

The ABC's of Hydrogen Water

What YOU need to know



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The ABC' s of Hydrogen Water

You have questions about hydrogen water.
We have answers.

This booklet is intended to introduce you to Gaura hydrogen water, a product that is well-known in Japan and has been used for over a decade as part of a complete wellness and health program.

If your questions are not answered here, please do not hesitate to contact us.



I. Hydrogen Water. The Basics.

• What is Hydrogen Water?

Hydrogen Water is water (H_2O) infused with molecular hydrogen (H_2). Over a decade since the publication of study results reporting that molecular hydrogen has been shown to have potential benefits in preventive and therapeutic applications, dozens more studies have been conducted and published to verify and elaborate on these results.

• Is Hydrogen Water the same as Alkaline Water?

Hydrogen water is not alkaline water, a type of water better known in the United States. Alkaline water, which has above-neutral pH (a measure of the basicity/acidity of water), or pH of greater than 7.0, has almost no concentration of molecular hydrogen. Hydrogen water, in contrast, has neutral pH but is rich in molecular hydrogen, with concentrations of 1.0 ppm (parts per million) or more. 1 ppm is roughly equivalent to 1 mg/L of water (1 milligram per liter).

• Does hydrogen really dissolve in water?

Yes. At a pressure of one atm (atmospheric pressure at sea level) molecular hydrogen can be dissolved in water up to a saturation point of about 1.62 mg/L. Gaura hydrogen water products generate concentrations ranging from 0.5 mg/L to 1.1 mg/L.

• Is it true that tap water has small amounts of dissolved hydrogen in it? And since water, H_2O , has hydrogen in it already, is there really any reason to drink hydrogen water?

The amount of dissolved molecular hydrogen in tap water is less than one eight-millionth of a mg of H_2/L — far below the 0.5 mg/L or more that has shown to have certain therapeutic effects.

• How long does the Gaura hydrogen water retain its concentration of hydrogen?

It generally takes several hours for the hydrogen in Gaura hydrogen water to dissipate. This process will be sped up by shaking, heating, or exposing the hydrogen water to ultraviolet light. The process will slow down if the hydrogen water is stored in metal-lined containers.

II. Benefits of Hydrogen Water.

• Does the body really absorb hydrogen from drinking hydrogen water?

Yes. Hydrogen, the smallest of all elements, can be absorbed by cells throughout the body.

• What are the theories for why hydrogen water is beneficial?

One leading hypothesis as to why molecular hydrogen is beneficial concerns the manner in which it reacts with various “reactive” oxygen species. Studies theorize that molecular hydrogen neutralizes harmful hydroxyl radicals ($\cdot\text{OH}$, or the neutral form of the hydroxide ion OH^-) within cells. These changes occur at the genetic/DNA level.

• I have heard people use the expression “hydrogen eliminates rust in the body.” What does that mean?

The term “rust” is often used to describe a situation where excess reactive oxygen species exist in the body, more than our cells are actually equipped to handle naturally. Various factors can increase reactive oxygen species in the body, including excessive sun exposure, smoking, and stress. This phenomenon is called oxidative stress and is similar to the oxidation that creates rust in metals.

• What benefits do people experience from drinking hydrogen water?

Based on various studies, the top three benefits that people have reported from drinking water high in dissolved molecular hydrogen are:

- Relief from feelings of constipation
- Improved skin condition
- Faster recovery from fatigue

Studies support the belief that hydrogen has three primary benefits. Other reported benefits include improved metabolism, better sleep, reduced effects of hangovers, weight loss, and reduced bloating.

• How long does it take to realize the benefits of consuming hydrogen water?

People have reported noticing improvements in as short as a few days to several weeks. On average, most people have reported noticing positive changes within a month.

● Is there any scientific evidence of the purported benefits of hydrogen water?

Yes, there is. Many studies have reported benefits of hydrogen in studies of living cell and animal experiments. Several medical institutions are conducting human clinical trials, with promising benefits being reported in areas such as: cardiopulmonary arrest resuscitation, interstitial cystitis, cerebral ischemia, inflammatory and mitochondrial myopathies, periodontal disease, metabolic syndrome, reducing side effects from radiation treatment, improving skin damage caused by ultraviolet rays, wrinkles, and skin brightness.

III. Benefits of Hydrogen Water.

● How often should I drink hydrogen water and how much should I drink? Is too much harmful?

Studies suggest that drinking 200 ml or more hydrogen water daily is recommended to realize its benefits.

● What time of day is best to drink hydrogen water to fully realize its benefits?

It is more effective to drink hydrogen water at a particular time of day every day.

If you drink once a day, drink it in the morning or at night.

If twice a day, drink it morning and night.

If three times per day, drink it morning, noon, and evening.

If you drink 200–300 ml, drink it once a day. If you drink 500 ml or more in a day, divide up your consumption throughout the day.

● How quickly do I need to drink freshly generated hydrogen water?

In a cup, hydrogen water will retain its concentration for about an hour. You should drink it within a half-hour to an hour. With aluminum bottles, the concentration of hydrogen can last for several hours if sealed after every use.

● Can hydrogen water be used for cooking?

While heating hydrogen water rapidly dissipates the hydrogen concentration of the water, you can use hydrogen water to wash vegetables, rinse rice, and wash surfaces.

IV. Types of Hydrogen Water Products and How to Choose.

• What other hydrogen-related products does Triwin offer?

We offer hydrogen-related products:

- Hydrogen Water Bottle
- Hydrogen Water System (Refer to our catalogue p.06)
 - Counter Top type: SKGA, AQ-1200 H2-PT
 - Under Sink type: H2-68
- Hydrogen Water Heating Machine H2-Pot
- H2 Inhaler H2-HA300
- H2 Inhaler H2-HA100
- Hydrogen-rich water filter

• I've tried hydrogen water and believe it works for me. But it has become too expensive to afford on a regular basis. What can I do?

In the long term, frequent users of hydrogen water should consider one of our hydrogen water dispensers and generators. Triwin hydrogen water generator bottle is good for 1–2 people. For 3 or more people, choose one of our quality dispensers – the SKGA, AQ-1200, H2-PT, H2-68.

• I have seen hydrogen water products packaged in aluminum bottles or aluminum-lined containers being sold in supermarkets and pharmacies. Should I continue purchasing these products?

Hydrogen water packed in aluminum bottles sold in supermarkets and pharmacies are difficult to handle and expensive in the long term. Shaking the containers, opening and closing them continually, and exposing them to excess heat can result in the hydrogen content dissipating very quickly. Our dispensers and generators are more effective because they generate hydrogen water on demand, not in advance to be shipped.

Triwin uses BPA-free material – it's your safe choice!

• I want to use hydrogen for cosmetic and beauty purposes. Do you have any products other than hydrogen water that I can use?

Yes, we do! We offer H2 Bubble hydrogen bath powder and a hydrogen mister.