



Travelling overseas isn't the only time when we need to consider the safety of our drinking water. A family camping trip, day hike, or extended trek can be spoiled by contaminated water. This will leave you not only feeling unwell but in a potentially dangerous or life-threatening situation.

For this reason, I've put together my top 10 facts about effectively purifying a water source so you can hydrate safely off the beaten track – plus, my top recommendations for water treatment systems.



I've put together my top 10 facts about effectively purifying a water source. Image: LifeStraw

When it comes to safe hydration, the essentials that every adventurer should know are:

1. All surface water, still and flowing, contains some form of viruses, bacteria, or protozoa.
2. Bacteria and protozoa are removed via filtration down to 0.2 microns.
3. Viruses are only removed through much finer filtration, or a combination of new technologies.
4. Sanitisation effectively kills bacteria, protozoa, and viruses in clear water.
5. Sanitisation means chemical or ultraviolet treatment i.e. Steripen or chlorine.
6. Boiling water kills bacteria, protozoa, and viruses – but particulates, chemicals, and heavy metals remain.
7. Heavy metals and chemicals can be removed with activated carbon (absorption).
8. You cannot filter saltwater to make it drinkable.
9. You should never assume flowing water is safe – you don't know what is happening upstream.
10. With the right treatment, any water can be turned into safe drinking water.

Which Water Treatment Option is Right for Me?

Let's look at some common activities and the type of water treatment required for each.



When family camping, a chemical treatment will be enough in an emergency. Image: Coleman

Family Camping

When camping, you will likely bring water from home – but on longer trips, you will need to pick up water along the way. Any water you gather will probably be from tanks or taps in caravan parks and campsites, which is most likely clear and safe to drink straight from the source.

Most designated campsites will have a sign indicating if the water source is safe for drinking. However, it's a good idea to carry a chemical treatment as a back-up, just in case something happens to your water supply.



Katadyn Micropur Forte Tablets

For your peace of mind, take a chemical treatment such as Katadyn Micropur Forte (available in tablet and liquid form) to take with you when camping. This also contains silver ions, which eliminate the risk of re-contamination of water stored for long periods.



Knowledge of proper water purification is essential for a backcountry adventure.

International Travel

The risk of viral, bacterial, and protozoan infection is much higher in certain destinations. When travelling to urban areas that present uncertainty, sealed bottled water is usually readily available and a safe option. However, single-use plastic bottled water is not environmentally friendly and has increasingly become a huge concern – especially in the areas that lack the infrastructure for responsible disposal. Luckily, there are reliable alternatives available with UV light treatment, or all-in-one purifier bottles.

Steripen

Most water from taps runs clear and can be safely treated either chemically or with UV light, such as Steripen. The Steripen is useful in that you can treat a glass or bottle of water without chemicals, making it far more pleasant to drink. If the water sources available to you are turbid, you will need to filter the water first to make chemical and UV treatment effective.



A Steripen is a compact choice for lightweight activities. Image: Steripen

Grayl and Lifestraw Purifier Bottles

There are now portable and easy to use options such as the Grayl UltraPress Water Filter and Purifier Bottle or the slightly larger GEOPRESS. This bottle removes 99.9999% of viruses, disease-causing bacteria, and protozoan cysts, as well as sediment, chemicals, and heavy metals. This is a great option for those who don't want to purchase single-use plastic bottles of water, and will last you about 300 uses until you must replace the purifier cartridge.

LifeStraw also produce a similar bottle called the Go Tritan Renew Bottle, which filters water through a hollow fibre membrane filter removing 99.999999 % of bacteria and 99.999 % of protozoan parasites. Both options are easy to use and convenient, so they will fit in perfectly with your travel lifestyle.



A Grayl bottle is a great purification option for travel or day hikes. Image: Grayl

Extended Trekking

You may need to make the most of whatever water source you come across here, especially if you are heading off the beaten track. For longer trips you should aim for a filtration system that is light, compact, field maintainable and can filter larger volumes of water.

MSR Hyperflow, Guardian, and Platypus GravityWorks

When you need to filter larger amounts of water, the Hyperflow from MSR is compact to fit in your pack, field-maintainable so you can clean it to recover the flow without tools, and filters 3 litres of water per minute. It also fits onto wide-mouth containers so you can connect it directly to your drink bottle and, combined with a chemical treatment such as Micropur Forte, this bottle can create safe drinking water from any water source.



Effective against bacteria and protozoa, the Platypus GravityWorks will filter your water while you set up your base camp. It comes with two water reservoirs: one for dirty and the other for clean water, connected by a filter. Just hang up the full dirty reservoir higher than the empty clean one, and gravity will get the job done for you! It also comes with bottle adaptors, so you can connect it to your water bottle for convenience.

Self-cleaning, effective against viruses, bacteria, protozoa and particulate (so you don't need to use further treatment), and able to treat up to 10,000 litres of water – the MSR Guardian will truly cover all your bases when it comes to safe hydration.

Want to know more about what's in the water you're drinking? Check out Katadyn's Safe Drinking Water Guide.



Choose something field maintainable for extended trekking. Image: MSR

Day Hikes and Trail Running

If you're just hitting the trail for the afternoon and need a water filtration device on hand in case you get stranded, there are some compact and effective options available that won't weigh you down.

MSR and LifeStraw Filters

I would recommend a field-maintainable water filter such as the MSR TrailShot Pocket Sized Water Filter or MSR Miniworks EX filter. They're compact, quick to use, and efficient.

If you know that you're going for a shorter hike where there are reliable water sources available and you want to really lighten your load, a LifeStraw is perfect too. This device filters 99.9999% of bacteria and 99.9% of protozoan cysts, allows you to drink straight from the water source, and only weighs 57g! Compact and lightweight, a LifeStraw makes an ideal addition to your emergency camping or hiking kit – just in case!



A LifeStraw is a compact choice for trekking and heading overseas. Image: LifeStraw

Hydrate Safely Outdoors

These are just a few of the convenient and effective water purification products on the market that will offer reassurance and safe hydration when exploring off the grid.

So, whether you're a lightweight trekker or just love getting away with the family in your 4WD – you'll find a great option to cover your hydration needs.

What water treatment system do you use?