

# is your water safe?

With bottled drinking water proving unkind to both your wallet and the environment, a water filter could be the answer. **Laura Greaves** investigates the options.



Australians consume over 380 million litres of bottled drinking water every year. That's a staggering 95 million 250ml plastic bottles - 65 percent of which end up in landfill - at a cost of in excess of \$500 million.

In New South Wales alone, Australian Bureau of Statistics figures reveal that eight percent of the population says bottled water is their main source of drinking water - that suggests that more than half a million people rarely turn on the tap. Statistics also show that, while 93 percent of Australian homes are connected to mains water, nearly 20 percent rely on bottled water for basic household tasks.

Worldwide, the packaging of drinking water requires 2.7 million tonnes of plastic every year. And, most shockingly, bottled water is an average 1,000 times more expensive than local drinking water. So it's not surprising that many people are seeking more cost effective and environmentally sound means of accessing clean, pure drinking water - and one of the simplest solutions is a water filter.

## BE WATER WISE

If your home is over 60 years old, ask your plumber to check any original pipes and fixtures for lead. Pipes connecting to the main water lines may also contain lead solder. To be sure, buy a testing kit from The Lead Group ([www.lead.org.au](http://www.lead.org.au)).



## Why filter?

The National Health and Medical Research Council's Australian Drinking Water Guidelines state that water "should contain no harmful concentrations of chemicals or pathogenic micro-organisms, and ideally it should be aesthetically pleasing in regard to appearance, taste and odour."

State water authorities treat our tap water to kill micro-organisms such as bacteria, viruses and protozoa like cryptosporidium and giardia; water filters help to 'catch' any bugs that may have slipped through the net. Treatment processes also leave a lingering taste and smell of chlorine or disinfectant, the removal of which is a chief function of in-home water filters.

Water may look clear and clean, but it's the invisible chemical pollutants - traces of everything from hormone tablets to solvents - which are the real threat.

Water filtration works in two ways: either by using a source of activated carbon, such as coconut, charcoal or ceramic, to make contaminants adhere to the carbon source (a process known as adsorption that removes odour, taste and particles from water); or by reverse osmosis, where a semi-permeable membrane separates impurities from the water. Activated carbon filters remove chlorination by-products, parasites, some minerals, such as lead, and some chemicals. Reverse osmosis filters are more

expensive but remove more toxins and heavy metals; they also remove some potentially healthful minerals. There are four main types of water filter:

**Jug:** User-friendly, small, convenient, and with readily available replacement filters, these are affordable - prices range from \$20.00 to \$75.00 - but filters should be replaced every few weeks and range in price from \$10.00 to \$30.00, so over time this method can prove expensive.

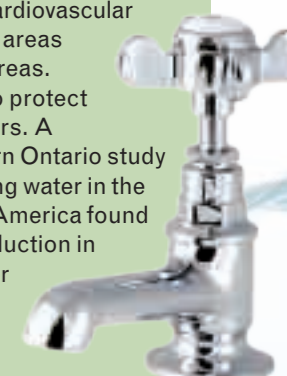
**Tap-mounted:** These purify water as it comes out of the tap, making them arguably the most convenient method of filtration. With set-up costs ranging from \$25.00 to \$75.00, they're easy to use and switching between filtered and non-filtered water is simple. However, they aren't compatible with all taps.

**Counter-top:** These more expensive (up to \$350.00) filters are less likely to clog than jug or tap-mounted filters, but take up valuable bench space. The good news is they can filter large amounts of water without requiring major plumbing work.

**Under-sink:** The priciest option, this type of filter costs between \$180.00 and \$600.00. It can filter large amounts of water, but it does require installation by a plumber.

## TOP TAP TIPS

Filtered water may taste and smell better, but tap water isn't all bad. Studies have linked hard tap water with lower mortality from heart disease, including the British Regional Heart Study, which found 10 to 15 percent more cardiovascular deaths in soft water areas than in hard water areas. Hard water may also protect against some cancers. A University of Western Ontario study that analysed drinking water in the 100 largest cities in America found a 10 to 25 percent reduction in the number of cancer deaths in cities with hard water.



Whatever brand of filtration system you choose, check that it's certified by non-profit public health organisation NSF International at [www.nsf.org/certified/dwtu](http://www.nsf.org/certified/dwtu).

## Personal choice

While it's simple to filter the water you drink at home, what about when you're out and about? The good news is you can have access to filtered water at all times, without buying bottled H<sub>2</sub>O. New to Australia, Water Bobble is a BPA-free reusable drink bottle made from recycled materials and with a built-in filter. It is available in 385ml, 500ml and one litre sizes. Visit [www.waterbobble.com](http://www.waterbobble.com) for more information.

Public filtered water fountains are an increasingly common sight in towns whose councils wish to discourage use of bottled water. Some have gone a step further: the village of Bundanoon, in the NSW Southern Highlands has implemented an outright ban on the sale of bottled water. Even the NSW Government is getting in on the act, banning all government departments and agencies from buying bottled water, including supplies for water coolers.