

Hydrogenation

By now, most of us know that British tap water contains some heavy metals (primarily from the soil and rusty water pipes), hormones (from the drugs people and cattle farmers flush down their drains), fluoride (that some municipalities add deliberately) and drug residues (that people flush down their drains). Although the focus for many has been on water purification, massive benefits can be gained from transforming filtered water into alkaline, antioxidant water, which is now increasingly referred to as hydrogen-rich water.

Water Purification Effects

The Basics

Good alkaline, antioxidant water filters remove or significantly reduce the heavy metals, hormones, drugs, fluoride, and even some other chemicals from your tap water. When independent academics from the University of Edinburgh's department of engineering [tested](#) using this filtration method, they found that it could almost completely remove fluoride, heavy metals, oestradiol (a hormone), bisphenol-A (a toxic substance that leaks from plastic) and chlorophenol (a substance found in pesticides).

The Health Benefits

1. Even at the legally permitted amounts, fluoride can cause [osteoarthritis](#), [bone brittleness](#), impaired brain and [cognitive development](#), and [obesity and depression](#) because of inhibiting the activities of the thyroid. With these terrible consequences, it is staggering that some municipalities still add it to water because they believe it to be beneficial.
2. Lead – the most common heavy metal in British tap water – compromises your [neurological development](#) and give rise to a long list of brain and nervous system disorders. As a nation, we complain when it accidentally ends up in our children's toys, but bewilderingly, we are relaxed when it shows up in our drinking water.
3. Hormones could compromise children's normal [sexual development](#).
4. Bisphenol-A causes [erectile dysfunction](#), lower fertility and carries a risk of breast and prostate cancer.
5. Many studies have linked chlorophenol to various types of [cancer](#).

The Health Benefits of Hydrogen-Rich Water

The Basics

Alkaline, antioxidant water is particularly rich in hydrogen, which has recently been subjected to an impressive amount of research as a health aid. The molecules are small enough to pass through cell membranes with little effort, and researchers believe hydrogen-rich substances to be almost completely without adverse health effects. It is also inexpensive relative to most medicines. In fact, if you have an alkaline, antioxidant water filter, you are at the cutting edge of medical science, as some physicians are beginning to prescribe hydrogen saline injections, hydrogen baths and hydrogen gas to inhale. With an alkaline, antioxidant water filter, you can effectively have your own medicine on tap!

More Health Benefits

6. Hydrogen-rich water is a potent antioxidant. It can prevent oxidation from inflicting damage on cells throughout your body, and it can repair cells that have already been damaged by it, thereby preventing them from becoming free radicals that steal electrons away from their neighbouring cells in the process of trying to repair themselves. Alkaline water, such as is produced by popular alkaline filters, has been tested specifically and discovered to be one of the **strongest antioxidants** ever examined. Oxidative damage is one of the causes of many health problems, including cancer, early aging, dementia and other neurological conditions. Damaged cells cannot function as required, which means that no-one with a significant amount of oxidative damage can genuinely have energy, mental clarity, good health and so on.

7. After applying hydrogen-rich solutions to cancer cells in the laboratory, scientists concluded that they could **shrink and suppress** the growth of such cells. Many animal studies have concurred, and since some researchers subjected the laboratory animals to no cancer treatment other than the **alkaline water**, it seems as if the inhibitory effect of hydrogen solutions on cancer cells can be incredibly strong. As always, it is worth mentioning that you should not abandon your cancer treatment in favour of alkaline water; the research has not been repeated on a sufficient number of human beings in their natural settings to risk your life on it. But it can be a powerful addition to your existing cancer treatment.

8. Drinking hydrogen-rich water can protect against the neurological damage of brain injury, both the type that occurs during **surgery** and **stroke**, and that which occurs over time due to **oxidative stress**. If you play contact sport, your children play contact sport, you consider yourself to be a particularly poor driver, you take

care of a relative who has suffered a stroke, or you are horrified at the idea of dementia, you can give it a go.

9. Many animal studies have proven that hydrogen-rich substances greatly improve the prospects of sufferers of heart failure and heart attacks. Of course, you might be deemed mad if you insist that your [alkaline filter jug](#) be brought to the emergency room after a heart attack, but scientists have also proven that hydrogen-rich substances (primarily hydrogen saline) can prevent cardiovascular damage caused by [oxidative stress](#) and/or [inflammation](#), even after serious cardiac events.

10. Hydrogen attacks inflammation. Researchers at the Forsyth Institute in Boston caused [inflammatory bowel disease](#) in mice, and proved that drinking hydrogen-rich water could relieve the inflammation and even prevent it in those mice who received it before the disease was brought about. Other scientists found that it could relieve inflammatory [liver disease](#) and [lung inflammation](#), which could be particularly helpful for asthma sufferers. In fact, when one research team tested hydrogen sulphide on [asthmatic rats](#), they discovered that it did prompt considerable relief. Some experts also discovered that it could slow the progression of [rheumatoid arthritis](#) and relieve some of its symptoms. Rheumatoid arthritis is, at its core, a condition that causes inflammation in the joints.

11. Hydrogen-rich water improves fat and glucose metabolism, even in people with [type 2 diabetes](#) and impaired glucose tolerance. If you have enjoyed a typical Western diet of refined bleached grains and hydrogenated oils until recently, you are probably not as sensitive to glucose as you should be. In a study on rats, academics found that hydrogen has an effect on fatty liver, cholesterol and [obesity](#), so you have a lot to look forward to.

12. Hydrogen supports strong bones and muscles. This will come as no surprise to knowledgeable alkaline water drinkers – it's one of the most frequently investigated benefits. Alkaline, antioxidant water helps your body maintain the pH of your blood without it having to loot minerals like calcium and magnesium, which are stored in the cells of bones and muscles. As a result, it prevents [bone loss](#) and [osteopenia](#), which is a condition in which the protein and mineral content of bone tissue is reduced, but less severely than in osteoporosis.

So, What's the Answer?

Recent advances in bioceramics have resulted in a number of water filtration products which not only filter water but change it to alkaline, antioxidant water with a high molecular hydrogen content. Bioceramics are combinations of natural minerals and crystals, selected for their special properties. Some of these bioceramics react with the water passing through to release molecular hydrogen..

Over the last decade, there has been a great many studies published on the potential therapeutic benefits of molecular hydrogen, and in our view, it's only a matter of time before this tiny, powerful molecule is more widely appreciated.