Drinking Water on the BNT

By Graham Crossley

One consideration that will have to be planned well for your BNT trek is the provision of safe water for drinking and cooking. Armed with a bit of knowledge and an appropriate solution to the problem, you should be able to have a safe trek.

Safe Drinking Water

It is an unfortunate fact that even the remotest mountain streams can carry bugs that can cause sickness in humans. The closer the area is to human habitation, visitation or intensive land use, the higher the risks of contamination. Even if the water is clear and from a running stream it may still be unfit to drink without preparation. Two of the worst bugs are called Cryptosporidium and Giardia. Basically they can give you bad diarrhoea, have no cure, and, in immune-suppressed individuals (chemotherapy, transplant patients or AIDS) and the very young or old, can lead to death. You may not be in any of the high risk categories now but may at some other stage of your life for say medical treatment. An ounce of prevention from becoming infected now is well worthwhile as there is no known cure. Additionally, no one wants to have their trip spoiled by acute diarrhoea. Cryptosporidium and Giardia are resistant to water treatments such as purifying tablets and simple filters. They can only be removed by filtering through a very fine element or by boiling.

Boil or Filter Your Water

As you can't tell if the water source is contaminated and the significant consequences of becoming infected, it is recommended that you either simply boil your water (rolling boil for 1 minute) or filter it with a filter guaranteed to remove all pathogens.

Filters

There are a number of filters on the market that are available from bush walking and camping shops. They have had extensive development for use in both developed and undeveloped countries. Generally they consist of a pump, a ceramic filter cartridge and in some models an additional carbon filter. As the pathogens are very small, the element must be capable of removing all eggs (oocysts). The design must also be such that unfiltered water can't bypass the filter in any way. The filter must also be correctly maintained to preserve efficiency. Contaminated water must not be allowed to come in contact with the output side of the filter through careless handling. Some manufacturers also sell water containers that the filter can be directly coupled to for ease of filling.

What should You Look For In A filter

My personal opinion is 100% efficiency in removing parasites and their eggs is the only safe level. Please note that the US Food and Drug Administration states that an infectious dose of Cryptosporidium is between 1 to 10 oocysts. In a Sydney water crisis, levels of 2000 oocysts per 100 litres were detected. Simple math tells you that at 99.97 percent filter efficiency and an input level of 4000 oocysts per 100 litres, one would get through - an infectious dose. For a given filter efficiency, either a higher contamination rate or greater volume of water would increase the chance of oocysts being passed by the filter. For this reason and that the input level is unknown, I believe a filter must be 100% efficient. You only get one body and must live in it all your life.

Besides filter efficiency, important considerations in choosing a filter include ease of use, durability, availability of replacement parts and filters, size and weight.

Your Choice

Like most matters, the solution to ensuring safe water is a personal choice which you will have to make.
For me, I boil the water as it is simple, reliable and 100 percent safe.