

Travelers' Diarrhea

What is it and who gets it?

Travelers' diarrhea (TD) is the most common illness affecting travelers. Each year between 20%-50% of international travelers, an estimated 10 million persons, develop diarrhea. The onset of TD usually occurs within the first week of travel but may occur at any time while traveling and even after returning home.

The primary source of infection is ingestion of fecally contaminated food or water. You can get TD whenever you travel from countries with a high level of hygiene to countries that have a low level of hygiene. Poor sanitation, the presence of stool in the environment, and the absence of safe restaurant practices lead to widespread risk of diarrhea from eating a wide variety of foods in restaurants, and elsewhere.

Your destination is the most important determinant of risk. Developing countries in Latin America, Africa, the Middle East, and Asia are considered high risk. Most countries in Southern Europe and a few Caribbean islands are deemed intermediate risk. Low risk areas include the United States, Canada, Northern Europe, Australia, New Zealand, and several of the Caribbean islands.

Anyone can get TD, but persons at particular high-risk include **young adults**, immunosuppressed persons, persons with inflammatory-bowel disease or diabetes, and persons taking H-2 blockers or antacids. Attack rates are similar for men and women.

TD is caused by bacteria, protozoa or viruses that are ingested by eating contaminated food or beverages. For short-term travelers in most areas, bacteria are the cause of the majority of diarrhea episodes.

What are common symptoms of travelers' diarrhea?

Most TD cases begin abruptly. The illness results in increased frequency, volume, and weight of stool. Altered stool consistency also is common. Typically, a traveler experiences 3 or more loose or watery bowel movements each day. Other commonly associated symptoms are nausea, vomiting, abdominal cramping, bloating, fever, urgency, and malaise. Most cases of TD last an average of 3 – 4 days without treatment. TD is rarely life threatening. The natural history of TD is that 90% of cases resolve within 1 week, and 98% resolve within 1 month.

Treatment of Travelers' Diarrhea

If you experience an abrupt onset of uncomfortable diarrhea you can be reasonably confident that the cause is bacterial.

You can treat yourself in one of the following ways:

1. Hydration alone (most cases of TD will resolve within 3 - 5 days) or
2. Hydration plus an antimotility* agent, to lessen the amount and frequency of stools or
3. An antibiotic, which can shorten the illness from 3 – 5 days to 1 – 2 days, plus an antimotility agent, plus adequate hydration.

*If you have a high fever and bloody stools you should seek medical advice before taking an antimotility agent.

A recommended regimen involves:

1. **An antibiotic:**

- Ciprofloxacin (Cipro) 500 mg twice a day for 3 – 5 days
(Take for 3 days, if diarrhea continues, you may continue for another 2 days)

And

2. **An antimotility agent:**

- Loperamide: 4 mg (2 tabs), with the first stool then 2 mg (1 tab) after each stool
Up to a total of 16 mg/day (8 tabs).

3. **Rehydration:**

TD in adults is not usually associated with significant dehydration, but replacement of fluids remains a cornerstone of self-treatment. Dehydration can be corrected with many fluids, and you should drink any available appropriate fluid. Studies on oral rehydration solutions suggest that while plain water is very important, it should be supplemented with drinks that contain a balance of salt and carbohydrate (sweets), e.g., Gatorade or Pedialyte.

For example:

- Do drink bottled water (avoid tap water, fountain drinks and ice cubes unless you are sure of their purity).
- Mix packets of Gatorade only with bottled water
- Do drink carbonated drinks in cans or bottles.
- Avoid known intestinal irritants such as alcohol, coffee and strong tea.
- If you are hungry, you can eat, but be careful to avoid spicy and greasy foods, and dairy products.

REPORT TO A DESIGNATED LOCAL HEALTH CARE FACILITY IF ANY OF THE FOLLOWING OCCUR:

- You are vomiting and cannot hold down fluids.
- You cannot keep up your fluid intake due to large amounts of watery stools or because of nausea.
- You have a high fever, chills and/or bloody stools.
- If you are very weak or debilitated, or have trouble breathing.
- If you have severe abdominal pain (not relieved by passing stools).
- If you still have significant diarrhea after 5 days of treatment with antibiotics.

Food and Beverage Precautions

Travelers' Diarrhea (TD) is caused by something you ate or drank. 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, you 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* you eat is more important than *what* you eat, following food and water precautions can still help decrease the amount of organisms ingested and decrease the severity of TD if you do become ill. 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, following the guidelines below can minimize the risk.

Food Precautions

Travelers should:

- Eat at establishments that are known to cater to foreigners or that are 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 cooked vegetables.
- Eat fruits that you peel yourself, nuts that you shell yourself.
- Eat canned goods.
- Always wash your hands with soap before eating and after using the toilet.

Travelers should not:

- 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.
- Eat unpeeled fruit or unshelled nuts, unless you have removed peels or shells yourself.
- Eat undercooked, raw, or cold meat, seafood, or fish.
- Eat large carnivorous fish, especially from reef areas (barracuda, red snapper, amberjack, surgeon fish, parrot fish, mullet, sea bass, grouper, or moray eels). Many contain concentrated toxins.
- Eat or drink unpasteurized dairy products such as cheese, yogurt, or 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 you know they are 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.

Beverage 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, you can reduce the chance of illness by following these precautions.

Travelers should:

- Use only water that is sealed and bottled or chemically treated, filtered, or boiled – 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 (even 1 minute), at any altitude 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 beverages does not render them safe.
- Purify your own 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 with you if you are going out for the day and safe water is not assured.
- Breast-feeding 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.

Travelers should NOT:

- Drink 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 make you ill.

- 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.
- Drink fruit juice unless it comes directly from a sealed container; otherwise it may have been diluted with tap water.

IN SHORT:

- **Drink only bottled or boiled water, or carbonated (bubbly) drinks in cans or bottles. Avoid tap water, fountain drinks, and ice cubes.**
- **Eat only thoroughly cooked food or fruits and vegetables you have peeled yourself.**
Remember: boil it, cook it, peel it, or forget it.