

MEDICAL HANDBOOK

A GLOBAL **R_x** FOR THE TRAVELER

From insurance and inoculations to packing smart to dealing with ailments abroad, an essential guide to protecting your health away from home. **BY AIMEE LEE BALL**

Around Christmastime a couple of years ago, DEPARTURES Editor at Large Sophy Roberts boarded a British Airways flight from London to Nairobi with her husband and their two young sons. Four-year-old Danny was recovering from a recent bout of chicken pox but had been cleared for travel by his doctor. Two or three hours after takeoff, Danny became lethargic, and his face and neck appeared to be swelling—“like a hamster holding

food in his cheeks,” recalls his mother. “I was concerned it could have been an allergic reaction to the antimalarial meds he’d taken. I was reading the small print on the packaging, quickly losing my cool. Although the airline had efficient systems for such passenger emergencies—a flight attendant was communicating with a doctor on the ground—time was absolutely frozen, and there was nothing but the Sahara desert beneath us.”

When the family arrived in Kenya at midnight, they were fast-tracked through customs and taken to a private hospital recommended by Roberts’s seat mate. “The facility was okay,

but we were still in a developing country,” she says. Blood tests showed Danny had picked up another infection that had sent his immune system into overdrive. “He spent the next week on antibiotics,” says Roberts, “and we spent it watching our steps.”

The episode got all of us at the magazine thinking about the kinds of health and medical issues we sometimes take for granted when we travel. It eventually grew into this special report, an indispensable guide for today’s traveler, with information, advice, and anecdotes from globe-trotting specialists who have been through—or treated—it all.



BEFORE YOU GO

A BRIEF HISTORY OF TRAVEL MEDICINE

Travel medicine didn't really exist as a specialized field until about 20 years ago. Many European countries had institutes of tropical medicine—a legacy of colonialism—but they focused on disease in indigenous populations. "No one dealt with health issues related to travel, things like 'I'm a diabetic flying from New York to Hong Kong; when do I take my insulin across the twelve time zones?'" says Bradley Connor, M.D., who runs **Travel Health Services**, a clinic in New York.

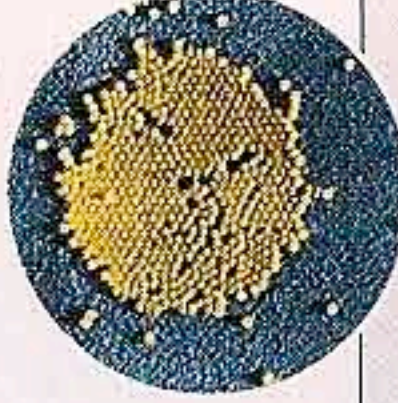

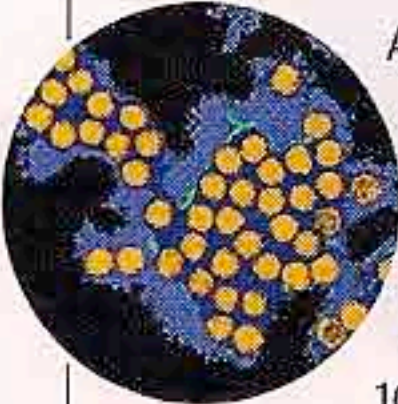



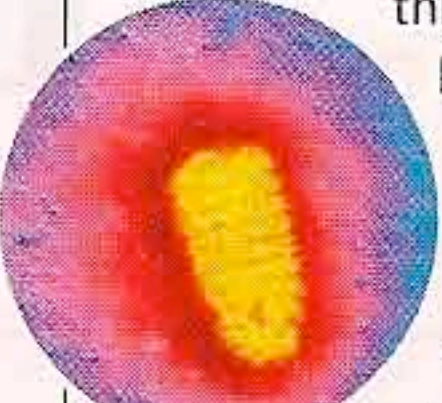





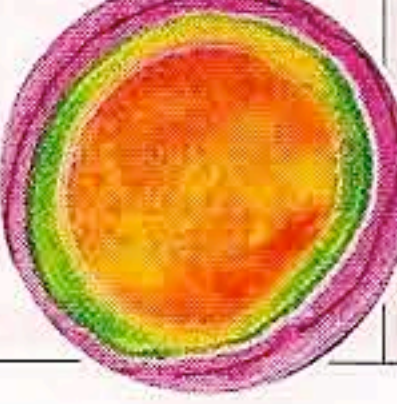

If anyone can be called the original specialist in the field, it's Martin Wolfe, M.D., director of **Traveler's Medical Service**, a health center in Washington, D.C. As a State Department consultant for more than 30 years, Wolfe was responsible for recommending vaccinations and prophylaxes for government personnel, including Henry Kissinger. "A specialist provides a lot that the average doctor doesn't," says Wolfe. "We can advise you on where diseases occur and when there's an outbreak, and recommend doctors and hospitals overseas."

By 1991 there were enough travel medicine practitioners to hold a conference in Atlanta. Today the **International Society of Travel Medicine (ISTM)** has about 2,500 members in 75 countries, and a wealth of information is available to travelers. Here are a few key resources:

- Both the **ISTM** and the **American Society of Tropical Medicine and Hygiene** maintain lists of travel medicine clinics sorted by country and, within the United States, by state. istm.org; astmh.org.
- Free membership to the **International Association for Medical Assistance to Travellers** comes with access to a directory of English-speaking doctors in 90 countries, most abiding by IAMAT's set fees. iamat.org.
- Membership in **International SOS** provides travelers access to more than 6,000 medical professionals operating in 70 countries. internationalsos.com.
- The **Centers for Disease Control and Prevention** and the **World Health Organization** both offer extensive online guides to international travel and health. cdc.gov; who.int.
- Experts from the CDC answer questions about the safety and efficacy of vaccines on the **Immunization Action Coalition's** Web site. immunize.org.

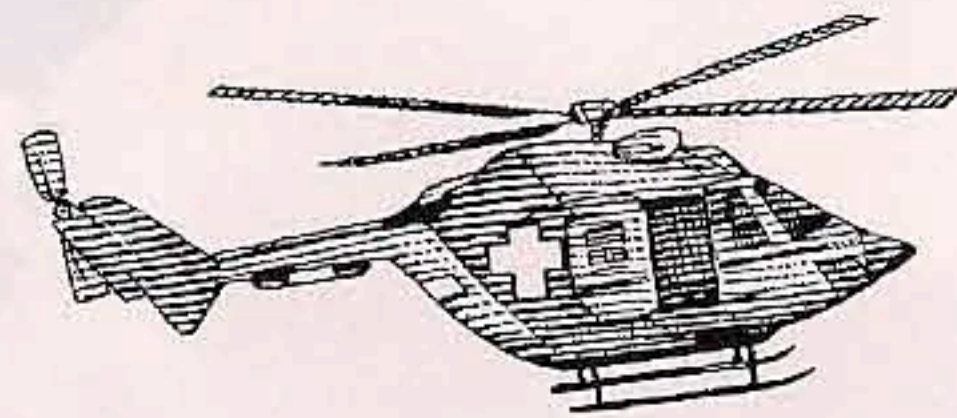
Calling the Shots: A Guide to Vaccinations

A number of vaccines are strongly recommended by the CDC or the State Department; others are required by certain countries to cross their borders. In most cases, advance planning is required so that enough time is given for the vaccination to take effect. So, what to take when? Here, a breakdown of the basics every world traveler should know.

Who Should Get It & When	DISEASE	Destinations & Dangers
<p>Anybody over the age of 18 needs a polio booster—even those who remember sucking on vaccine-saturated sugar cubes in grade school. It can be administered anytime before travel.</p> 	<p>POLIO</p>	 <p>"Polio was mostly eradicated, but there are still pockets remaining in Nigeria, India, Pakistan, and Afghanistan," says Stuart Rose, M.D., of Travel Medicine.</p>
 <p>Antibodies develop within two weeks of injection, so getting the shot a month before travel is playing it safe. A second dose six to 12 months later dramatically boosts antibody levels, providing virtually 100 percent immunity.</p>	<p>HEPATITIS A</p>	<p>Hepatitis A, a viral infection of the liver, is picked up from water and food (especially shellfish) or is transmitted sexually. According to the CDC, Mexico and Central and South America are the highest-risk areas for Americans. But even travelers to low-risk regions should consider a vaccination.</p> 
<p>Three doses provide lifelong protection: The first should be given at least one month before travel, the second one month later, and the third six months after the second. Alternately, Twinrix, a combination Hepatitis A and B vaccine, can be administered over three weeks.</p> 	<p>HEPATITIS B</p>	 <p>Hepatitis B is passed on through bodily fluids or syringes. The vaccine probably isn't necessary for most travelers, but anybody can end up exposed to blood or an unsterilized needle, so it's not a bad idea. (In fact, it's now a routine childhood vaccination.) High-risk regions for Hepatitis B are Africa, Southeast Asia, and the Middle East.</p>
 <p>A series of three injections is given over three to four weeks, to be completed before travel. More doses are required in the case of an actual bite. If contracted, rabies must be treated with a shot of rabies immune globulin, says Bradley Connor, M.D., of Travel Health Services, "which probably isn't available in Nepal."</p>	<p>RABIES</p>	<p>Rabies is a viral infection of the central nervous system, transmitted by an animal bite, usually that from a dog or a monkey in the developing world, or a bat, a skunk, a fox, or a raccoon in North America. Southeast Asia, sub-Saharan Africa, the Indian subcontinent, and Central and South America are all hosts to rabies. A vaccine is recommended for travelers who may come in contact with these animals, particularly children, who tend to find such beasts cute.</p> 
<p>This vaccine should be given a minimum of ten days before travel and is considered effective for at least ten years. Pregnant women or anyone sensitive to eggs are advised against getting it.</p> 	<p>YELLOW FEVER</p>	<p>Carried by a day-biting mosquito, yellow fever, a viral infection of the liver, is found mostly in sub-Saharan Africa, South America, and Panama. An international certificate of vaccination confirming inoculation (or, alternately, a waiver) is required for entry into certain countries, listed on cdc.gov.</p> 
 <p>Available as a single injection or as four capsules, this vaccine kicks in one week after the last dose—but it's only ever about 65 percent effective. It is not recommended for young children.</p>	<p>TYPHOID FEVER</p>	<p>Typhoid is spread through contaminated food or water. It occurs mainly in South and Southeast Asia, but there is also risk in Africa, the Caribbean, and Central and South America.</p> 
<p>Everyone, travelers and homebodies alike, should get a tetanus shot every five to ten years. (It now protects against diphtheria and whooping cough as well.)</p> 	<p>TETANUS</p>	 <p>Rusty nails are everywhere, so no place is without risk. Tetanus, otherwise known as lockjaw, gets serious when the severe spasms caused by the disease start to affect the respiratory muscles and interfere with breathing.</p>



BEFORE YOU GO

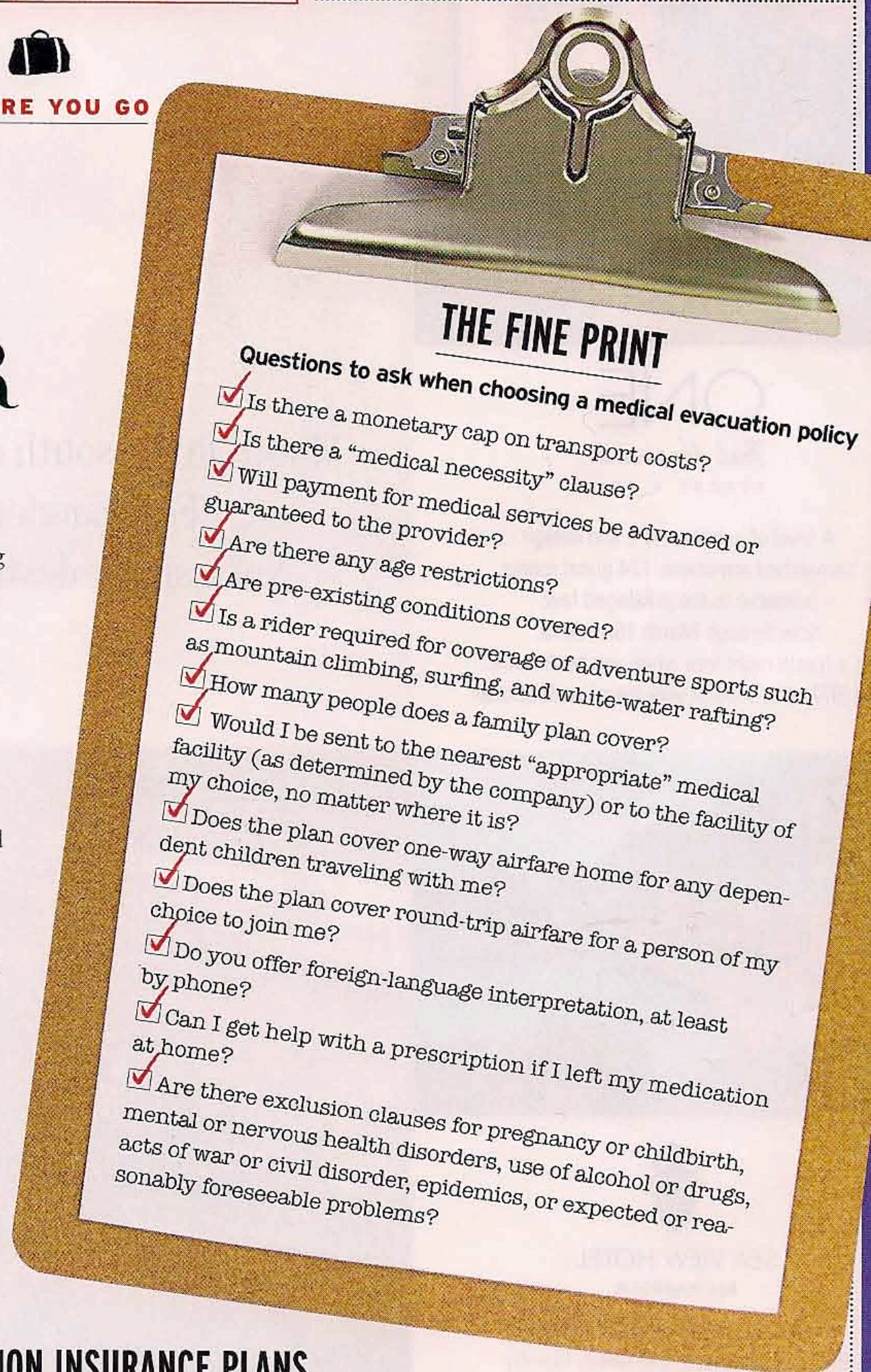


PREPARING FOR EMERGENCIES

Medical emergencies can happen anywhere. Just tripping on a few picturesque cobblestones can lead to a broken ankle. How does an injured or sick traveler find first-rate care, and fast? Medical evacuation services offer the best guarantee of excellent treatment by providing emergency airlifts to top local hospitals—or even one's home. Many of them also offer insurance plans to cover the associated costs.

The most important thing to check is exactly how each service is set up for emergencies in a destination country. The **U.S. Travel Insurance Association's** Web site (ustia.org) is a good resource, and price quotes from different carriers are available at sites such as **Squaremouth** (squaremouth.com) and **Insure My Trip** (insuremytrip.com). American Express Platinum and Centurion Cardmembers have access to the **Premium Global Assist Hotline** (715-343-7977), a service that can arrange and cover the costs of medical evacuations.

One caveat: Policies often stipulate that in the case of evacuation, a nurse from the United States must accompany the patient. "It's ridiculous," says Guy Rubin, managing partner of Imperial Tours. "A client of ours had a heart attack in Shanghai. It took two days to find an American nurse, another two days to get the nurse a visa to enter China, and then another day for the flight. A week passed before anything happened. That's like an ambulance stopping to have its engine serviced on the way from a crash scene to the hospital."



THE FINE PRINT

Questions to ask when choosing a medical evacuation policy

- Is there a monetary cap on transport costs?
- Is there a "medical necessity" clause?
- Will payment for medical services be advanced or guaranteed to the provider?
- Are there any age restrictions?
- Are pre-existing conditions covered?
- Is a rider required for coverage of adventure sports such as mountain climbing, surfing, and white-water rafting?
- How many people does a family plan cover?
- Would I be sent to the nearest "appropriate" medical facility (as determined by the company) or to the facility of my choice, no matter where it is?
- Does the plan cover one-way airfare home for any dependent children traveling with me?
- Does the plan cover round-trip airfare for a person of my choice to join me?
- Do you offer foreign-language interpretation, at least by phone?
- Can I get help with a prescription if I left my medication at home?
- Are there exclusion clauses for pregnancy or childbirth, mental or nervous health disorders, use of alcohol or drugs, acts of war or civil disorder, epidemics, or expected or reasonably foreseeable problems?

MEDICAL EVACUATION INSURANCE PLANS

MEDJET ASSIST

medjet.com

Unlike many plans, MedjetAssist will transfer patients to a hospital of their choice when traveling within the United States, not just when abroad. Annual membership is \$250 for an individual or \$385 for a family of up to five. There are also short-term bookings for one to three weeks.



FLYING DOCTOR SERVICE

amref.org

In the event of a life-threatening emergency, members are guaranteed free evacuation to Nairobi from anywhere in East Africa. Profits benefit the Flying Doctors' Society of Africa, which brings doctors to rural areas where they are needed most. Plans range from \$30 for two weeks to \$50 for two months.

INTERNATIONAL SOS

internationalsos.com

Founded by two Frenchmen in 1985, International SOS is active in 70 countries and operates a network of clinics and "alarm centers" that serve as a sort of global 911 service. The company also provides health care for the employees of many international corporations and nonprofits. Individual plans range from \$85 for a ten-day trip to annual membership for \$435.

ACCESS AMERICA

accessamerica.com

AccessAmerica's Med Evac plans cover up to \$1 million of the costs associated with transport to a medical facility—one it deems "appropriate"—and then home. There are 3-, 6-, and 12-month evacuation plans for individuals (\$190-\$490) and families of up to eight members (\$290-\$690).



ROYAL FLYING DOCTOR SERVICE OF AUSTRALIA

flyingdoctor.net

Travelers are entitled to the same emergency evacuation from the Australian outback as residents, at no charge. The RFDS is funded in part by donations, which can be made on its Web site. The service started in 1928 with a single biplane and now has 53 aircraft, each fully equipped with an intensive care unit.

MEDESCORT INTERNATIONAL

medescort.com

MedEscort International can help travelers who leave home without coverage and are faced with a medical emergency. But it's not an insurance plan, so the patient is responsible for the costs of the evacuation, which can run as high as \$125,000. In addition to offering "air ambulance" services, the company provides medical escorts for travelers in need of continuous care.



BEFORE YOU GO

PEST PRACTICES

Malaria is still a major—and potentially life-threatening—concern for world travelers. Here's what you need to know.

To Westerners, malaria may seem like an archaic disease, but every year it affects as many as 500 million people across the globe. A child dies of malaria every 30 seconds. And an estimated 30,000 travelers annually bring this unwelcome souvenir back from a trip abroad.

Malaria is caused by the parasite plasmodium, which is transmitted by infected female Anopheles mosquitoes. After entering the human body, the parasite migrates to the liver, where it usually multiplies for a week or two before invading red blood cells and causing symptoms such as headache, fever, nausea, and vomiting. If left untreated, malaria can turn fatal by disrupting the blood supply to vital organs.

Travelers are often lulled into thinking that malaria isn't a concern in urban areas. While there's little risk in Latin American or Southeast Asian cities, malaria is common in cities across sub-Saharan Africa. There's less danger if you visit an infected area during daylight hours, since mosquitoes feed mostly at night—though some of them may not get that memo.

No drug guarantees protection, and there's no consensus about an optimal regime. Antimalaria drugs don't actually prevent infection—they inhibit the parasites from multiplying in either the liver or the bloodstream. "There are five different parasites," says Stuart Rose, M.D., president of Travel Medicine in Northampton, Massachusetts. "And two of them can set up shop in your liver and hang out there, out of reach of drugs used to halt the spread of malaria in your blood." Only one

drug will eradicate those parasites, and that's primaquine, which must be taken with whatever antimalarial you used while traveling.

There are four malarial-prevention drugs that are approved in the United States, and most of them came about because governments needed to protect their military forces around the world, says Alan Magill, M.D., director of experimental therapeutics at the Walter Reed Army Institute of Research. The drug of choice used to be mefloquine, which was developed at Walter Reed during the Vietnam War. But it had to be used for two weeks before travel and a month afterward. Even worse, about a third of those who took it reported side effects ranging from stomach problems to bad dreams

and suicidal depression. A newer medication called Malarone, which is a combination of the drugs atovaquone and proguanil, is taken for a shorter period—generally a day before travel and one week after—and is tolerated much more easily, but it has to be taken every day.

Most experts advise supplementing any drug regime with precautions for skin and clothing, and the CDC recommends four types of insect repellents. The industry standard is DEET, which was developed by the U.S. army in 1946. A repellent with 35 per-

cent DEET protects for four to six hours, and there's little added benefit from concentrations above 50 percent. (The American Academy of Pediatrics recommends 30 per-

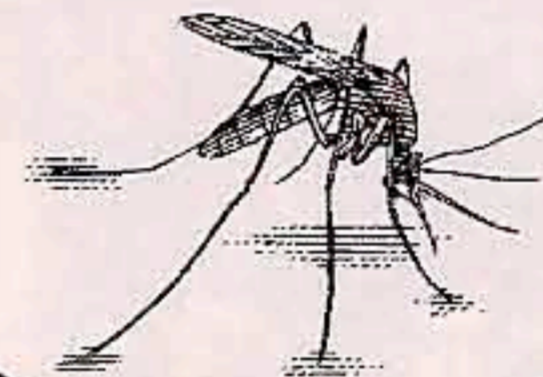
cent DEET for children down to the age of two months.) Also on the CDC's list of repellents are the chemicals picaridin and IR3535, a synthetic used in Avon's Skin So Soft. For those who prefer natural products, lemon eucalyptus oil is also on the list.

Another option is to wear protective clothing sprayed with permethrin, a chemical that paralyzes a mosquito's nervous system. "When I check into my hotel," says Magill, "I make sure the window screens are functioning, then shake the curtains and spray them with permethrin before going to dinner. And I wear long pants, socks, and shoes—no shorts or flip-flops."

You'll notice "quine" in the name of many antimalarial medications, and you may think of quinine, the main antimalarial from the 17th century to the 1940s. It was discovered by the Quechua Indians of Peru, who ground the bark of cinchona trees and mixed it with sweetened water to offset the bitter taste, thus producing tonic water. In colonial India, the British mixed their medicinal quinine tonic with gin to make it more palatable. But don't get too excited about staving off malaria with a few stiff cocktails. The quinine content of tonic water is a small fraction of the medical dosages used in treatments. "If you're lying on your malarial bed," says Rose, "go ahead and make your last drink a G and T—and make it a double."

Fact

While malaria might seem like a relic of the colonial era, up to of half a billion people get infected every year, including some 30,000 travelers.



Fact

Quinine is still used to treat malaria, but a gin and tonic won't do much good, as tonic water contains a medically insignificant amount of the substance.



True Story

"In the seventies and eighties, when I traveled in a loosey-goosey hippie fashion, I had encounters with less-than-friendly microbes. I remember driving through Baja, Mexico, eating a lardy roadside burrito, then pulling over and hurling into the cacti, all while thinking: This place is gorgeous. Another time I bought a bag of figs in Morocco, only to later find myself hanging over a toilet and noticing a beautiful sign atop the minibar pointing toward Mecca. I'm more cautious now and tend to go to prissy places. If you get sick in France, medicine comes in glass ampoules—it makes illness more glamorous." —SIMON DOONAN, CREATIVE DIRECTOR OF BARNEYS NEW YORK



BEFORE YOU GO

PACKING THE ESSENTIALS

A peek into the personal travel kits of four frequent fliers.



LORIE KARNATH, *president, the Explorers Club*

Among the rules Karnath adheres to are avoid airplane food and never take sleep aids. "I think you're better off being a little tired," she says. "And you can't be an explorer if you need those things." **1.** Ace bandage **2.** Iodine tablets for water purification **3.** Antibiotic doxycycline ("for suspicious tick and bug bites and bronchial problems") **4.** Nasonex for stuffy nose or blocked ears **5.** Band-Aids **6.** Bayer aspirin **7.** Tiger Balm ("good for anything from soreness to insect stings") **8.** Plain crackers to calm the stomach **9.** Imodium for diarrhea **10.** Medical "sharps" (syringes) **11.** Instant hot and cold compresses



ANDREW HEISKELL, *executive VP, Mutual of America*

"My theory," says Heiskell, "is to pack something for above the waist and something for below the waist." **1.** Alcohol swabs ("for tableware in establishments of dubious hygiene") **2.** Eyeglass kit for repairs **3.** Dental cement for replacing fillings **4.** Purell hand sanitizer **5.** Swiss Army knife ("it can double as a great gift") **6.** Pepto-Bismol **7.** Duct tape for putting pressure on wounds ("friends in the Special Forces assure me it works very well") **8.** Alka-Seltzer Plus ("for when you've been riding on a bus for three days and feel lousy") **9.** Cherry-flavored cough lozenges **10.** Iodine for skin scrapes and purifying water **11.** Cipro



PAULETTE COLE, *CEO and creative director, ABC Home*

"I'm a trooper, but I get sick," says Cole, who logs countless miles stocking her New York flagship with ecoconscious, socially responsible products. "I'm a vulnerable traveler, always looking at antiques in dusty places or down muddy back roads." **1.** Insect repellent with DEET ("in places with malaria, though I feel dirty using it") **2.** Amoxicillin antibiotic tablets **3.** Pulsatilla homeopathic remedy for sinuses **4.** Malarone pills for malaria **5.** Tamiflu to prevent or treat flu **6.** Surgical masks ("when going to Africa and India") **7.** Arnica cream for sore muscles and bruises

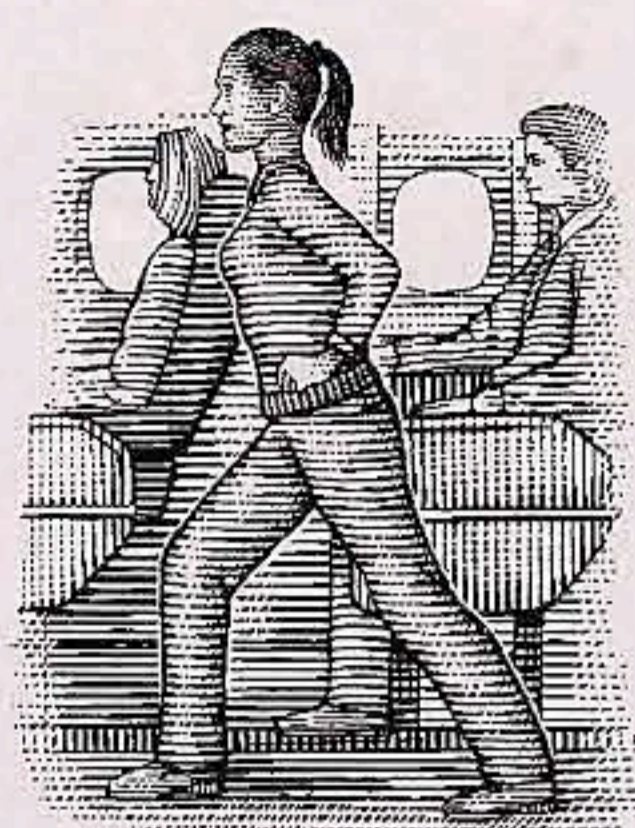


VISHAKHA DESAI, *president, Asia Society*

"When it's my time to go, I'll go," says Desai, who considers herself a fatalist and uses no inoculations or prophylaxes despite a heavy travel schedule in Asia. "Still, I take fewer chances. I love Indian street food, but now I only eat things cooked in front of my eyes." **1.** SinuCleanse neti pot for sinuses ("it's really good but a bit of a hassle") **2.** Echinacea and vitamin C to boost immune function **3.** Her 95-year-old mother's homemade ginger candies for stomach upsets and circulation **4.** Tylenol PM as a sleep aid ("just in case") **5.** Claritin for allergies



IN THE AIR



KEEPING IT LOOSE AT 40,000 FEET

An airplane cabin is pretty much a crime against nature. At typical cruising altitudes, air pressure is equivalent to 6,000 to 8,000 feet above sea level—more challenging on the body than Denver, the mile-high city. The amount of oxygen in the blood is reduced and gases within the body expand, producing that familiar popping sensation in the ears. **Prolonged immobility, especially when seated, can lead to pooling of blood in the legs** and the development of a clot called deep-vein thrombosis. DVT has been dubbed economy-class syndrome, but it can find its way to the front of the plane.

Walks up and down the aisle are recommended on flights longer than four hours, as are stretches for the back, arms, and calves. If one is in an increased-risk category (older, obese, pregnant, a smoker, recuperating from surgery, or taking hormone medications), there are other options. One is compression stockings, which must be fitted properly so they don't act like tourniquets and do more harm than good. **There's also an anticoagulant called fondaparinux (brand name: Arixtra),** given by injection, which lasts about 24 hours. But note: "With an anticoagulant, if you were to hurt yourself, there would be an increase in bleeding," says Richard Wenzel, M.D., chairman of internal medicine at Virginia Commonwealth University. "If you have an ulcer, you could bleed out on the plane." His suggestion for reducing clotting risk:








Take a baby aspirin before flying.

Tip

On a long flight, it's essential to move around. In addition to walking up the aisle and stretching your arms and legs, Oz Garcia, a New York specialist in nutrition and antiaging, recommends these simple exercises: Squeeze a rubber ball to stimulate circulation in your hands and arms; and while in your seat, lift your knee and flex your foot for a count of ten, then repeat.

Beating Jet Lag

Here's an Evelyn Wood course in brain chemistry for travelers: The hypothalamus, located in the center of the brain, is the body's master clock, regulating its circadian rhythm and deciding when it's time to wake or sleep. ("Circadian" is Latin for "around a day.") Light signals travel from your retina to a cluster of nerves in the hypothalamus called the suprachiasmatic nucleus, or SCN. The approach of dusk each day prompts the SCN to signal the nearby pineal gland to release the hormone melatonin, which helps regulate the sleep cycle. But crossing multiple time zones wrecks havoc with melatonin production, leading to jet lag and inspiring weary travelers to try innumerable remedies, from acupuncture to vitamins and herbal concoctions. The latter, though widely used, work primarily by placebo effect, says travel medicine specialist Stuart Rose, M.D. Here, some of the most tried (and true?) ways of fooling Mother Nature.

	Melatonin	Light Therapy	Sleeping Pills	Restricted Diet
THE REMEDY	<p>On the day of travel, take supplemental melatonin 30 minutes before you plan to sleep (ideally, close to the target bedtime at your destination). Some studies have shown five milligrams to be effective, others as little as 0.5 milligrams. Make sure it's synthetic, as animal-derived melatonin can be contaminated. Continue taking for several days.</p> 	<p>If traveling east, wake up early the two or three days before your trip and expose yourself to bright light using a high-intensity lamp (a number of companies make portable ones) for 30 to 60 minutes, depending on intensity. When flying west, stay up later and use the lamp in the evening—well before bedtime, as it can cause insomnia.</p> 	<p>Take a sedative such as Ambien, Sonata, or Lunesta (start with the lowest suggested dosage) to help with sleep on long flights and again before bedtime at your destination. (An experimental drug called tasimelteon has shown to be effective for jet lag-related insomnia, but it won't be available for several years.)</p> 	<p>Four days before travel, start a dietary regime that alternates days of high-protein breakfasts and lunches (think steak and eggs) and high-carbohydrate dinners with days of "fasting," which is defined as 800 calories a day, mainly in the form of salads, light soups, fruits, and juices.</p> 
HOW IT WORKS	<p>Taking melatonin—commonly used for insomnia as well—essentially tricks the body into thinking it's time to sleep and helps reset its internal clock.</p> 	<p>High-intensity lamps, which are often used to treat seasonal affective disorder, mimic natural sunlight. They can suppress the body's release of melatonin, helping to stave off sleep and shift your circadian rhythm forward or backward.</p>	<p>Ambien, Sonata, and Lunesta are in a class of sedatives known as non-benzodiazepines. They bind to specific receptors in the brain, activating the release of chemicals that relax the body and induce sleep.</p>	<p>Protein helps the body make the chemicals it produces when it's time to wake up, while carbs help ready the body for sleep. The alternating fasting days deplete the liver's store of carbs and prepare the body for resetting its internal clock.</p>
THE RESULTS	<p>Several trials suggest that taking melatonin reduces the number of days required to establish a normal sleep pattern, diminishes the time it takes to fall asleep, and reduces daytime fatigue. But some trials have found no benefits, and reported side effects include headaches, nausea, and irritability.</p>	<p>A study simulating a trip from New York to Hong Kong found that subjects receiving light sessions at progressively later times each day got on schedule at least four days earlier. But tests of long-haul flight crews showed no improvement in jet lag symptoms from light therapy.</p> 	<p>Unlike the barbiturates once used, these sleep aids have minimal or no hangover effect. Lunesta and Ambien are best if one has at least eight hours to sleep, while Sonata wears off after four hours and is appropriate for shorter flights.</p>	<p>One small study published in the journal <i>Military Medicine</i> found that National Guard troops using the diet (which is known as the Argonne diet) before flying across nine time zones were less likely to experience jet lag.</p> 



ON THE GROUND

INTO THIN AIR... SAFELY

Have you ever had a nasty hangover? That's a pretty close approximation to altitude sickness, says David Shlim, M.D., a Wyoming-based expert who headed a travel medicine clinic in Kathmandu for 15 years. "If you ascend slowly, you usually don't notice," he explains. But when you go up faster than your body can adjust, nausea, dizziness, headache, and fatigue occur.

These are signs of **acute mountain sickness**, or AMS, the most common form of altitude illness. AMS can lead to more serious, even life-threatening conditions known as **high-altitude pulmonary edema** (HAPE) and **high-altitude cerebral edema** (HACE), when fluid accumulates in the lungs or the brain cavity.

AMS can occur at moderate altitudes like Denver's (5,280 feet), but it's more common during travel to places such as Cuzco, Peru (11,000 feet), or Lhasa, Tibet (12,000 feet).

Mount Kilimanjaro, whose peak is 19,340 feet, has a high incidence of altitude sickness. "There are no villages to hang out in on the way up, so people ascend too fast," Shlim says. "You want to take the longest trip to the summit, not the shortest." And

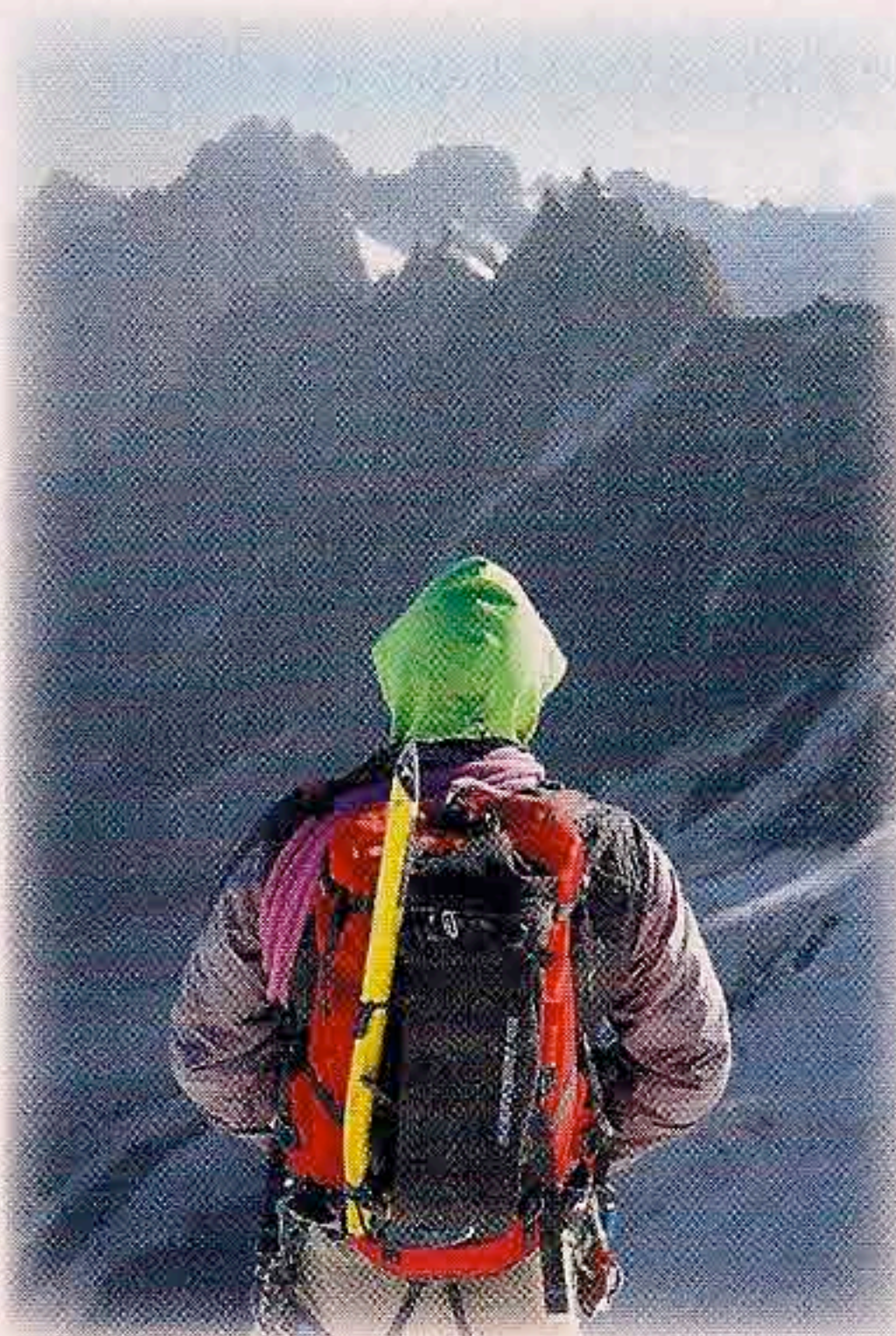
living somewhere like Colorado doesn't protect you. Susceptibility varies by individual and is unrelated to age or fitness. "It's a myth that once you get it, it's easier to get in the future," says Shlim. "All it means is that you're susceptible and you'll have to adjust."

That might require taking the drug acetazolamide, which is sold under the name Diamox.

"It acidifies the blood slightly," explains Shlim. "When your brain senses that, it causes you to increase your respiration, to blow off carbon dioxide. People have tried breathing deeper and faster to adjust, but it just doesn't work."

There are no absolute rules regarding altitude sickness prevention, only guidelines. One shouldn't attempt more than 1,000 feet per day after 10,000 feet. And Shlim's rule is: If you don't feel well, it's altitude sickness until proven otherwise. Generally, it's not necessary to descend immediately unless your condition

worsens. Supplemental oxygen can help reduce symptoms, but a day or so of rest is still essential. "If you go higher before your symptoms go away, it's 100 percent certain they'll get worse," says Shlim. "And if you carry on, it can be fatal."



True Story

"While hiking an ancient Incan trail near Machu Picchu, I slid on some wet ground, my right foot lodged between two rocks, and *crack*. My foot just hung there at a ninety-degree angle to my leg. Luckily my companion had a cell phone. A local doctor clambered up to give me a shot for the pain, and hotel workers made a splint and a stretcher out of branches and carried me a half mile down the mountain—I'm sure they heard me screaming all over Peru. X-rays at a clinic in Cuzco revealed a major break above the ankle. Fortunately, I'd signed up for an emergency evacuation plan (the company is a client of my PR firm), and they sent a Learjet staffed with two nurses. There was even a choice of movies—*Intolerable Cruelty* would have been fitting."

—GEOFFREY WEILL,
PRESIDENT OF GEOFFREY
WEILL ASSOCIATES

OTC ABROAD: A QUICK GUIDE

Should you need to visit a pharmacy while traveling, remember that many health remedies that aren't readily available or require a prescription here in the United States can be purchased over the counter. Here's a sampling from several popular destinations—just be careful what you bring back through customs.



Great Britain

Ibuleve gel

The same active ingredient (ibuprofen) that's in Advil or Motrin, but you can rub it right on the sore spot.

Nelsons Travella

Homeopathic, non-drowsy remedy for motion sickness.

Nurofen Plus

Combining ibuprofen and codeine, it's among the most potent pain relievers available OTC.



France

Biafine

Topical cream for treating scrapes, sores, burns.

Donormyl effervescent tablets

Antihistamine for cold and allergy relief; also used as a sleep aid.

Homéoplasmine

Antiseptic ointment for scrapes, chapped skin, and nasal irritations due to a cold or allergies; can also be used as a lip balm.



Germany

Bepanthen

Ointment with vitamin B5 for diaper rash and other skin irritations.

Bromelain

This enzyme, found in pineapples, is popular here as a remedy for nasal and sinus inflammation from infection, injury, or allergies.

Wick MediNait

German Vicks NyQuil with a decongestant and more alcohol.



Greece

Celestoderm-V with Garamycin

Topical cortisone cream (with an antibiotic) for cuts, scrapes, and insect bites.

Hexalen

Antiseptic mouthwash that helps relieve a sore throat.

Imigran

Taken at the first sign of a migraine to relieve nausea, headache, and sensitivity to light.



Italy

Gentilyn Beta

Antibiotic cream with cortisone for eczema, acne, and ingrown hairs.

Promethazine

Sedative that relieves allergy symptoms and also motion sickness.

Voltadvance

Anti-inflammatory for arthritis pain, migraines, or cramps; similar to the prescription-only Voltaren sold in the United States.



South Africa

Biral

Herbal sedative that contains valerian root and passionflower extracts.

Stilpane syrup

Codeine-laced pain reliever, cough suppressant, fever reducer, and sleep aid (requires a prescription, but some pharmacists will sell it OTC).

Dolorol Forte

Essentially Tylenol (acetaminophen) with codeine.



ON THE GROUND

GUT REACTIONS

When the local fare is too much for your digestive system.

Montezuma's revenge, Delhi belly, turista—by any name it's traveler's diarrhea, and though it mostly afflicts visitors to developing countries, it can strike anywhere. Contaminated water, poor sewage treatment, or unsanitary food handling can allow parasites and E. coli to enter the food supply. According to the World Health Organization (WHO), millions of people become ill and thousands die every day from food-borne diseases. "If you go anywhere beyond the occasional business meeting in London, you're going to get this," says Alan J. Magill, M.D.

The standard guideline for food safety is boil it, peel it, or forget it. Boiling is by far the most reliable way to make water safe for drinking, but it's hardly practical. Another method is to treat water with iodine tablets for a minimum of 30 minutes before drinking it. Using a reverse-osmosis water filter is also an option, but make sure it is fine enough to be effective. The nonprofit organization NSF International compares specific models on its Web site (nsf.org).

"If you drink a carbonated beverage, you can be reasonably certain that it was bottled in a plant," says Bradley Connor, M.D. "But milk or fruit juice can be contaminated because they're often diluted with water." The WHO recommends avoiding any uncooked foods except for fruits and vegetables peeled yourself; anything made with raw or undercooked eggs, such as homemade mayonnaise or Caesar salad; and buffets or street-food stalls where raw and cooked food may come into contact

with each other. "Even in five-star hotels, there are factors outside our control," says Connor. "Generally, anything freshly prepared and served hot is best."

There's an 80 percent chance that any traveler's diarrhea is bacterial, so you may want to carry the antibiotic ciprofloxacin—though in Southeast Asia it's better to have azithromycin (brand name Zithromax). "Historically, Americans have favored using antibiotics quickly and liberally, but the European attitude is 'Just rest and take fluids,'" says Magill. "It's true, you will get better with rest, but that's not why people travel. An anti-motility agent such as loperamide, better known as Imodium, can come in handy on a long bus ride."

Replacing lost fluids and electrolytes is an important part of treating diarrhea. The American Society of Tropical Medicine and Hygiene recommends commercial rehydration salts, like CeraLyte, or a home brew made by mixing a teaspoon of salt and two or three tablespoons of sugar into a liter of potable water. Until recently the pharmaceutical industry only offered treatment, not prevention, of traveler's diarrhea, but that's changing. The *Annals of Internal Medicine* published a study in 2005 in which more than 200 students arriving in Guadalajara, Mexico, were given a drug called rifaximin (brand

name Xifaxan, sold in Europe as Spiraxin or Zaxine). Only 14 percent developed traveler's diarrhea, as opposed to 53 percent of those who took a placebo. But Herbert L. DuPont, M.D., director of the University of

Texas's Center for Infectious Diseases, who conducted the trial, notes that more study is needed, especially in Asia.

Another possible preventive is Travelan, an over-the-counter pill containing antibodies from bovine colostrum, a fluid in milk that provides newborn calves with immunity to infections.

Travelan is not regulated by the FDA, but its manufacturer claims it prevents bacteria from binding to the small intestine. One minor bovine colostrum study done with 20 volunteers in 1988 had positive results, but no research seems to have been published since. The anti-cholera vaccine Dukoral was found to have some cross-protection against other bacterial toxins, including those that cause traveler's diarrhea, but it's not FDA-approved for any use in this country.

Stay tuned, though: Later this year 1,800 subjects from the United States and Europe will be given an as-yet-unnamed vaccine patch, produced by the Austrian biotech firm Intercell, before traveling to Mexico or Guatemala, and monitored to see if they stave off Montezuma's revenge.

"None of these things is going to be 100 percent effective," warns James M. Fleckenstein, M.D., a vaccine researcher at the University of Tennessee's Health Science Center. "As long as bacteria contain toxins, they can transmit disease. Avoidance is still the best way to prevent illness."

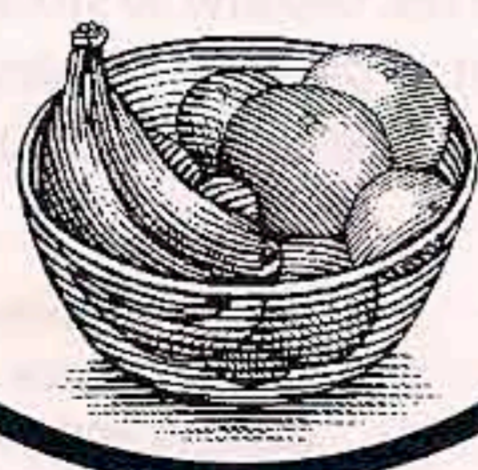
Fact

The antibiotic ciprofloxacin, sold under the names Cipro and Ciloxan, is prescribed to fight bacterial toxins from contaminated food and water.



Fact

Boil it, peel it, or forget it. When it comes to fruits and vegetables, eat only those you peel with your own (clean) hands, like bananas and oranges.



True Story

"One time in New York, I was wearing heels to dinner and they got caught in a grate. I ended up with torn ligaments—worse than a broken ankle. When I arrived at my hotel, I couldn't get out of the car. Two wonderful young men on the hotel staff carried me in to my bed. How do you tip for something like that? The upshot was that my doctor at the Hospital for Special Surgery, Rock Positano, became a fantastic blogger on the Huffington Post. I'm willing to sacrifice a few ligaments to the blog." —ARIANNA HUFFINGTON, EDITOR IN CHIEF, THE HUFFINGTON POST



ON THE GROUND

HOT SPOTS: AN INFECTIOUS DISEASES UPDATE

On March 15, 2003, *The New York Times* ran its first article on SARS (severe acute respiratory syndrome), titled "Mystery Respiratory Illness Afflicts Hundreds Globally." It's a familiar pattern: A new disease prompts dramatic headlines and international anxiety. Then the threat diminishes, the news moves on, and the panic becomes a memory. But what happened to SARS? Or bird flu? We looked at seven recent outbreaks to assess their impact today. (For current advisories, go to state.gov/travel or cdc.gov/travel.)

West Nile virus made its Western Hemisphere debut in 1999, in the New York City suburbs. Since then it has spread throughout North America, causing fever and serious illnesses like encephalitis and meningitis, and has expanded to Central and South America. The risk of catching the virus increases in late summer and early fall. The CDC recommends using insect repellent when outdoors.

Mad cow disease The human version of bovine spongiform encephalopathy (BSE) was first identified in 1996 in the UK. More than 80 percent of cases were contracted there, mostly from eating beef tainted with the central nervous tissue of infected cattle. Per the CDC, new public health measures have reduced the risk in the UK to roughly one case per ten billion servings.

SARS originated in southern China in late 2002. It reached Hong Kong in February 2003, and within days there were outbreaks in Singapore, Toronto, and Hanoi. By summer a total of 810 deaths had been reported in 29 countries. No humans have been infected since 2004, but scientists warn that even one new case could cause another epidemic.

Swine flu The H1N1 virus was first detected in Mexico in March 2009, and by late April the CDC called for U.S. citizens to avoid all nonessential travel to the country. But the WHO soon announced that containment was no longer possible and recommended against closing borders. The CDC ban was lifted on May 15, having been in effect for only two weeks. As of November the flu was still spreading at an increasing pace, and production delays had slowed distribution of the vaccine.

Monkeypox hit the United States in 2003, when 37 human cases were linked to pet prairie dogs who had contracted the virus from African rodents they had been housed with at a pet store. The virus itself is highly treatable, but the 2003 outbreak showed how quickly international animal transportation can spread infectious diseases.

Ebola virus Discovered in 1976, when outbreaks occurred in Sudan and Zaire, the Ebola virus kills an average of 90 percent of those it infects. Transmitted through bodily fluids, the most dangerous strains have remained in Africa. The strand that caused the 1989 Reston, Virginia, scare affected only monkeys, and no human cases have been reported in the States.

Avian flu Since the first human outbreak, in 1997 in Hong Kong, 442 cases of bird flu have been reported worldwide. Human-to-human transmission remains rare, but if contracted, the disease has a high mortality rate. Travelers to affected countries—Indonesia, Vietnam, and Thailand have had the most cases—should get a seasonal flu shot.



HOME AGAIN. AND HEALTHY.

Bradley Connor, M.D., discusses which lingering symptoms to take seriously.

In the mid-eighties, New York gastroenterologist Bradley Connor noticed that a lot of the patients at his practice were travelers returning from trips abroad. No one in his field studied the effects of travel on gastrointestinal health at the time, so he developed his own specialty and founded the Travel Health Services clinic (travelhealth.net). An expert in post-travel medical issues, he answered a few questions about what to watch for after you've come home.

What symptoms do you see most in returning travelers?

The three most common complaints are fever, skin rash,

and diarrhea, or post-diarrheic symptoms like cramping, bloating, and constipation.

What might a fever indicate?

In a traveler returning from a high-risk area, a fever is treated as malaria until we prove it isn't. Otherwise, the consequences could be devastating. Occasionally we see typhoid or paratyphoid fever, but more often than not it's influenza, bronchitis, sinusitis, or a urinary tract infection.

What causes skin rashes?

Various things. Sometimes a parasite has burrowed into the skin of someone who walked around in sandals or in certain

sandy areas. We also see bad sunburns. And there's an interesting thing called photodermatitis, particularly in travelers to Mexico, where they drink margaritas and if lime juice drips on their skin it sort of gets blanched in the sun.

And gastrointestinal problems?

Bacterial diarrhea usually gets better after a few days. If someone continues to have symptoms, that often turns out to be a parasite. We want to make sure they don't have giardia or cyclospora.

If someone returns from a trip feeling fine, would you still recommend a checkup?

In general, no. If somebody had

exposure that might have put them at risk, yes. We tell people not to swim in freshwater in Africa because of schistosomes, which are microscopic parasites. In some cases they cause swimmer's itch. In other cases they don't, but you can end up with schistosomiasis six months or a year later. Or if a patient was traveling with a coworker who came down with a terrible case of something, we check them for that. If someone is overseas for a while—say two or three months—it's reasonable to do some baseline tests, even if they're perfectly well. But for the average short-term traveler, no.