

## Water Disinfection

Travelers who are camping, hiking, or staying in remote areas may need to disinfect their drinking water. Several methods can be used.

### Heat

Most germs die quickly at high temperatures. Water that has been boiled for 1 minute is safe to drink after it has cooled. If no other method of water disinfection is available, very hot tap water *may* be safe to drink if it has been in the tank for a while.



### Filtering

A variety of filters are available from camping stores. Most have filter sizes between 0.1 and 0.4 microns, which will remove bacteria from water but will not remove viruses. New “hollow fiber” technology can remove viruses as well. “Reverse osmosis” filters remove bacteria and viruses and can also remove salt from water, which is important for ocean voyagers.

### Chemicals

Tablets or packets of powder can be bought at camping stores to disinfect water. These usually combine chemical disinfectants (such as chlorine or iodine) with a substance that makes the water clear and improves its taste. Follow the instructions on the package closely—you may need to wait several hours until all the germs are killed.

### Ultraviolet (UV) Light

Portable units that deliver a measured dose of UV light are an effective way to disinfect small quantities of clear water. However, this technique is less effective in cloudy water since germs may be shielded from the light by small particles.

### Solar Radiation

In an emergency situation, water can be disinfected with sunlight. Water in a clear plastic bottle, preferably lying on a reflective surface (such as aluminum foil), will be safe to drink after a minimum of 6 hours in bright sunlight. This technique does not work on cloudy water.

Content source: Centers for Disease Control and Prevention (<http://www.cdc.gov/>)

National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) (<http://www.cdc.gov/ncezid/index.html>)

Division of Global Migration and Quarantine (DGMQ) (<http://www.cdc.gov/ncezid/dgmq/index.html>)