



Don't Buy These 7 Alkaline Water “Alka-Lies”

BY JACK BARBER

Imagine if you could hook up a device to your faucet that would transform your tap water into your own private fountain of youth.

According to the manufacturers and distributors of alkaline water devices, you can do just that...

With alkaline water, they claim, you can cure cancer... absorb more nutrients... hydrate with the wettest water around... rejuvenate your body and change your life!

This is not only a load of bunk—*but potentially harmful.*

After drinking alkaline water for 10 years, blogger David Niven Miller says he developed severe acid reflux, GERD/GORD, blockage, heartburn, and infection of the lower esophagus.¹

And that's only some of the health problems alkaline water may cause.

The alkaline water zealots would have you believe that guzzling alkaline water is good for you. **They try to convince you that plain, clean, pure water which God created for us to drink, called H₂O, isn't good enough for human consumption. They claim that whether water has been distilled naturally through the hydrologic cycle or by mechanical distillation, pure distilled water—which can be slightly acidic—is bad for you.**

However, as you'll soon find out, “acid” is not another nasty four letter word. In fact, not only is it not bad for you—*it's just the opposite.*

If you've been drinking in the alkaline water debate, wondering what to believe, read on. **Below you'll find the 7 most common alka-lies debunked** as well as some refreshingly clear guidance on water and health based on solid science and research.

¹ Miller, D. “Alkaline Ionised Water”. Viewed 4/12/13 at <http://www.growyouthful.com/tips/alkaline-water.php>

But before we get into the actual debate about whether or not acid is good for you, let's dispel the myth that distilled water is horribly acidic...

Alka-Lie #1: *Distilled water is horribly acidic*

As nationally-known nutritionist, author and Founder of the Integrative Medicine Program at the University of Arizona, Dr. Andrew Weil, explains, "For reasons I don't understand, any number of myths—and some quite extreme—have grown up over the years about distilled water. As far as acidity goes, **distilled water is close to neutral pH and has no effect on the body's acid/alkaline balance.**"

Here's why Dr. Weil says this so confidently...

To measure acidity, we use the pH scale which measures the concentration of hydrogen ions in a substance. This scale runs from 0 to 14. A pH of 7 is neutral. A pH less than 7 is acidic and a pH greater than 7 is alkaline.

Concentration of hydrogen ions compared to distilled water		Examples of solutions at this pH
10,000,000	pH = 0	battery acid, strong hydrofluoric acid
1,000,000	pH = 1	hydrochloric acid secreted by stomach lining
100,000	pH = 2	lemon juice, gastric acid, vinegar
10,000	pH = 3	grapefruit, orange juice, soda
1,000	pH = 4	tomato juice, acid rain
100	pH = 5	bananas, black coffee
10	pH = 6	urine, saliva
1	pH = 7	"pure" distilled water
1/10	pH = 8	sea water, eggs
1/100	pH = 9	baking soda
1/1,000	pH = 10	Great Salt Lake, milk of magnesia
1/10,000	pH = 11	ammonia solution
1/100,000	pH = 12	soapy water
1/1,000,000	pH = 13	bleaches, oven cleaner
1/10,000,000	pH = 14	liquid drain cleaner, lye

Pure distilled water is at a neutral pH of 7. Distilled water also has no solids dissolved in it to buffer it. For this reason, adding the slightest amount of acid or base will change distilled water's pH.

The pH scale is logarithmic. This means every change in the pH level signifies a tenfold change in acidity. Pure distilled water is at a neutral pH of 7. Orange juice with a pH of 3 is actually 10,000 times more acid than neutral distilled water.

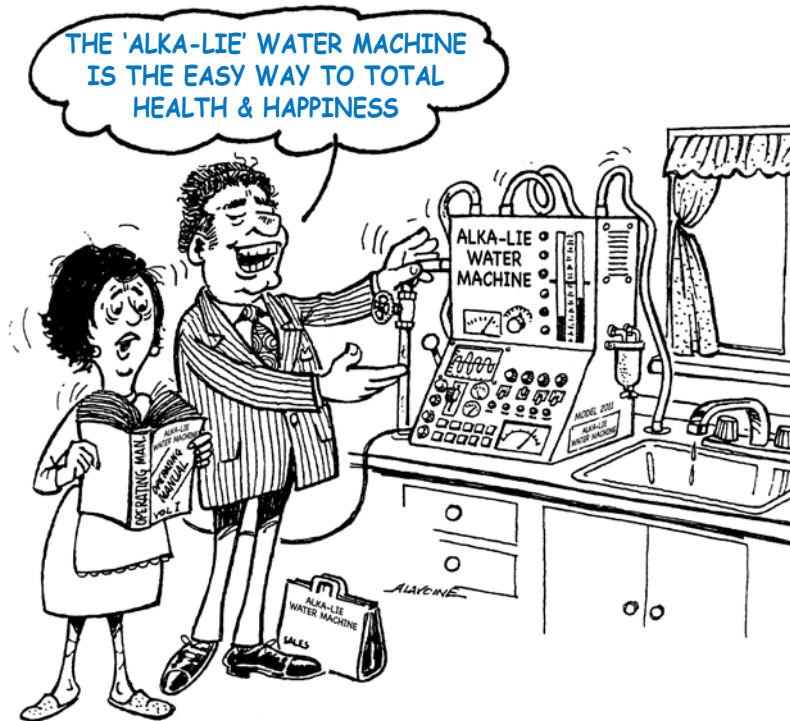
Because purified distilled water has no dissolved solids, just a small amount of carbon dioxide from the air will lower distilled water's pH to a slightly acidic pH 6.5. Just a pinch of an alkalizing substance like baking soda will move it in the other direction, up to a pH over 7. In other words, **the pH of distilled water is like a pendulum that can easily be moved with a feather. In comparison, water with dissolved solids requires a sledge hammer to move the pendulum.**

This means, distilled water's acidity level—after mixing with carbon dioxide—is negligible.

Alka-Lie #2:

Pure water can be separated by electrolysis to produce alkaline water

Along with the myth of distilled water's devastating acidity, alkaline water fans also contend you can make tap water alkaline through ionization or electrolysis. They argue you can shoot an electric current through water (H₂O) and separate the positively-charged hydrogen ions (H⁺) from the negatively charged hydroxide (OH⁻) ions. According to their marketing, a good alkaline water device will then keep these separated into streams of acidic water and alkaline water.



This brings us to the next Alka-Lie...

Alka-Lie #3: *Drinking alkaline water can change your body's pH*

Fundamentally-speaking, it doesn't matter whether your drinking water is slightly acidic or alkaline.

Because when you drink water, within seconds it mixes with the extremely acidic gastric juices in your stomach. And then shortly after, as it exits the stomach, your pancreas releases alkaline bicarbonate into the partially-digested slurry to neutralize the stomach acid.

In a recent *Men's Health Journal* article, well-known author and nutritionist, Dr. Bob Arnot, explained, "**Your body is designed to adjust to its optimal pH balance no matter what you ingest.** For instance, once alkaline water enters your stomach, your body simply pours in greater amounts of acid to neutralize it."

In other words, your body already has a good system of shifting the pH of the water you drink along with the food you eat. You don't have to add a thing.

But let's say you still wanted to try to shift this system with the water you drink.

Consider that the hydrochloric acid in the stomach has a pH of 1. **This is 1,000,000 times more acidic than pure water with a neutral pH.**

Since you understand how the pH scale works, you can see it would take extremely alkaline water to change the pH of your stomach acids and influence the pH of body fluids further down the line. Sure, it might take just a pinch of baking soda in distilled water to move it above pH 7. But it will take more than 10 times that amount of alkalinity to move the pH to above 7 to 8.

Clearly they don't know enough about the power of ionic attraction. Or they're slipping salts into your water to stabilize these charged particles.

Water may shift into these two specialized forms at very localized points near the positive and negatively charged electrified plates. But just a hair's breadth away from this spot, the charged H⁺ and OH⁻ ions will seek out the oppositely charged ions and reform the standard form of H₂O. At most, you'd produce hydrogen and oxygen gas as the ions recombine and leave excess hydrogen and oxygen atoms.

So the creation of alkaline water with only the help of electricity is not possible. But even if you did create some alkaline water or settled for some water with baking soda in it to make it alkaline... would it really have much of an effect on your body's pH?

- *You could try seawater with a pH of 8...* But it probably wouldn't be alkaline enough to shift the pH once it mixed with the stomach's hydrochloric acid. And any sailor knows you can't drink seawater long without getting profoundly sick and eventually dying a painful death...
- *You could try eating straight baking soda at a pH of 9...* Or maybe swig some water straight out of the Great Salt Lakes which has a pH of 10... But given that many of the Oregon trail pioneers in the 1860's (and their horses and cattle) died trying to drink the water in the Great Salt Lakes, this flies in the face of good sense!

“Say no to alkaline water, it’s a scam,” says Arnot. As you’re starting to see, the myths perpetrated by the alkaline water mongers are not only false—but dangerous! Which leads us to the next Alka-Lie...

Alka-Lie #4: *Alkaline water is good for your health*



According to the alkaline water advocates, alkaline water will improve your health. However, science demonstrates just the opposite is true.

Let’s start with digestion and immunity. There’s a reason your body produces the extremely strong hydrochloric acid with a pH of 1 in your stomach. **Your body uses this powerful acid to destroy bacteria, fungi and other pathogens that take a ride on the food you eat.**

When you shift the acidity of your stomach, you encourage infection by allowing the pathogens to get through your stomach unscathed. One Italian study found that 50% of patients who took acid-reducing proton pump inhibitors (PPI’s) ended up suffering from overgrowth of pathogenic bacteria in their small intestines as compared to only 6% of patients not using antacids.^{2,3}

To add insult to injury, the protein-digesting enzymes your stomach secretes are specially designed to work in this acidic environment. When your stomach doesn’t break protein down properly, the proteins can cause intestinal injury and inflammation. Several studies have demonstrated that these poorly-digested protein particles trigger the development of allergic reactions. For example, when mice were fed fish after decreasing their stomach acid with antacids, they developed allergic reactions to fish protein.⁴

Even when it comes to acid indigestion and heartburn, the conventional wisdom is wrong. **Several studies published in the peer-reviewed journal *Gastroenterology* have shown that antacids actually make the problem worse.** After two months of Nexium, 44% of the healthy volunteers developed heartburn, acid reflux or dyspepsia.⁵

Instead, most people find relief from these digestive problems by *increasing* the acid in their stomach with supplements or simply taking apple cider vinegar. As we age, our acid production declines giving rise to bloating

² Lombardo L et al. Increased incidence of small intestinal bacterial overgrowth during proton pump inhibitor therapy. *Clin Gastroenterol Hepatol.* 2010 Jun;8(6):504-8. doi: 10.1016/j.cgh.2009.12.022. Epub 2010 Jan 6.

³ McColl K et al. “Evidence that proton-pump inhibitor therapy induces the symptoms it is used to treat” *Gastroenterology* 2009; 137: 20-22.

⁴ Untersmayr E et al. Antacid medication inhibits digestion of dietary proteins and causes food allergy: a fish allergy model in BALB/c mice. *J Allergy Clin Immunol.* 2003 Sep;112(3):616-23.

⁵ *Gastroenterology*, Reimer C et al “Proton-pump inhibitor therapy induces acid-related symptoms in healthy volunteers after withdrawal of therapy” *Gastroenterology.* 2009; 137: 80-87.

and other digestive discomforts. Both my wife and I take hydrochloric acid, and drink vinegar (pH 2) to help us with these digestive problems. Since we started supplementing, we've regained digestive peace.

But playing with acid doesn't stop at affecting your digestive system. It can affect your heart and even increase your risk for cancer...

Alka-Lie #5: *Alkaline water can cure cancer and other diseases*

Alkaline water proponents cite several studies showing cancer cells thrive in an acidic environment and die in an alkaline environment. Consequently, they argue that drinking alkaline water will help you fight cancer.

Yet, they fail to acknowledge that this research has only studied cancer cells in test tubes. If you ran this experiment on a living organism you'd likely get a very different result. As Dr. Gabe Mirkin explains in an article on

QuackWatch.org, cancer cells are not the only ones that thrive in acidic environments and die in an alkaline environment—*all of your other cells respond the same way.*

Research has shown that exposure to an alkaline environment can lead to nerve cell injury and eventually stroke.⁶ Severe buildup of alkalinity—known as alkalosis—can lead to convulsions, heart failure and coma.

Japanese researchers demonstrated that rats given alkaline water over a period of time develop lesions on their hearts and elevated potassium levels in the blood. Both of these developments can lead to fatal heart problems.^{7 8 9}

Sure, alkaline water may kill cancer cells. *But it is also likely to kill you.*

Alka-Lie #6: *Alkaline water gives your body mineral nutrition*

It's true what they say many of us are short on minerals that build our bones and keep our heart beating properly. An estimated one-third of American adults are deficient in magnesium, essential for over 300 metabolic processes in the body.

Some alkaline water systems add minerals in order to increase the alkalinity. However, water is not the best source of these minerals. In fact, mineral-rich water may even be bad for your health.

First, simply by diluting the acidity of your stomach with alkaline water you prevent adequate mineral absorption. Stomach acid helps break bonds between proteins and minerals as well as within mineral salts. **Numerous studies have shown that low stomach acidity can interfere with the absorption of essential minerals like iron, zinc and calcium.**

⁶ Giffard R et al. Extracellular Alkalinity Exacerbates Injury of Cultured Cortical Neurons. *Stroke*. 1992;23:1817-1821

⁷ Watanabe T et al. Influence of Alkaline Ionized Water on Rat Erythrocyte Hexokinase Activity and Myocardium. *Journal of Toxicological Studies*. 1997; 22(2):141-151

⁸ Watanabe T et al. Degradation of Myocardial Myosin and Creatine Kinase in Rats Given Alkaline Ionized Water. *J Vet Med Sci*. 1998; 60(2): 245-250

⁹ Watanabe T et al. Histopathological Influence of Alkaline Ionized Water On Myocardial Muscle of Mother Rats. *Journal of Toxicological Sciences*. 1998; 23(5).

Secondly, research demonstrates your body cannot do much with the inorganic minerals dissolved in water. Instead, your body seems to absorb minerals better when they are chelated, forming a bond with what's called a ligand, a complex organic molecule containing amino acids. These ligands seem to help shepherd minerals through the initial stages of digestion and then release the minerals in the cells after absorption.

As Ron Kennedy, MD explains, **“In order for a mineral to be of any use to the body, it must be presented in a form in which it can be used. That form involves an association with an organic (carbon-based) molecule. Carbon-based molecules are found in living systems and are not found in the ground which is where mineral water comes from.”**

The best way to get this form of minerals is through your food. Plants do the work of binding these minerals with ligands as they take them up from the soil.

Dr. Kennedy goes on to explain that the inorganic mineral salts found in water not only are hard for the body to absorb, but can wreak havoc with your health. The inorganic mineral salts found in water separate into isolated ions. These ions go on to precipitate other minerals in circulation, forming new salts in the body. These precipitated salts are found in the lens of the eye in the form of cataracts. Or in the kidneys as kidney stones. Or in the walls of the arteries causing arteriosclerosis.¹⁰

So in fact, **by trying to mineralize your water you may be causing more harm to your body than good.**

Which brings me to the next argument...

Alka-Lie #7: *Distilled water leaches minerals out of your body*

As part of their campaign, alkaline advocates like to terrorize people with images of minerals leaching out of your bones after you drink distilled water.

And it's true, you can lose these minerals if you're not getting enough minerals in your diet. Your bones are like a mineral bank. If your body needs more magnesium or calcium for nerve or heart functioning, it will take the minerals stored in your bones.

But distilled water is not the problem. As explained above, your best source of minerals is from your diet, not your water. If you're drinking distilled water—which is essentially pure water—it simply mixes with the food in your stomach and lower down in your intestines. Depending on the minerals in your diet, the mixture that eventually reaches the point of absorption is no longer distilled water but a mineral-rich slurry of nutritional building-blocks.

The pure distilled water you drank initially goes nowhere near your bones to leach minerals out of them.

But the role distilled water plays in helping your body manage minerals goes even further. In truth, distilled water does take minerals out of your body. But as Dr. Kennedy explains, only the ones you don't need that may

¹⁰ Kennedy R. Distilled Water versus Mineral, Carbon Filtered, and Reverse Osmosis Water. Doctors' Medical Library. Viewed 7/13 at <http://www.medical-library.net/content/view/228/41/>

precipitate, contributing to arterial plaque buildup, kidney stones and cataracts.

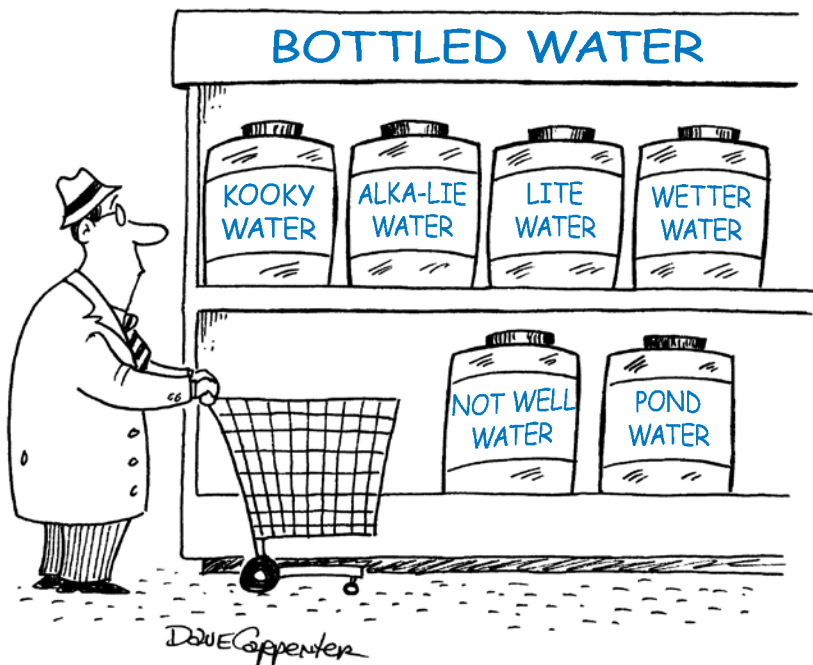
Your body gets rid of excess materials through the kidneys. And to work well, these organs need lots of water—unadulterated water. The more water you can add to your bodily fluids without additional mineral loads, the easier it is for your cells to wash out junk, including inorganic minerals your body can't absorb.

In contrast, **many health experts describe drinking mineral water as similar to washing your dishes in dirty water.** It simply doesn't do the job and just ends up making more of a mess.

Bottom line, get your minerals from your food and let water do what it does best in its pure state—hydrate and wash your body from the inside out.

Save Your Health And Your Money –Don't Believe The Alka-Lies

The Alka-Liars ignore an important part of human physiology—Our body uses a wide range of pH values.



In May 2013, the Consumer Union, publisher of *Consumer Reports*, published an editorial in the *Washington Post* lambasting the promises made by alkaline water supporters: **“The evidence supporting any of the health claims for alkaline products is murky at best.”**

As the Consumers Union notes, in order to maintain good health and function properly our body maintains pH levels ranging roughly from a pH of 2 (similar to lemon juice) to a pH of 8 (a bit below baking soda's pH of 9).¹¹ And these pH levels are exquisitely balanced by your body, primarily through a complex system of buffering and breathing.

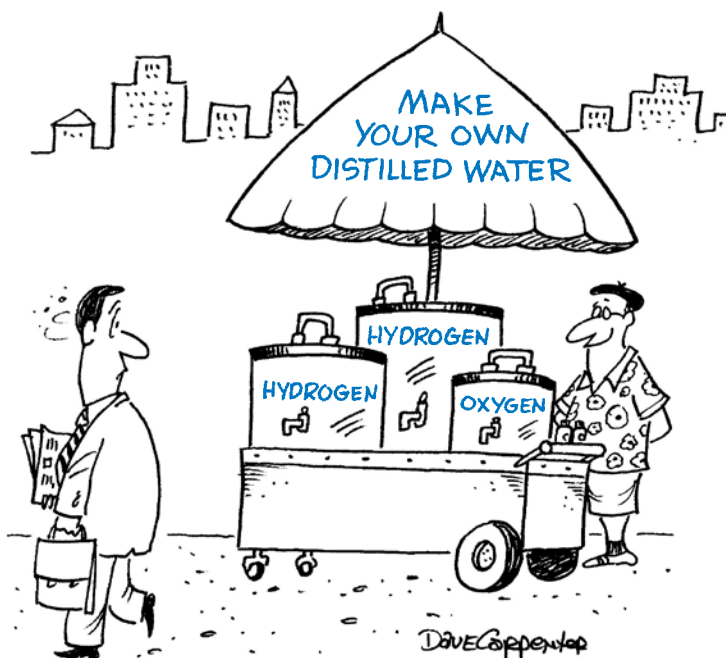
Certainly, there are some things you can do to help your body maintain the right levels of acidity and alkalinity...

- **Eat a lot of good, mineral-rich foods like vegetables.** As I explained earlier, plants are the best source of the chelated minerals your body uses to alkalinize the bloodstream after digestion.
- **Exercise.** With its heavy release of excess acid in the form of carbon dioxide, exercise helps your body regulate its internal acid levels.

¹¹ Consumers Union of United States. Alkaline products promise health benefits with little proof to support such claims. *The Washington Post*. February 2011.

But alkaline water? Well, at the very least it's simply a quick fix with no real results. At worst, it can endanger your health.

Your Body Thirsts For Pure, Distilled Water



Our bodies need water. Even mild dehydration will slow down your metabolism as much as 3%. The number one reason for daytime tiredness is too little water. According to Dr. A. F. Beddoe, author of *Biological Ionization As Applied To Human Nutrition*, **just drinking 5 glasses of water a day can decrease colon cancer by 45%, slash the risk of breast cancer by 79% and reduce the risk of bladder cancer by 50%.**¹²

But our body works best with simple, plain, pure water—like the pure H₂O nature distills in the water cycle.

Dr. Cary Reams, known for developing the Biological theory of Ionization, spent years (and his 3 Ph D's worth of expertise) studying how pH affects the body and health. **He demonstrated that distilled water with its free hydrogen ions,**

unoccupied by contaminants or mineral salts, is the best water for the body's hydration needs. Pure water—not the minerals dissolved in it—is what your cells need to create the aqueous environments all biochemical reactions take place in.

“Distilled water has an ultra-low viscosity,” explains Roe Gallo, Ph D. This means it can slip into tight spaces and move easily through membranes and capillaries. Because it's so “slippery”, Dr. Gallo explains, **distilled water makes removal of toxins and nutrient transportation a breeze. In contrast, water with minerals or other impurities is “sticky”, harder to move around the body.**¹³

Dr. A. True Ott, Ph D, explains, **“Alkaline water is actually dehydrating. One should strive to consume the purest water possible—and that is simply steam-distilled water.** It is rich in free hydrogen ions. Why then are people often tricked into thinking that drinking water with high total dissolved solids (TDS) contaminants such as ionized water is actually a wise and healthy thing to do? Science and logic screams otherwise!”

So don't betray your body by falling for the alka-lies about alkaline water.

As Dr. Andrew Weil advises, “The health claims for water ionizers and alkaline water are bogus. Save your money.” ■

¹² Beddoe, A. “RBTI Insights on Distilled Water – The Elixir of Life.” Advanced Ideals Institute. www.advancedideals.org

¹³ Questions & Answers: WATER. Dr. David Klein, Ph D and Dr. Roe Gallo, Ph D. www.waterwise.com/experts

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