



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.
- 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 0.2

microns will help eliminate the risk of pathogens. 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). Water boiled for any length of time (even 1 minute) is safe to drink.

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 (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 the beverages safe.
- Purify your 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 with you if you are going out for the day and 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 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 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.