

Sent: Thu, 12 May 2016 10:58:44 -0400
From: "Moore, Brandon J. MAJ USA WHMO/WHMU" <brandon.moore@whmo.mil>
To: "Vidal, Luis E" <luis.vidal@whmo.mil>, "Cushman, Chase M." <chase_m_cushman@who.eop.gov>, "DeFranceschi, Gabrielle" <gabrielle_k_defranceschi@who.eop.gov>, "Sendroff, Jesse" <jesse_l_sendroff@who.eop.gov>, "Gaughran, Kaitlin" <kaitlin_d_gaughran@who.eop.gov>, "Waldo, Katie A." <katherine_a_bradley@who.eop.gov>, "Branch, Katherine Y." <katherine_y_branch@who.eop.gov>, "Lein, Martha" <martha_b_lein@who.eop.gov>, "Rosa, Luke" <luke_rosa@who.eop.gov>, Members WHMO AIROPS <memberswhmoairops@whmo.mil>, Members WHMU ALL <memberswhmuall@whmo.mil>, Members HMX-1 Duty WHLO <membershmx-1dutywhlo@whmo.mil>, "Brush, Michael" <michael_brush@who.eop.gov>, memberswhmomilaides <memberswhmomilaides@whmo.mil>, PPD OPS <ppdops@usss.dhs.gov>, "Ruskin, Rachel" <rachel_m_ruskin@who.eop.gov>, [REDACTED], "Sims, John Cr" <john.sims@whmo.mil>, [REDACTED] "Bennett, Tabitha" <tabitha_r_bennett@who.eop.gov>, TRAVELOPS-GROUP <travelops-group@whmo.mil>, USSS TS <tsall@usss.dhs.gov>, "Lawlor, Richard I. LCDR USN WHMO/HQ" <richard.lawlor@whmo.mil>, "Varghese, Maju" <maju_varghese@who.eop.gov>, battlestaff@whmo.mil, whpeoc@whmo.mil, justin.kandle@whmo.mil, james.vankeuren@whmo.mil, charlene.thoreen@whmo.mil, wesley.spurlock@whmo.mil, reco.dempsey@whmo.mil, andrew.contreras@whmo.mil, "Schnelle, Timothy W. LtCol USMC WHMO/OPS" <timothy.schnelle@whmo.mil>, marlin.grant@whmo.mil, "Carton, Ryan H. ITC (FPJ) USN WHMO/WHCA" <ryan.carton@whmo.mil>, daniel.dynys@whmo.mil, jose.nieves@whmo.mil, christopher.sharpe@whmo.mil, "Varghese, Maju" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=maju_varghese">, shawn.stelzel@whmo.mil, "Bass, Keith M. LCDR USN WHMO/WHMU" <keith.bass@whmo.mil>, "Gaughran, Kaitlin (Associate)" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=gaughran,kaitlin d.3ac">, [REDACTED] joshua.lingerfelt@whmo.mil, dyson.kepner@whmo.mil, "Victorio, Armando I. SSgt USMC WHMO/OPS (NO PSD)" <armando.victorio@whmo.mil>, jonathan.edwards@whmo.mil, matthew.sikkink@whmo.mil, james.nicholson@whmo.mil, "Narciso, Arlene A. ET1 (SW/AW) USN WHMO/WHCA" <arlene.narciso@whmo.mil>, "Wood, Racheal L. CPT USA WHMO/WHMU" <racheal.wood@whmo.mil>, kyle.stuart@whmo.mil, "Slingerland, Katherine J. MAJ USA WHMO/OPS" <katherine.slingerland@whmo.mil>, betty.moore@whmo.mil, [REDACTED] veronica.schoenborn@whmo.mil, "Pena, Jennifer M. MAJ USA WHMO/WHMU" <jennifer.pena@whmo.mil>, brian.broadwater@whmo.mil, ryan.sherwood@whmo.mil, brice.sanders@whmo.mil, "Ruskin, Rachel (Associate)" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=ruskin,rachel m.81f">, alan.derenne@whmo.mil, james.thompson2@whmo.mil, "Sims, John C" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=whca_1326455aca">, "Vidal, Luis E" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=whca_1325239fa9">, kristin.stoniecki@whmo.mil, "Brush, Michael" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=michaelbrush63665062">, bien.desena@whmo.mil, sandra.bonavina@whmo.mil, thomas.murphy@whmo.mil, jonathan.marrs@whmo.mil, [REDACTED] "Frechette, William M. Capt USAF WHMO/WHMU" <william.frechette@whmo.mil>, benjamin.barlow@whmo.mil, john.spohrer@whmo.mil, "Anderson, Edward J. CIV WHMO/WHCA" <edward.anderson@whmo.mil>, adam.horne@whmo.mil, kimberley.walsh@whmo.mil, clifford.greenwalt@whmo.mil, "Cushman, Chase M." <"/o=eop/ou=exchange administrative group /cn=recipients/cn=chasem.cushman60713554">, "Davila, Eduardo J. SSG USA WHMO/WHCA" <eduardo.davila@whmo.mil>, grace.butler@whmo.mil, "Rosa, Luke" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=luke_rosa">, [REDACTED] mark.fletcher@whmo.mil, "Bradley, Katie A." <"/o=eop/ou=exchange administrative group /cn=recipients/cn=katherinea.bradley75061772">, ryan.jaime@whmo.mil, ari.doucette@whmo.mil, [REDACTED] michelle.lea@whmo.mil, "Dingus, Mark E. CIV WHMO/WHCA" <mark.dingus@whmo.mil>, trevor.monfette@whmo.mil, "DeFranceschi, Gabrielle (Intern)" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=defranceschi,gabrielle k.eee">, matthew.macfarlane@whmo.mil, brandon.limtiaco@whmo.mil, christopher.medina@whmo.mil, peter.benning@whmo.mil, "Watkins, Kenneth J. SFC USA WHMO/OPS (NO PSD)" <kenneth.watkins@whmo.mil>, jamie.eckert@whmo.mil,

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[redacted] jillian.malzone@whmo.mil, "Sendroff, Jesse (Associate)" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=sendroff, jesse l.f72">, andrew.terhall@whmo.mil, joshua.cravens@whmo.mil, "Dechmerowski, Felix C. CIV WHMO/OPS" <felix.dechmerowski@whmo.mil>, jennifer.miller2@whmo.mil, lea.laffoon@whmo.mil, "Bennett, Tabitha (Associate)" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=bennett, tabitha r.242">, benjamin.price@whmo.mil, "McCormick, Alan N. SSG USA WHMO/WHMU" <alan.mccormick@whmo.mil>, justin.wright@whmo.mil, "Steadman, Andrew C. MAJ USA WHMO/HQ" <andrew.steadman@whmo.mil>

Cc: "Pease, Geoffrey B" <geoffrey.pease@whmo.mil>, [redacted] <"/o=eop/ou=exchange administrative group /cn=recipients/cn=whca_13230633e8">, "Pease, Geoffrey B" <"/o=eop/ou=exchange administrative group /cn=recipients/cn=whca_1319792b4a">

Subject: RE: POTUS; Hiroshima, Japan 27 May, 2016
[POTUS Medical Advisory Vietnam Japan May 2016 FINAL V4.docx](#)
[WHMU Travel Guide.pdf](#)

Greetings Hiroshima Advance Team,

I will be the Advance Medical Officer and TMO for the upcoming POTUS Hiroshima, Japan visit. I will be arriving at Hiroshima Airport on Monday 23 May at 1900 HRS (7:00 pm).

Dr. Ronny Jackson, MD and Capt Kyle Perry, RN will be the medical traveling party aboard Air Force One. MAJ Jen Pena, MD and CPT Betty Moore, RN will be traveling on Support.

The recommended PRIMARY hospital for the Airport and all known event sites is:

Hiroshima Citizens Hospital (Level II Equivalent)

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7-33 Motomachi
Hiroshima-City, Hiroshima Prefecture 730-8518
Neighborhood: Naka-Ku
Main Switchboard: [+81] 082-221-2291
24hr ER Dept: [+81] 082-221-2365
Website: <http://city-hosp.naka.hiroshima.jp/english>

A walk-through of this facility will be conducted Tuesday, 24 May at 1000 hrs (10:00 AM). All are welcome to attend. Please meet outside the MAIN ED entrance. Representatives from security and IT have been requested to attend.

The recommended CONTINGENCY hospital for the Airport and all known event sites is:

Hiroshima University Hospital (Level III Equivalent)
Kasumi1-2-3
Hiroshima City, Hiroshima Prefecture 734-8551
Neighborhood: Mainami-Ku
Main Switchboard: [+81] 257-5555
24hr ER Dept: [+81] 257-5586
Website: <http://www.hiroshima-u.ac.jp/hosp/>

A walk-through of this facility will be conducted Tuesday, 24 May at 1200 hrs (12:00 PM). Please let us know if you are interested in attending a walk-through of this facility.

Please contact the WHMU advance officer for any medical issues or questions. If I am not available, please contact the local US Embassy Medical Officer:

LOCAL Embassy Medical Officer:
Dr. Rajesh Vyas, MD
US Embassy Tokyo
Cell Phone: [REDACTED]
Office: 81-3-3224-5635
Email address: VyasR@state.gov

Attached is a copy of the WHMU travel advisory and immunization recommendations. Please ensure you have all of your immunizations updated at least 10 days prior to your departure.

Please let me know if you have any questions or concerns.

V/r

Brandon Moore
MAJ, SP, APA-C
Physician Assistant
White House Medical Unit

Office: 202-757-2476
Cell: [REDACTED]

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-----Original Message-----

From: Vidal, Luis E. MAJ USA WHMO/WHMU
Sent: Thursday, May 12, 2016 10:12 AM
To: Cushman, Chase M. M. EOP/WHO <Chase_M._Cushman@who.eop.gov>; DeFranceschi, Gabrielle K. EOP/WHO <Gabrielle_K_DeFranceschi@who.eop.gov>; Sendroff, Jesse L. EOP/WHO <Jesse_L_Sendroff@who.eop.gov>; Gaughran, Kaitlin D. EOP/WHO <kaitlin_d_gaughran@who.eop.gov>; Waldo, Katie A. A. EOP/WHO

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Battle Staff Mailbox <BattleStaff@whmo.mil>; White House PEOC Mailbox <WHpeoc@whmo.mil>
Subject: POTUS; Hiroshima, Japan 27 May, 2016

Greetings,

Here is the Hiroshima, Japan medical package prepared for:

MAJ Brandon Moore, APA-C (Lead)
Brandon.Moore@whmo.mil

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Please consider all hospital information as pending until confirmed by the medical advance officer.

Very Respectfully,

MAJ Luis Vidal
MPAS APA-C
Deputy Operations Officer
White House Medical Unit
Office: 202-757-2457
Cell [REDACTED]

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April 25, 2016

MEMORANDUM FOR WHITE HOUSE PERSONNEL TRAVELING ON THE UPCOMING
TRIP OF THE PRESIDENT OF THE UNITED STATES TO
HANOI AND HO CHI MINH, VIETNAM; SHIMA AND
HIROSHIMA, JAPAN

FROM: DR. FRANCESCA CIMINO, FAAFP
WHITE HOUSE MEDICAL UNIT

SUBJECT: MEDICAL TRAVEL ADVISORY

The White House Medical Unit (WHMU) offers the following information for those traveling on the May visit of the President to Vietnam and Japan. Travelers deviating from the official itinerary should contact the White House Medical Unit at (202) 757-2476 for further information and individual recommendations.

Immunizations:

Recommended Vaccinations:

Hepatitis A vaccine is recommended for all travelers. Hepatitis A is a viral infection of the liver that is usually transmitted by unclean food handling. The vaccine is a two-shot series. All frequent international travelers should have this vaccine regardless of destination. Detailed information about this immunization is available at http://www.immunize.org/vis/hepatitis_a.pdf.

Typhoid vaccine is recommended for all travelers. Typhoid is a bacterial infection also transmitted by unclean food handling; the injected vaccine (available from WHMU) is effective for two years. The oral vaccine (available by prescription) is effective for five years. All frequent international travelers should have this vaccine regardless of destination. Detailed information about this immunization is available at <http://www.immunize.org/vis/typhoid.pdf>.

Influenza vaccine is recommended for all travelers. Influenza ("the flu") is a viral infection transmitted by coughing, sneezing and close contact. Annual vaccination is required for adequate protection. Detailed information about this vaccination is available at http://www.immunize.org/vis/flu_inactive.pdf.

Yellow fever vaccine is required **only** for all travelers coming from countries with risk of yellow fever transmission going to Vietnam. All such travelers arriving **MUST** have documentation of an up-to-date yellow fever vaccine. The vaccine is a single shot and is effective for ten years. Detailed information about this immunization is available at http://www.immunize.org/vis/yellow_fever.pdf.

Routine/childhood vaccines are recommended for all travelers. These include tetanus, diphtheria, pertussis, polio, mumps, measles, rubella, pneumococcal, and varicella (chicken pox).

Vaccinations are offered to pass holders at the WHMU Clinic in Room 97 of the EEOB, phone (202) 757-2476. Immunization hours are 9:00 to 11:00 AM and 1:00 to 3:00 PM Monday through Friday (clinic is closed on Thursday mornings for training). Good medical practice requires that you be monitored for 15 minutes after an injection. For USSS members, vaccines can also be obtained at the USSS Health Clinic from 1:00 to 3:00 PM Monday through Friday at HQ building, phone (202) 406-6912. Vaccines may also be obtained through your personal physician or any of the U.S. State Department Travel Clinics.

Dietary Precautions:

There is **high** risk for **travelers' diarrhea** in Vietnam, including in deluxe accommodations. Food precautions are essential in order to reduce the chance of illness. The risk of acquiring food-borne illness is greatest when eating at smaller restaurants and from street vendors. Strictly avoid undercooked fish, shellfish, raw vegetables and salads.

Additionally, "**bird flu**" (H5N1) is present in Vietnam. Well-cooked chicken and eggs are safe to eat. It can be difficult to determine if poultry has been adequately cooked. Unless you have knowledge of specific kitchen procedures, do not eat chicken, duck, goose, pigeon, or turkey in Hanoi and Ho Chi Minh.

The water in Vietnam is **NOT SAFE TO DRINK**. Do not drink the tap water unless it has been boiled, filtered, or chemically disinfected. Do not drink un-bottled beverages or drinks with ice. Do not consume ice. Brush your teeth only with bottled water. Drink only canned, boxed, or commercially bottled water and carbonated drinks. International brands are safest. The best approach to avoid food-borne illnesses is prevention:

- Eat only thoroughly cooked food or fruits and vegetables you have peeled yourself
- Cooked foods should be eaten while hot
- *Boil it, cook it, peel it, or forget it*
- Don't eat food purchased from street vendors
- Don't eat dairy products unless you know they have been pasteurized

There is *minimal* risk for travelers' diarrhea in Japan. Tap water and ice in **Japan** are **SAFE** for consumption. There is some risk of **liver fluke** ingestion. The most conservative approach is to avoid undercooked fish and shellfish, raw vegetables and salads outside deluxe establishments while in Shima.

The local embassy personnel can usually be relied upon as a good source of information regarding safe places to eat. You should notify the traveling medical team immediately of diarrhea or nausea or vomiting so that treatment can begin as soon as possible.

Endemic Diseases:

- There is **NO** risk for **malaria** in the travel locations on the itinerary. However, other illnesses spread by mosquitos are highly present in Vietnam. These include **dengue fever** and **chikungunya**. If you will be outdoors for an extended period at any time during the day in Vietnam, you should use insect precautions. Wear clothing that exposes minimal skin and apply DEET repellant (30-35%).

Note: The World Health Organization has reported *sporadic cases of Zika virus* in Vietnam. Based on the current information, we recommend you take the following steps to prevent the disease:

- Women that are pregnant or planning to get pregnant in the near future should consider deferring travel to these areas.
- Men that are traveling to these areas with a partner at home that is pregnant, trying to become pregnant, or may become pregnant, condom use is recommended. Sexual transmission of Zika virus appears uncommon at present, but all authorities are advocating a very cautious approach. In general, abstinence or male condom use is recommended for 1-2 months after risk travel with no compatible symptoms, for 6 months

following recovery from confirmed infection, and for the duration of pregnancy when the female partner is pregnant. Symptomatic travelers should ideally abstain from sex pending test results and seek expert advice if Zika infection is proven.

- All other travelers to these areas are encouraged to wear long sleeved shirts and long pants and use insect repellents with at least 30% DEET. In addition, when possible, stay in places with air conditioning or areas that use window and door screens to keep mosquitoes outside.
- **Avian Influenza (bird flu)** is present in Vietnam. Avoid places where direct contact with birds or their secretions may occur (such as live animal markets and poultry farms). The current influenza vaccine **does not** protect against bird flu. However, we do have anti-viral medications which are effective, if infected.
- **Tuberculosis** is present in Vietnam. Avoid crowded public places, people who are coughing, and public transportation whenever possible.
- **Rabies** occurs in all locations on this trip. All bites, scratches, or direct physical contact with a stray or wild animal should be taken seriously and post-bite medical care sought immediately. If an animal bites or scratches you it is a **MEDICAL EMERGENCY**. Immediately wash the wound with soap and water for at least 15 minutes and contact the WHMU medical officer.
- **HIV, hepatitis B**, and other sexually transmitted diseases are prevalent (as they are in most urban areas).

Additional issues:

- **Air quality** is poor in all large urban areas. Individuals with respiratory problems (such as asthma or allergies) should bring extra inhalers and other prescribed medications. Air quality in **Hanoi and Ho Chi Minh** frequently reaches unhealthy levels. Travelers should reduce prolonged or heavy outdoor exertion.
- **Motor vehicle accidents** are a major health threat. Wear seat belts at all times and be vigilant regarding unfamiliar traffic patterns and driving practices. Avoid riding on

motorcycles.

- **Routine medical supplies** should be carried with you. Bring additional contact lens solutions, glasses, personal prescription medications, over-the-counter cold and allergy remedies, and pain/headache relief preparations.

Note: Special precautions for bringing medications into Japan.

Japanese customs authorities *strictly regulate* the importation of medications. Certain medications, including inhalers and some cough, cold, allergy, or sinus medications, may be prohibited and can result in detention for up to several weeks. In addition to narcotics and other controlled substances, regulated ingredients include those deemed to be stimulants, such as pseudoephedrine, levomethamphetamine, and the common cough suppressant dextromethorphan. For more information please visit the U.S. State Department information page on this issue <http://japan.usembassy.gov/e/acs/tacs-medimport.html>.

- **Jet lag** can be severe and may take several days to overcome. Hanoi and Ho Chi Minh are eleven hours later than Washington DC. Shima and Hiroshima have a thirteen hour time difference. Jet lag is best overcome by adapting to local sleep/wake and meal patterns as quickly as possible. Stay well hydrated and exercise regularly. Early morning exposure to daylight will help reset your body clock. Late afternoon sunlight is beneficial when you return. Sleeping pills will aid in initiating sleep, but will not reset your internal clock.
- **Medical Insurance:** The US Government does not *automatically* provide medical insurance for official travelers. Be certain that you are familiar with your personal insurance carrier's policies on coverage overseas. In most cases, the US Government will provide *secondary* coverage for requirements beyond what your personal policy may cover, but travelers should talk to their personnel offices for details (some policies do not provide any overseas coverage, in which case the government would not be available as a secondary insurer). In most cases, for official travelers, medical evacuation (to the nearest source of acceptable care, not necessarily to the United States) is provided by the government, if required. Credit cards may or may not be accepted depending upon location, and cash is often the preferred method of payment. Additionally, pre-approval may be required so discussion in advance with your private insurance company is highly

encouraged. Additional comprehensive travel advice can be found in the attached booklet from the White House Medical Unit, titled "Travel Advice - International Travel Readiness".

Site-Specific Medical Care:

TRAVELING MEDICAL TEAM

Air Force One:

CAPT Ronny Jackson, MD
World Cell: [REDACTED]
ronny.jackson@whmo.mil

Capt Kyle Perry, RN
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Support Plane:

MAJ Jen Peña, MD
World Cell: [REDACTED]
jennifer.pena@whmo.mil

CPT Betty Moore, RN
World Cell: [REDACTED]
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HANOI, VIETNAM

WHMU Advance Medical Officer

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WHMU Advance Officers

Maj Justin Wright, PA-C
World Cell: [REDACTED]
justin.wright@whmo.mil
Arrival: May 17

LT Ari Doucette, PA-C
World Cell: [REDACTED]
ari.doucette@whmo.mil
Arrival: May 17

Local US Medical POC:

Embassy Nurse Practitioner

Beth King, DNP
[+84] 4-3850-5114 (Office)
[REDACTED] (Cell)
Kingbj@state.gov

Local Hospital:

Vinmec International Hospital (Level II equivalent)

458 Minh Khai St.
Hanoi, Vietnam
Main Switchboard: [+84] 4-3974-3556
24hr ER dept: [+84] 4-3974-3558/4333
Website: <http://www.vinmec.com>

HO CHI MINH CITY, VIETNAM

WHMU Advance Officers

LT Frank Cornejo, PA-C

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frank.cornejo@whmo.mil

Arrival: May 18

CPT Abe Medina, PA-C

World Cell: [REDACTED]
abraham.medina@whmo.mil

Arrival: May 18

Local US Medical POC:

Embassy Nurse Practitioner

Beth King, DNP

[+84] 4-3850-5114 (Office)

[REDACTED] (Cell)

Kingbj@state.gov

Local Hospital:

French Vietnamese (Level III Equivalent)

06 Nguyen Luong Bang St.

Tan Phu Ward, HCMC, 70000

Main Switchboard: [+84] 8-5411-3333

24hr ER dept: [+84] 8-5411-3500

Website: <http://www.fvhospital.com>

SHIMA, JAPAN

WHMU Advance Officers

LCDR Bien Decena, PA-C

World Cell: [REDACTED]
bien.decena@whmo.mil

Arrival: May 19

MAJ Jim Nicholson, MD

World Cell: [REDACTED]
james.nicholson@whmo.mil

Arrival: May 19

Local US Medical POC:

Regional Medical Officer

Rajesh Vyas, MD

[+81] 3-3224-5635 (office)

[REDACTED]
VyasR@state.gov

Local Hospital for Summit Site:

Ise Red Cross Hospital (Level I Equivalent)

1-471-2 Funae, Ise

Mie Prefecture 516-8512

Main switchboard: [+81] 596-28-2171

24hr ER dept: [+81] 596-65-5026

Website: <http://www.ise.jrc.or.jp/info/i04.html>

Local Hospital for Airport:

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Nagoya University Hospital (Level II Equivalent)

65 Tsuramai-cho, Showa-ku

Nagoya 466-8560

Main switchboard: [+81] 052-741-2111

24hr ER dept: [+81] 052-744-2996

Website: <http://www.med.nagoya-u.ac.jp/english02/index.html>

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Staff Care: The WHMU Medical Officer should be the first call for any medical issues. If the WHMU Medical Officer is not available, the Embassy Health Unit should be the next point of contact. An Embassy Medical Officer can provide care or direct you to the appropriate hospital or clinic for treatment. Assistance with individual questions or concerns is also available from the WHMU Clinic at (202) 757-2476 or on the Centers for Disease Control website at www.cdc.gov/travel.

For questions regarding this medical advisory please contact Dr. Francesca Cimino at (202) 814-9749 or francesca.cimino@whmo.mil.

White House Medical Unit

Travel Advice

International
Travel Readiness



The information in this booklet is intended to alert readers to travel-related health and medical issues. Specific advice and recommendations should always be obtained from a health care provider or travel medicine specialist.



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Introduction

What do travelers think about when planning to travel to a foreign country? Do thoughts turn to spectacular scenery, exotic foods, and the opportunity to experience another culture? Are there worries about diseases, insects, and water safety? Most of us consider both parts of the picture, excited about the good prospects and nervous about the bad. We wonder how to get the most out of travel while guarding against any health hazards that might exist. This guide is for those who want to enjoy the opportunities of travel without spending time and energy dealing with problems that could be prevented. We'll provide reliable explanations and practical ideas about the best ways to stay healthy while traveling abroad.

The threat of disease worldwide, although real, is often different from what many people expect. Cholera epidemics, yellow fever, and outbreaks of plague may make headlines, but they rarely affect travelers. This doesn't mean there is no cause for concern. It is important to take all reasonable precautions to reduce the chances of becoming ill. But the problems that are most likely to affect travel plans are much more ordinary—traveler's diarrhea, jet lag, or an auto accident, for example.

Travelers who follow preventive behaviors can avoid most travel-related health and safety problems. This guide will present many techniques that can be used to help reduce the risk of disease and injury while traveling. Some travelers may choose to follow all the techniques carefully, especially if they are traveling in high-risk areas or have existing health concerns. Others may evaluate the risks and decide to follow only some of the precautions mentioned, based on individual needs.

Travelers spending time exclusively in developed countries, in resort areas of developing countries, or within the international hotel circuit will generally have a lower risk of illness.

Adventure travelers and persons staying abroad for extended periods of time (more than 1 month), spending a good deal of time with local populations, or eating and sleeping in rural accommodations are typically at higher risk. This is especially true for persons traveling in developing countries.

The illnesses that usually concern travelers are discussed under topics such as vaccines, general health and safety, water, food, insects, and physical contact. Additional illnesses, rare in travelers, are summarized in alphabetical order.

Forms and checklists are available to help travelers evaluate and document their health and safety needs.

RESOURCES

There are many resources available to help travelers find additional information about the areas they plan to visit. Most bookstores and libraries have travel sections with resources containing facts on climate, geography, political conditions, disease risks, and other concerns. There are also many sites on the Internet where travelers can find free, detailed, and current information. Some of the best are:

Travel Health Online: www.tripprep.com

Centers for Disease Control and Prevention: www.cdc.gov/travel

World Health Organization: www.who.int

International Society of Travel Medicine: www.istm.org

U.S. Department of State: www.travel.state.gov

Vaccines

When planning a trip, one of the first things to do is set up an appointment with a health care provider. ("Health care provider" refers to the physician, physician assistant, or nurse that a traveler consults to determine their travel health needs. This might be a regular physician or a travel medicine specialist.) Ideally, the appointment should take place about 2 months before the departure date. Some vaccines and preventive medications need to be started well in advance of travel in order to be fully effective by the time the destination is reached. Travelers who aren't able to plan that far ahead should schedule the appointment as soon as possible to ensure their personal health is protected while traveling.

Along with food, water, and insect precautions, vaccines can greatly reduce the risk for certain diseases. Many travelers have been vaccinated against

"childhood" diseases such as measles and mumps and may already be immune to them. However, not all countries have been able to achieve a high rate of vaccination, and some diseases that are no longer a threat in developed countries are serious problems in developing countries.

ROUTINE IMMUNIZATIONS

Check family records or with a health care provider to ensure past immunization against measles, mumps, rubella; diphtheria, tetanus, pertussis; varicella; and polio. One type of meningococcal vaccine is given routinely to some children, teens, and college students.

Adults and adolescents who are not immune to common childhood diseases should discuss appropriate protective measures with their health care providers.

Even for travelers who have been previously immunized, a health care provider may recommend a booster dose of tetanus/diphtheria/pertussis (Tdap) or tetanus/diphtheria (Td). A booster dose of polio vaccine may also be recommended for those traveling to an area where polio still occurs. (See [Tetanus](#); [Polio](#).) All persons aged 6 months and older should receive an annual flu immunization.

Vaccines that protect against human papillomavirus are available for use in persons ages 9-26 years. A vaccine that protects against herpes zoster virus (shingles) is available for persons ages 50 years and older.

Individuals who are traveling with children whose immunizations are not complete can usually have those schedules accelerated to provide protection during travel.

REQUIRED VACCINES

Under the International Health Regulations, health officials of some countries are allowed to require proof of yellow fever vaccination as a condition of entry. Some countries require yellow fever vaccination for entry if a traveler has also visited certain other countries during their trip. Check requirements carefully to avoid problems. The vaccine must be given at least 10 days (and for most destinations, not more than 10 years) before entry into the country where it is required. (See [Yellow Fever](#).)

Cholera vaccination is rarely recommended for travelers. No country currently requires cholera vaccination for entry, although some local government representatives may ask for it despite official policy. (See [Cholera](#).) Cholera vaccine is not available in the U.S., but it is available in Canada and elsewhere.

To document status of immunization of or a required vaccine (currently only yellow fever vaccine), travelers need an *International Certificate of Vaccination or Prophylaxis*, signed and dated when the vaccine was given.

The *Certificate* is recognized worldwide, and travelers without one may be denied entry to countries or even vaccinated on the spot (which is not desirable). If any injections are necessary, insist that sterile disposable needles and freshly opened vaccine vials are used. Some people bring their own needles and syringes when they travel.

In the event that a "required" vaccine cannot be given (e.g., because of an allergy to the vaccine or due to the unavailability of the vaccine), a health care provider may choose to provide a medical exemption letter.

SPECIAL CONSIDERATIONS

Under special circumstances, a traveler may be required to receive additional vaccines or testing for entry to a specific country. For example, travelers who participate in an annual pilgrimage to Mecca (Hajj or Umra) are required to produce a certificate of vaccination against meningococcal meningitis issued not more than 3 years and not less than 10 days before arrival in Saudi Arabia. (See [Meningococcal Disease](#).)

Saudi Arabia requires proof of immunization with polio vaccine for travelers younger than age 15 years coming from countries reinfected with wild poliovirus and for all travelers, regardless of age, coming from polio-endemic countries and countries with re-established polio transmission, as well as all travelers from India. All of these persons will also be given a dose of oral polio vaccine upon arrival in Saudi Arabia.

Saudi Arabia also recommends immunization against influenza.

India requires a single dose of oral polio vaccine (OPV) for individuals traveling inbound to India who are both nationals and residents of countries with ongoing polio transmission. This requirement does not apply to foreign nationals residing in or travelers transiting these countries. Inactivated polio vaccine (IPV) is not acceptable for this requirement, which is in place to prevent reintroduction of polio into India.

Many countries have additional health-related requirements for long-term visitors; in some cases these apply to persons staying just a few weeks.

When receiving a visa application, review it in detail and check for all health measures required for entry. (See [Visas](#).) Travelers who will be affiliated with any agency, institution, or organization during their stay should ask their contacts if they know of any official or unofficial requirements.

OTHER TRAVEL-RELATED VACCINES

There are vast differences in standards of health care throughout the world. Many developing countries do not have access to the finances or personnel needed to enforce strict public health standards. Disease outbreaks can occur suddenly and spread rapidly. In some countries, there are risks of serious complications from medical treatments that are questionable or even dangerous.

Depending on the destination and the length and nature of the stay, a health care provider might recommend additional vaccines or preventive medications to help reduce the chance of contracting specific illnesses. The 2 most important factors are whether the traveler will be transiting areas where the risk of disease is greater than it is at home and whether certain activities there will put the traveler at risk of contracting these diseases. Search for up-to-date information about current conditions in the countries that will be visited. (See "[Resources](#).") Some travel-related vaccines that might be recommended include hepatitis A and B, Japanese encephalitis, typhoid, rabies, cholera, yellow fever, and meningococcal.

General Health and Safety Concerns

ACCIDENTS

Transportation-related injuries are the leading cause of preventable deaths among travelers. Road conditions and traffic law enforcement may be poor in some countries, and vehicles may lack adequate safety equipment. Cars with seat belts might not be readily available at a particular destination. The tips below can help prevent transportation-related injuries:

- Whenever possible, try to find cars with seatbelts.
- Avoid using overcrowded public vehicles if possible.
- Do not hesitate to ask drivers to slow down if they are driving recklessly.
- Allow a few days to acclimatize and overcome jet lag before driving.
- Avoid driving at night, especially in rural areas.
- Remain alert and drive slowly—roads could be damaged or too narrow for passage, animals might be gathering ahead, or people could be hiking or crossing, even in remote areas.
- Be aware of the appropriate side of the road on which to drive, as it can vary from country to country.
- Individuals who will be traveling away from urban centers should research in advance where to find fuel, food, and assistance.
- Make note of the nearest regional medical facility on maps.
- Some countries have a "zero tolerance" policy and severe penalties for driving under the influence of alcohol or drugs.
- In some countries visitors are allowed to operate motor scooters, bikes, and other vehicles over unfamiliar and potentially unsafe terrain. This



poses a risk to the operator, especially if inexperienced, and to others. Don't use these vehicles and stay out of the way when traveling on roadways or on foot. Travelers who choose to cycle while abroad should bring a good-quality helmet.

Slips and falls can be prevented by taking some common-sense precautions:

- Organize hotel rooms. Return chairs and drawers to their proper places and keep belongings off the floor. Keep a soft light on at night in order to see. Take extra care in the bathroom, where hard surfaces, water, and electricity can combine to cause serious injuries.
- Be careful when moving around on planes. Narrow aisles, food carts, and improperly stored luggage can be hazardous, especially during turbulence.
- Watch out for the most common shipboard mishaps: falling overboard, tripping over bulkheads, and catching fingers in doors that swing shut when the ship moves. It's not unusual for ships' doctors to treat onboard accidents before ever leaving port.
- Wear low-heeled, slip-proof shoes while traveling to help reduce fatigue and the risk of injury.

ALTITUDE

Travelers to mountain areas should be prepared to recognize and respond to the symptoms of altitude illness, which are caused by the lower level of oxygen available at high elevations. Although the human body can adjust to changes in altitude, the process (called acclimatization) takes time.

Each person has his or her own "acclimatization line." Below it, travelers probably won't experience altitude illness, but going above it causes

symptoms to begin. For most people, this line initially lies somewhere near 2,700 m (8,900 ft), but it can be adjusted by following preventive techniques. Travelers who have had altitude problems previously, have heart or lung problems, are unable to acclimatize on the way to altitude, or plan to go to extremely high altitudes should discuss prevention and treatment options with a health care provider.

Three types of altitude illness can occur:

- **Acute mountain sickness (AMS)** typically appears at altitudes above 2,500 m (8,200 ft), although illness can begin at elevations as low as 1,500 m (4,900 ft) in some individuals. Symptoms usually appear within a few hours of ascent and may include one or many of the following symptoms: headache, insomnia, irritability, dizziness, muscle aches, fatigue, loss of appetite, nausea or vomiting, and swelling of the face, hands, and feet. Travelers who experience mild AMS symptoms should limit their activity level and remain at the same altitude 1-2 days before ascending any farther. Aspirin or ibuprofen can be used for headache. If symptoms become worse during a day of rest, *descend until symptoms begin to improve*.
- **High altitude cerebral edema (HACE)** is a dangerous form of altitude illness that can lead to coma and death. HACE can be thought of as a worsening of AMS symptoms, with additional changes in consciousness and/or coordination. Persons affected may hallucinate, appear confused, and begin to stumble or stagger, and they can have severe headaches and extreme fatigue. It is crucial to help victims descend to receive drug and oxygen treatment because they may be too confused to see the problem themselves. People who have recently experienced HACE should not ascend again, even if they have improved.
- **High altitude pulmonary edema (HAPE)** is a buildup of fluid in the lungs that can occur along with HACE or separately. Like HACE, it is a medical emergency. Victims become breathless and very tired when walking and may experience a sense of fullness or pressure in the chest. Eventually they are short of breath even while resting. At this point, the illness can rapidly progress to death. Victims must be guided down to receive drug and oxygen treatment as soon as the illness is recognized as HAPE. They should be kept warm and assisted as much as possible because exertion will make the condition worse. Some people have chosen to ascend again after recovering from HAPE, but this is not recommended.

ALTITUDE ILLNESS PREVENTION AND TREATMENT

Preventive Behaviors

Travelers who are flying or driving to a high-altitude location should try to spend a few days at transitional altitudes to adjust. Consult a health care provider before leaving and discuss personal needs for medications to prevent and/or treat altitude illness. Remember, the same advice that applies to climbers applies to anyone at a high altitude: watch for signs of altitude illness, drink extra water, don't do too much too fast, and avoid alcohol and unnecessary medications, especially those that decrease breathing rate such as sleeping pills, tranquilizers, and narcotic-based pain relievers.

Travelers who are climbing to high altitudes have options that those who are flying or driving may not have. Climbers can use these preventive techniques to acclimatize and reduce their chances of altitude illness:

- "Climb high, sleep low." Altitude illness occurs during ascent, not descent. The simplest way to avoid or reduce symptoms is to ascend slowly to give the body time to become accustomed to changes in oxygen concentration. Travelers who begin to feel mild symptoms of altitude illness, or reach an altitude of 3,000 m (9,800 ft), should keep total daily altitude gain under 300 m (1,000 ft). Travelers can exceed 300 m of altitude during the day's climb, but should descend to sleep at an altitude that is no more than 300 m above the previous night's altitude.
- Increase fluid intake to counteract symptoms of dehydration induced by dry mountain air and increased respiratory rate.
- Avoid using alcohol or any unnecessary medications as their effects may be increased at high altitudes. Sleeping pills, tranquilizers, and narcotic-based pain relievers, in particular, can cause serious problems because they can decrease breathing rates. Consult a health care provider about any required medications.
- If a group tries to push past the limits of its individual climbers, there is a good chance that those who are most susceptible will experience altitude illness. If someone becomes ill during ascent, assume the problem is due to altitude and act accordingly.
- Keep a log of the altitude at which each trip begins, the amount gained each day, and the altitude slept at each night. If anyone becomes ill, this information will be very important.
- Travelers who have had altitude problems previously, have heart or lung problems, or are planning to go to extremely high altitudes, should



consult a health care provider to discuss options for prevention and treatment of illness.

Medications

There are some drugs available that can help with altitude illness.

- **Acetazolamide** has been shown to prevent or lessen AMS symptoms by increasing breathing rate and helping with acclimatization. Side effects may include tingling in hands and feet, nausea, and increased urination.
- **Dexamethasone** can improve AMS and HACE symptoms long enough for severely ill travelers to descend to safety and medical help, but it is not curative and does not promote acclimatization. Side effects may include sweating, flushing, and nausea.
- **Nifedipine** is often included in treatment for HAPE. It improves blood flow and reduces the need for oxygen. Side effects may include headache, nausea, weakness, dizziness, or edema.

Depending on the severity of illness, additional drugs and oxygen treatment may be necessary. Always ask a health care provider for written information on dosages, scheduling, side effects, and precautions for all medications.

BEACHES AND SWIMMING

It's easy to be caught off guard while enjoying oneself. Unfortunately, play can be serious business for those unaware of the dangers at recreational areas.

- When possible, limit swimming to chlorinated pools and unpolluted ocean beaches far from the mouths of streams. Avoid freshwater lakes and rivers in the tropics—they may contain the snails that transmit schistosomiasis to humans. (See [Schistosomiasis](#).)

- Walking barefoot exposes individuals to poisonous plants and animals, parasite and fungal infections, puncture wounds, and cuts and bruises. Wear footwear when the going is rough. Rubber sandals, flip flops, or shoes made to be worn in water can offer some protection when wading or swimming.
- In areas frequented by animals, sand and soil may be contaminated. As a precautionary measure, consider sitting on a towel, blanket, or piece of clothing if chairs or hammocks are not available. Shake out all fabrics thoroughly after use to avoid transporting any "unwanted guests."
- In tropical waters, watch for jellyfish, sea anemones, and corals, all of which can give nasty stings. If stung, rinse the affected body part with isopropyl alcohol, vinegar, or seawater, and scrape or shave the area gently to remove any remaining stingers. Do not rub the area or rinse with fresh water or tap water. Acetaminophen, aspirin, or ibuprofen will help ease pain, and antihistamines such as diphenhydramine (Benadryl) can relieve itching and swelling. If symptoms are severe or if signs of anaphylactic reaction are present, seek medical help immediately. (See [Pests.](#))
- Strong currents and submerged objects can cause injury and drowning. Before diving into unfamiliar waters, check out what lies below and don't touch strange objects.
- There are usually no lifeguards at beaches in tropical and developing countries. Never swim alone or at night. Know what to do to help someone who is injured or in danger.

CHILDREN AND TRAVEL

Traveling with children can be more rewarding by taking some extra preparations. Plan a pace that accommodates children without hurrying, and include frequent food, beverage, and rest stops. Have toys, books, and games available to keep children quietly occupied when necessary.

- Give children an identification necklace or card to keep with them at all times. It should include an address and phone number while abroad (but no names), as well as medical or emergency information.
- Prearrange a meeting place in case of separation. Some people have children carry whistles to use if they become lost. Make sure children know the name and number of the person or place they should call if they become lost and their parents are not available. Teach them how to use foreign telephones and let them practice making several calls.

- Travel agents or airline representatives can usually provide airplane seating charts and help choose the best travel times and seats for children. Many airlines will allow travelers to carry an infant safety seat or collapsible stroller on board, but travelers should check the airline's policy prior to travel.
- Many airlines require that the infant be placed in an approved infant seat or child restraint device, which is then secured with the safety belt of the aircraft seat. Most airlines require infants older than 2 years of age to occupy a regular airline seat. In some cases, airlines will allow a child less than 2 years of age in a child restraint system to occupy an empty airplane seat without having to pay the airline fare for the child. However, purchasing an airline ticket for the child is the only way to guarantee that a seat will be available.
- Call the airline in advance to order special meals for children if they might not like the food offered. Bring along familiar foods or snacks and a 24-hour supply of food for infants in case of extensive delays.
- Traffic regulations at various destinations may be different than those at home. Be sure children understand the rules in the countries they will visit, especially if traffic lights or signs are different than those they already know.
- Do not assume child or infant car seats can be rented at each destination—bring one along unless it is certain that a safe one will be available. Travelers may also need a length of climbing rope or some other means of fastening the child's seat to the car's seat in case seat belts are not present or are inadequate.
- Check to be sure that all routine immunizations are up-to-date and that any needed travel-related vaccines are given, if appropriate. As with adults, infants and children need to be protected against diseases caused by physical contact (such as rabies) or insects (such as malaria) and should follow careful food and water precautions. In addition, travelers should be prepared to handle any diarrhea that might occur while traveling.

COLD WEATHER

If travel plans include outdoor activities in a chilly environment, it may be necessary to pack water-resistant shoes or boots, a hat or face mask, and mittens or gloves. The tips below will help travelers cope with the cold.

- Dress in layers of loose, soft clothing for warmth—pockets of air between the layers create additional insulation, and layers can be added or removed if the weather changes.

- Wear an outer layer of windbreaker-type material. A chilling wind can pull away generated body heat and turn a cold day into a dangerous one.
- If there is any chance of precipitation, wear a moisture-resistant covering as an outer layer.

Hypothermia is a dangerous drop in the body's core temperature. It can occur even on days that seem mild, especially if the weather is damp. Many hypothermia deaths have occurred in weather that is between 30 and 50°F (-1 and 10°C). Children and the elderly are particularly vulnerable. Watch for symptoms of hypothermia: slurred speech, decreased awareness, shivering, irritability, or stumbling. Be especially concerned if shivering stops—this is a sign of exhaustion.

Frostbite is an actual freezing of body tissues. Symptoms include pain, numbness, swelling, itching, and changes in skin color. **Do not** thaw a frozen body part unless it can be kept thawed. For example, if a hiker must still be able to walk to help, don't start the warming process. Refreezing causes damage that is even worse than the original frostbite.

Travelers who suspect frostbite or hypothermia should find warm shelter and seek medical attention. Remove cold, damp clothing and place the victim between blankets until help arrives. Avoid interim measures such as rubbing or rapid re-warming, which can lead to complications.

CRIME

Many countries have government offices (such as the U.S. Department of State) that supply information for travelers. Check for advisories on political or civil unrest, criminal activity against tourists, and other travel concerns before each trip. Know the phone number and location of the closest embassy or consulate and always carry this information. A duty officer is usually on call in case of crime or other emergency. Know how local law enforcement agencies operate and where to go for help. Unless local law requires travelers to carry a passport, keep it locked in a safe location and carry a photocopy. If a passport is stolen, identification is needed to receive a new one. Bring several passport-size photos.

TIPS FOR AVOIDING CRIME

Out and about:

- Prepare tour routes before setting out. (Avoid studying maps in the street—this will attract unnecessary attention.)
- Lock rooms before setting out and inform at least one other person about individual daily schedules at all times.

- Become familiar with common local scams and distraction techniques. Ask at hotels if any areas are dangerous. Use extra caution in tourist sites, marketplaces, elevators, crowded subways, train stations, and festivals, and avoid marginal areas of cities.
- Be constantly attentive to surroundings and be wary of any stranger who engages in any form of conversation or makes physical contact in any way, no matter how accidental the contact appears to be. Especially beware of pickpockets around train stations and other crowded areas. Groups of small children sometimes act as distractions so travelers can be robbed.
- If confronted, give up all valuables. Money and passports can be replaced—people cannot.

Valuables, money, and dress:

- Do not wear expensive clothing or jewelry and avoid carrying expensive cameras, computers, or luggage. Avoid clothing that declares nationality or political beliefs.
- Never carry valuables or large amounts of cash. Use traveler's checks or credit cards for large purchases, but first make sure they are accepted at each destination.
- Learn about local exchange rates and pay close attention to all monetary transactions. Exchanging money is sometimes seen as an easy way to deceive tourists. Avoid black market exchanges.
- Carry only a passport face page and legal entry stamp photocopy while out and about. Leave the passport in a hotel safe.
- Do not carry purses or money belts that can be cut or torn off. (Wear handbags across the chest or under a jacket or shirt.) Carry a wallet in a front pocket with rubber bands wrapped around it so it cannot be easily removed.

Traveling by car, taxi, or public transport:

- Keep suitcases locked and out of sight. Do not leave valuables in the car.
- When driving, keep car doors locked and windows rolled up. Use cars with air conditioning. Carjacking and thefts happen when stopped at gas stations, parking lots, or in slow city traffic.
- Avoid driving at night or alone, and never drive outside urban areas after dark. Do not pick up hitchhikers.
- Do not drink and drive.



- Rental cars, in particular, can attract unwanted attention. Avoid cars with rental markings. Never drive a motorcycle or scooter abroad.
- If available, long-stay and business travelers should arrange a locally purchased mobile phone to be kept in the vehicle when traveling.
- Use only "registered" taxis, preferably radio taxis. Negotiate the fee before entering the taxi and carry small denominations for the taxi bill. Avoid sharing taxis with strangers. Avoid overcrowded public transport if possible.
- Do not accept food offerings—they may contain sedatives to induce sleep and make it easier to be robbed.
- If the driver is acting in an unsafe manner, or appears to be intoxicated, disembark at the next stop.
- Beware of bogus porters who may disappear with luggage.

In the hotel:

Rooms on floors 3-6 are generally regarded as optimal for safety and security.

- Lock rooms when heading out. When in the hotel, be sure to keep the hotel door locked at all times.
- Meet visitors in the lobby. Do not advertise personal room numbers. When out of the hotel, leave keys with the concierge. Inform someone, including the front desk, of an expected return time.
- Look for fire safety instructions in each hotel room and become familiar with escape routes upon arrival.
- Keep valuables in the hotel safe. Room safes are less secure.

DENTAL CARE

Travelers who have a current dental concern or any pending dental work should take care of it before leaving home—it could be difficult to find a dentist in a foreign country. Also, dental care in most developing countries can be very poor, and travelers should avoid the risk of problems from inadequate treatment, improperly sterilized dental instruments, or infectious disease. Travelers who will be away from home for an extended period of time should have a routine checkup before departing.

EMERGENCIES

Prepare for emergencies by knowing how to handle problems before leaving on a trip.

- Check with a medical insurance provider to determine coverage while out of the country. Know how to reach a representative while traveling abroad and how to obtain compensation for any care received. Travelers who are not comfortable with their current level of coverage should look into supplemental travel insurance.
- Determine personal needs in advance using thorough research—all insurance policies are not created equal. Frequent travelers may want a yearly policy; others may choose coverage only for the length of a one-time trip. Policies may or may not cover air rescue, ambulance transport, help in making hospital arrangements, coverage of medical or hospital bills, cash advances, evacuation to a home country, or 24-hour telephone assistance.
- Some travelers may already have partial coverage or the option to purchase it through travel-related memberships. Some credit card companies include insurance if charging a trip; many international auto and touring clubs offer policies along with the usual provisions for car towing and accident assistance. Some tour packages also include insurance. Check carefully to find out what is covered.
- Most foreign medical providers require cash payment. Before leaving home, ensure access to funds while abroad.
- Try to have an advocate present while receiving medical care. A health care provider who will represent a traveler's best interests, a traveling companion, or, at a minimum, someone who speaks the local language can serve as a valuable ally in an emergency.
- Ask a health care provider if they can recommend providers or hospitals in each destination country, if possible. In serious emergencies, go to the largest medical facility in the area as quickly as possible.

- Those with a medical condition should wear medical alert tags and carry a list of important foreign words related to their condition.
- Avoid injections, dental procedures, or skin piercing while traveling. Even manicures and shaves at public barbers can be risky in some areas. All of these activities can increase exposure to HIV (human immunodeficiency virus) and other blood-borne pathogens.
- Travelers with a condition requiring injections should bring a supply of needles and syringes. Carry a letter from a doctor explaining the specific medical needs.
- If injected medications are advised during travel, ask if there is an oral formulation that can be taken instead. If injections are necessary during travel, insist on individually wrapped, disposable needles.
- If there is a chance that an injection offered abroad is unnecessary (especially if circumstances are questionable or if the injection is to be given by non-medical personnel), ask if there is an "administrative fee" or penalty that can be paid in lieu of the shot.

EYE CARE

- Travelers who have eye or vision problems should see a eye care specialist before departing.
- Bring an extra pair of glasses or contact lenses, along with any necessary cleaning or wetting solutions.
- Travelers who wear contact lenses should wash hands with purified water before inserting the contacts. Consider switching to eyeglasses if traveling to remote areas.
- Protect the eyes by wearing sunglasses when outdoors, especially at high altitudes or if the sunlight is intensified by water, sand, or snow.
- Keep a written copy of any lens prescriptions with all other health information.

FLYING WITH A COLD

Traveling by airplane with swollen mucous membranes can cause pain during ascent and descent or, in rare cases, may even result in permanent damage. Travelers who are very ill and have ear or sinus pain or a high fever should consider postponing air travel until they have recovered. Those who must travel with a cold should drink plenty of fluids and use a decongestant or nasal spray before takeoff and landing. Over-the-counter cold remedies work effectively for most people, but, in addition to a decongestant, they



commonly contain antihistamines, which can cause drowsiness. Ask a health care provider for specific recommendations on treatment and dosages.

HEAT AND SUN

Travelers who are visiting a country where temperatures or humidity exceed normal exposure should take extra precautions to guard against skin damage or heat-related illnesses.

- Wear sunscreen every day to prevent skin damage. Use a sun protection factor (SPF) of 15 or more and make sure it protects against both UVA and UVB light. Reapply if swimming or perspiring. Remember to apply sunscreen to ears and neck and use lip protection as well. If choosing sunscreen for a child, select one without PABA, which can cause rashes or other problems.
- Ultraviolet radiation from the sun increases the risk of cataracts. Where sunlight is very strong, wear sunglasses that have side shields and block 92-97% of visible light.
- While in the sun, wear light-colored, lightweight, loose-fitting, heat-reflecting clothing that covers as much skin as possible. Cotton and linen fabrics are good choices. Wear a loose-fitting, light-colored hat with a wide brim.
- Try not to spend too much time outdoors between 10:00 a.m. and 2:00 p.m., when the sun is strongest.
- If taking any medications, be extra careful about sun exposure. Check to see if the medications cause photosensitivity (which will increase the risk of sunburn).
- Decrease alcohol intake and increase intake of other fluids.

Travelers who have *mild sunburn* should relieve the discomfort by bathing in cool water or applying cool compresses to affected areas and by taking oral anti-inflammatory drugs such as aspirin or ibuprofen.

Heat rash can appear as an area of raised spots or as reddened, sensitive skin, usually in body areas that are not exposed to air, such as underarms and groin. Cool baths or compresses can help soothe irritated skin, and hydrocortisone cream will decrease itching.

Heat exhaustion results from elevation of core body temperature (hyperthermia). Symptoms include dizziness, nausea, rapid pulse, and headache. Immediately take the person to a cool spot to rest and give plenty of liquids. If untreated, heat exhaustion can lead to heat stroke.

Heat stroke is extreme hyperthermia, with a core body temperature of 100°F (38°C) or higher. It is very serious and can be fatal. Symptoms include confusion, irrational behavior, low blood pressure, shock, vomiting, shortness of breath, and unconsciousness. Cool victims as quickly as possible: remove their clothing, wet them down, fan them, and get medical help immediately. If they are able to drink, give them water.

JET LAG

Many people experience jet lag as a result of traveling across multiple time zones. Jet lag is usually more obvious when flying east and less so when flying west. The range of symptoms includes sleep disturbances, daytime fatigue, weakness, headache, sleepiness, and irritability. Most symptoms disappear by the fifth day after traveling across a 6-hour time zone. It is difficult to compensate for jet lag for trips shorter than 3 days.

Tips for reducing jet lag:

- When possible, choose daytime flights to minimize loss of sleep and fatigue.
- Eat lightly and drink lots of water.
- Avoid large fatty meals, caffeine, and alcohol during the flight.
- Adjust meal and sleeping times to those of the destination upon arrival. It may be even more effective to begin the process gradually several days before the trip, if possible.
- Get daylight exposure as soon as possible upon arrival.
- If traveling to the east, get exposure to morning light; if traveling to the west, get exposure to afternoon light. This will help the body adjust to the changed sleep-wake cycle.

Prevention of Jet Lag with Drugs

Consult a health care provider about the use of medications such as melatonin or zolpidem (Ambien) and the timing of their use, if appropriate. Sedatives are no longer recommended on airline flights due to the risk of blood clots in the legs during prolonged immobility.

- Zolpidem (Ambien) is a hypnotic that has been shown to be as effective as melatonin. It can be used to induce sleep after arrival at the appropriate destination time-zone sleeping time, when the body is jet lagged and cannot fall asleep. It can be used for up to 2-3 nights at each end of the trip. Some persons, and especially women, may experience morning impairment in activities that require full alertness (e.g., driving). Extended release formulations can result in day-long impairment. Use the lowest effective dose.
- Melatonin is a natural hormone in the body that aligns sleep cycles and other physiologic functions. In the U.S., melatonin supplements are not regulated by the FDA, so their purity and potency cannot be guaranteed. Melatonin can cause sleepiness and reduced alertness. Do not drive, operate heavy machinery, or perform tasks requiring alertness for 4-5 hours after taking melatonin. Timing of the dose of melatonin must be precise or it can actually worsen symptoms. Persons who suffer from psychiatric problems or migraine headaches or who may be pregnant should use melatonin with caution, if at all.

MEDICATIONS

- Depending on destination, familiar medications and health-related products may not be available or they could be marketed using different names or formulations. Some medications might not meet the standards for safety, quality, and consistency found at home.
- Before departing, list all medications and their generic names and keep this list close at hand in case replacement medications are needed. Also keep a copy of the drug information leaflets (package inserts) from the manufacturers.
- Bring along an adequate supply of all the over-the-counter and prescription medications that are needed, preferably split up into 2 separate bags. Leave them in their original containers and keep a record of their generic names.
- Take along copies of prescriptions for the most important drugs, and have all prescriptions written using generic names, since trade names vary in different parts of the world.

- Obtain and carry a letter from a physician on letterhead stationary, appropriately signed and dated, containing a medical history and medication requirements.
- Travelers who are allergic to any drugs should carry medical alert information, preferably a Medical Alert wristband or tags listing the allergy.
- Remember to pack products for skin care, hygiene, and birth control if depending on certain brands.

MOTION SICKNESS

Travelers who have experienced a bout of motion sickness during ground, air, or water travel should know the feeling: vague discomfort becomes nausea, the face pales, and sweating ensues. Lightheadedness and exhaustion may be followed by vomiting. Some people are more prone to this condition than others, but factors such as turbulence, anxiety, and illness can also trigger motion sickness.

The human body has a delicate system of equilibrium that relies on fluids in the inner ear, visual sensors, and other physical input to maintain a sense of balance. When incoming signals are in conflict—for example, when the body is at rest yet the eyes sense movement—this system is disturbed, causing the symptoms of motion sickness.

Antihistamines can prevent or relieve motion sickness, especially if taken 30 to 60 minutes before travel and continued during the trip. Over-the-counter medications approved for this use in the U.S. are cyclizine (Marezine), dimenhydrinate (Dramamine), diphenhydramine (Benadryl), and meclizine (Bonine). Side effects may include drowsiness, dizziness, or dry mouth. Antihistamines should not be used by persons with glaucoma, breathing problems such as asthma, or urinary difficulties caused by an enlarged prostate. Check labels carefully for appropriate dosages, precautions, and age restrictions.

Some people may require prescription drugs such as scopolamine if over-the-counter medications are not effective. Discuss the options with a health care provider, and make sure to ask about precautions and drug interactions. Other tips:

- Eat lightly before and during travel. Don't drink alcohol.
- Sitting in the most stable section of a moving vehicle helps to reduce symptoms. The best seats are those over the wings on an airplane; in the front seat of a car (except infants and children); near the front of trains; amidships, on deck if possible; and just forward of the midsection on buses.

- Face forward and look out a window, keeping the eyes fixed on the horizon or on a stationary point in the distance. Stay as still as possible, and avoid any rapid head movement.
- Sleep if possible. If not, it may help to wear dark glasses or keep the eyes closed to reduce visual stimulation.
- Children are more prone to motion sickness than adults are. For symptomatic treatment of motion sickness, dimenhydrinate or diphenhydramine may be considered for children aged 12 years and older. The first dose should be given 1 hour before travel and then every 6 hours. A test dose should be given in advance, as these medications can cause excitability rather than drowsiness in some children.
- The other advice that applies to adults is also valid for kids, with 1 exception: the front seat of a car is not safe for children. Make sure children are secured in the back seat with a seat belt or child car seat. Give them sunglasses to wear, and make a game out of watching a fixed object on the horizon.

PACKING FOR TRAVEL

- Start early! Keep an ongoing list of everything necessary to bring, writing it down as soon as possible. When it's time to load up, check off each item as it is packed. A number of things can be forgotten if relying only on memory, particularly if packing in a hurry.
- It is not uncommon for luggage to be misplaced or stolen. Items that travelers may have trouble replacing or can't do without for a day should be kept in a carry-on bag: valuables, traveler's checks, important documents, medications, eyeglasses, toiletries, etc. Also pack a change of clothing in the event of delayed luggage return.
- In an environment with high levels of bacterial contamination, frequent handwashing can help lower the risk of infection. Bring disposable antibacterial wipes or "waterless" antibacterial gel if soap and clean water will not be available.
- If there are clothes that need to be kept unwrinkled, lay them flat and slip them inside plastic dry cleaning bags or jumbo garbage bags; fold them as few times as possible. The plastic bags reduce wrinkling. Keep each pair of shoes in a plastic or cloth bag. This protects the shoes and the clothes.
- Pack heavy items at the bottom of the suitcase so they don't wrinkle the lighter items. Travelers who are using wheeled luggage should pack



heavy items closest to the wheels to help keep the luggage upright.

- When all packing is finished, take a final step—or several. Walk around with all luggage to mimic practices while traveling. Are the cases too heavy or unwieldy to carry for a moderate distance? Are objects shifting or falling out? Are items such as plane tickets and passport safe in a zippered pocket yet easily accessible?

PASSPORTS AND VISAS

A **passport** is issued by a home country as proof of citizenship. Visas are stamped into passports to allow entry into other countries. Although there are exceptions, travelers are usually required to display passports when entering or leaving a country. Travelers should also carry a photocopy of their passport and keep the original in a safe place at destination.

A **visa** is an endorsement or stamp entered into a passport by a foreign government. It allows a traveler to enter a country for a specific reason and period of time. Start applying for visas as soon as possible so that all necessary documentation is completed well before the departure date. To receive a visa, a passport must be sent to an embassy or consulate of the country that will be visited. Most countries have embassies and consulates worldwide, and travel agents can usually tell travelers where the nearest ones are located. Keep in mind that a passport may be tied up for days or weeks until the paperwork is done, so plan accordingly. In addition, some countries require proof of yellow fever vaccination before they will issue a visa. The amount of time spent mailing a passport to the various agencies involved can really add up if there are several countries on an itinerary. Plan ahead. For travelers who only have a few weeks to prepare, a commercial visa service can often speed up the process.

TRAVELER'S THROMBOSIS (DVT)

Blood clots called deep vein thrombosis (DVT) can occur in the large veins of the leg or pelvic area during or after long trips by air, bus, or train. Sitting still for long periods of time, especially with knees bent, can cause blood to pool in the legs, which increases the risk of a clot forming. (See other risk factors for DVT, listed below.) For air travel, the risk of DVT, sometimes called "traveler's thrombosis," increases with the length of the flight. If not treated, DVT can lead to pulmonary embolism (PE), a potentially life-threatening condition in which part of the clot in the leg dislodges, travels to the lungs, and blocks a blood vessel.

Risk Factors for DVT

- A personal or family history of previous DVT, PE, or blood clotting disorder
- Recent major surgery, trauma, or immobilization (e.g., being in a leg cast)
- Cancer within the last 2 years or current chemotherapy
- Late pregnancy or the first 6 weeks after childbirth
- Estrogen-containing medications
- Older than 50 years of age
- Severe obesity
- Recent heart attack or congestive heart failure
- Large varicose veins or chronic venous insufficiency

Symptoms of DVT

Symptoms of DVT can occur during or after a long flight or trip. Travelers who develop any of these symptoms should consult a health care provider:

- Leg pain, ache, or discomfort
- Leg swelling
- Increased warmth in the leg
- Leg skin discoloration (red)
- Joint pain

Symptoms of Pulmonary Embolism

- Chest pain
- Shortness of breath
- Difficulty breathing
- Travelers who develop any of these symptoms should seek immediate medical attention.

Prevention of DVT

Preventive measures that can be taken (primarily to prevent blood from pooling in the legs during travel) include:

- Avoid clothing that binds at the knees or waist. Wear loose, comfortable clothing.
- Wear graded compression stockings (20-30 mm Hg at the ankle level).
- Walk around in the aircraft cabin at least every hour and at transit stops.
- Stand up and stretch the arms and legs periodically.
- Exercise leg and calf muscles frequently by flexing and extending the ankles and knees.
- Avoid crossing the legs as it decreases blood circulation.
- Use a footrest (or elevate feet on a briefcase or small bag) to reduce pressure on the back of the thighs from the seat, which can decrease circulation to the legs.
- Drink plenty of water to prevent dehydration.
- Avoid alcohol, coffee, and sleeping pills during a long flight.
- When possible, avoid sitting in a window seat.

Water Precautions

In developed countries, clean drinking water is available right out of the tap, and breakdowns in the system are rare. Developing countries, however, don't always have the resources needed to ensure a pure water supply, and consequently tap water is not safe to drink. Even if the people who live there can drink the water, travelers should not assume that they can. Local residents have built up immunity to organisms in the water, but visitors have not. As a result, tap water can make travelers sick.

When traveling through areas with less than adequate sanitation or with water sources of unknown purity, travelers can reduce the chance of illness by following these precautions.

TREATING WATER

Chemical Disinfection

If it is not possible to boil water, chemical disinfection is an alternative. Most (but not all) diarrhea pathogens are susceptible to being killed by iodine, which can be used to disinfect water, leafy vegetables, and fruits. Add 5 drops of 2% iodine to 1 liter of water and let stand for 30 minutes.



- Travelers who have thyroid problems or iodine allergies or who are pregnant should NOT use iodine for water purification. The use of iodine should be limited to a few weeks to avoid its effect on the thyroid from long-term use.
- For those travelers who wish to avoid the taste and smell of iodine in their disinfected water, vitamin C (ascorbic acid) can be added to the water after the iodine has been in contact with the water for 30 minutes or more. Add about 50 mg of vitamin C to a liter of water and shake briefly to eliminate the iodine taste and odor.
- Tetraglycine hydroperiodide tablets (e.g., Globaline, Potable-Aqua, Coghlan's) are available from pharmacies and sporting goods stores. The manufacturer's instructions should be followed.
- Chlorine also can be used, but its germicidal activity varies greatly with temperature and other factors; thus, it is less reliable than iodine.

Portable Filters

It cannot be assumed that portable filters will make drinking water safe; most authorities make no recommendation regarding their use because of insufficient independent verification of efficacy.

However, in areas where it is not practical to boil all drinking water, a good quality filter with a pore size of 0.1-0.4 microns will effectively remove cysts and bacteria but not viruses. The filtered water should then be treated chemically, as well.

Boiling

Urban travelers may choose an immersion coil for boiling water (a plug adapter and current converter might be necessary). Boiling for 1 minute is usually sufficient. Because the boiling point decreases at higher altitudes, water should be boiled for 3 minutes at 2,000 m (6,562 ft).

Ultraviolet (UV) Light

UV light can kill bacteria, viruses, and protozoan oocysts in water. Battery-operated portable units that deliver UV doses have become available and may be useful to disinfect small quantities of clear (not turbid) water.

DO

- Use sealed bottled water or chemically treated, filtered, or boiled water for drinking and for brushing teeth.
- Drink beverages made only with boiled water whenever possible (such as hot tea and coffee). Water boiled for any length of time at sea level (even 1 minute) is safe to drink.
- Drink canned, boxed, or commercially bottled carbonated water and drinks. International brands are safest. Beware of unsealed containers that may have been refilled.
- Safely drink beer and wine; however, alcohol added to other beverages does not render the beverages safe.
- Purify their own water (see "[Treating Water](#)") if one of these options is not available. Decide which method to use for water purification and bring along the appropriate equipment.
- Carry safe water if going out for the day in an area where availability of safe water is not assured.
- Breastfeeding is the safest food source for infants who are still nursing. If formula is used, it must be prepared with boiled water and sterilized containers.

DON'T

- Drink fruit juice unless it comes directly from a sealed container; otherwise it may have been diluted with tap water.
- Drink tap water or anything mixed with tap water.
- Rinse toothbrush in tap water.
- Use ice unless it is made from boiled, bottled, or purified water. Freezing does not kill the organisms that cause diarrhea.
- Assume that water is safe because it is chlorinated. Chlorination does not destroy all the organisms that can cause illness.
- Drink from wet cans or bottles—the water on them may be contaminated. (Dry wet cans/bottles before opening and clean all surfaces that will have contact with the mouth.)

Food Precautions

It is difficult, if not impossible, to guarantee the safety of food and beverages when traveling, especially in developing countries. Without strict public health standards, bacteria or parasites in food or water may go undetected and cause illness such as traveler's diarrhea.

However travelers can continue to enjoy local foods—this is part of the pleasure of international travel. Just be sure to follow food and water precautions and concentrate on eating the types of food that tend to be safest. Although there is some evidence that suggests where food is eaten is more important than what food is eaten, following food and water precautions can still help decrease the amount of organisms ingested and decrease the severity of traveler's diarrhea if contracted. It also helps reduce the risk of other infections such as dysentery, hepatitis A and E, giardiasis, typhoid, and paratyphoid.

While it may not be possible to avoid diarrhea in certain high-risk destinations even with the strictest adherence to preventive measures, the risk can be minimized by following the guidelines below:

DO

- Eat at establishments that are known to cater to foreigners or that are specifically known by other foreigners to be safe.
- Eat foods that are well cooked and served steaming hot.
- Eat breads, tortillas, crackers, biscuits, and other baked goods.
- Eat fruits, nuts, and vegetables with thick skins, peels, or shells that can be removed.
- Eat canned foods.
- Always wash hands with soap before eating and after using the toilet.

DON'T

- Eat any food from street vendors or market stalls.
- Eat leafy or uncooked vegetables and salads. Some organisms in soil and water are not destroyed by normal cleaning methods. Beware of garnish—typically uncooked vegetables, fruits, or herbs.
- Eat undercooked, raw, or cold meat, seafood, and fish.
- Eat large carnivorous fish, especially from reef areas. Many contain concentrated toxins.

- Eat or drink unpasteurized dairy products such as cheese, yogurt, and milk. Be particularly wary of ice cream and other frozen confections that may have been made or stored in contaminated containers.
- Eat cold sauces such as mayonnaise, salad dressing, chutneys, or salsas, which are usually raw and made by hand.
- Eat buffet foods such as lasagna, casseroles, and quiches—unless they are known to be fresh (not reheated) and have been kept steaming hot. Avoid buffets where there are no food covers or fly controls.
- Eat creamy desserts, custards, or sauces that may not have been adequately refrigerated.

Illnesses from Food and Water

HEPATITIS A

Hepatitis A is a viral infection of the liver spread from person to person through the fecal-oral route or through contaminated food and water. It is one of the most common diseases for which travelers are at risk. Symptoms appear suddenly 2-8 weeks after infection and can range from a mild, flu-like ailment with fever to a full-blown illness that can progress to jaundice and liver failure. Fatigue is usually the first sign of illness, followed by nausea and lack of appetite. Most people also have mild pain over the liver (just under the rib cage, on the right side of the body). Hepatitis A occurs worldwide, although there is less risk to persons traveling exclusively in Australia, Canada, northern and western Europe, Japan, New Zealand, and the U.S.

Prevention: Practice good personal hygiene and follow food and water precautions carefully. Hepatitis A vaccine provides long-lasting immunity; it is given in a single dose with a second dose 6 months later. (A combined hepatitis A/B vaccine is also available.) Travelers can also receive temporary protection with an immune globulin injection. Consult a health care provider about which method is appropriate.

TRAVELER'S DIARRHEA

Traveler's diarrhea (TD) is a major concern for travelers, especially those heading to developing countries. TD results from ingesting contaminated food or water. The vast majority of TD is caused by bacteria (e.g., *E. coli*), but can also be caused by protozoa (e.g., *Giardia*) or a virus (e.g., rotavirus). TD occurs in up to 60% of travelers. Episodes typically last 3-4 days on average, but some cases can persist for weeks.

Destination is an important risk factor for TD. Developing countries in Africa, Latin America, Asia, and the Middle East are considered high-risk areas for acquiring TD, while southern Europe and a few Caribbean islands are considered intermediate risk. Australia, Canada, northern Europe, New Zealand, the U.S., and several of the Caribbean islands are considered low risk.

Travelers can help reduce the chances of acquiring traveler's diarrhea by strictly following food and water precautions and paying close attention to hygiene. A vaccine (Dukoral) that has been shown to be effective against some types of diarrhea is available in Canada and elsewhere (not in the U.S.). However, despite prevention strategies, TD still occurs. Therefore, it is important to learn how to recognize and manage TD if it occurs.

Symptoms

Bacterial diarrhea has an abrupt onset of uncomfortable diarrhea. Fever, nausea, or vomiting may occur. "Abrupt onset" generally means that the traveler is aware of the exact time of day the illness began, and the symptoms are quite bothersome from the beginning. Travelers who experience an abrupt onset of uncomfortable diarrhea can be reasonably confident that the cause is bacterial, and can self-treat with an appropriate antibiotic (as provided by a travel health physician) to shorten the illness.

In contrast, **protozoal diarrhea** begins gradually, with loose stools occurring in distinct episodes during the day, gradually becoming more bothersome, and associated with fatigue. Diarrhea might occur after the first few weeks of travel, and persons with protozoal infections often do not seek medical care for weeks due to the generally mild nature of the symptoms. Antibiotics such as metronidazole or tinidazole (Tindamax) are usually prescribed for protozoal diarrhea, but, in general, travelers should not carry these drugs for self-treatment. A proper diagnosis should be made and the drugs administered under medical supervision.

TREATING BACTERIAL TD

Travelers are often in areas where prompt, effective medical care is unavailable. Therefore, it is often more practical to self-treat bacterial diarrhea with antibiotics that have been prescribed and purchased prior to leaving for the trip. Travelers who do bring medication should make sure that written information on symptoms, precautions, correct dosage and scheduling is included. Many drug treatments for diarrhea should not be used by pregnant women, and some that are recommended for adults can cause complications for children.



Antibiotics

For treatment of suspected **bacterial diarrhea**, quinolone antibiotics (ciprofloxacin, levofloxacin, ofloxacin, norfloxacin) are preferred. Quinolones may be used with caution in children of all ages, although only ciprofloxacin is FDA approved for children less than 18 years of age (azithromycin is generally preferred for children less than 18 years of age). Safety of quinolone antibiotic use during pregnancy and lactation has not been established.

When quinolones cannot be used, azithromycin may be an effective alternative in treating bacterial TD; azithromycin is also the drug of choice for children and pregnant women. Rifaximin (Xifaxan) is an alternative when neither quinolones nor azithromycin can be used; rifaximin is approved for treatment of TD caused by *E. coli* in persons 12 years of age and older (only for use in persons who do not have fever or bloody stools). Safety of rifaximin in pregnancy and lactation has not been established.

Non-Antibiotic Methods

Antimotility drugs such as loperamide (Imodium) or diphenoxylate (Lomotil) may be useful on a temporary basis to slow bowel movement and reduce frequency of stools. These drugs are not curative, and they are only recommended in certain situations. Consult a health care provider about the advantages and disadvantages of use.

Some people take bismuth subsalicylate (Pepto-Bismol) preventively to reduce their risk of traveler's diarrhea. It should be used this way only if recommended by a health care provider and only for less than 3 weeks. Side effects include darkening of the tongue and stools and, occasionally, nausea, constipation, or ringing in the ears. It should not be used by children less than 12 years of age, pregnant or nursing women, or people who have an aspirin allergy or are taking aspirin, who have renal insufficiency or have

gout, or in persons taking anticoagulants, probenecid, or methotrexate. (Use with caution in older children and teens with a viral infection.)

Managing TD Symptoms: Travelers who have diarrhea will need to take measures to prevent dehydration, especially during prolonged episodes.

- Adults can replace fluids and electrolytes (body salts) by eating salted crackers and drinking plenty of nonalcoholic, noncaffeinated beverages and soups. If there is any question about the purity of the water source, make sure all beverages and soups are prepared with purified water.
- If signs of dehydration appear (dizziness, weakness, dry skin, sunken eyes, deep-yellow urine, reduction or lack of tears and urine), seek medical help immediately. Dehydration can quickly become serious for infants, children, and the elderly.
- Travelers who begin to pass soft stools should try eating easy-to-digest foods such as bread, potatoes, tortillas, and rice. Eat lightly for a few days, and stay away from dairy products and foods that are spicy or greasy.
- Infants must be given food and fluids throughout the course of any diarrheal episodes and watched closely for signs of dehydration.
- Oral rehydration solutions (ORS) may be helpful in replacing lost fluids. They were designed to decrease childhood mortality rates and are absorbed rapidly from the intestine. ORS packets are available in most developing countries. They should be reconstituted with boiled, bottled, or purified water.

Travelers should see a health care provider or travel medicine specialist if:

- Diarrhea does not improve after a few days
- Fever, shaking chills, severe fluid loss, or blood or mucus in the stools develop
- Taking antibiotics and a rash or hives develop

BACTERIAL DIARRHEA

Suggestions for Treatment

- Travelers who have mild loose stools without other symptoms: An antibiotic is probably not necessary. Try bismuth subsalicylate (Pepto-Bismol) or an antimotility drug such as loperamide (Imodium) if needed for travel, but not for more than 48 hours.
- Travelers who have moderately loose or frequent stools with cramps or nausea: Take an antibiotic. Take an antimotility drug if needed for travel, but not for more than 48 hours.

- Travelers who have severe diarrhea with cramps, nausea, bloody stools, dehydration, or high fever and chills: Take an antibiotic. Try to avoid using antimotility drugs. Seek medical help if symptoms do not rapidly improve.

POLIOMYELITIS (POLIO)

Although best known as a cause of paralysis in infants and children, adults are also vulnerable to polio. Polio is usually spread via the fecal-oral route, by ingestion of water or food contaminated with the virus. After an incubation period of 6-20 days, the virus can cause fever, headache, sore throat, and vomiting. Most people recover at this point, but in some cases the virus invades the central nervous system and results in paralysis. Polio continues to occur in many developing countries, particularly in Afghanistan, Nigeria, and Pakistan, and in some countries from west Africa across to the Horn of Africa.

Prevention: Although food and beverage precautions may help reduce the risk of exposure to polio virus, vaccination is the only reliable protection against polio. Travelers should have received the full series of injected polio vaccine. In addition, a one-time booster dose may be recommended for some travelers.

TYPHOID FEVER

Typhoid fever is a bacterial infection of the digestive tract caused by *Salmonella typhi*. Prevalent in countries with warm climates and poor sanitary conditions, it typically is spread via food and water contaminated with fecal matter or urine from an infected human carrier. Typhoid has an incubation period of 1-3 weeks. Symptoms include headache, fever, abdominal pain, and, sometimes, a rash. If untreated, it may progress to a more severe illness with ongoing high fevers, "pea-soup" diarrhea, disorientation, multiple organ involvement, and coma.

Prevention: Vaccination is available by injection and in oral form in some countries. The injection (1 shot) should be given at least 2 weeks before possible exposure, and the oral vaccine series (4 doses) should be completed at least 1 week before possible exposure for optimum protection. A health care provider may recommend vaccination if traveling in endemic areas or areas with a recent typhoid outbreak. Whether vaccinated or not, it is important to follow food and water precautions because the vaccine is only 60-70% effective in preventing illness.

Additional illnesses that may be contracted from food and water include: anthrax, brucellosis, leptospirosis, and tapeworm. (See [Additional Illnesses](#).)



Insect Precautions

In the tropics, insects can transmit significant illnesses such as malaria, dengue, yellow fever, and rickettsial disease—some potentially life-threatening. These diseases are best prevented by personal protective measures. In some cases (e.g., malaria or yellow fever), a preventive drug or vaccine is available but should never replace personal protection measures. Travelers to areas where insects that transmit these diseases may be present can help minimize their risk by following the insect precautions and protective measures discussed below.

PERSONAL PROTECTION MEASURES

- Wear clothing that exposes as little skin as is practicable.
- Apply a repellent containing the insecticide DEET (concentration 30-35%) or picaridin (concentration 20% or greater for tropical travelers).
 - Picaridin products in the U.S. with 20% concentration include Natrapel (Tendercorp) and Picaridin Insect Repellent (Sawyer). Picaridin is also known as Icaridin in some countries.
 - Picaridin has a pleasant smell, an advantage over DEET.
- The repellent should be applied to all exposed nonsensitive areas of the body. Frequent application ensures continuous protection.
- The time of day and type of insects to be avoided determine when the repellent should be applied.
 - Mosquitoes that transmit malaria (*Anopheles* mosquitoes) are generally night biters. In risk areas, be especially vigilant in applying repellent from dusk to dawn.

- Mosquitoes that transmit dengue, chikungunya, and yellow fever (*Aedes* mosquitoes) are generally day biters. In risk areas, be especially vigilant in applying repellent during daytime hours, especially during peak biting times during the early morning hours and again in late afternoon.
- Mosquitoes that transmit West Nile virus and Japanese encephalitis (*Culex* mosquitoes) are most active at dusk and again at dawn. In risk areas, be especially vigilant in applying repellent from dusk to dawn.
- Consider treating outer clothing, tents, and sleeping bag liners with permethrin (or other pyrethroid) when traveling in an area of very high risk for malaria or other mosquito-borne or tick-borne diseases.
- If not sleeping in a sealed, air-conditioned room, sleep under a permethrin-impregnated bed net when at high risk of malaria. Regularly check the net for rips and tears, and keep it tucked in around the bed at all times. Ensure that all open windows have insect screens.
- Use an aerosol insecticide before going to bed and a vaporizer device throughout the night.
- Outdoors, a smoldering pyrethroid coil can be used to reduce flying insects.
- In areas where tick-borne disease is a risk, perform a full body check at least once a day.

Insecticides

The most effective repellents contain **DEET** (N, N diethylmeta-toluamide) or **picaridin** (Natrapel, Picaridin Insect Repellent, Cutter Advanced, Cutter Advanced Sport, KBR3023, Bayrepel, Autan, [RS]-sec-butyl 2-[2-hydroxy-ethyl]). Picaridin is now considered to have comparable efficacy and duration of protection to DEET at the same concentration. Both compounds have now been shown to be effective under actual field conditions in tropical countries against both *Anopheles* and *Aedes aegypti* mosquitoes.

Duration of protection: With both DEET and picaridin, the duration of effectiveness increases as the concentration of repellent increases. With DEET, the effect on duration of protection plateaus at about 50% concentration. Products with less than about 20% picaridin or DEET have a relatively short duration of protection and should be discouraged for use in tropical travelers. The optimal concentration of DEET is considered to be 30-35%. When used by tropical travelers in appropriate concentrations (that is, 20% or greater), picaridin should be applied every 4-6 hours. In the U.S., there

are 2 products containing 20% picaridin: Natrapel (Tendercorp) and Picaridin Insect Repellent (Sawyer).

Use in children: Both DEET and picaridin-containing repellents can be used in children \geq 2 months of age. The maximum concentration of DEET that should be used in children is 30%. There is no information on the maximum concentration of picaridin for children. Picaridin is more pleasant smelling than DEET.

Use in pregnancy and breastfeeding: DEET and picaridin can be used by pregnant and breastfeeding women but should not be applied directly to the abdomen or nipple area. While DEET has been shown in 1 short-term study to be safe in the second and third trimesters of pregnancy when used at concentrations of 20% or lower, the use of DEET in the first trimester has not been well studied. If extensive exposure is anticipated, pregnant women should consider more frequent repellent application because lower concentrations are often used. Although there is no evidence that the use of DEET or picaridin by pregnant or lactating women poses a health hazard to unborn babies or children who are breastfeeding, there are no long-term follow-up studies available.

Safety: DEET is effective against mosquitoes, ticks, fleas, and chiggers and is a remarkably safe insect repellent; only 30 cases of severe toxicity have been reported among billions of uses over 30 years. Most cases of toxic encephalopathy or seizures were reported in young children in whom excessive amounts were used over prolonged periods. There is no long-term information available on the use of picaridin but toxicity tests in animals have shown it to be extremely safe.

The use of another repellent, **IR3535** (3-(N-acetyl-N-butyl) aminopropionic acid ethyl ester; Bug Guard Plus), is more controversial, and conflicting data exist over its effectiveness. IR3535 is recommended by WHO as equivalent to picaridin at the same concentration. IR3535 repellents can be used in children \geq 6 months of age, but due to a lack of data, they should not be used by pregnant or nursing women. In the U.S., IR3535 repellents are available in a range of concentrations up to 20%.

An increasing number of botanical repellents containing eucalyptus, citronella, soybean oil, geranium oil, castor oil, and 2-undecanone are marketed. At present, insufficient evidence exists that these are viable alternatives to DEET or picaridin.

* Use of brand names is for informational purposes only and does not constitute preference for one brand over another.

The following precautionary measures can minimize the possibility of adverse reactions to insect repellent containing DEET or picaridin:

- Use repellents according to label directions.
- Apply repellents sparingly and only to exposed skin.
- Repellents should not be inhaled or ingested and contact with the eyes should be avoided.
- Avoid applying repellents to portions of children's hands that are likely to have contact with eyes or mouth.
- Never use repellents on wounds or irritated skin.
- Wash repellent-treated skin after coming indoors if there is no further risk of exposure to insects.
- If a suspected reaction to insect repellent occurs, wash treated skin and seek medical attention.
- Pregnant and nursing women should minimize use of repellents, as about 6-9% of the chemical is absorbed through the skin.

Travelers also should purchase a pyrethroid-containing flying-insect spray to use in living and sleeping areas during evening and nighttime hours.

For added protection against mosquitoes, bednets and clothing may be soaked in or sprayed with permethrin. Permethrin is an insecticide licensed for use on clothing; when applied according to directions it can be effective on clothing for several months and on bednets for half a year. Permethrin physically binds to the fabric, which then can be repeatedly washed without loss of effect; this also prevents absorption through skin. In some countries, deltamethrin liquid is available.

Illnesses from Insects

CHIKUNGUNYA

Chikungunya is a viral disease transmitted to humans by the bite of infected *Aedes* mosquitoes. It is often confused with dengue. After an incubation period of 1-12 days, symptoms occur, including sudden onset of fever and joint pain that can be severe; headache, muscle pain, weakness, chills, and GI symptoms also occur. Some patients develop a rash. Most recover within 7-10 days but some continue to have symptoms for a month or more. Dengue occurs in tropical and subtropical areas, especially Africa, the Indian subcontinent, and Asia. Urban epidemics in India and Sri Lanka account for most cases.

Prevention: Travelers are at risk from mosquito bites, especially during the day. In risk areas, travelers should be especially vigilant in applying repellent during daytime hours, especially during peak biting times during the early morning hours and again in late afternoon. (See [Mosquitoes](#).)

DENGUE

Dengue is a viral infection that is spread to humans by the bite of *Aedes* mosquitoes. Dengue infections are widespread in most tropical and sub-tropical countries of the South Pacific, Asia, the Caribbean, the Americas, and the Indian Ocean islands. Also known as “break bone fever,” dengue occurs more frequently during warm, humid seasons, and transmission is more intense in urban areas, including downtown business areas. Anyone in an endemic area who has not previously been exposed to the currently circulating serotype is at risk of acquiring dengue.

About 2-5 days after being bitten, the victim experiences a sudden high fever, generalized weakness, and intense muscle, joint, and back pain (hence the term “break bone fever”). A rash may appear in some people. Dengue is usually self-limited, with an average duration of 6 days. Most persons with dengue do not need to be hospitalized, but those with persistent fever should seek medical attention as soon as possible.

Severe forms of dengue (dengue hemorrhagic fever and dengue shock syndrome) are rare. These begin like classic dengue but progress to severe abdominal pain and persistent vomiting; if left untreated, they can progress to bleeding at sites of minimal trauma, circulatory failure, shock, and death. Seek medical attention immediately if symptoms appear.

Prevention: There is no vaccine against dengue, so it is vital to take personal protection measures and insect precautions. Make sure to use repellent during the mosquitoes’ peak biting times; mosquitoes that spread dengue are daytime feeders with 2 peaks of biting activity during the day—early morning and mid-to-late afternoon hours. During overcast days or when indoors, however, mosquitoes will feed all day.

JAPANESE ENCEPHALITIS

Japanese encephalitis (JE) is a viral disease that is spread to humans by the bite of the *Culex* mosquito. JE occurs in Asia, and most human infections occur in rural, agricultural areas. Risk is very low for short-term rural travelers not engaging in extensive unprotected outdoor activities. Risk for travelers who confine their travel to highly urban environments is nearly non-existent, although rare cases have been reported from suburban areas adjacent to agricultural land.

Symptoms appear abruptly, with headache, high fever, nausea, and vomiting. If the illness progresses it can lead to paralysis or death. There is no effective drug treatment for JE; the disease can only run its course, but it is still vital to seek supportive medical treatment.

Prevention: Personal protection measures and insect precautions are vital if traveling in risk areas. Make sure to use repellent during the *Culex* mosquitoes' peak biting times: between dusk and dawn. A vaccine is available but is not recommended for all travelers to risk areas. Vaccination may be recommended for those who will be traveling extensively or making frequent short trips in rural areas or visiting an epidemic area. The vaccine series consists of 2 doses given 28 days apart and should be completed at least 1 week before potential exposure.

MALARIA

Malaria is transmitted through the bite of the *Anopheles* mosquito and is the most frequent infectious cause of death for travelers to the tropics and subtropics. Malaria is found in many parts of the world including Africa, Central and South America, Southeast Asia, the Indian subcontinent, the Middle East, and the islands of the South Pacific. Most malaria occurs in sub-Saharan Africa.

Symptoms usually develop within days of exposure, or—less commonly—months or even years later. Symptoms always include fever and flu-like symptoms, such as chills, sweats, headaches, muscle aches, and/or a vague feeling of illness. Vomiting, abdominal pain, diarrhea, cough, and jaundice (yellowing of the skin and whites of the eyes) can also occur.

Travelers who have been in a malaria-endemic area within the past year and have a fever or flu-like symptoms should seek immediate medical attention.

Of the 4 types of malaria that cause human disease, *P. falciparum* usually occurs about 10-12 days after infection and is a **medical emergency**. If not treated immediately and properly, it can be fatal. Illness caused by the milder types (*P. vivax*, *P. ovale*, *P. malariae*) is not usually life-threatening but can be a serious health risk for the very young, the elderly, and persons with underlying illness. Malaria caused by *P. vivax* and *P. ovale* may eventually resolve without treatment but can relapse periodically until properly treated.

Prevention: Antimalaria drugs and insect precautions are important safeguards when traveling to a malarious area. Remember to follow insect precautions even if using preventive medications and to be especially vigilant using repellent between dusk and dawn when *Anopheles* mosquitoes are most active.

A travel medicine advisor can best explain which destinations require preventive measures and can help choose an appropriate anti-malarial drug for that destination. Travelers must take the anti-malarial drug before, during, and after travel to a malarious area. Taking the drug before travel allows the drugs to build up to an effective level and gives the health care provider time to assess any side effects. Continuing the drug after leaving a malarious area suppresses most attacks of longer-incubating malaria.

Chloroquine

Chloroquine is the drug of choice for areas where there is no resistance to this drug. Chloroquine is effective and safe, and has also been shown to be safe for infants and pregnant women. Minor side effects include upset stomach, headache, dizziness, blurred vision, and itching. Serious side effects are uncommon. Rarely, seizures or psychosis have occurred. Those who have epilepsy may be at risk for seizures. Those who are allergic to chloroquine or have retinal or visual field changes should not take the drug.

Chloroquine is taken by mouth once a week. Start taking the drug 1 week before arrival in a malarious area, continue taking it while in the risk area, and take it for 4 weeks after leaving the risk area. Take chloroquine with meals or in divided, twice-weekly doses to avoid stomach upset. If a dose is missed, take it as soon as possible that same week and then resume the normal schedule the next week. Do not take a double dose if a dose is completely missed one week.

There are many areas of the world where malaria is resistant to chloroquine. When traveling in these areas, a different drug must be used; 3 drugs are equally effective: mefloquine, Malarone, and doxycycline.

Mefloquine

Mefloquine can be used when traveling to areas of chloroquine resistance; for long-stay travelers to these areas it is often the most convenient regimen. Minor side effects include stomach distress, dizziness, headache, and vivid dreams, which tend to be mild or temporary. (Be aware that mild dizziness is a possible side effect and may impact travelers who plan to drive, pilot a plane, or operate machinery.) Severe side effects can include serious neurological and psychiatric side effects that can persist for months, years, or permanently, even after discontinuation of mefloquine. Mefloquine is not recommended for persons who are allergic to mefloquine or related compounds, persons with active depression or recent history of depression or any psychiatric disorder, and persons with a history of convulsions.

Mefloquine is taken by mouth once a week. Start taking the drug 2-3 weeks before arriving in a malarious area, take it while in the risk area, and continue to take it for 4 weeks after leaving the risk area. Missed doses should be taken as soon as possible that same week, with the normal schedule resuming the next week. Do not take a double dose if a dose is completely missed one week.

Malarone

Malarone (a combination of atovaquone and proguanil) can also be used when traveling to areas of chloroquine resistance, and is often the drug of choice among short-term travelers. Malarone should not be used by pregnant women, people with severe renal failure, or those who are allergic to either of the drug components.

Malarone is taken by mouth once daily. Start taking it 1 day before arrival in a malarious area, take it daily while in the risk area, and continue to take it daily for 1 week after leaving the risk area. Take this drug with a meal or milk, at the same meal time each day. Missed doses can be taken later in the day, but should not be doubled the next day if missed completely.

Doxycycline

Doxycycline can also be used when traveling to areas of chloroquine resistance. It may also be recommended for travel to areas where malaria is resistant to both chloroquine and mefloquine, or for people who can't use chloroquine, mefloquine, or Malarone. Skin sensitivity to sunlight is a potential side effect that can lead to severe sunburn, especially in tropical sun. To lower this risk, use a sunscreen that blocks both UVA and UVB rays, avoid prolonged exposure to the sun, and wear protective clothing and a hat. Women who take doxycycline may develop yeast infections and should bring with them an antifungal drug. Do not take this drug if pregnant, younger than 8 years of age in the U.S. (or 12 years of age in the U.K.), or allergic to doxycycline or tetracycline.

Doxycycline is taken by mouth once daily. Start taking it 1 day before arrival in a malarious area, take it daily while in the risk area, and continue to take it daily for 4 weeks after leaving the risk area. Take this drug with food or at least 8 ounces of fluid while sitting or standing, to prevent throat or stomach irritation. Do not take Pepto-Bismol or antacids as they can interfere with absorption of doxycycline. Late doses can be made up the same day, resuming the normal schedule the next day. Do not take a double dose if a dose is completely missed one day.



Primaquine

Primaquine is not considered a first-line drug of choice for prevention of malaria. It should be used for prevention of malaria only when none of the other drugs listed previously can be used and only for travel to areas that have only *P. vivax* malaria. Travelers who are pregnant or have low levels of G6PD (glucose-6-phosphate dehydrogenase) should not take this drug.

For prevention, primaquine is taken by mouth once daily. Start taking it 1 day before arrival in the malarious area, take it daily while in the risk area, and continue to take it daily for 1 week after leaving the risk area. Take with food in order to reduce stomach upset. Late doses can be made up on the same day. Do not double the dose if a dose is completely missed.

Another use for primaquine is in preventing certain kinds of malaria (*P. vivax* and *P. ovale*) from occurring ("relapsing") months or even years after routine preventive medications have been stopped—generally for people who have had prolonged exposure in certain malarious areas.

Other regimens may be recommended by health care providers in certain circumstances. Travelers should understand why their regimen has been chosen and how to take the medication appropriately, and carry written instructions.

Self-Treatment

In rare situations it may be prudent to carry a drug for self-treatment of malaria; however, this is a temporary measure and medical attention should be sought as soon as possible. Take the drug promptly, according to a health care provider's instructions, if fever and illness occur during travel and medical care is not available within 24 hours.

Either Coartem (co-artemether; artemether/lumefantrine combination) or Malarone (atovaquone/proguanil combination) should be used for self-treatment.

The adult self-treatment dose for Coartem consists of 6 doses taken over 3 days. The first day 4 tablets are taken followed by 4 more tablets 8 hours later. On the second and third days, 4 tablets are taken every 12 hours. Coartem needs to be taken with food. (Do not take with grapefruit juice.) Coartem should not be used by pregnant women, persons with a heart condition called QTC prolongation, or those with an allergy to either component of the drug.

The adult self-treatment dose for Malarone consists of 4 tablets taken once daily for 3 days. Malarone should be taken with milk or a meal. Malarone should not be used by pregnant women, persons with renal failure, or those who are allergic to either component of the drug.

An alternative to Coartem or Malarone for self-treatment is quinine plus doxycycline, but this drug has a much more complex schedule of doses and is frequently associated with adverse effects.

Note: The treatment drug should not be the same as the drug being used for prevention.

YELLOW FEVER

Yellow fever is a viral disease transmitted by *Aedes* mosquitoes; the major areas of risk are parts of Africa and South America. While incidence of infection among travelers is very low, the fatality rate in non-immune travelers is nearly 90%. Yellow fever is named for the characteristic jaundice (yellow eyes and skin) that results from viral invasion of liver cells in severe cases. Most cases are mild, beginning with a sudden headache, fever, and muscle aches.

Prevention: Yellow fever vaccine consists of a single injected dose, given at least 10 days before entry into a risk area. Since the disease can be fatal and the vaccine is highly effective, a health care provider may recommend vaccination if traveling to an area of yellow fever risk. Proof of yellow fever vaccination may be required for entry to some countries. (See "Required Vaccines" in [Introduction](#) and *International Certificate of Vaccination or Prophylaxis*.) Personal protection measures and insect precautions are vital, whether travelers receive vaccine or not; there may be risk of other mosquito-borne illnesses at the destination, as well.

Additional illnesses that may be contracted from insects or other arthropods include: bartonellosis, chikungunya, filariasis, leishmaniasis, onchocerciasis, Rocky Mountain spotted fever, trypanosomiasis, and typhus. (See [Additional Illnesses](#).)

Problems from Physical Contact

Some diseases are transmitted through physical contact, sexual activity, or contact with blood. Many of these diseases are more prevalent in developing countries than elsewhere. However, the following guidelines can help prevent these health problems no matter the destination.

Hepatitis B is a serious infection of the liver caused by the hepatitis B virus. It can be transmitted through needlesticks, sexual contact, tattooing, blood transfusion, nicks during haircuts or manicures, injection drug use, or from an infected mother to her infant at birth. Symptoms, which typically begin 6 weeks to 6 months after infection, include loss of appetite, fever, nausea, vomiting, fatigue, and stomach pain; dark urine and jaundice (yellow skin and eyes) are also common. People who develop chronic hepatitis can spread the disease to others for the rest of their lives and can develop long-term liver disease such as cirrhosis (which destroys the liver) or liver cancer.

Prevention: Hepatitis B vaccination consists of a series of at least 3 injections over a 6-month period. (A combined hepatitis A/B vaccine is also available.) Vaccination may be recommended, especially to frequent or long-term travelers or to those anticipating medical care while abroad.

Rabies is a serious viral infection of the central nervous system that is transmitted through contact (bites, scratches, licks) with the saliva from infected animals. Many animals can transmit rabies (e.g., skunks, raccoons, bats, coyotes, foxes, dogs, cats, ferrets). Risk of rabies varies widely between countries. There are usually no symptoms during the incubation period, which can last from 4 days to 4 years or more. The disease is still reversible during the incubation period so prompt treatment is vital. Once symptoms appear, the disease is almost always fatal. Early symptoms include tingling at the site of the bite, followed by fever, muscle aches, anxiety, depression, irritability, and sometimes respiratory or gastrointestinal symptoms. The victim eventually experiences sensitivity to light, sound, and touch, and will have severe throat spasms when trying to drink water. Dementia, convulsions, and paralysis precede death.

Prevention: Avoid direct contact with all dogs and other biting mammals. A health care provider can determine whether vaccination is necessary, based on factors such as whether rabies is present at the destination, the duration of stay, planned activities, and age (for children); children who play outdoors in developing countries are at increased risk for rabies. Another factor is the availability within 24 hours of modern rabies vaccine and im-



CDC, Health Information for International Travel 2014, DHHS, Atlanta, GA.

mune globulin for postexposure use. Preexposure vaccine consists of 3 injections over a 3- to 4-week period.

If an exposure does occur, the most reliable methods of preventing rabies are immunization and thorough wound cleaning. Anyone who receives a bite, scratch, or lick on broken skin should scrub the area thoroughly with soapy water, alcohol, or povidone iodine, and **seek immediate medical help**. Never presume an animal is free of rabies. Any contact with animal saliva in a rabies-endemic region should be evaluated by a medical professional. If exposure is suspected, even those who have received the preexposure vaccine must have a limited series of postexposure injections. Those who have not received the preexposure vaccine series must receive longer treatment, including both vaccine and rabies immune globulin injections.

Sexual contact with new or casual partners can lead to numerous sexually transmitted diseases and should be avoided. Unprotected casual sex is always high-risk behavior.

Prevention: Individuals who engage in sexual activity with new partners during travel should use condoms to reduce their risk of acquiring sexually transmitted diseases. Because safety standards differ worldwide, it is advisable to bring a supply of high-quality latex condoms. (They should be protected from sun and extreme temperatures.) Condoms do not entirely eliminate the risk of HIV transmission. Human papillomavirus (HPV) is also

sexually transmitted and can cause cervical cancer and genital warts; an HPV vaccine is available for persons ages 9-26 years.

Skin problems can result from contact with people, plants, insects, or animals. Even minor problems should be taken care of immediately to guard against secondary infection.

Prevention:

- Individuals participating in adventure travel or spending extensive time in rural areas should ask local people, guides, or other contacts about precautions needed to avoid any poisonous plants or animals.
- Rashes and other skin inflammations (contact dermatitis) can be caused by a wide variety of products used for cleaning or personal hygiene. If a product being used is suspected to be causing the problem, stop using it and try one with milder or fewer ingredients.
- Prevent blisters by wearing soft cotton socks and sturdy, comfortable shoes. Don't break in new shoes during the trip; make sure they fit well before departure. Don't pop any blisters that may develop. This leaves damaged skin exposed to bacterial infection. Pad the area with soft, dry gauze and keep it clean. If the blister opens on its own, treat it as any other minor abrasion.
- Clean minor cuts or abrasions thoroughly by scrubbing gently with soap and boiled, bottled, or purified water or povidone iodine solution to remove bacteria and debris, then rinse. Coat the area with antibiotic ointment and keep it covered with a clean, dry bandage until it begins to heal.
- To relieve the pain of minor burns, apply cool, wet compresses to the area and take oral anti-inflammatory drugs such as aspirin or ibuprofen. Don't apply ice—this can damage already traumatized skin tissue.
- Fungal infections such as athlete's foot and jock itch are more likely to occur in warm, moist climates. Bring an antifungal skin cream, ointment, or powder for these problems and apply according to package instructions; keep the affected area clean and dry.
- Individuals with a history of allergic reactions should take precautions to avoid allergens and make sure to bring a medication that works for their symptoms. Those with severe allergies should wear a medical alert tag and carry a "sting kit" in case of anaphylactic reaction. (See [Pests](#).)
- Consider bringing antihistamines (such as Benadryl), which decrease the allergic response in most people. A topical ointment with hydrocortisone to relieve itching is also helpful.

Tetanus is an acute, often fatal, neuromuscular disease caused by organisms found worldwide in dust and soil, especially where there is animal waste. These organisms can infect a wound or other damaged tissue and create toxins that affect the nervous system. Symptoms include muscle rigidity and spasms, usually starting with lockjaw. Severe cases can be fatal. Although it is highly preventable with vaccination, tetanus is a common disease in developing countries where the vaccine is not widely utilized.

Prevention: All persons should complete a primary series of diphtheria, tetanus, and acellular pertussis vaccine. DTaP is used for children ages 6 years and younger; Tdap and/or Td is used for persons ages 7 years and older. A booster dose of Tdap is routinely given at age 11-12 years and to all persons aged 11 years and older who have not yet received 1 dose of Tdap. A booster dose is given every 10 years. Individuals who receive a wound may need a dose of tetanus-containing vaccine depending on how many doses they have received previously and when their last booster dose was given.

Pests

Bees and all other insects of the order *Hymenoptera* (fire ants, hornets, wasps, and yellow jackets) can deliver bites and stings that are painful but rarely fatal. Humans are usually stung as a result of disturbing the insects or their nests. Insects inject venom into the skin, sometimes leaving a stinger embedded, and the venom causes pain, redness, and swelling. Remove the stinger as quickly as possible, as more venom can be injected as long as it remains. (The method of removing the stinger is unimportant—speed is what counts.) Travelers can choose from any number of topical products for pain relief, some made especially for insect bites and stings. If ice is available, use it to reduce swelling. Oral antihistamines, such as Benadryl or ChlorTrimeton, can alleviate swelling and itching but may cause drowsiness.

Multiple stings or hypersensitivity (allergy) to venom can cause an **anaphylactic reaction** within minutes in some individuals. Instead of a local response, the body's defenses overreact to the venom, causing symptoms that may include flushing, dizziness, nausea, headache, blurred vision, shortness of breath, irregular heartbeat, or fainting. If any of these symptoms occur, **get medical help immediately**. In the most severe reactions, throat tissue begins to swell, leading to airway obstruction and death.

People who know they have a sensitivity to bites or stings should wear a medical alert tag and carry a sting kit at all times. The kit includes a syringe

of epinephrine (adrenaline) and an oral antihistamine, both of which are needed to decrease the allergic reaction until medical help is found. Instructions are included with these kits; because they can be complicated, it is important to read them before an emergency.

Prevention: Follow insect precautions and avoid disturbing insects or their nests. Wear shoes and socks in brush, grass, or forest; tuck trousers into socks when necessary. Inspect bedding carefully, and shake out clothing before putting it on. Travelers should consider carrying a sting kit if they will be outdoors and away from medical help, whether or not they are prone to allergic reactions.

influe can transmit parasites and spread disease among humans and animals when they bite or sting. Even more common is their role in carrying bacteria, viruses, and parasites from feces and other filth to food products. Follow food, water, and insect precautions carefully. Try to stay away from areas where flies congregate, such as garbage dumps and fields where manure is used as fertilizer.

Lice are small gray or brown bugs that live on blood and can pass disease to humans. Head lice and crab lice (which usually reside in the pubic area) infest the roots of hair shafts, leaving tiny white eggs that are difficult to remove. They can cause itching and rash. Body lice usually live in the seams of clothing, taking frequent side trips to feed. Lice can be acquired from contact with infested people or fabrics.

Lice can be combed out of hair using soap or vinegar and a fine-toothed comb, but the most efficient method is the use of chemical dusts, lotions, or shampoos made for this purpose. Because some of the chemicals may be toxic if overused, it is important to follow directions exactly. Infested clothes, bedding, and other fabrics must be cleaned thoroughly in very hot water (use the hottest cycle on washers and dryers), treated with insecticides, or heated at 160°F (70°C) for 30 minutes. Antihistamines can help control itching.

Mites cause an intensely itchy, raised red rash called scabies. Mites burrow into human skin to lay their eggs and are spread among people through physical contact with skin or fabric. Because of the length of the mite life cycle, it may be 6–8 weeks after contact before symptoms appear. These start with small itchy bumps, followed by the rash—usually at the waist, underarms, inner thighs, and/or backs of legs. Itching may increase at night. Various chemical lotions and creams are made to kill mites. They are applied over the entire body, left on for several hours, and then washed off. Everyone

living or traveling with an infested person must also be treated, even if they don't yet show any symptoms. Antihistamines help relieve itching, which can continue for up to 2 weeks after treatment. All clothing, bedding, and other fabric should be cleaned thoroughly in very hot water (use the hottest cycle on washers and dryers), heated at 160°F (70°C) for 30 minutes, or sealed tightly in plastic bags for 3-5 days until the mites are dead.

Mosquitoes are found everywhere in the world. Mature female mosquitoes feed on blood to produce their eggs and are responsible for transmitting many disease-causing parasites and viruses.

Three types of mosquito are of special concern to travelers: *Anopheles* mosquitoes spread diseases such as malaria and bite primarily at night. *Aedes aegypti* spread yellow fever and dengue; they feed during the day and at night. *Culex* mosquitoes help spread numerous viruses, including the one that causes Japanese encephalitis; they bite primarily at night. Because it's not easy to identify individual types by sight, it's best to avoid all mosquitoes as much as possible and follow insect precautions when traveling in areas where they spread serious disease.

In regions where mosquitoes pose a major disease threat, follow insect precautions very carefully, especially during the hours when they are most active. (See [Insect Precautions](#).) All mosquitoes breed in standing water, and their numbers increase during rainy seasons. Make sure any containers that hold water are emptied regularly to prevent breeding.

Sandflies are found mainly in tropical and subtropical climates. The bite of the female spreads leishmaniasis and bartonellosis to humans. Sandflies are tiny, and the grid of most window screens and mosquito netting is not small enough to keep them out. Use a permethrin-based insecticide spray on screens and netting to kill sandflies on contact. Keep bed netting tucked in tightly around the base of the mattress at all times. Sandflies tend to breed in garbage and manure, so try to avoid disposal areas or fields where manure is being used as fertilizer. Sandflies are most active between dusk and dawn and hide in dark corners during the day. Follow insect precautions when traveling in areas where sandflies are responsible for spreading disease.

Scorpions live in desert or warm, tropical climates. They are most active at night; during the day they usually hide indoors or outdoors in cool, shaded areas. They can deliver an extremely painful, sometimes fatal sting from a barb on the tail if disturbed.

To avoid being stung, wear shoes and socks during outdoor activities in risk



areas, and shake out all clothing, shoes, and bedding before every use. Do not disturb a scorpion. Scorpion venom can cause sweating, nausea, nervousness, vision and breathing problems, muscle spasms, high blood pressure, seizures, or paralysis. In the event of a sting, apply ice, immobilize the affected area, and seek medical care immediately.

Snakes strike fear into the hearts of many people, but very few species can severely injure or kill humans. Snakes are almost always found in rural areas, and there is a low incidence of snakebite among travelers. Nevertheless, travelers should be cautious if they plan on spending time in the rural outdoors. Ask local people if there are venomous snakes in the area, exactly what they look like, and where they are found. Wear shoes and socks, stay on paths, and keep hands and feet away from crevices, cracks, tall grass, or any place that can't be clearly seen. Snakes can sense nearby humans and will try to escape. Let them. If bitten by a snake, get help immediately, even if there are no symptoms. Not every bite contains venom (about 25% of bites are "dry"), but medical help is called for because of the potential for injury.

Spiders are equipped with venom to disable or kill insects. They also bite people, but only about 40 of some 30,000 known species are dangerous to humans. Of these, most fatal bites are from the groups that include the brown recluse (varieties found in the Americas, the Mediterranean, North Africa, and Israel) and the black widow (varieties found in Africa, the Americas, the Mediterranean, Australia, and New Zealand). Watch out for the Brazilian "banana spider" and the funnel-web spiders of Australia and Tasmania.

Travelers should seek medical help immediately if bitten or if unaware of being bitten but experience symptoms such as sweating, nausea, rapid heartbeat, muscle spasms, blurred vision, or breathing problems. Don't disturb the nooks and crannies where spiders hide. Wear shoes, and think carefully before reaching into areas that can't be seen. Wear gloves when it seems prudent and practical to do so, for instance if gardening or digging.

Shake out towels, clothing, and bedding before each use. Be especially careful in outdoor toilet facilities, which are notorious spider hideouts.

Ticks are found worldwide, often in brushy or leafy undergrowth or caves. Before feeding they can be as small and dark as a freckle; when engorged they might be the size of a button. Adult ticks have 8 legs. Their jaws are built to latch onto skin as they feed, making them difficult to remove once they are in place. Before ticks can drink blood they have to inject saliva to thin it, and any organisms they carry can be transmitted to the host. Ticks spread diseases such as typhus, Lyme disease, and encephalitis. It takes hours for ticks to get completely anchored, so don't assume they are fully embedded upon finding one. To remove a tick, first flick or pull gently to see if it comes off. If the tick is already embedded, pull it up from its back end and work it out firmly until the mouth parts have disengaged. Any parts left in can cause infection. Reduce the chances of tick-related illness by closely following insect precautions. (See [Insect Precautions](#).) Perform full-body checks for ticks every day; don't forget to check the scalp, behind the ears, the back, and other hard-to-reach areas. Use a mirror, or employ the buddy system with traveling companions.

Worms and other parasites can cause multiple health problems, including intestinal and neurological ailments. Some enter the body via food or drink; others burrow through the skin of persons swimming in infected water or walking barefoot on infected ground. Virtually all cases can be treated, but prevention is much preferred. Be aware that these creatures live in sand, soil, water, and food—especially in developing countries—and take measures to avoid them. Wear shoes and follow food, water, and insect precautions.

Special Medical Concerns

Many people with medical concerns continue to travel. Whether they have a temporary medical condition, such as pregnancy, or an ongoing health concern, such as diabetes, travelers should consult their health care providers about their trips and plan ahead for any any specific needs.

	DIABETES	HEART DISEASE	PREGNANCY	PULMONARY PROBLEM	STOMACH DISORDER	IMMUNE DEFICIENCY
Consult health care provider for advice in planning.	✓	✓	✓	✓	✓	✓
Carry letter from health care provider stating condition, medications, and treatments.	✓	✓	✓	✓	✓	*
Wear medical alert tags (stating condition and drug allergies) at all times.	✓	✓	✓	✓	✓	*
Inform airlines, cruise lines, and hotels about special needs.	✓	✓	✓	✓	✓	*
Keep insulin in insulator pack; adjust doses to time zones; bring supply of needles and syringes.	✓					
Delay trip if condition is currently unstable.	✓	✓	✓	✓	✓	✓
Some live vaccines may be inadvisable.			✓		✓	✓
Take extra precautions in areas with high risk of infections.	✓	✓	✓	✓	✓	✓
Follow food and water precautions strictly.	✓		✓		✓	✓
Avoid physical extremes, high altitudes, and overexertion.		✓	✓	✓		
Check availability of oxygen at each destination.		✓		✓		
Avoid areas of extreme air pollution or high humidity.		✓		✓		
*Discuss this issue with a health care provider, as an immune deficiency due to infection with human immunodeficiency virus (HIV) can cause entry problems in some countries.						

Upon Return

Some illnesses can emerge weeks or even months after returning home. For example, hepatitis B symptoms typically appear 3 to 4 months after infection. Keep this time lag in mind, especially in case of intestinal illness. Seek medical care if an illness is severe or does not improve after 3 or 4 days. Provide details on destination(s), activities, duration of stay, what was consumed, and whether or not any insect bites occurred during travel.

Additional Illnesses

The following section contains descriptions of less common travel-related illnesses. However, there may be a risk depending one's particular destination and activities. Therefore, it is important to be aware of these illnesses and know how to prevent them. As with other diseases, if symptoms appear during or after travel, seek medical attention.

African trypanosomiasis, or sleeping sickness, is a parasitic infection caused by the bite of an infected tsetse fly in sub-Saharan Africa. The chronic form occurs in central Africa and limited areas of West Africa, in wooded areas around rivers, mostly in rural areas; transmission is higher during the dry season. The acute form of the disease occurs in grasslands and savanna woodlands in eastern and southeastern Africa—areas where tourists go on safari. (Most of these cases occur in Tanzania, Uganda, Malawi, and Zambia.) For the chronic type, the first symptom is a lesion at the bite site occurring 1-2 weeks after the bite. Systemic symptoms occur weeks to months later and include intermittent high-grade fevers, enlarged lymph glands, edema, and an itchy rash. Months to years later, slowly progressive neurological symptoms occur, causing increasing sleepiness, coma, and death. The acute form occurs much more rapidly, with symptoms beginning within days or weeks of infection; neurological involvement appears within a few months. The disease is rare in short-term travelers; most of those who acquire this form of the disease have fevers and systemic symptoms by the end of their trip or shortly after returning home.

Prevention: Avoid close proximity to animals such as those found in game parks. Wear light-colored (not blue), heavyweight clothing. Insect precautions are minimally effective against tsetse flies (but will protect against mosquitoes).

Anthrax is an infectious illness caused by spore-forming bacteria; the spores are resistant to disinfection and physical destruction. Anthrax is usually transmitted to humans through contact with diseased animals or

animal products. The resulting infection can be *cutaneous*, causing skin lesions; *pulmonary*, causing flu-like symptoms and respiratory distress; or *intestinal*, which causes severe abdominal pain and fever. Anthrax occurs globally but is most common in agricultural regions in Central and South America, sub-Saharan Africa, central and southwestern Africa, and southern and Eastern Europe. It is uncommon in industrialized countries.

Prevention: Travelers are at low risk of naturally occurring disease, but should avoid contact with livestock and untreated animal hides and carcasses. When possible, make sure that meat is properly slaughtered and cooked to well done. Vaccine is available but generally recommended only for persons with high-risk occupations.

Avian influenza ("bird flu") is a serious viral infection that occurs primarily in poultry, waterfowl, and migratory birds. Human infection is rare but does occur. Most human cases result from direct contact with infected poultry or their droppings. Exposure can also occur via respiratory secretions or eye secretions of infected birds, or through contact with contaminated surfaces. It is possible that humans can be exposed by eating undercooked, infected poultry or eggs or duck blood or by inhaling dried, airborne poultry feces. Initial symptoms resemble a severe case of regular flu: fever, chills, cough, runny nose, sore throat, muscle aches, and headaches; however, the person then deteriorates rapidly, suddenly developing severe pneumonia and respiratory distress about 3-5 days into the illness.

Prevention: If traveling in an area where avian influenza is occurring in birds or humans, follow preventive measures. Frequent, thorough handwashing is vital. Carry and use alcohol hand sanitizers or towelettes. Practice good respiratory hygiene. Avoid all contact with birds and poultry, any surface that may be contaminated, live animal markets ("wet markets"), and poultry farms. Cook poultry and eggs thoroughly. Get immunized against the regular flu before leaving; it won't protect against avian influenza but may decrease the chance of confusing regular flu with avian influenza if sickness occurs.

Bartonellosis is a bacterial infection that is transmitted to humans by the bite of infected sandflies. It can occur as acute or chronic illness. The acute phase, Oroya fever, is characterized by fever, headache, weakness, muscle aches, and exhaustion. As the disease progresses, anemia, enlarged kidney and spleen, swollen lymph glands, and changes in mental status can occur. Seizures, pulmonary edema, and generalized connective tissue edema can also occur. If the infection is not treated during this phase, there is a high fatality rate. The chronic phase usually begins after the acute phase and is characterized by verruga peruana—skin lesions that can last for months



or even years. Bartonellosis occurs in the South American Andes in central Peru and parts of Ecuador; altitude is also a factor, with the endemic zone ranging from 500 to 3,400 m (1,600 to 11,200 ft) above sea level.

Prevention: If traveling in a risk area, avoid exposure to sandflies, especially between dusk and dawn when biting is most likely. Observe standard insect precautions in risk areas; however, because sandflies are about 1/3 the size of mosquitoes they can penetrate standard mosquito nets. Use permethrin spray on screens and nets. (See [Sandflies](#).)

Brucellosis is a bacterial disease that is transmitted to humans primarily from goats, cattle, and hogs. In travelers, the most common source of infection is consumption of unpasteurized dairy products, especially fresh goat cheese and other goat products. It can also be transmitted by contact with infected meat or animals or inhalation of contaminated dust. The incubation period is 2-4 weeks. Initial symptoms include fever, malaise, muscle aches, fatigue, chills, and weight loss. Long-term complications are uncommon in travelers. The disease occurs worldwide; high-risk regions include the Mediterranean basin, parts of Mexico and South and Central America, the Arabian Gulf area, and the Indian subcontinent.

Prevention: Avoid consuming unpasteurized dairy products, especially goat milk-derived products, locally prepared ice cream, and undercooked meat or dishes containing meat tissues or bone marrow. Avoid close contact with potentially infected animals and their secretions, particularly if cuts or abrasions of the skin are not fully healed.

Chagas' Disease (American Trypanosomiasis) is usually transmitted to humans by blood-sucking insects known as Reduviid bugs (kissing bugs). If infection is acquired through a skin lesion, some persons develop a red, hardened area ("chagoma") at the site, along with enlarged lymph glands. Persons who acquire the infection through the surface of the eye or eyelid

lining develop painless swelling of the eyelids and tissue around the eyes. Shortly after the initial symptoms, fever, malaise, enlarged and painful lymph glands, generalized edema (swelling), and mildly enlarged liver and spleen may appear. A few persons will develop central nervous system symptoms and/or cardiac involvement, which can be fatal. Acute symptoms usually resolve within 8-10 weeks. The chronic phase develops years after the initial infection. The disease may be mild or severe. The severe form is marked by an enlarged heart and extensive heart damage and can be fatal. The disease occurs only in the Western Hemisphere and is endemic in Mexico and Central and South America. Risk to travelers is very low; the highest risk is for persons sleeping in mud huts in the poorest areas of endemic Central and South American countries.

Prevention: Avoid sleeping in houses that are constructed of mud, adobe, or palm thatch. If such accommodations are unavoidable, search the sleeping areas thoroughly for bugs and use bednets. Avoid blood transfusions that have not been screened for Chagas' disease. Avoid freshly prepared fresh fruit and cane juices from unsanitary sources in endemic areas.

Coronavirus, also known as Middle East respiratory syndrome coronavirus (MERS-CoV), is an acute viral respiratory infection that has caused several hundred cases, primarily in the Arabian Peninsula, since April 2012. The exact reservoir, source, and mode of transmission remain unknown though studies indicate circulation of MERS-CoV or closely related coronaviruses in camel populations.

Prevention: Travelers should practice good personal hygiene and frequent handwashing; avoid all wild and farm animals, especially camels; and avoid persons with respiratory illnesses. If respiratory symptoms arise after travel to an area where cases have been reported, seek medical care.

Cholera is an acute bacterial intestinal infection usually caused by consuming contaminated water or food. The infection is often mild and self-limited. Severe cases begin with explosive onset of frequent watery stools (vomiting may also occur) and progress to dehydration, shock, and coma.

Prevention: Travelers who follow usual tourist itineraries with standard accommodations and observe food safety recommendations while in countries reporting cholera have virtually no risk. Risk increases for those who drink untreated water or eat poorly cooked or raw seafood in risk areas. Oral cholera vaccine is available in some countries but not all (e.g., it is not available in the U.S.) and is not 100% effective. Discuss its availability and suitability with a health care provider. Follow strict food and water precau-

tions whether vaccinated or not. (See "Traveler's Diarrhea" in [Illnesses from Food and Water](#).)

Ciguatera poisoning is caused by eating fish that have accumulated a high level of toxins. Especially risky are larger carnivorous fish that live near coral reefs, such as barracuda, grouper, moray eel, parrot fish, red snapper, surgeon fish, trigger fish, amberjack, wrasse, and mullet. Symptoms can include numbness or tingling of lips, tongue, mouth, throat, arms or legs; diarrhea; cramps; and vomiting; "heat and cold reversal" (a burning sensation when touching something cold and a cold sensation when touching something hot); or cardiac symptoms such as irregular heartbeat. Fatal respiratory paralysis can ensue in the most serious cases. Symptoms become more severe with each exposure to the toxin.

Prevention: The toxin is tasteless and odorless and can't be destroyed by cooking, so exercise caution when eating fish in risk areas, particularly in the Indo-Pacific waters, the Gulf of Mexico, Southeast Asia, and the Gulf of California. Avoid eating the fish mentioned above, but if that is not possible, eat smaller portions or smaller, younger fish (larger fish have higher levels of toxin); don't eat the heads or internal organs of these fish (organs retain more toxins); and don't eat any fish considered dangerous by the local population.

Diphtheria is an acute bacterial disease transmitted through respiratory droplets and contact with skin lesions. It is characterized by sore throat, hoarseness, nasal drainage, fever, difficulty swallowing, and a thick, gray membrane covering the back of the throat. It can be fatal. Diphtheria occurs worldwide but mainly in developing countries.

Prevention: The best prevention is a primary series of diphtheria, tetanus, and pertussis vaccine, which all persons should complete. DTaP is used for children 6 years and younger; Tdap and/or Td is used for persons 7 years and older. See *Tetanus* for booster doses.

Dysentery is a term for illnesses characterized by abdominal pain, bloody diarrhea, cramps, and fever. Travelers are most likely to encounter 2 types. *Amoebic dysentery (amebiasis)* is common in tropical climates. Symptoms include abdominal discomfort with both diarrhea and constipation. Serious cases can cause fever, chills, and frequent diarrhea containing blood or mucus. *Bacillary dysentery (shigellosis)* is common in regions with poor sanitation or anywhere hygienic standards are lax. Flu-like symptoms appear suddenly, 1-4 days after ingestion of the bacteria, including diarrhea that can last up to a week.



Prevention: Because illness is caused by ingesting contaminated food or water, it is important to follow food and water precautions. (See [Traveler's Diarrhea](#).)

Ebola is a severe, often-fatal disease caused by infection with Ebola virus. The means of transmission is unknown. The onset of illness is abrupt and is characterized by fever, headache, joint and muscle aches, sore throat, and weakness, followed by diarrhea, vomiting, and stomach pain. A rash, red eyes, hiccups, and internal and external bleeding can also occur.

Prevention: Ebola hemorrhagic fever is found in remote areas of central and western Africa. When traveling to these areas, it is important to avoid close physical contact with people who appear ill. Travelers should avoid bats and other rodents and should not eat unidentified or undercooked bush meat.

Filariasis is a systemic parasitic disease caused by microscopic worms (filariae). Larvae, which later develop into adult worms, are transmitted to humans by biting flies, mosquitoes, or gnats. In the tropics and subtropics, filariae can cause 3 important diseases: lymphatic filariasis, onchocerciasis (river blindness), and loiasis.

Early symptoms of lymphatic filariasis include recurring fever, pain, and swelling of lymph nodes in the arms, legs, or scrotum. When lymph flow is obstructed, swelling of the affected body part occurs (called elephantiasis). This type of filariasis is transmitted through mosquito bites; most bite at night but a few bite during the day. Early symptoms of onchocerciasis include itching of the skin or eye, rash, skin nodules, and swelling of 1 limb. This type of filariasis is caused by the bite of the black fly or buffalo gnat; they bite throughout the day, especially at dawn and dusk. (See [Onchocerciasis](#).) Early symptoms of loiasis may be recurrent itchy or swollen skin or a worm seen migrating beneath the conjunctiva of the eye. Loiasis is spread by

deer flies, mango flies, and mangrove flies, which bite throughout the day and especially around noon.

Prevention: Follow insect precautions carefully when traveling in risk areas. A preventive drug may be used for some long-term travelers to risk areas; it is not suitable for short-term travelers.

Giardiasis is a diarrheal illness caused by the microscopic protozoa *Giardia lamblia*. It is acquired by ingesting contaminated water or food (including swallowing contaminated recreational water), exposure to fecally contaminated environmental surfaces, and person-to-person transmission by the fecal-oral route. Giardiasis occurs throughout the world, and risk is highest for persons who live in or visit rural areas, trek in backcountry areas, or frequently eat, drink, or swim in areas that have poor sanitation and inadequate drinking water treatment facilities. Symptoms often begin gradually, with loose stools occurring in distinct episodes during the day and an increase in intestinal gas and bloating; symptoms then become more bothersome and are associated with fatigue. Symptoms can persist for months.

Prevention: Follow water and food precautions carefully, and practice good personal hygiene. See a health care provider about chronic diarrhea. (See [Traveler's Diarrhea](#).)

Lassa fever is an acute viral infection found in tropical regions, particularly rural western Africa. It is highly contagious and severe cases can be fatal. In many cases there are few symptoms. In persons who do have symptoms, the onset is gradual, over several days, and may include fever, general discomfort, muscle pain, dry cough, chest and abdominal pain, headache, and sore throat. As the illness progresses, symptoms include facial and neck swelling and difficulty breathing. In severe cases, confusion, shock, and seizures may occur. Infections tend to occur in clusters around rural villages; however, urban cases have occurred. Infections can occur at any time of the year, but the most human cases occur during the dry season between January and May. Travelers at the highest risk are long-term visitors, expatriates who are likely to stay in substandard accommodations, and adventure travelers.

Prevention: Lassa fever is carried by rodents, so prevention depends on avoiding contact with these animals, their feces, and potentially contaminated food or water. Avoid staying in accommodations with known rodent infestation when traveling in areas of risk.

Leishmaniasis is caused by parasites spread to humans by the bite of an infected sandfly. (See [Sandflies](#).) There are several forms of the disease. *Cutaneous leishmaniasis* is characterized by skin lesions and ulcerations that develop several weeks after being bitten. If untreated, the sores last from weeks to years. In some cases, cutaneous lesions may seem to heal, but the parasites then invade the soft tissue of the face, causing inflammation and destruction of nose and mouth tissue. This is called *mucosal leishmaniasis*. *Visceral leishmaniasis*, also called kala azar, is rare in travelers; there may be no symptoms or a slowly progressive febrile disease with abdominal enlargement, weakness, weight loss, dry scaly skin, edema, and hemorrhage. It is potentially fatal if not treated. Leishmaniasis occurs in parts of the Americas, Africa, Europe, and Asia.

Prevention: Follow insect precautions and remember that sandflies are very tiny, about 1/3 the size of mosquitoes. Use permethrin spray on screens and nets. Consult a health care provider about any incidence of prolonged fever, anemia, weight loss, or unhealed lesions.

Leptospirosis occurs worldwide, with a higher incidence in tropical climates; most cases occur during or soon after rainy seasons. A variety of animals (e.g., rodents, dogs, livestock) carry *Leptospira* bacteria in their urine, which can infect water where people swim or bathe. The disease is transmitted to humans through direct contact with contaminated water, soil, or animal urine through contact with open skin or mucous membranes of the eyes, nose, or mouth. Most cases occur 5-14 days after exposure. The disease begins with chills, fever, headache, and muscular pain. Weil's disease, the most serious form of the infection, is identified by jaundice (yellow skin and eyes), hemorrhage or bleeding in the skin and subcutaneous tissue, shock, and cardiac arrhythmias. Death can occur. Adventure travelers and persons who engage in hiking, biking, camping, swimming, boating, or other water sports in natural freshwater bodies are at risk for acquiring leptospirosis.

Prevention: Avoid exposure to potentially contaminated water, soil, and mud. Do not swim or wade in fresh water that might be contaminated with animal urine. Wear protective clothing or footwear during recreational activities that might involve exposure to contaminated water or soil. Travelers should also be aware of the dangers of urine contamination when befriending a stray animal and should carefully wash or avoid fresh vegetables grown in soil with suspected contamination. Employ good handwashing techniques. Some adventure travelers take doxycycline to prevent infection. Ask a health care provider if this antibiotic is indicated.

Meningococcal disease is a potentially fatal infection caused by the *Neisseria meningitidis* bacteria, which enter the body through the upper respiratory tract. Most people who become infected develop very mild upper respiratory symptoms or no symptoms at all. Severe cases can lead to meningitis (infection of the membranes covering the spinal cord and brain); symptoms of meningitis include severe headache, stiff neck, high fever, nausea and vomiting, and sensitivity to light. If the disease progresses, it can lead to convulsions, coma, and death. (Meningitis can progress rapidly so prompt treatment with antibiotics is extremely important.) Risk to travelers is generally low, but increases as length of stay increases and level of contact with local populations increases. Meningococcal infections occur most commonly in poor, overcrowded areas. Epidemics occur each year in the “meningitis belt” of Africa (especially during the December through June dry season).

Prevention: Vaccine is available to protect against meningococcal disease. It is routinely recommended for some persons in developed countries and for others traveling to certain developing countries. Persons participating in an annual pilgrimage to Mecca (Hajj or Umra) are required to produce a certificate of vaccination against meningococcal meningitis issued not more than 3 years and not less than 10 days before arrival in Saudi Arabia. Employ good handwashing techniques, especially when traveling to developing countries.

Onchocerciasis, sometimes called river blindness, is a disease of the skin and eyes caused by the filarial nematode (round worm) *Onchocerca volvulus*. Humans contract the disease when bitten by infected blackflies or buffalo gnats, which bite during the day and especially at dawn and dusk, and are found near rapidly flowing rivers and streams. The fly then deposits the infective larvae beneath the skin of humans, and the larvae penetrate the human tissue and after about 1 year develop into adult worms. Early symptoms include itching of the skin or eye, rash, skin nodules, and swelling of 1 limb. In heavy infections, the larvae may invade the eyes and cause blindness. Onchocerciasis is widespread in river basins and forests of tropical sub-saharan Africa and Sudan, as well as valleys of east-central Africa and Yemen. Travelers can get this disease, especially if they live in endemic areas and work outdoors.

Prevention: Use protective clothing (long-sleeved shirts and long pants), insect repellents, and permethrin-impregnated bednets for sleeping, and avoid breeding locations of the blackfly or buffalo gnat. Be especially vigilant with insect precautions during the daytime hours when black flies bite.

Pertussis (whooping cough) is a highly contagious bacterial disease that is spread through inhalation of bacteria from an infected person. Pertussis is characterized by mild upper respiratory symptoms followed by coughing spells so bad that it is hard to eat, drink, or breathe, followed by a high-pitched “whoop” when breathing in. Pertussis can lead to pneumonia, seizures, brain damage, and death. It is most common in countries where immunization generally is not provided.

Prevention: The best prevention is childhood vaccination, which is usually given in combination with diphtheria and tetanus vaccines (DTaP) to children younger than age 7 years. Older persons who did not complete a primary series will need 1 dose of the pertussis-containing vaccine Tdap and 2 doses of Td. Tdap is given routinely at age 11-12 years and to persons older than 11 years of age who did not receive a previous dose of Tdap. A booster dose is given every 10 years and for wound management. (See [Tetanus](#).)

Rocky Mountain spotted fever is caused by the bacterium *Rickettsia rickettsii*, which is spread to humans by ticks. Fever, headache, and muscle pain occur 2-14 days after being bitten by a tick, followed a few days later by a rash, usually on the hands and feet, spreading to the trunk and face. Rocky Mountain spotted fever is found throughout the Western Hemisphere. It is the most frequently reported rickettsial illness in the U.S. and also occurs in areas of Central and South America. Without prompt treatment it can be fatal.

Prevention: Follow insect precautions carefully, especially in areas that are likely to harbor ticks. (See [Ticks](#).) Domestic animals should wear tick collars and be checked regularly after they have spent time outdoors.

Schistosomiasis (bilharzia) is acquired through contact with larvae-infested fresh water. The parasite lives in humans, and its eggs are excreted in stool and urine, ending up in water where they live in certain freshwater snails. The snails, in turn, release tiny free-swimming larvae (called cercariae) into the water. When humans come into contact with infested water, the cercariae penetrate the unbroken skin and migrate to veins around the liver or bladder where they mature into flatworms or flukes called schistosomes. A few hours after contact with cercariae, an itchy rash occurs (in some persons) where the cercariae enter the body (“swimmers itch”); this usually resolves within a day. Weeks later the adult worms begin to produce eggs and the person may experience flu-like symptoms as well as diarrhea and hives. Long-term consequences include severe liver disease, kidney



failure, and bladder cancer. Schistosomiasis occurs throughout the tropics and subtropics and is endemic in many developing countries. Travelers are usually infected by bathing, swimming, wading, boating, or rafting in infested water. Even brief water exposure can lead to infection.

Prevention: Avoid swimming or wading in fresh water in areas with poor sanitation or where cases of schistosomiasis have occurred. If water exposure cannot be avoided, wear protective footwear or clothing and apply an effective insect repellent. (See [Insect Precautions](#).) Rubber boots and wetsuits are protective. If contact with fresh water cannot be avoided, towel dry vigorously, as cercariae die quickly when removed from water and cannot survive drying.

Scombroid poisoning is caused by ingesting bacterial toxins from spoiled fish such as tuna, mackerel, skipjack, and bonito; other fish have also produced scombroid poisoning, e.g., amberjack, anchovy, mahi-mahi (dolphin), bluefish, swordfish, herring, salmon, trout, and sardine. Symptoms occur within an hour of eating spoiled fish and can include flushing, bright red rash, headache, and palpitations. Hives, dizziness, shortness of breath, abdominal pain, diarrhea, nausea, vomiting, generalized edema (swelling), and redness of the eyes can also occur. Most symptoms resolve within 3-8 hours.

Prevention: Contaminated fish may taste strong or peppery and might make one's mouth tingle. If fish tastes strange or causes any sensation of numbness, don't eat it. Scombroid is usually a short-lived illness. Antihistamines provide symptomatic relief, as do bronchodilators, when necessary. Adrenaline may be required in rare, severe cases.

Tapeworms can be transmitted to humans who eat raw, undercooked, or smoked meat or fish containing tapeworm larvae, which then invade the

small intestine of the human host. Symptoms range from vague abdominal discomfort to pain, diarrhea, and weight loss. Beef tapeworms occur in central Asia, the Near East, central and eastern Africa, Southeast Asia, and Central and South America. Pork tapeworms occur in Central and South America, parts of Africa, Mexico, Southeast Asia, the Philippines, India, and part of southern Europe. Travelers at the highest risk are those who are exposed to unsanitary conditions, particularly water or food contaminated with human or animal waste.

Prevention: Avoid consumption of undercooked beef, pork, or fish, as well as salted, dried, or pickled meat-derived products. Avoid unprocessed water, ice, raw vegetables, fruits with skin that have not been thoroughly washed with clean water, and other food items processed in unsanitary conditions.

Tuberculosis (TB) is an infectious disease caused by bacteria (*Mycobacterium tuberculosis*). TB most commonly affects the lungs, but any organ of the body can be affected. TB is usually spread when infected people cough and droplets are inhaled by those nearby. Persistent cough, fever, night sweats, weight loss, fatigue, chest pain, and coughing up bloody sputum are symptoms of infection, but they are not always present. TB is a risk for travelers to areas where TB is endemic, and especially for persons who will be in the area for longer than 1 month, health care providers, and persons working in aid situations.

Prevention: Avoid close physical contact with persons who are coughing or otherwise obviously ill. A vaccine called Bacille Calmette-Guérin (BCG) is used in many developing countries and is also recommended in some industrialized countries (e.g., the U.K.) for long-stay travelers to endemic areas, but its effectiveness in adults is variable. In the U.S., pre- and post-travel TB screening is recommended rather than BCG vaccine.

Typhus is an infection caused by bacterial organisms called rickettsiae. Typhus occurs in several forms (see below) and usually is transmitted to humans by the bites of lice, fleas, mites, or ticks. Symptoms occur from 6 to 18 days after exposure and include high fever, headache, and rash; respiratory and neurological symptoms can also occur. (See also [Rocky Mountain spotted fever](#), which is caused by tick-borne *Rickettsia*.)

Epidemic (Louse-borne) typhus occurs in regions of Africa, South America, and Asia. It occurs when infected body lice or their feces contaminate a bite, an abrasion, or the eyes; it can also be caused by inhalation of dried

feces. The disease can spread rapidly when large numbers of people are living in crowded, unsanitary conditions, and incidence tends to increase in winter. Symptoms begin suddenly about 10-14 days after exposure (see symptoms above). The disease can be relatively mild; however, if left untreated, it can result in death.

Endemic (Flea-borne) typhus, also called murine typhus, is spread by fleas that live on mice and rats. It occurs worldwide (especially in tropical and subtropical areas) wherever people live in close contact with rodents. The disease occurs when feces of infectious fleas contaminate a bite or skin abrasion, usually when the victim scratches or rubs a bite; the disease can also be caused by inhalation of dried feces. Symptoms occur 1-2 weeks after contact and last for 6-13 days. The disease is typically mild and fatalities are rare.

Scrub typhus occurs mostly in Southeast Asia, the Indian sub-continent, the South Pacific, and North Queensland, Australia. People become infected when bitten by infected mites while walking through scrub (the cleared areas of jungle or forest). (See [Mites](#).) Close examination of skin will show 1 or more small black scabs at the site of the mite bites. Symptoms appear after a 5- to 10-day incubation period. In addition to symptoms noted above, muscle pain and swollen lymph glands may occur. Mortality rates are low but serious neurological symptoms can occur if the disease is not treated.

Prevention: Preventive measures in risk areas include standard insect precautions; avoidance of unsanitary, crowded conditions; and good personal hygiene. If walking through scrub in risk areas, treat clothing with permethrin, cover exposed skin, and wear trousers tucked into boots.

Zika virus is transmitted by mosquitoes and is closely related to dengue. However, Zika virus infection causes milder illness, including fever, malaise, headache, rash, joint and muscle pain, and inflamed eyes. Zika virus infection occurs in at least a dozen countries of Africa, Southeast Asia, and Indonesia.

Prevention: Observe insect precautions when in risk areas. (See [Mosquitoes](#).)

MEDICAL HISTORY FORM

Check with a health care provider and family records to complete this information.

Name: _____

Address: _____

Telephone: _____

Blood Type/RH Factor: _____

Allergies to food, insects, medicine, or environmental factors: _____

Name, address, and telephone of health care provider in home country: _____

Name, address, and telephone of health care providers or hospitals in destination country: _____

Chronic conditions (e.g., cardiac problems, diabetes, hypertension): _____

Current or recent conditions (e.g., pregnancy, flu, injury): _____

Prescription for glasses or contact lenses, if relevant: _____

Dental history, if relevant: _____

Attach signed, dated letter from a health care provider explaining all current treatments or medications. Include any prescriptions, using both generic and brand names.

IMMUNIZATION RECORD

<i>Immunizations</i>	<i>Required</i>	<i>Recommended</i>	<i>Date Completed</i>
Cholera			
Diphtheria, tetanus, pertussis (DTaP or DTP)			
DT (diphtheria tetanus)			
Hepatitis A			
Hepatitis B			
<i>H. influenzae</i> type b (Hib)			
Human papillomavirus (HPV)			
Influenza			
Japanese encephalitis			
Measles, mumps, rubella (MMR)			
Meningococcal meningitis (MCV4 or MPSV)			
Pneumococcal (PCV13 or PPSV23)			
Poliomyelitis, primary series			
Polio booster			
Rabies			
Rotavirus			
Tetanus, diphtheria (Td)			
Tetanus, diphtheria, pertussis (Tdap)			
Typhoid			
Varicella (chickenpox)			
Shingles (herpes zoster)			
Yellow fever			
Other:			

Useful Items to Pack

Some useful items to pack are suggested below. Items needed will differ depending on destination, length of trip, and activities planned. For documents, make copies and carry both the photocopies and originals separately when traveling. Upon arrival, carry a copy of the passport when out and about and keep the original in a safe place.

DOCUMENTS

- *International Certificate of Vaccination or Prophylaxis*
- Credit card information
- Medical insurance provider information
- International driver's license
- Medical History Form/Vaccination Status Record
- Passport, with 4 extra photos
- Visa(s)
- Traveler's checks
- Airline tickets

OTHER ITEMS

- Electric plug adapter, current converter
- Facial tissue in small packets
- Flashlight, batteries, candles, matches
- Hand sanitizer
- Insect repellent with DEET or picaridin
- Insecticide with permethrin for clothing, netting, and other fabrics
- Mosquito netting
- Spare glasses, sunglasses, contact lenses, cleaning/wetting solutions
- Scissors
- Sunscreen
- Tampons/sanitary napkins
- Heating coil, chemical purifiers, filter for water purification

FIRST AID ITEMS

- Adhesive bandages or gauze and tape
- Alcohol swabs for disinfection, in individual packets.
- Antibacterial soap, hand wipes, or waterless gel
- Antibiotic and antifungal ointments, creams, or powder
- Bandage rolls (Ace wraps) for sprains and strains
- Cough syrup or lozenges
- Disinfectant for cuts and scrapes
- Hydrocortisone cream (topical cream for itching, bites, and skin irritation)
- Oral rehydration solution (ORS) for diarrhea, dehydration
- Thermometer
- Tweezers
- Medications
- Antihistamine (e.g., Benadryl) for allergic reactions
- Antimotility medication (e.g., Imodium or Lomotil)
- Bismuth subsalicylate (e.g., Pepto-Bismol) for intestinal distress
- Birth control pills/condoms
- Laxative/stool softener
- Pain relievers (e.g., acetaminophen, aspirin, ibuprofen)
- Prescription medications, labeled in original bottles
- Vitamins

Useful Foreign Phrases

The following are translations of some phrases travelers may need in order to get medical help while overseas. To avoid any confusion that could result from mispronunciation, simply point to the appropriate phrase. For a more complete list of phrases, try the Berlitz phrasebook series.

Emergency – get a doctor, quick!

- Spanish – Urgencia-llame a un médico, ¡rápido!
- German – Notfall-holen Sie schnell einen Arzt!
- French – C'est une urgence-appellez immédiatement un médecin!
- Italian – E un'emergenza. Chiamate un dottore, presto!
- Swahili – Haraka-pata daktari haraka!
- Portuguese – Emergência! Chame um medico, rápido!
- Chinese – 紧急情况 – 快叫医生来!

Call an ambulance!

- Spanish – ¡Llame a una ambulancia!
- German – Rufen Sie einen Krankenwagen!
- French – Appelez une ambulance!
- Italian – Chiamate un'ambulanza.
- Swahili – Ita ambulensi!
- Portuguese – Chame uma ambulância!
- Chinese – 叫救护车!

I am sick.

- Spanish – Estoy enfermo (M) enferma (F).
- German – Ich bin krank.
- French – Je suis souffrant (M) souffrante (F).
- Italian – Sto male.
- Swahili – Mimi ni mgonjwa.
- Portuguese – Estou doente.
- Chinese – 我病了。

Please take me to the nearest hospital.

- Spanish – Por favor lléveme al hospital más cercano.
- German – Bitte, bringen Sie mich zum nächsten Krankenhaus.
- French – S'il vous plaît, transportez-moi à l'hôpital le plus proche.
- Italian – Per favore, mi porti all'ospedale più vicino.
- Swahili – Tafadhali nipeleke kwa hospitali ilio karibu.
- Portuguese – Por favor, me leve para o hospital mais próximo.
- Chinese – 请带我到最近的医院。

Where is the toilet?

- Spanish – ¿Dónde está el baño de damas/caballeros?
- German – Wo ist die Toilette?
- French – Où sont les toilettes?
- Italian – Dov'è il bagno?
- Swahili – Choo kiko wapi?
- Portuguese – Onde fica o banheiro?
- Chinese – 哪儿有厕所?

Can you write down for me the name, address and phone number of (see following phrases):

- Spanish – ¿Puede escribirme el nombre, dirección y número de teléfono de:
- German – Können Sie bitte mir Namen, Adresse, und Telefonnummer von _____ aufschreiben?
- French – Donnez-moi par écrit le nom, l'adresse et le numéro de téléphone:
- Italian – Mi può scrivere il nome, indirizzo e numero di telefono di:
- Swahili – Unaweza kuniandikia mimi, jina, anwani, na namba ya simu ya:

- Portuguese – Você pode escrever para mim o nome, endereço e número de telephone de:
- Chinese – 请写一下你的姓名、地址和电话号码。

...an English-speaking doctor?

- Spanish – un médico que hable inglés?
- German – einem Arzt, der Englisch spricht
- French – d'un médecin parlant anglais?
- Italian – un dottore che parla inglese?
- Swahili – daktari anaesema kiingereza?
- Portuguese – Um médico que fala inglês?
- Chinese – 会说英文的医生

...an English-speaking dentist?

- Spanish – un dentista que hable inglés?
- German – einem Zahnarzt, der Englisch spricht
- French – d'un dentiste parlant anglais?
- Italian – un dentista che parla inglese?
- Swahili – daktari wa meno anaesema kiingereza?
- Portuguese – um dentista que fala inglês?
- Chinese – 会说英文的牙医

...an English-speaking hospital?

- Spanish – un hospital donde hablen inglés?
- German – einem amerikanischen oder englischen Krankenhaus
- French – d'un hôpital américain ou anglais?
- Italian – un ospedale americano o inglese?
- Swahili – hospital ya kiamerika ama kiingereza.
- Portuguese – um hospital onde falam inglês?
- Chinese – 有英文服务的医院?

...a good doctor?

- Spanish – un buen médico?
- German – einem guten Arzt
- French – d'un bon médecin?

- Italian – un buon dottore?
- Swahili – Dakrai mzuri?
- Portuguese – um bom médico?
- Chinese – 好医生

...a good dentist?

- Spanish – un buen dentista?
- German – einem guten Zahnarzt
- French – d'un bon dentiste?
- Italian – un buon dentista?
- Swahili – Daktari was meno ambae ni mzuri.
- Portuguese – um bom dentista?
- Chinese – 好牙医

Would you please write down the telephone number of the American embassy or consulate?

- Spanish – ¿Podría escribirme por favor el número de teléfono de la embajada o consulado americano?
- German – Könnten Sie bitte die Telefonnummer von der amerikan-ischen Botschaft oder dem amerikanischen Konsulat auf-schreiben?
- French – S'il vous plaît, donnez-moi par écrit le numéro de téléphone de l'ambassade ou du consulat des Etats-Unis?
- Italian – Per favore, mi può scrivere il numero di telefono dell'ambasciata o del consolato americano?
- Swahili – Tafadhali unaweza kuniandikiya namba ya simu ya embasi ama konsulet ya amerika.
- Portuguese – Você pode escrever para mim o número de telefone da embaixada ou do consulado americano?
- Chinese – 可以请你写一下美国大使或顾问的电话号码吗?

I do not speak _____.

- Spanish – No hablo español.
- German – Ich spreche kein Deutsch.
- French – Je ne parle pas votre langue.
- Italian – Non parlo italiano.
- Swahili – Mimi sijui lugha yako.

- Portuguese – Eu não falo português.
- Chinese – 我不会说中文。

Can you get an English interpreter for me?

- Spanish – ¿Puede conseguirme un intérprete de inglés?
- German – Können Sie mir einen Dolmetscher holen, der Englisch spricht?
- French – Pouvez-vous me procurer un interprète parlant anglais?
- Italian – Mi può trovare un interprete inglese?
- Swahili – Unaweza kunipatia mtu anieleza mimi kwa kiingereza.
- Portuguese – Você pode conseguir um intérprete de inglês para mim?
- Chinese – 可以给我请一个英文翻译吗？

I have been ill for _____ days. (Hold up the number of fingers.)

- Spanish – Llevo _____ días enfermo (M) enferma (F).
- German – Ich bin seit _____ Tagen krank.
- French – Je suis souffrant (M) souffrante (F) depuis _____ jours.
- Italian – Sono malato da _____ giorni.
- Swahili – Mimi nimekuwa mgonjwa kwa siku _____.
- Portuguese – Eu tenho estado doente por _____ dias.
- Chinese – 我已经病了好几天了。

It hurts here.

- Spanish – Me duele aquí.
- German – Es tut mir hier weh.
- French – C'est là que j'ai mal.
- Italian – Mi fa male quà.
- Swahili – Hapa pana uchungu.
- Portuguese – Dói aqui.
- Chinese – 这儿疼。

I have diarrhea.

- Spanish – Tengo diarrea.
- German – Ich habe Durchfall.
- French – J'ai la diarrhée.

- Italian – Ho la diarrea.
- Swahili – Mimi nina ugonjwa wa kuhara.
- Portuguese – Tenho diarreia.
- Chinese – 我一直拉肚子。

I have been vomiting.

- Spanish – He estado vomitando.
- German – Ich habe mich übergeben.
- French – J'ai des vomissements.
- Italian – Ho vomitato spesso.
- Swahili – Mimi ninatapika.
- Portuguese – Tenho estado vomitando.
- Chinese – 我一直在吐。

I am a diabetic.

- Spanish – Soy diabético.
- German – Ich bin Diabetiker.
- French – Je suis diabétique.
- Italian – Ho il diabete.
- Swahili – Mimi nina ugonjwa wa sukari.
- Portuguese – Eu sou diabético (-a).
- Chinese – 我是个糖尿病人。

I have asthma.

- Spanish – Tengo asma.
- German – Ich habe Asthma.
- French – Je suis asthmatique.
- Italian – Ho l'asma.
- Swahili – Mimi nina asma-mimi nina-taabu khvuta Pumzi.
- Portuguese – Sofro de asma.
- Chinese – 我有哮喘病。

I have a cardiac condition.

- Spanish – Sufro del corazón.
- German – Ich bin herzleidend.
- French – Je souffre du coeur.
- Italian – Sono malato di cuore.
- Swahili – Mimi nina ugonjwa wa moyo.
- Portuguese – Tenho uma doença cardíaca.
- Chinese – 我有心脏病。

I am pregnant.

- Spanish – Estoy embarazada.
- German – Ich bin schwanger.
- French – Je suis enceinte.
- Italian – Sono incinta.
- Swahili – Mimi nina mimba.
- Portuguese – Estou grávida.
- Chinese – 我怀孕了。

I am currently taking these medications. (Show containers or say generic names.)

- Spanish – Estoy tomando estas medicinas.
- German – Ich nehme zur Zeit diese Medikamente.
- French – Voici les médicaments que je prends actuellement.
- Italian – Sto prendendo queste medicine ora.
- Swahili – Kwa sasa ninatumla dawa hizi.
- Portuguese – Estou tomando estes medicamentos.
- Chinese – 我最近有吃这种药。

I need more of this. (Show container or prescription order.)

- Spanish – Necesito más de éstas.
- German – Ich brauche mehr davon.
- French – J'ai besoin de ce produit.
- Italian – Me ne serve di più.
- Swahili – Ninataka nyengine zaidi ya hii.
- Portuguese – Eu preciso mais disso.
- Chinese – 我得多要一点这个。

I am allergic to _____. (Give generic names.)

- Spanish – Soy alérgico a _____.
- German – Ich bin allergisch gegen _____.
- French – Je suis allergique à _____.
- Italian – Sono allergico a _____.
- Swahili – Mimi mwili wangu aupatani na _____.
- Portuguese – Eu sou alérgico (-a) a _____.

- Chinese – 我对……过敏。

Please use my disposable syringe and needle.

- Spanish – Por favor use mi jeringa y aguja desechables.
- German – Bitte benutzen Sie mein eigenes Einwegspritzengerät.
- French – S'il vous plaît, servez-vous de ma seringue et mon aiguille pour injections jetables.
- Italian – Per favore, usi la mia siringa e il mio ago da buttar via.
- Swahili – Tafadhali tumia sindano hii yangu, ambayo utupwa ikishatumiwa.
- Portuguese – Por favor use a minha seringa e agulha descartáveis.
- Chinese – 请用一次性注射器和针头。

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