
The Health Benefits of Hydrogen Water

1) Hydrogen Water is an Antioxidant and Prevents Brain Damage

Molecular hydrogen (H₂) can protect cells and tissues from oxidative damage **by selectively reducing reactive oxygen species (ROS)**.

Unlike other antioxidants, **H₂ has the unique capability of crossing cell membranes and targeting organelles** such as the mitochondria and nucleus

Drinking hydrogen water prevented the development of [Parkinson's disease](#) in an experiment on rats. Hydrogen water **reduced oxidative stress and prevented cognitive impairment** associated with [dementia](#) and Parkinson's disease.

Hydrogen water **prevented both the development and progression of neural degeneration**, and also suppressed neuronal loss in another Parkinson's disease mice study.

Additionally, in a study on patients with Parkinson's disease, it was found that the intake of **hydrogen water reduces neurotoxic damage**, which agrees with previous studies on animals. There were also no adverse effects from the hydrogen water at high doses (1000 mL/day)

2) Hydrogen Water May Improve Mood Disorders



Hydrogen water restored the natural growth of brain cells in mice. Because antidepressants increase adult neurogenesis, hydrogen water may be used for improving [depression](#) and some mental disorders.

3) Hydrogen Water Suppresses Inflammation

Molecular hydrogen (H₂) exhibits [anti-inflammatory](#) effects in many animal studies.

In a study, patients with [rheumatoid arthritis](#), a chronic inflammatory disease, drank .5 L/day of hydrogen water for 4 weeks. By the end of the study all patients with early rheumatoid arthritis achieved remission and 20% became symptom-free .

4) Hydrogen Water Reduces Muscle Fatigue, Motor Deficits, and Muscle Degeneration



In an experiment with young athletes, drinking hydrogen water **reduced [lactic acid](#) build-up** during heavy [exercise](#) and **decreased muscle fatigue**

In a study on mice with Duchenne muscular dystrophy (DMD), a devastating muscle disease, hydrogen water **prevented abnormal body mass gain** and **increased the production of the antioxidant [glutathione peroxidase](#)**. It was found that hydrogen water can potentially improve muscular dystrophy in DMD patients

5) Hydrogen Water Prevents Metabolic Syndrome

Hydrogen water significantly reduced fatty liver in mice with type 2 [diabetes](#) and [obesity](#) as well as in mice with a high-fat-diet-induced fatty liver. Also, **levels of [glucose](#), [insulin](#), and [triglycerides](#) were decreased** by stimulating energy metabolism

A study in rats showed that hydrogen water was able to prevent [atherosclerosis](#) (hardening of the arteries) .

In a study on patients with the potential for metabolic syndrome, **drinking hydrogen water (1.5 – 2 L/day) for 8 weeks showed an increase in HDL-cholesterol** (“good” cholesterol) and a decrease in total cholesterol

6) Hydrogen Water May Help in Weight Loss

Long-term drinking of hydrogen water **controlled body fat and [weight](#)** in rats, despite no change in food and water intake

7) Hydrogen Water Enhances Mitochondrial Function

Clinical studies have shown that **drinking hydrogen water directly protects the mitochondria** and improves the outcome of mitochondrial disorders

Drinking hydrogen water also stimulates energy metabolism (as measured by oxygen consumption and CO₂ production)

8) Hydrogen Water Treats Diabetes

A clinical trial in patients with type 2 [diabetes](#) and impaired glucose tolerance showed that drinking hydrogen water (900 mL) for 8 weeks **decreased**

cholesterol, normalized glucose tolerance and improved [insulin resistance](#) in a majority of the treated patients.

9) Hydrogen Water May Treat Metabolic Acidosis

Metabolic acidosis is a condition characterized by an increase in blood acidity, which can be exacerbated with [exercise](#). A study in healthy physically active males found that a daily intake of hydrogen-rich water for 14 days **increased the pH of the blood before and after exercise** with no side effects. The study concluded that drinking hydrogen water is safe and may have an alkalizing effect in the blood .

10) Hydrogen Water May Prevent Cancer

Heated hydrogen water was found to be an effective anti-tumor agent

In human tongue and connective tissue cancer cells, **hydrogen water suppressed tumor colony growth** by reducing [oxidative stress](#)

Hydrogen water also **inhibited angiogenesis (blood vessel growth)** in cultured human [lung cancer](#) cells

11) Hydrogen Water Reduces Side Effects of Cancer Treatments

Drinking hydrogen water improved mortality and body [weight loss](#) caused by an anti-cancer drug, [cisplatin](#), and reduced kidney toxicity in mice.

In a study on patients receiving radiation therapy for malignant liver tumors, drinking hydrogen water (1.5 – 2 L/day) suppressed [oxidative stress](#) (as measured by elevation of total hydroperoxide levels) and prevented the loss of appetite

12) Hydrogen Water Boosts Skin Health

Hydrogen water administered intravenously (into the vein) to patients with acute erythematous skin diseases caused the erythema (redness) and associated symptoms to significantly improve

Bathing in hydrogen water for 3 months **significantly improved wrinkles in the skin** in a human study.

Hydrogen water also **reduced human skin cell damage from ultraviolet (UV) rays** .

13) Hydrogen Water Enhances Wound Healing

Hydrogen water intake via tube feeding in elderly patients **reduced the wound size of pressure ulcers and enhanced recovery**.

14) Hydrogen Water Limits Damage of Transplant Organs

Hydrogen water in the form of a preservation solution reduced the damage of a variety of organs during transplantation.

15) Hydrogen Water Improves Bladder Dysfunctions

In a study on rats that were surgically induced with a bladder obstruction, **drinking hydrogen water significantly suppressed bladder weight increase and [oxidative stress](#)**. Also, hydrogen water reversed the decreased responses to muscles and electric field stimulation. These results suggest that hydrogen water could help patients with a bladder obstruction by decreasing oxidative stress .

16) Hydrogen Water is Cardio-Protective



Treating [diabetic](#) mice with hydrogen water **significantly improved heart muscle function**, indicating that molecular hydrogen could be useful for diabetic heart muscle disease .

17) Hydrogen Water Protects the Eye

H₂-loaded eye drops facilitated the recovery process after retinal injury in rats .

Treating the cornea with hydrogen solution **significantly reduced angiogenesis (blood vessel growth)** after alkali-burn injury in mice, indicating that hydrogen therapy may prevent blindness caused by chemical burns of the eye

18) Hydrogen Water Prevents Hearing Loss

Molecular hydrogen protects auditory hair cells from oxidative damage [R].

Studies in guinea pigs found that hydrogen-rich saline and water prevented the death of cochlear hair cells after noise exposure, indicating that hydrogen water may protect against noise-induced hearing loss

19) Hydrogen Water Combats Allergy

Drinking hydrogen water eliminated an immediate-type allergic reaction in mice

Atopic dermatitis (AD) is an allergic inflammatory skin disorder characterized by red, scaly rashes on the skin. In mice with AD-like skin, hydrogen water was able to improve symptoms by suppressing inflammation (through manipulation of [Th1](#) and [Th2](#) responses)

20) Hydrogen Water Ameliorates Kidney Disease



A study in rats found that hydrogen-rich water was able to improve kidney dysfunction from toxic damage by reducing [oxidative stress](#) and chemical waste products (creatinine (Cr) and [blood urea nitrogen \(BUN\)](#))

Drinking hydrogen water also reduced inflammation and blood pressure in hemodialysis patients

21) Hydrogen Water Protects the Liver

Drinking hydrogen water **suppressed liver fibrogenesis** in mice by protecting liver cells from free-radical damage

Hydrogen water also **significantly improved liver function and reduced [oxidative stress](#)** in patients with chronic hepatitis B

22) Hydrogen Water Promotes Gut Health

Hydrogen-rich water alleviated stomach mucosal injury induced by [aspirin](#) in rats (by suppressing oxidative stress and inflammation), indicating that hydrogen water may protect healthy individuals from gut damage caused by oxidative stress

23) Hydrogen Water Protects the Lung

Hydrogen water consumption in rats had a protective effect against lung tissue injury by suppressing inflammation and oxidative stress (through reduction of [NF-κB](#) activity)

24) Hydrogen Water is Radioprotective

A study found that pre-treating mice with hydrogen water before irradiation exposure **increased survival rates and protected the heart from radiation-induced damage**

Hydrogen treatment also inhibited irradiation-induced death in cultured human white blood cells, suggesting that hydrogen may be used as an effective radioprotective agent

25) Hydrogen Water Relieves Pain

In mice, oral hydrogen water intake was found to alleviate common symptoms of neuropathic pain (allodynia and thermal hyperalgesia). The study concluded that hydrogen water may be helpful for relieving nerve pain in a clinical setting

26) Hydrogen Water May Prolong Lifespan

The ability of molecular hydrogen to protect nuclear DNA and the mitochondria from oxidative damage is thought to have beneficial effects on chronic diseases like [cancer](#) and the aging process

H₂ treatment delayed the replicative lifespan of bone marrow stem cells by reducing oxidative stress

When human umbilical vein endothelial cells (HUVECs) were grown in a hydrogen-rich medium, **both oxidative stress and cellular aging were suppressed**. The study concluded that **drinking hydrogen water may increase [longevity](#) in humans**

27) Hydrogen Water is Antibacterial and May Promote Oral Health

A study found that hydrogen water may improve oral hygiene because of its antibacterial effect against cavity and gum disease-causing bacteria

In patients with gum infection, drinking hydrogen-rich water improved disease symptoms and enhanced the effects of non-surgical gum disease treatment

The proven benefits of hydrogen water

While much of the research on the health benefits of hydrogen water has been conducted in Japan, where it has long been popular within the alternative health scene, the results are actually surprisingly promising. Here's just a snapshot of what the scientific literature suggests hydrogen water can do for our health.

1. Hydrogen water protects against Parkinson's disease

It might seem a little hard to believe that simply injecting a little more hydrogen into plain old water would turn it into a [Parkinson's disease](#)-preventing super-drink, but that's exactly what the research suggests it can do.

A [2012 study](#) published in the *Journal of Medical Gas Research* showed that drinking hydrogen water was able to protect against oxidative damage in the brain and prevent cognitive impairment associated with Parkinson's disease. Another [2009 study](#) found a similar result, concluding that "drinking H₂-containing water may be useful in daily life to prevent or minimize the risk of lifestyle-related oxidative stress and neurodegeneration."

Yet another randomized placebo-controlled [study](#) showed that drinking one liter of hydrogen water every day for 48 weeks "significantly improved the total Unified Parkinson disease rating scale (UPDRS) score of patients with Parkinson's disease." While these are all relatively small studies, the results suggest that hydrogen water may very well protect your brain against neurodegenerative disorders like Parkinson's.

2. Hydrogen water treats rheumatoid arthritis

A [2016 study](#) published in the *American Journal of Translational Research* found that molecular hydrogen, which is the same element added to hydrogen water, was able to reduce oxidative damage and protect cells against inflammation. This means that by adding more hydrogen to water, it is able to address the root cause of rheumatoid arthritis and help alleviate symptoms.

An earlier [2014 study](#) proved just that, showing that molecular hydrogen was able to improve symptoms of rheumatoid arthritis in 24 patients by an average of 20 percent. That's a huge deal for people whose whole livelihoods are often ruined by the pain and limitations of rheumatoid arthritis.

3. Hydrogen water lowers risk of metabolic syndrome

Metabolic syndrome is a major precursor to a wide range of cardiovascular disorders, including obesity, insulin resistance, diabetes, hypertension and dyslipidemia. Luckily, hydrogen water may just provide a viable solution for keeping metabolic syndrome at bay.

A [2010 study](#) published in the *Journal of Clinical Biochemistry and Nutrition* found that eight weeks of drinking between 1.5 and 2 liters of hydrogen water was able to dramatically decrease markers of metabolic syndrome in 20 at-risk subjects. Drinking hydrogen water was shown to increase superoxide dismutase, a powerful antioxidant enzyme, decrease thiobarbituric acid, a common precursor to metabolic syndrome, and improve patient's cholesterol ratios.

4. Hydrogen water improves learning and memory

Studying for exams? Trying to learn new skills at work? Hydrogen water can help with that!

A [2009 study](#) published in the *Journal of Neuropsychopharmacology* found that “continuous consumption of hydrogen water reduces oxidative stress in the brain, and prevents the stress-induced decline in learning and memory.” This also means that by preventing oxidative stress in the brain, drinking hydrogen water could protect your brain against other neurodegenerative disorders and keep your mind sharp.

5. Hydrogen water alleviates muscle degeneration

In a [study](#) that examined the effect of drinking hydrogen water on mice with Duchenne muscular dystrophy, a debilitating muscle disease, researchers found that hydrogen water helped to prevent muscular degeneration by increasing production of the master antioxidant glutathione peroxidase and by preventing excessive body mass gain.

Another [study](#) found that athletes who drank hydrogen water before exercise were able to lower blood lactate levels (which is what gives your muscles that “burn” after a workout) and improved exercise-induced decline in muscle function.