

Travel and Trek's Guide To...

Safe Drinking Water - How To Keep The Costs Down

Safe drinking water in third world countries such as Nepal and India is of major importance if the traveller is to remain healthy. In the past the cost of buying bottled water has been negligible, just a few pence in some cases but recently it has risen sharply. It now impacts quite considerably on a traveller's day to day budget.

If you are a frequent traveller, it may be worth considering the options open to you to help keep the cost of safe drinking water down. Whilst this article concentrates on the Everest Base Camp trek, the principles are the same with any long trek or isolated area.

Today you can purchase a 1 litre bottle of mineral water in Kathmandu for 10 Ruppees (~8p)¹. In the hills however, it now starts at 100 Ruppees (~80p) and continues to rise with the altitude until you are paying close to 300 Ruppees (~£2.40) per litre at Gorak Shep, which is the final stop before you reach the Everest Base Camp.



In terms of how much you drink on a daily basis, all of us have different levels but we will assume that we drink 3 litres of water a day. That may appear high but at altitude you should be drinking a lot more than normal. The diuretic effects of altitude and cold will make you urinate more and you will sweat more due to physical exertion (exaggerated by being at altitude).

At 3 litres per day over a 13 day period with slightly rising costs as the trek progresses, it works out at approximately £47.10 just on mineral water. Add the Kathmandu element and it rises slightly more over the full duration of the trip.

Let's face facts; you need the water, there is no way around it but you can cut the cost.

Frequent travellers (not just trekkers) who go anywhere that has potentially unsafe drinking water should seriously consider buying a good water filter² and/or a purification³ system. Boiling is the only sure way of making water safe (you should also filter it though, boiling does not remove particles) but this isn't always possible to do. A filter and/or purification method is the next best thing. In theory you should filter AND purify but the vaccinations that you should have had should counter any ill effects that may come your way as a result of only doing one or the other.

¹ Prices taken in March 2008.

² Filtration is the process of separating solids from fluids (ie small particles in water), normally using a multi-layer filter.

³ Purification is the process of removing contaminants from a raw water source (often unseen) to make it potable.

When deciding what to use, there are numerous factors that you should consider:

- o Initial cost
- o Upkeep costs (batteries, replacement filters)
- o Weight
- o Size/bulk
- o Robustness (does the unit break easy? bear in mind how you carry it)
- o Ease of use
- o How much water can be treated (filters only last for so long and drops only treat x amount of water)
- o Effectiveness. In theory they are all effective but if you are going into very remote places, you may want to ensure that the system you have is bombproof, ie what happens if it breaks?

What's Available? – here are some examples of what is on the market

Water filter: Katadyn Vario water filter £79.99 (treats 7000 litres)

There are various versions of this filter; this is the cheapest.

- o Pros: Plastic and therefore robust, lightweight, high capacity, fast through flow, good to share, good track record, easy to maintain.
- o Cons: Some consider it a little bulky, high initial outlay
- o Costs: £0.01 per litre over a single filters life. With a 7000L capacity, it will filter 3 litres every day for over 6 years!



Purification tablets: £4.99 (treats 50 litres)

- o Pros: Very small bottle, cheap, easy to carry several bottles.
- o Cons: Horrid tasting water.
- o Costs: £0.09 per litre. Rises to £0.29 per litre if you add effervescent tablets.



Iodine droplets: £4.99 (treats 280 litres)

- o Same as purification tablets.
- o The over taste can be countered using effervescent orange tablets (factor in extra cost).
- o Costs: £0.01 per litre, rises to £0.21 per litre if you add the effervescent tablets.

Steripen: approx £70 (treats 5000 litres)

The Steripen is a handheld devise that uses UV light to destroy ALL waterborne microbes.

- o Pros: Kills 99.9% of anything remotely harmful, lightweight, high capacity, easy to use.
- o Cons: Requires 4 x AA batteries to operate, could considered bulky, potential to malfunction, need a wide necked bottle to allow the Steripen to get into the bottle to operate
- o Costs: £0.01 per litre, rising to over £0.15 per litre when you add the cost of batteries (rechargeable).



Conclusions

At worse case, the droplets or tablets plus the effervescent tablets will cost you approx £12 as opposed to £47, a saving of £35 on a single trek. For individuals embarking on a 'one off' trip, this is difficult to beat and a bottle of iodine droplets in your bag is always a good safe backup.

If shared between two people, even taking into account the initial outlay, both the Katadyn filter and Steripen will be cheaper than buying bottled water and you still have it for future use. They are certainly excellent value for the longer term, very easy to share with others especially on a tented trek when you are inevitably camping next to rivers. They are also good if you use a camelback hydration system (it is easy to filter water straight into it).

Eco-friendly Element

All of these methods are much more eco-friendly than the use of bottled water, cutting down enormously on the considerable quantity of plastic bottles currently being used.

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Terry still leads many treks in Nepal and India and has actively used all of these methods experiencing the pros and cons. He currently uses a Steripen.