

Travel Abroad

International travel is an exciting opportunity for families. Recommendations for safe travel abroad address issues such as food safety, insect avoidance, and immunization.

The following highlights are taken from the Center for Disease Control. More detail is available at www.cdc.gov/travel.

Food Safety

To avoid illness, travelers should select food with care. All raw food is subject to contamination. Particularly in areas where hygiene and sanitation are inadequate, the traveler should avoid salads, uncooked vegetables, and unpasteurized milk and milk products such as cheese. Eat only food that has been cooked and is still hot or fruit that has been peeled by the traveler personally. Undercooked and raw meat, fish, and shellfish can carry various intestinal pathogens. Cooked food that has been allowed to stand for several hours at room temperature can be contaminated with bacterial growth and should be thoroughly reheated before serving. Consumption of food and beverages obtained from street food vendors should be avoided. The easiest way to guarantee a safe food source for an infant <6 months of age is to have the infant breast feed. If the infant has already been weaned from the breast, formula prepared from commercial powder and boiled water is the safest and most practical food.

Some species of fish and shellfish can contain poisonous toxins, even when well cooked. The most common type of toxin in fish is ciguatoxin. The flesh of the barracuda is the most toxic and should always be avoided. Red snapper, grouper, amberjack, sea bass, and a wide range of tropical reef fish contain the toxin at unpredictable times. Scombroid is another common fish poisoning that occurs worldwide in tropical as well as temperate regions. Potential sources include blue fin or yellow fin tuna, mackerel, bonito, mahi-mahi, herring, amberjack, and bluefish.

Drinking Water Safety

Water that has been adequately chlorinated, by using minimum recommended water treatment standards used in the United States, will protect against viral and bacterial waterborne diseases. However, chlorine treatment alone might not kill some viruses and the parasites giardia, amebiasis, and cryptosporidia. In areas where chlorinated tap water is not available or where hygiene and sanitation are poor, travelers should be advised that only the following might be safe to drink:

- Beverages made with boiled water.
- Canned or bottled carbonated beverages, including carbonated bottled water and soft drinks.
- Beer and wine for adults

Where water might be contaminated, travelers should be advised that ice should also be considered contaminated and should not be used in beverages. If ice has been in contact with containers used for drinking, travelers should be advised to thoroughly clean the containers, preferably with soap and hot water, after the ice has been discarded.

It is safer to drink a beverage directly from the can or bottle than from a questionable container. However, water on the outside of beverage cans or bottles might also be contaminated. Therefore, travelers should

dry wet cans or bottles before they are opened and to wipe clean surfaces with which the mouth will have direct contact. Avoid brushing teeth with tap water.

Boiling is by far the most reliable method to make water of uncertain purity safe for drinking. Water should be brought to a vigorous rolling boil for 3 minutes and allowed to cool to room temperature; ice should not be added. Travelers should consult the CDC website if interested in other methods for treating water to make it safe for drinking.

Travelers' Diarrhea

For young infants, breastfeeding is the best way to prevent foodborne and waterborne illness. Only purified water should be used for drinking, brushing teeth, and mixing infant formula and foods. Scrupulous attention should be paid to hand washing and cleaning pacifiers, teething rings, and toys that fall to the floor or are handled by others. Carrying child-safe hand wipes facilitates this. Dairy products should be avoided unless effective pasteurization can be assured. Fresh fruits and vegetables should be avoided unless they can be washed well and peeled *by you* without recontamination. Bringing finger foods or snacks will avoid the need to try potentially risky foods between meals. Meats and fish should be well cooked and eaten just after they have been prepared.

Prophylactic antibiotics to *prevent* diarrhea illness are not recommended for young travelers. Bismuth subsalicylate, taken as the active ingredient of Pepto-Bismol, may have some benefit for prevention of diarrhea. Caution should be used in giving Pepto-Bismol to children and adolescents with chickenpox or influenza because of a potential risk of Reye syndrome. Pepto-Bismol has not been approved for infants and children <3 years of age

Immediate medical attention is required for the infant or young child with diarrhea who has signs of moderate to severe dehydration, bloody diarrhea, fever >101.5°, or persistent vomiting. While medical attention is being obtained, the infant should be offered oral rehydration solution (ORS) such as pedialyte. Refer to our handout Vomiting and Diarrhea.

Antimotility agents such as Imodium should be avoided in children because they can cause serious neurologic side effects in the young and are poorly effective in this age group. These agents have also been associated with an increased risk of hemolytic uremic syndrome associated with some *E. coli* infections.

Parents should be particularly careful to wash hands well after diaper changes in infants with diarrhea to avoid spreading infection to themselves and other family members.

There are little data regarding using antibiotics to *treat* travelers' diarrhea in children. If diarrhea is moderate to severe, use of trimethoprim-sulfamethoxazole (TMP/SMX) can be considered until medical assessment is possible. Fluoroquinolones are not approved for children <18 years; however, some travel health practitioners prescribe them for very short-term treatment in children. Tetracycline can cause teeth staining if used in children <8 years of age.

Infection and Infestation from Soil Contact

Children are more likely than adults to have contact with soil or sand and thus can be exposed to infectious stages of parasites present in soil, including ascariasis, hookworm, cutaneous larva migrans, trichuriasis, and strongyloidiasis. Children and infants should wear protective footwear and play on a sheet or towel rather than directly on the ground. Clothing or diapers dried on the ground should be ironed before use to prevent infestation with fly larvae (myiasis).

Insect avoidance

Many diseases are transmitted by the bite of a flying or crawling insect. Medication is available to help decrease risk of malaria (see below), but insect avoidance should be followed none-the-less. Other illnesses can only be avoided by avoiding the insect bite.

Avoid outdoor activity during dawn and dusk. Wearing long-sleeved shirts, long pants, and hats minimizes areas of exposed skin. Shirts should be tucked in. Repellents applied to clothing, shoes, tents, mosquito nets, and other gear will enhance protection. Wear closed shoes instead of sandals. Inspect your child and yourself for ticks at the end of each day.

When accommodations are not adequately screened or air conditioned, bed nets are essential to provide protection and comfort. Bed nets should be tucked under mattresses and can be sprayed with a repellent, such as permethrin. (e.g., Permanone or deltamethrin); permethrin may be used on clothing, shoes and camping gear as well. The permethrin will be effective for several months if the bed net is not washed. Aerosol insecticides can help clear rooms of mosquitoes. Permethrin-treated clothing repels and kills ticks, mosquitoes, and other arthropods and retains this effect for up to 5 launderings. There appears to be little potential for toxicity from permethrin-treated clothing.

For use on the skin, most authorities recommend repellents containing DEET, which repels mosquitoes and ticks. In general, the more DEET a repellent contains, the longer time it can protect against mosquito bites. However, there appears to be no added benefit of concentrations greater than 50%.

No definitive studies have been published about what concentration of DEET is safe for children. For *travelers*, DEET formulations as high as 50% are recommended by the Center for Disease control for both adults and children >2 months of age. Lower concentrations are not as long lasting, offering short-term protection only and requiring more frequent reapplication. Repellent products that do not contain DEET do not work well and are not shown to be safer for children. Parents should choose the type and concentration of repellent to be used by taking into account the amount of time that a child will be outdoors, exposure to mosquitoes, and the risk of mosquito-transmitted disease in the area.

Travelers should be advised that the possibility of adverse reactions to DEET will be minimized if they take the following precautions:

- Use enough repellent to cover exposed skin or clothing. Do not apply repellent to skin that is under clothing. Heavy application is not necessary to achieve protection. If repellent is applied to clothing, wash treated clothing before wearing again.
- Do not apply repellent to cuts, wounds, or irritated skin.
- After returning indoors, wash treated skin with soap and water.
- Do not spray aerosol or pump products in enclosed areas; do not breathe in.
- Do not apply aerosol or pump products directly to the face. Spray your hands and then rub them carefully over the face, avoiding eyes and mouth.
- When using repellent on a child, apply it to your own hands and then rub it on your child. Avoid the child's eyes and mouth and apply sparingly around the ears.
- Do not apply repellent to children's hands. (Children tend to put their hands in their mouths.)
- Do not allow children under ten years old to apply insect repellent to themselves; have an adult do it for them. Keep repellents out of reach of children.
- Protect infants two months of age and under by using a carrier draped with mosquito netting with an elastic edge for a tight fit.
- Bed nets, repellents containing DEET, and permethrin should be purchased before travel.

Immunization

Be sure routine vaccines are up to date: Tetanus, diphtheria, pertussis, measles, mumps, rubella, polio, chicken pox, hepatitis A and B. Children under 5 should be immunized for hemophilus and pneumococcus. Additional vaccines may be necessary according to your destination. Some vaccines require multiple doses, so plan in advance.

Meningococcal meningitis, cholera, yellow fever, and other vaccines are recommended for travel to certain areas. Consult www.cdc.gov for further information.

Malaria Prevention

Certain destinations require malaria prophylaxis (prevention). This involves taking oral medication once a week, starting one week before departure and continuing for four weeks after return. Consult www.cdc.gov for specific information about your destination.

Transportation Safety

Follow guidelines for child restraint when abroad, just as you would at home. Use car seats or booster seats for your children and seat belts for yourself.