



PURE IONIC WATER™

The Water of Champions

PURE IONIC WATER™ SYSTEMS

Hydrogen Rich Water

HYDROGEN RICH WATER

Hydrogen-rich water (HRW) is an innovative functional drink that comprises pure water with abundance of hydrogen molecules. It is professed that HRW causes benefits for human health. A source of molecular hydrogen, HRW might be a convenient medium to deliver this bioactive gas, induce antioxidation and other key physiologic functions. In this document, we will cover some of the published scientific evidence based literature into the health benefits of hydrogen rich water.

Hydrogen-Rich Water Affected Blood Alkalinity in Physically Active Men

Possible appliance of effective and safe alkalizing agent in the treatment of metabolic acidosis could be of particular interest to humans experiencing an increase in plasma acidity, such as exercise-induced acidosis.

In the present study we tested the hypothesis that the daily oral intake of 2L of hydrogen-rich water (HRW) for 14 days would increase arterial blood alkalinity at baseline and post-exercise as compared with the placebo. This study was a randomized, double blind, placebo-controlled trial involving 52 presumably healthy physically active male volunteers. Twenty-six participants received HRW and 26 a placebo (tap water) for 14 days. Arterial blood pH, partial pressure for carbon dioxide (pCO₂), and bicarbonates were measured at baseline and postexercise at the start (day 0) and at the end of the intervention period (day 14). Intake of HRW significantly increased fasting arterial blood pH by 0.04 (95% confidence interval; 0.01 – 0.08; $p < 0.001$), and postexercise pH by 0.07 (95% confidence interval; 0.01 – 0.10; $p = 0.03$) after 14 days of intervention. Fasting bicarbonates were significantly higher in the HRW trial after the administration regimen as compared with the preadministration (30.5 ± 1.9 mEq/L vs. 28.3 ± 2.3 mEq/L; $p < 0.0001$). No volunteers withdrew before the end of the study, and no participant reported any vexatious side effects of supplementation.

These results support the hypothesis that HRW administration is safe and may have an alkalizing effect in young physically active men.

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Effects of Hydrogen Rich Water on Prolonged Intermittent Exercise

Recent studies showed a positive effect of Hydrogen Rich Water (HRW) intake on acid-basic homeostasis at rest. We investigated 2-weeks of HRW intake on repeated sprint performance and acid-base status during prolonged intermittent cycling exercise.

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Hydrogen-Rich Water for Improvements of Mood, Anxiety, and Autonomic Nerve Function in Daily Life

Health and a vibrant life are sought by everyone. To improve quality of life (QOL), maintain a healthy state, and prevent various diseases, evaluations of the effects of potentially QOL-increasing factors are important. Chronic oxidative stress and inflammation cause deteriorations in central nervous system function, leading to low QOL. In healthy individuals, aging, job stress, and cognitive load over several hours also induce increases in oxidative stress, suggesting that preventing the accumulation of oxidative stress caused by daily stress and daily work contributes to maintaining QOL and ameliorating the effects of aging. Hydrogen has anti-oxidant activity and can prevent inflammation, and may thus contribute to improve QOL.

The present study aimed to investigate the effects of drinking hydrogen-rich water (HRW) on the QOL of adult volunteers using psychophysiological tests, including questionnaires and tests of autonomic nerve function and cognitive function. In this double-blinded, placebo-controlled study with a two-way crossover design, 26 volunteers (13 females, 13 males; mean age, 34.4 ± 9.9 years) were randomized to either a group administered oral HRW (600 mL/d) or placebo water (PLW, 600 mL/d) for 4 weeks. Change ratios (post-treatment/pre-treatment) for K6 score and sympathetic nerve activity during the resting state were significantly lower after HRW administration than after PLW administration. These results suggest that HRW may reinforce QOL through effects that increase central nervous system functions involving mood, anxiety, and autonomic nerve function.

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Hydrogen-Rich Water Reduces Inflammatory Responses and Prevents Apoptosis of Peripheral Blood Cells in Healthy Adults: a Randomized, Double-Blind, Controlled Trial

The evidence for the beneficial effects of drinking hydrogen-water (HW) is rare. We aimed to investigate the effects of HW consumption on oxidative stress and immune functions in healthy adults using systemic approaches of biochemical, cellular, and molecular nutrition. In a randomized, double-blind, placebo-controlled study, healthy adults (20–59 y) consumed either 1.5 L/d of HW (n=20) or plain water (PW, n=18) for 4 weeks. The changes from baseline to the 4th week in serum biological antioxidant potential (BAP), derivatives of reactive oxygen, and 8-Oxo-2'-deoxyguanosine did not differ between groups; however, in those aged ≥ 30 y, BAP increased greater in the HW group than the PW group.

Apoptosis of peripheral blood mononuclear cells (PBMCs) was significantly less in the HW group. Flow cytometry analysis of CD4+, CD8+, CD20+, CD14+ and CD11b+ cells showed that the frequency of CD14+ cells decreased in the HW group. RNA-sequencing analysis of PBMCs demonstrated that the transcriptomes of the HW group were clearly distinguished from those of the PW group. Most notably, transcriptional networks of inflammatory responses and NF- κ B signaling were significantly down-regulated in the HW group. These findings suggest HW increases antioxidant capacity thereby reducing inflammatory responses in healthy adults.

[Read full article.](#)

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