available to trusted individuals.

- a. Maintain the highest level of awareness and suspicion, and practice prudent avoidance of travel in high-risk areas, particularly after-hours.

**International Medicine Center  
Disaster Preparation / Safe Travel  
September 1, 2005**

Diseases expected to increase, specifically:

- Malaria
- Dengue fever
- Bacterial dysentery: cholera, typhoid fever, E. coli, Campylobacter
- Other dysentery: giardiasis, amebiasis
- Respiratory infections: influenza, pneumonia
- Soft tissue infections: staphylococcal and streptococcal – especially boils and impetigo
- Viral: hepatitis A, hepatitis B

*Note: To learn more about these diseases, please see the table at the end of this document.*

8. **Personal Medical Conditions:** Be sure to carry adequate supplies of medications (at least a month's amount) for pre-existing problems: diabetes, high blood pressure, heart diseases etc.

*Note: List meds, dosages, etc. on your website for access while abroad along with other vital personal medical information that would be critical to foreign care providers in an emergency.*

9. **Medical insurance:** Coverage for medical evacuation/transport, medical care, and repatriation of remains

10. **Identification bracelet or necklace/dogtag:**

- a. Name
- b. Website
- c. Cell phone numbers (of your contacts)
- d. Nationality
- e. Passport number

Conclusion: Some of these items may not be relevant to a specific trip. Many must be handled by the traveler. The medical supplies and treatments should be available at a travel medicine specialty clinic.

Edward R. Rensimer, MD, FACP  
Director, IMC

**International Medicine Center  
Disaster Preparation / Safe Travel  
September 1, 2005**

Summary of Common Travel/Disaster-Related Illnesses  
Transmission, Prevention & Treatment

<i>Disease</i>	<i>Transmission</i>	<i>Available Prevention</i>	<i>Treatment</i>
<b><i>Amebiasis</i></b> (Diarrhea)	Food, Water	Low-risk ingestion	Antibiotics
<b><i>Campylobacter</i></b> (Diarrhea)	Food, Water	Low-risk ingestion	Antibiotics
<b><i>Cholera</i></b> (Vibrio) (Diarrhea)	Food, Water	Low-risk ingestion	Antibiotics / Supportive
<b><i>Dengue</i></b> (virus)	Mosquitoes	Vector barriers	Supportive
<b><i>E. coli</i></b> (Diarrhea)	Food, Water	Low-risk ingestion	Supportive ± Antibiotics
<b><i>Giardia</i></b> (Diarrhea)	Food, Water	Low-risk ingestion	Antibiotics
<b><i>Influenza</i></b> (virus)	Respiratory	Vaccine Antiviral medications	Antiviral medications
<b><i>Malaria</i></b>	Mosquitoes	Antimalarial medications	Antimalarial medications
<b><i>Pneumonia</i></b> (pneumococcal)	Respiratory	Vaccine	Antibiotics
<b><i>Soft Tissue Infection</i></b> (MRSA Cellulites)	Skin Contact	Topical antibiotics	Antibiotics
<b><i>Typhoid</i></b> (salmonella)	Food, Water	Low-risk ingestion	Antibiotics / Supportive
<b><i>Vibrio vulnificus</i></b> (Diarrhea/ Soft Tissue)	Seafood, Water	Avoid contaminated sea water/seafood	Antibiotics / Surgery /Supportive
<b><i>Viral Hepatitis A</i></b>	Food, Water	Gamma Globulin Vaccine Low-risk ingestion	Supportive
<b><i>Viral Hepatitis B</i></b>	Intimate contact Body fluids	Safe sex Avoid body fluids (blood) Vaccine	Antiviral medications Hepatitis B antibody
<b><i>West Nile Virus</i></b>	Mosquitoes	Vector Barriers	Supportive

Definitions:

Supportive – IV fluids, fever/symptom control medications, etc.

Vector Barriers – insect repellents, clothing, netting