

Untold Truth About The Water You Drink

IAN BLAIR HAMILTON



*“My family didn’t have a water habit,
Cola was ‘cool’!”*

“When I grew up our family didn’t have a water habit. So I drank Cola. Cola was ‘cool’. I guzzled it every day with my lunch. I was proud that I could down a whole 600ml bottle without pausing for air. I would have contests with my school friends in speed of putting away our daily bottle. Water...I didn’t touch the stuff!

“At age 19 I lost my teeth!”

At age 50 I began to drink filtered water. At age 58 I regard myself as (relatively) transformed in attitude to my health.

This is mainly through a change in attitude to my water habits, but also – of course – through the fact that as I approach sixty and beyond I have begun to wonder how I am to ‘live long and prosper’ into my grey years.





Contents

	<i>The Most Important Health Choice</i>	3
Chapter 1	Why Water Needs To Be Filtered	4
	Contaminants that still make it through today's high-tech water source processing	
Chapter 2	Water Filters – Basic Systems	8
	The Basic Carbon Filter	8
	Water Distiller	8
	Ceramic Water Filter	9
Chapter 3	New Technology	10
	Magnetic Systems	1
	Single Flow Magnetics Plus Filter	10
	Energetics	10
	Far Infra Red	10
	Catalytic Converters	10
	Reverse Osmosis	11
	Ultra Violet Radiation	11
	Water Alkalizer/Ionizer	11
	Other Systems	12
Chapter 4	Bottled Water	13
	How Does Bottled Water Compare With Free Tap Water?	13
Chapter 5	It's Your Decision!	14
	Cost	14
	Home Circumstance	14
	Health Perspective	14
	Factors to Consider	14
Chapter 6	Choosing A System	15
	Negative Ionization	15
	Infra Red Systems	15
	PH Control/Alkalizing	15
	Micro Clustering	15
	Long-life Filter Systems	15
	On the Practical Side	16
	What Does What (graph)	17
	What Has What (graph)	17
	The Cost (graph)	18
	<i>Finale – Author's Last Word</i>	19



The Most Important Health Choice

I spent five years researching the subject of water and have come to the realisation that that our choice of water is the single most important and comprehensive health choice we can make.

There is an old axiom that water filter vendors have been using for many years,
“Either get a filter, or become a filter.”

I’d like to add another epithet to that one,
“You are what you eat... and DRINK.”

200 YEARS AGO

We receive our water from the sky.

It falls to earth and percolates through the earth, into streams, whirling, tumbling and absorbing light photons, energy and the minerals essential for healthy life.

After drinking, the minerals and energy it offers are absorbed and converted to energy and it passes back into the earth and the sea – where it evaporates to continue this perfect natural cycle.

TODAY WATER IS VERY DIFFERENT

Natural water is a rarity today due to industrial contamination, woodland loss and the need for centralised water storage. Water must be capable of absorption if it is to benefit us.

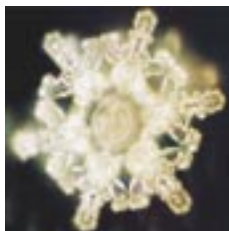
Water in its natural form can be seen in the example below. Compare this to the microscope picture of polluted, processed and piped municipal water.

IT’S YOUR CHOICE, LIVE OR DEAD WATER!

Live Water

The perfect structure of a pure frozen water molecule.

Source: Dr Masaro Emoto, ‘Messages from Water’.



Live Water

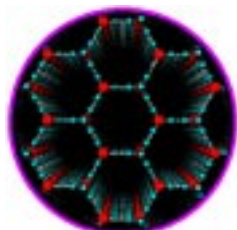
The unique hexagonal structure of a snowflake as it falls to earth; never duplicated, always perfect!



Live Water

As it should be at an atomic chain level.

X-Ray representation of water ice at 100,000,000 magnification. Red balls are Oxygen atoms, Cyan are Hydrogen..



Dead Water

Tap water at freezing point after degeneration due to processing.

Source: Dr Masaro Emoto, ‘Messages from Water’.



Gunk, goo, toxins, muck, bacteria and assorted chemicals make up the cocktail that we call tap water. It's a sad fact, but water 'ain't what it used to be'.

With privatisation of water supplies, chemical modification and an aging reticulation system, outbreaks of water borne disease are more and more frequent.

There are many, many water borne contaminants, viruses, bacteria and amoeba that still make it through today's purportedly high-tech water source processing. These include:



CHLORINE

Chlorine used to kill life forms in the water, chlorine is a recognised carcinogen. We are now entering into a period of increased water shortages. As reservoirs lower, water suppliers add more chlorine. This is because the number of micro-organisms in a reservoir do not decrease as water levels drop. They simply become more concentrated.

Dosage will be lifted above recommended maximums due to the necessity of containing disease through micro-organism increases.

During our last local drought, I could even smell chlorine gas from outside taps.

Chlorine in drinking water has been linked to increased incidence of bladder and rectal cancers by Harvard University and the Medical College of Wisconsin.

Chlorine is also linked to body protein damage. It causes dry skin and hair, and burns the eyes. If you suffer from asthma, sinus problems, allergies, skin rashes or emphysema chlorine in your water may well exacerbate your condition.

Chlorine kills bugs, but it also reacts with organic matter in water potentially creating new toxic substances. One such substance, trichlormethane, is far more carcinogenic than chlorine itself.

The US EPA labels Mutagen X, another chlorine by-product as the 'single largest contributor' to the ability of municipal water to cause genetic mutations. Chloramines in excess of EPA's standard could cause stomach discomfort or anaemia.

Chlorine Dioxide

Some infants and young children who drink water containing chlorine dioxide in excess of accepted standards may experience nervous system effects. Similar effects may occur in foetuses of pregnant women who drink water containing chlorine dioxide in excess of the standard. Some people may also experience anaemia.

FLUORIDE

90% of Australian water supplies now add fluoride. USA's EPA has set an enforceable drinking water standard for fluoride of 4 mg/L (some people who drink water containing fluoride in excess of this level over many years could get bone disease, including pain and tenderness of the bones).

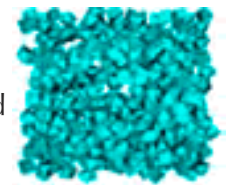
EPA has also set a secondary fluoride standard of 2 mg/L to protect against dental fluorosis.

Dental fluorosis, in its moderate or severe forms, results in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should not drink water that has more than 2 mg/L of fluoride.

MICROBES

Coliform bacteria are common in the environment and are generally not harmful.

However, the presence of these bacteria in drinking water is usually a result of a problem with the treatment system or the pipes which distribute water, and indicates that the water may be contaminated with germs that can cause disease.



Faecal Coliform and E-Coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes.

Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms.



MICRO-ORGANISMS

These include germs, amoeba, parasites, cysts and viruses. In my experience chlorine does not fully eliminate these organisms.

During our recent local drought, even though chlorine levels were drastically increased, local health practitioners reported a rash of parasitological infection: Filtration level of 1 micron will exclude infection including Cryptosporidium and Giardia.

A filtration of less than 0.1micron is required to exclude viruses. Few people realise that flu viruses are carried on birds that migrate from Asia. These birds settle in our reservoirs, and outbreaks follow.



CRYPTOSPORIDIUM

Cryptosporidium is a parasite that enters lakes and rivers through sewage and animal waste. It causes cryptosporidiosis, a mild gastrointestinal disease.

However, the disease can be severe or fatal for people with severely weakened immune systems. EPA and CDC have prepared advice for those with severely compromised immune systems who are concerned about Cryptosporidium.

Giardia Lamblia is another parasite that enters lakes and rivers through sewage and animal waste. It causes gastrointestinal illness (e.g. diarrhoea, vomiting, cramps).



TURBIDITY

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms.

These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhoea, and associated headaches.

INORGANIC CONTAMINANTS

Inorganic Contaminants include Antimony, Asbestos, Barium, Beryllium, Cadmium, Chromium, Copper, Cyanide Mercury, Nitrates, Nitrites, Selenium, Thallium.

Ingestion of even miniscule amounts of these heavy metals is associated with many serious health challenges.

SYNTHETIC ORGANIC CONTAMINANTS

(including pesticides and herbicides)

2,4-D
2,4,5-TP (Silvex)
Acrylamide
Alachlor
Atrazine
Benzoapyrene
Carbofuran
Chlordane
Dalapon
Di 2-ethylhexyl adipate
Di 2-ethylhexyl phthalate
Dibromochloropropene
Dinoseb
Dioxin (2,3,7,8TCDD)
Diquat
Endothall
Endrin
Epichlorohydrin
Ethylene dibromide
Glyphosate
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene
Lindane
Methoxychlor
Oxamyl [Vydate]
PCBs [Polychlorinated biphenyls]
Pentachlorophenol
Picloram
Simazine
Toxaphene

Disinfection by-products form when disinfectants added to drinking water to kill germs, react with naturally-occurring organic matter in water.



Trihalomethane

Some people who drink water containing trihalomethanes in excess of EPA standard over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Haloacetic Acids

Some people who drink water containing halo acetic acids in excess of EPA standard over many years may have an increased risk of getting cancer.

Bromate

Some people who drink water containing bromate in excess of EPA standard over many years may have an increased risk of getting cancer.

Chlorite

Some infants and young children who drink water containing chlorite in excess of EPA's standard could experience nervous system effects. Similar effects may occur in foetuses of pregnant women who drink water containing chlorite in excess of EPA's standard. Some people may experience anaemia.

VOLATILE ORGANIC COMPOUNDS

Volatile Organic Compounds may combine with other contaminants to form new toxic substances.

These include:

- Benzene*
- Carbon Tetrachloride*
- Chlorobenzene*
- o-Dichlorobenzene*
- p-Dichlorobenzene*
- 1,1-Dichloroethylene*
- 1,2-Dichloroethylene*
- Dichloromethane*
- 1,2-Dichloroethane*
- Ethylbenzene*
- Styrene*
- Tetrachloroethylene 1,2,4*
- Trichlorobenzene*
- 1,1,1,-Trichloroethane*
- 1,1,2-Trichloroethane*
- Trichloroethylene*
- Toluene*
- Vinyl Chloride*
- Xylenes*

MTBE

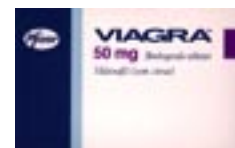
MTBE is a fuel additive, commonly used in the United States to reduce carbon monoxide and ozone levels caused by auto emissions. Due to its widespread use, reports of MTBE detections in the nation's ground and surface water supplies are increasing. The Office of Water and other EPA offices are working with a panel of leading experts to focus on issues posed by the continued use of MTBE and other oxygenates in gasoline. EPA is currently studying the implications of setting a drinking water standard for MTBE.



Copper and Lead

Very few water systems can remove lead. Lead may be a problem in older homes where lead solder was used to join copper pipes. If the water supply is acidic, it will eat away at the lead – and copper – overnight, so that your first water in the morning may hold high levels of both minerals. For this reason it is always a good practice to run the tap for a minute or so before using the filter first thing in the morning.

Hormones, pharmaceutical drugs and more



As our society gains in ways to create new substances, we are seeing more and more synthetic substances turn up in our water supply. These include xenoestrogens, hormones, pain killers, tranquillisers, and almost every other drug imaginable including Prozac and Viagra.

This is happening now, and has increased alarmingly as we become more drug-dependent. Drugs enter through water recycling, garbage disposals interfering with water tables, and just thoughtless dumping by individuals.

Although some water filter sellers talk about it, they do not actually know whether these compounds will be filtered out.

We can only make the best choice of system within our means.



'PURIFICATION' CHEMICALS

In order to 'purify' drinking water up to 50 different chemical compounds are used. These include:

Lime (Calcium Hydroxide)
Chlorine Compressed
Liquefied Gas
Sodium Fluoride
Aluminum Sulphate Solution
Soda Ash Solution
Sodium Hydroxide Aluminum
Sulphate Polymer 1190
Polymer 1115
Polymer 1160X
Sodium Hypochlorite Solution
Sodium Silicofluoride

Acid Water

Acid Water is often found in rainwater tanks, especially tin and fibreglass/plastic. We certainly need to take care to choose a system that eliminates or neutralises all the chemical problems we have mentioned, but what do you have left?

If your water is acid, it will still be acid after filtration (in most cases). Acid of any form is already playing havoc with the general health of Australians, so it makes sense that ingesting more acid in the form of drinking water is not desirable.

In fact alkaline water has been shown to have very desirable effects on health and longevity.

A Norwegian study of 100,000 death certificates linked water pH with cause of death. It found that people drinking alkaline water had a 22% better chance of beating coronary disease.

Some areas of Australia also have acid water supplies even though the Water Safety Guidelines recommend neutral or above, mainly to prevent copper and lead from being eroded into the water supply, so it's worth getting a pH test kit to test your water.

HUMAN FAECES

"It was a perfect Sunday...quiet, serene. We sat silently watching the water run over the volcanic formations in the rock as it made its way down to the Rocky Creek Reservoir, water supply for the whole of the North Coast".

"We became aware that someone else was around by the sound of girl's voices. I looked across the stream just in time to see two teenage girls pulling up their pants and walking out from behind a large rock.

"Not wanting company, we watched as they chattered away, making their way back to the road where their car must have been parked. After they left, our curiosity got the better of us. Wondering what had been so hilarious, we walked over to where they had appeared.

"They had defecated into the stream. A sinuous brown trail wove its way downstream towards the reservoir."

Filtration today is just the first step.

Restorative technology has taken giant steps in the last thirty years but it is only recently that it has reached Australian shores.



THE BASIC CARBON FILTER

These systems are easy to install, relatively inexpensive, and cover the basic functions of filtration. The charcoal medium is derived from coconut husk. This absorbs impurities as the water passes through. This form of filter comprises possibly 90% of those in use domestically.

They are simple to install, relatively economical, and depending on micron level, will filter out the most deadly of contaminants, *Cryptosporidium* and *Giardia*.

An average charcoal filter will last a family 6-9 months. Some charcoal filters are enhanced by the use of activated nano-silver, which provides extra antibacterial protection, killing around 650 known types of organisms.

Minerals in solution can still permeate a charcoal filter. These minerals are essential to health.

In situations where sediment is a problem it is worthwhile to add a second separate in-line sediment pre-filter.

Otherwise the more expensive charcoal filter will become clogged up long before its normal lifespan.

Charcoal filters come in various forms:

1. *Carbon Block* is a solidified form of honeycombed carbon. It is the best form of filter but flow rate is significantly slower than with loose charcoal.
2. *Activated Silver Impregnated Charcoal*. Sometimes called *Chlorgon*, this adds chloramine exclusion and bacteria killing ability to the basic carbon.
3. *Micron Rating*. Anything 1 micron rating or below will inhibit *Cryptosporidium* and *Giardia* as the cysts are larger in size.



Viruses cannot be inhibited by a filter with a micron rating of more than 0.01 microns.

Carbon filters cannot change the pH balance of the water. If you have acidic water, you will still have acidic water, as the minerals causing the acidity will be dissolved and therefore will pass through the carbon filter.

Carbon filters may be susceptible to mould attack if left unused over extended periods. It is important to realise that a filter gathers the 'garbage' in your tap water and the organic component of this garbage is quite capable of rotting. Add a little summer humidity to the already damp internals of a carbon filter and you may have a mould attack.

Taste will always be the deciding factor, and if the taste of the water suddenly changes after an extended period of non-use such as your annual vacation, change the filter.

Note also that carbon filters reduce in efficiency the longer they are in use. For this reason regular filter replacement is essential.

WATER DISTILLER



Water Distillers had a brief period of popularity after the *Cryptosporidium* scare in Sydney.

People believed that the purest water had the least chance of allowing harmful organisms to enter the body, and distillation certainly rids water of all impurities.

However in recent years there has been growing awareness of distilled water's effects on the balance of minerals in the body, plus the acidic result that many distillers create.

People now realise that dissolved minerals in the water are more natural than pure water, and serve an important function in supporting the body's immune system and metabolism.

CERAMIC WATER FILTER

Ceramic water filters come as a cartridge that fits a normal bench top filter. At the core of the ceramic filter element is Diatomaceous Earth, a fossil substance, made up of tiny silicon shells left by trillions of microscopic, one celled algae called diatoms that have inhabited the waters of the earth for the last 150 million years.

Some ceramic filters incorporate nano-silver impregnated into a porous ceramic outer shell that can trap bacteria down to as low as .22 of a micron in particle size 1/100,000 of an inch.

Laboratories consider a filtering medium with an effective pore size of .01 micron to .45 micron to be bacteriologically sterile and .45 micron to 1.0 micron to be bacteriologically safe.

Regrowth of bacteria that becomes trapped either on the outside of the element or in the ceramic's pores is controlled by the silver which, on contact with water, releases small quantities of positively charged metals ions.

These ions are taken into the enzyme system of the bacteria's cell and thereby neutralize it. The flow rate of the ceramic filter can be renewed by brushing its outer surface under running water. As the top layer of ceramic and contaminants are brushed off and flushed away, a new layer becomes available. The flow rate of this form of filter is slow.



In the last forty years there have been amazing advances in water filtration technology.

This has come in part from the work of Russian scientists on ionized water, but also from the research of Viktor Schauberger, an Austrian inventor who recognises that water was far more than something to wash garbage out of our body and quench thirst. His work found that water indeed has a memory, and that this memory can be restored.

The following systems all go at least some way to fulfilling the dreams of these inspired pioneers.

MAGNETIC SYSTEMS

Fundamentally, this involves passing the water over or through a magnetic field.

This has the effect of re-arrangement of atoms, or ions in the water. However without the fundamental 'splitting' of water ions that occurs in a Water Ionizer (H₂O into OH⁻ and HO) lasting change is not possible, even though many claims are made by the various manufacturers.

MAGNETIC DE-SCALERS

Magnetic units do not filter or change pH. Some magnetic systems are used as de-scalers for pipes in hard water areas, for which they work well.

SINGLE FLOW MAGNETICS PLUS FILTER

When water flows through a magnetic field (whether it is electrically induced or induced using magnetic media such as Magnetite), it experiences a polarisation of minerals and a change in the ionisation of these minerals.

The result can be softer water, 'smaller' water molecules that may give far greater hydration, and a limited form of negative ionisation of the water, imparting some antioxidant effect.

Although single flow systems certainly work to some degree, the fact that they do not split the water into magnetically opposite streams (acid and alkaline) means that they will reform within a short period and therefore must be consumed immediately.

ENERGETICS



These are systems that use no power, but rely on the technology pioneered by Austrian Viktor Schauberger.

Basically they reconfigure incoming water by passing it through a vortex system that softens and re-energises the water. They do not, in most cases filter the water. They are usually attached to the house water inlet pipe so they can service the whole house.

FAR INFRA RED SYSTEMS

A number of systems include the use of Far Infra Red Energy.



This is a completely natural form of energy that emanates from certain minerals, the most effective being the semi-precious gem Tourmaline. Other minerals are used, often under proprietary brand exotic names, to enhance their perceived ability.

Far Infra Red energy (FIR) has the ability to soften water, to negatively charge it, and to restructure the water into smaller molecular clusters which may assist in hydration of the body. Most systems use FIR by including it in the replaceable filter.

CATALYTIC CONVERTERS



These systems use technology not unlike that used to control emissions in our modern car. They convert heavy metals, chlorine, pollutants and viruses into harmless oxidised form, breaking them down to their basic elements.



The research and proven technology for this comes from Estonia (former USSR) and has been used to manufacture systems that can be rushed to drought or conflict areas, throw a hose into a stagnant pool, and supply fresh, safe water immediately – to World Health Organisation standards.

Because they do not filter the water, they need no filter and domestic models will last up to 1,000,000 litres. They also negatively charge the water and alkalize it. There is only one such system available worldwide.



REVERSE OSMOSIS

Originally developed to process water in submarines, the reverse osmosis process draws water through an extremely fine membrane to create drinkable water from salty (or otherwise contaminated) water.

The contaminated water is put on one side of the membrane and pressure is applied to stop and then reverse the osmotic process. It generally takes a lot of pressure and is fairly slow, but it works. The result is extremely finely filtered water with nothing in it. Reverse osmosis takes everything out, including essential minerals.

Water without minerals can be a health problem. Dr. Zoltan Rona has authored an excellent paper on 'Pure Water' recommending in no uncertain terms against its continued consumption.

According to the U.S. EPA:

"Distilled water (which is identical to RO water~Ed), being essentially mineral-free, is very aggressive, in that it tends to dissolve substances with which it is in contact.

"Notably, carbon dioxide from the air is rapidly absorbed, making the water acidic and even more aggressive.

"Many metals are dissolved by distilled water."

Dr Rona adds, "Longevity is associated with the regular consumption of hard water (high in minerals). Disease and early death is more likely to be seen with the long term drinking of distilled water."

As Reverse Osmosis produced water is identical in nature to distilled water we can make the same assumptions.

ULTRA VIOLET RADIATION

UV systems use high frequency light to irradiate water through a glass 'element'. Water passing the element is exposed to the light, which kills all living organisms.



UV systems are very common in Third world hotels etc where the possibility of serious disease occurring from local water consumption is high, especially from faecal matter in the water.

In Australia, many country people have chosen UV to ensure they are not affected by waterborne Blastocystis or Giardia Lambda.

Although an excellent sterilizing system, it is impossible to know whether the system is working properly without a laboratory analysis of the output water.

For this reason the more sophisticated systems incorporate an hour counter so a new element can be replaced at a safe interval.

WATER ALKALIZER/IONIZER

Undoubtable an advanced water solution, most domestic water alkalizers allow you to choose a selection of different pH outputs at the touch of a button ranging from high alkaline pH10 water to neutral water and acidic water.

A water alkalizer may be attached to the kitchen tap or installed under sink. Tap water is first cleaned through a Biostone filter then passes through a separate chamber between titanium plates charged by mains power which ionizes the water.

The ionizing process separates the water into alkaline drinking water and acid water which is great for your skin.

During the 1960s Russian scientists devised a simple method of separating water into two streams of alkaline mineral-rich water and acid-mineral-rich water. They used a series of magnetically charged plates and a ceramic separator filament. As water passed between the plates, the magnetic field drew alkaline minerals to one side of the ceramic filament, and acid to the other.



The technology soon spread to Japan and Korea. Large companies like Akai, Panasonic, Toyo and Jupiter Science manufacture the bulk of the world's systems, with a combined output of well over one million units per annum. Korean alkalizers have taken the lead with the introduction of Far Infra Red technology to their systems.

Today in Japan alkaline and acid water is used in a huge number hospitals and clinics, both for consumption and wound healing in place of expensive drug regimens.

Alkaline water

Alkaline water is used for drinking and cooking with many, many people reporting health improvement and reduction of acid symptoms.

Ionized acid water

Acid water can be used for dermal application, with similarly, many users reporting improvement. Ionized acid water may be used for household cleaning because it is a powerful antibacterial also most plants thrive on ionized acid water.

In some countries ionized acid water is sold as 'beauty water' because it's great for the skin (as humans we should have an acidic mantle on our skin).

Some other systems make claims of alkalizing your water but do not guarantee it. The catalytic converter will alkalize approximately one pH point (ten times the input pH) but a water alkalizer can alkalize up to 1,000 times more than tap water – depending, of course, on input water.

Other systems depend on the addition of calcium to the filter to achieve alkalization. Your water must have minerals in to facilitate the ionizing process. For this reason, water supplies that hold very little minerals may not be as suitable.

Ionized/Alkaline Water is:

- ALKALINE – neutralises acid
- LIVE – donates electrons to your body = more energy
- CLEAN – filtration rating of 1 micron, plus retains essential minerals
- OXYGENATED – almost double of tap water
- MICRO CLUSTERED – helps increase hydration
- LOADED WITH calcium, magnesium, potassium and sodium (alkaline minerals)
- NEGATIVELY CHARGED – negative hydrogen ions are a powerful antioxidant).

Negative hydrogen ions supplied by ionized water are known as the original primal antioxidants. Every time you drink a glass of ionized water you intake approx 50% antioxidant and 50% oxygen.

OTHER SYSTEMS

I have not been able to include all systems here. There is a plethora of small household systems on the supermarket shelves. They are almost all carbon-based and have small capacity filters. Although they may initially do a good job, we have not included them because in our experience they generally do not represent good value.

There is also a range of systems that I call the 'Spin Doctor Specials'. These use massive advertising campaigns enlisting the assistance of celebrities to convince you through fear and hype that you must buy their system and that all others will probably harm you.

Distasteful as it may be, it works – many people contact me who are in real fear of making the wrong decision. So just to calm the waters (pun intended), here's a simple fact. You are not going to die prematurely from any water system and you are not going to die from drinking tap water, fingers firmly crossed!

It's the quality of life you need to think about – good health is indeed the greatest wealth.



The bottled water craze is so big that Coca-Cola and Pepsi predict that within a short time, water will create more revenue for them than their less healthy products. By 2007 the market will be twice the size.

Yet, bottled water is almost double the price of petrol!

Australians love bottled water. We spend \$525 million per annum on something supposed to be 'pure' or drawn from 'springs', and we fall for the pictures of sparkling streams and idyllic waterfalls as we rush for the checkout.

HOW DOES BOTTLED WATER COMPARE WITH FREE TAP WATER?

The *Weekend Australian* commissioned a report by the University of Technology, Sydney. The report stated that the best-selling bottled water (Mount Franklin), was no cleaner than the cheapest brand.

None of the three bottled waters tested were any better for you than tap water from three capital cities – Melbourne, which reputedly has the nation's cleanest, Sydney and Adelaide widely regarded as having the murkiest.

Yet 'premium' bottled water sells in supermarkets for about \$1.60 a litre – 209,333 % more than tap water which in Melbourne costs 0.075 of a cent per litre.

The cheapest bottled water tested (Coles Farmland 77c for 1.5 litre) had a level of total dissolved solids – suspended impurities that affect taste – almost as high as Adelaide's notorious tap water.

Dr. Grant Hose, research fellow in ecotoxicology at UTS, who oversaw the analysis, said the results showed that the notion that bottled water was somehow more 'pure' than tap water was incorrect. Dr Hose said "Tap water is as healthy for you as bottled water – it's no different".

The analysis tested the three tap water samples and three bottled waters for bacterial contamination, impurities that affect taste such as dissolved solids and other factors such as muddiness and acidity. It also screened the samples for the minerals calcium, magnesium, sodium (a measure of salt), fluoride and nitrate.

Neither tap nor bottled water samples had detectable bacterial contamination and all were well within guideline limits for the other substances.

The report continued: Mineral levels were not significantly elevated in the bottled waters. While Mount Franklin had 3.9mg of calcium per litre, this was well below the 14mg found in Sydney tap water, the 21mg in Adelaide tap water and the 4.3mg in Melbourne tap water.

Only the cheapest brand, Farmland, had higher levels, at 18mg. Potassium was similar, with 0.63mg in the Mount Franklin brand, 0.26mg in Frantelle and 22mg in Farmland. This compared to 2.2mg, 6.4mg and 0.61mg in Sydney, Adelaide and Melbourne tap water respectively.



From my description of carbon, sediment and ceramic filtration, it's easy to see that you can achieve basic filtration in your home, improve your health and feel safer about the water you drink.



Ultraviolet, Distillation and Reverse Osmosis systems, while important in their own way, do not, in my view, contribute as significantly to water health as systems that preserve the dissolved minerals in the water and therefore support the maintenance of body internal mineral balance.

Two years ago I was visited by a fifty year old lady who had come from London in search of a solution to her failing health. An ex-professional ballet dancer, she had been drinking 'pure' distilled water for six years.

Her problem was that her doctor told her she had the bones of a seventy five year old and that she had to stop drinking distilled water. This was enough to confirm my own view that 'pure' water may be the worst water one can drink.

COST

The more you spend, the more you get in a water system. If you have the money you get the benefit.

You can if you want, review all systems based on cost per litre but it is my personal opinion that health and longevity have no 'per litre' price.

(See page 18 for cost graph comparison.)

After five years drinking alkaline water it's simply wonderful when people express their surprise at how young and healthy this 58-year-old looks.

I do indeed believe that my health has benefited from my choice of water.

HOME CIRCUMSTANCE

There are some limitations imposed by your home environment that you need to take into account.

- a) If you are renting, you cannot bore holes in the kitchen bench to install an under sink system and may not be willing to 'gift' the landlord a whole-house system that can't be removed if you move out.

- b) If you have young children or elderly parents living with you, you don't want a complex system they won't be able to use.
- c) If you live on a farm or in a rural area you need to be aware of the added bacterial risk inherent in stored water. If you have a rainwater tank in an urban area, the same applies. Very few systems will guarantee biological performance.
- d) If you live in a 'hard water' area you need to be aware that some systems will have problems in performing satisfactorily.
- e) If you know that your area has certain water problems (too much copper, lime or salt), it's wise to query the supplier about this before purchase.

HEALTH PERSPECTIVE

People vary in their attitude to water. Young people tend to forgo investing in a water system because they feel they are never going to get sick.

As we age, we realise the preciousness of life and health, and our perspective changes along with our willingness to invest in our own health.

I recommend a study of various water articles on website www.ionlife.info and perhaps read my book '*The Untold Truth About the Cause of Disease*' to give yourself the facts about water that may have eluded you until now.

Water's properties, plus its ability to support health, immunity and longevity are in my opinion, the most understated health imperatives I know of.

FACTORS TO CONSIDER

Do you want your water to be:

- a) Filtered so that all micro-organisms are killed?
- b) Negatively charged for antioxidant effect?
- c) Alkaline?
- d) Oxygenated?
- e) Micro clustered?
- f) Filtered to eliminate fluoride?

Now you know the difference between each type of system, I'm going to discuss each feature so you can decide whether it's important to you.

With each description you'll find a picture of the systems that supports it.

NEGATIVE IONIZATION



Negative ions turn ordinary water into a powerful antioxidant – depending, of course, on how it is ionized.

Various systems claim ionization but the methods vary. Magnetic systems that do not separate the water will ionize more weakly than those that separate it into a positively ionized and negatively ionized stream (acid and alkaline).

The catalytic converter is in a class of its own because it oxidises acidic ions and produces alkaline negatively charged water only.

Be very careful of claims made, by merely passing water through some magnetic material will not give a high ionization and will not keep the negative ion effect in the water.

INFRA RED SYSTEMS



The use of infrared energy emitting minerals has been covered earlier. It assists in disinfection, in negative ionization, and in micro clustering. It is also known to have very powerful detoxifying and healing effect.

Health care professionals all over the world are familiar with and recommend FIR systems including FIR Saunas, blankets and foot patches.

PH CONTROL/ALKALIZING

The ability to control acidity or alkalinity of your water is invaluable. It means that you can alter the effect that your drinking water has on your internal pH balance.



As most of us are excessively acidic this has great relevance. Few people are capable of following the dietary 80/20 alkaline/acid rule and have decided to invest in systems that produce alkaline water.

Some systems claim to have 'balanced pH' or 'natural pH' – translated from sales jargon this means that they have no control over final pH. Only water alkalizers have this ability because only water alkalizing ionizers have computer-controlled alkalization.

MICRO CLUSTERING



This is a wonderful advance in water technology. By altering the molecular structure of the water from H₂O to OH⁻, water becomes 'smaller'.

The effect is silken water that tastes soft and seems to penetrate / hydrate far more easily. People who have problems with bloating from water have reported that the problem has disappeared when they began drinking micro clustered water.

LONG-LIFE FILTER SYSTEMS

There have been a number of failed attempts at long-life filter systems. The most recent one promised twenty years of use but was taken off the market after around three years.



The only long-life system that has stood the test of time is the catalytic converter, tested for over one million litres of filtration. Its secret is that it is not a filter. It converts the pollutants in the water to non-toxic ions.

ON THE PRACTICAL SIDE

- *If you have a fibreglass or plastic rainwater tank you may have very acidic water.*
- *If you have a concrete tank it will leach calcium into your water for up to 20 years.*
- *Tank water will always have sediment in it. You may require an inexpensive extra sediment in-line filter to preserve more costly fine filters.*
- *Tank water can have bacteriological problems. Ask your supplier whether their recommended system is guaranteed for non-municipal water.*
- *A water alkalizer will work with tank water but won't give the higher pH selection because there are fewer minerals in tank water.*
- *Ask for proof of what a system is capable of. Overseas doctors' claims are not always fairly made. Ask how long the system has been on the market.*
- *Not all filters remove all heavy metals. Heavy metal test kits are an invaluable aid to test your own body and water supply.*
- *It's not clever to use a filter cartridge beyond its expected life. What was once a health boon can quickly become a health hazard! Enrol in an automatic filter replacement program to ensure your family stays healthy.*
- *Heavily mineralised or 'hard' water can cause problems for any water filtration system. Some areas are notorious for the hardness of the water supply.*
- *Check the inside of your kettle or the cistern of your toilet for accretion; also check the colour of your bath water. A green colour indicates excess copper. Be sure to notify your supplier before they recommend a system.*



WHAT DOES WHAT

WHAT IT DOES ↓	WHAT IT IS →	Fine Carbon	Carbon	Ceramic	UV	Distiller	RO	Volcanic	Catalytic	Magnetic	Jupiter Alkalizer	Energetic/Vortex
Reduces Chlorine		✓	✓	✗	✗	✓	✓	✗	✓	✗	✓	✗
Reduces Flouride		✗	✗	✗	✗	✓	✓	✗	✗	✗	✓	✗
Reduces Viruses		✓	✗	✓	✓	✓	✓	✗	✓	✗	✓	✗
Reduces Cysts		✓	✗	✓	✓	✓	✓	✗	✓	✗	✓	✗
Reduces Lead		✗	✗	✗	✗	✓	✓	✗	✓	✗	✗	✗
Reduces Copper		✗	✗	✗	✗	✓	✓	✗	✓	✗	✗	✗
Reduces Bacteria		✓	✓	✓	✓	✓	✓	✗	✓	✗	✓	✗
Reduces Colour		✓	✓	✓	✗	✓	✓	✗	✓	✗	✓	✗
Reduces Odour		✓	✓	✓	✗	✓	✓	✗	✓	✗	✓	✗
Reduces Taste		✓	✓	✓	✗	✓	✓	✗	✓	✗	✓	✗
Reduces Inorganics*		✗	✗	✗	✗	✓	✓	✗	✓	✗	✗	✗
Reduces Nitrates		✗	✗	✗	✗	✓	✓	✗	✓	✗	✗	✗
Reduces Organics**		✓	✓	✗	✗	✓	✓	✗	✓	✗	✓	✗
Reduces Pesticides		✓	✓	✗	✗	✓	✓	✗	✓	✗	✓	✗
Reduces Tihalomethanes		✓	✓	✗	✗	✗	✗	✗	✓	✗	✓	✗
Reduces VOC's***		✓	✓	✗	✗	✗	✗	✗	✓	✗	✓	✗
Reduces Detergents		✓	✓	✗	✗	✓	✓	✗	✓	✗	✓	✗
Reduces Asbestos		✓	✓	✓	✓	✓	✓	✗	✓	✗	✓	✗
Disinfects Water		✗	✗	✗	✓	✓	✓	✗	✓	✗	✗	✗
Increase Negative Ions		✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓
Softens Water		✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓
Microclusters Water		✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✗
Oxygenates Water		✗	✗	✗	✗	✗	✗	✓	✓	✗	✓	✗
Alkalizes Water Slightly		✗	✗	✗	✗	✗	✗	✗	✓	✗	✓	✗
Specific Alkaline Choice		✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✗
Acid Water By-product		✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✗

* Reduces Inorganics = Inorganic Chemicals

** Reduces Organics = Organic Chemicals

*** Reduces VOC's = Volatile Organic Chemicals

WHAT HAS WHAT

Not as complex as it may seem, this chart tells you the available combinations of technologies you can get. Use the left hand column to choose the unit your are looking at, and then the top column to see what you can get with your chosen system.

CHOOSE YOUR SYSTEM ↓	CHECK YOUR NEEDS →	Fine Carbon Filter*	Carbon Filter	Ceramic Filter	UV Steralize	Distilled	Rev Osmosis	Magnetised	Catalytic	Alkaline to suit	Energetic
Fine Carbon*		✓	✓	✗	✗	✗	✗	✓	✗	✗	✗
Carbon		✗	✓	✗	✗	✗	✗	✗	✗	✗	✗
Ceramic		✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
Ultra-Violet		✗	✗	✗	✓	✗	✗	✗	✗	✗	✗
Distiller		✗	✗	✗	✗	✓	✗	✗	✗	✗	✗
Rev Osmosis		✓	✓	✗	✗	✗	✓	✗	✗	✗	✗
Volcanic 1**		~	✗	✗	✗	✗	✗	✓	✗	✗	✗
Volcanic 2**		~	✓	✗	~	✗	✗	✓	✗	✗	✗
Catalytic		✗	✗	✗	✗	✗	✗	✓	✓	✗	✓
Magnetic		✗	✗	✗	✗	✗	✗	✓	✗	✗	✗
Alkalizer		✓	✓	✗	~	✗	✗	✓	✓	✓	✓
Energetic		✗	✗	✗	✗	✗	✗	✓	✓	✓	✓

* Fine Carbon = less than .1 micron

** There are two systems on the market that use volcanic material

~ Optional

THE COST

What systems cost to run

Approximate purchase price and repetitive costs per 100 litres.

	Purchase Price	Filter Replacement Cost	Litres Used Before Filter Change	Cost per 100 Litres	Per Litre Rating (1-8)
<i>Fine Carbon*</i>	\$100	\$50	4,000	\$1.25	3
<i>Carbon</i>	\$100	\$50	4,000	\$1.25	3
<i>Ceramic</i>	\$150	\$100	5,000	\$2.00	4
<i>Ultra-Violet</i>	\$300	\$100	10,000	\$1.00	2
<i>Distiller</i>	\$350	-	-	-	1
<i>Rev Osmosis</i>	\$750	\$150	4,000	\$3.75	7
<i>Volcanic 1**</i>	\$600	\$80	4,000	\$2.00	4
<i>Volcanic 2**</i>	\$1,000	\$87	3,800	\$2.29	6
<i>Catalytic</i>	\$2,500	-	1,000,000	-	1
<i>Magnetic</i>	\$350	-	-	-	1
<i>Alkalizer</i>	\$1,595	\$90	4,200	\$2.14	5
<i>Energetic</i>	\$2,500	-	-	-	1
<i>Bottled</i>		600 /bottle		600 /100 litres	8

Please Note:

The prices and litres here are approximate and as accurate as I could access at the time of writing. Specific models are not identified.

Obviously the more litres you use, the more the cost for those systems with replaceable filters.



Happy Hydrating!

For further information about alkaline water please refer to our website

www.ionlife.info



Finale – Authors Last Word

It's pretty obvious that when investing in a new water system you 'get what you pay for'.

Sadly, due to the fact that some systems command prices far in excess of their true value, what you also get is an avalanche of 'spin doctoring'.

You'll see huge ads extolling the virtues of a particular brand and bagging all others. The buyer is flooded with newer, better, secret process, exotically named additives, natural balance, water gurus who have travelled the world in search of the perfect water...and more.

As you investigate further you'll find 'awful truths' about the competition, and uncover 'sinister plots' to defraud and slowly kill the buyer. It's like Boy's Own weekly.

I sympathise totally with the many people who call me up and say that they have been scared by this form of advertising. So let's make it simple. Unless you are extremely unlucky – in the range of being struck by lightning or attacked by an albino shark, you are not going to die from drinking tap water.

Water filtration may be a luxury or a necessity, depending on how you look at health and longevity.

Because water is not regarded by the Therapeutic Goods Administration as medicine, I would be breaking the law if I made any claims about what it can do for your family's health.

However, if what you have read here is followed up by some good Internet Google searches on relevant topics, you'll find a wealth of information on everything here plus many, many stories from users – as well as clinical studies. Please take the time to do this.

My site has plenty of information as well as links to other sources so you can do your own research. **See www.ionlife.info**

An educated decision is a good decision and we are very happy to talk to people who have done their own investigations.

You can email my team of specialists at **info@ionlife.info**

You may also be interested to read my book '*The Untold Truth About The Cause of Disease*', or study our product range and price list.

All of these are available on my web site, or if you need them in hard copy form, call customer service on 1800 268 469.

A FINAL WORD

Get the best you can. You deserve it!



Ian Blair Hamilton

Important Notice:

This information is not intended to replace medical advice or treatment from a doctor or health professional. It does not offer medical advice or diagnosis, directly or indirectly.

If you are sick or have chronic or persistent symptoms, you should seek the advice of a doctor or health professional, and only use the information and suggestions herein under their supervision.

The author, publisher, distributor, and any of their agents or employees disclaim any responsibility or liability in connection with the accuracy of and use of the information and suggestions herein.