

Benefits of Hydrogen Rich Water

The Free-Radical Scavenger

What can one expect from adding Hydrogen-Rich Water to his or her diet?

Hydrogen Rich Water...

- lubricates joints and muscles; our body is 70% water
- keeps our minds alert; the brain is over 70% water needing hydration to function
- helps the body absorb nutrients
- aids in circulation and digestion
- helps regulate body temperature
- detoxifies cells and the body whole
- improves blood pressure, decreases headaches, arthritic symptoms, back pain and chronic illness symptoms
- decreases the risk of colon cancer, bladder cancer and breast cancer
- Many people also lose weight

How is all this possible?

How can hydrogen rich water from the hydrogen water bottle do all this?

The truth is hydrogen rich water doesn't do any of the above things — the body does. The body uses the hydrogen to control oxidation by reducing the oxidants (free radicals) and by aiding greater energy production in the mitochondria.

There are three direct mechanisms involved that allow for these benefits:

Hydrogen - Becomes an antioxidant, reducing damages in the body, thus also ultimately reducing immune system workload.

Hydrogen - Literally fuels the ATP engine that powers every cell in the body. More fuel means more work can be done, less food needs to be eaten, and less food further reduces the oxidative load the body has to deal with.

Smaller Water Cluster Size - Free hydrogen changes the electrical charge in the water which causes water molecules to form smaller groups and allows for easier hydration and transport of vitamins and minerals.

Clinical Improvements Obtained From Intake Of Hydrogen-Rich Water (1985-2000) Hayashi, Hidemitsu, M.D., Water Institute, & Kawamura, Munenori, M.D., Kyowa Medical Clinic

- Improvement of general malaise, chronic constipation & diarrhea as well as persistent diarrhea after gastric resection
- Improvement of dehydration in infants with vomiting and diarrhea caused by viral infection
- Improvement of hyperbilirubinemia in newborns
- Improvement of blood sugar and HbA1c levels in diabetes
- Improvement of peripheral circulation in diabetic gangrene
- Improvement of liver function in hepatic diseases, cirrhosis of liver, hepatitis
- Improvement of uric acid levels in gout
- Improvement of cholesterol levels
- Improvement of gastroduodenal ulcers and prevention of recurrences
- Improvement of hypertensive or hypotensive disorders
- Improvement of hypersensitive disorders; urticaria (hives), atopic dermatitis, asthma, etc.
- Improvement of autoimmune disorders; rheumatism, collagen disease, SLE, etc.
- Improvement of dysmenorrhea, menopause symptoms
- Improvement of malignant tumors; hepatoma, cancers, etc.
- Improvement of specific diseases; Bechet Syndrome, Crohn Disease, Kawasaki's Disease, ulcerative colitis
- Experiences of pregnant women who took hydrogen-rich water during their pregnancy; almost no emesis, smooth delivery, slight jaundice, enough lactation, smooth and satisfactory growth of newborns

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Hydrogen acts as a therapeutic antioxidant by selectively reducing cytotoxic oxygen radicals

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Acute oxidative stress induced by ischemia-reperfusion or inflammation causes serious damage to tissues, and persistent oxidative stress is accepted as one of the causes of many common diseases including cancer. We show here that hydrogen (H₂) has potential as an antioxidant in preventive and therapeutic applications. We induced acute oxidative stress in cultured cells by three independent methods. H₂ selectively reduced the hydroxyl radical, the most cytotoxic of reactive oxygen species (ROS), and effectively protected cells; however, H₂ did not react with other ROS, which possess physiological roles. We used an acute rat model in which oxidative stress damage was induced in the brain by focal ischemia and reperfusion. The inhalation of H₂ gas markedly suppressed brain injury by buffering the effects of oxidative stress. Thus H₂ can be used as an effective antioxidant therapy; owing to its ability to rapidly diffuse across membranes, it can reach and react with cytotoxic ROS and thus protect against oxidative damage.

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Hydrogen acts as a therapeutic antioxidant by selectively reducing cytotoxic oxygen radicals

I Ohsawa, M Ishikawa, K Takahashi, M Watanabe... - *Nature medicine*, 2007 - nature.com

Abstract Acute oxidative stress induced by ischemia-reperfusion or inflammation causes serious damage to tissues, and persistent oxidative stress is accepted as one of the causes of many common diseases including cancer. We show here that hydrogen (H₂) has ...

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K Hayashida, M Sano, I Ohsawa, K Shinmura... - *Biochemical and ...*, 2008 - Elsevier

Inhalation of hydrogen (H₂) gas has been demonstrated to limit the infarct volume of brain and liver by reducing ischemia–reperfusion injury in rodents. When translated into clinical practice, this therapy must be most frequently applied in the treatment of patients with ...

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Inhalation of hydrogen gas suppresses hepatic injury caused by ischemia/reperfusion through reducing oxidative stress

K Fukuda, S Asoh, M Ishikawa, Y Yamamoto... - *Biochemical and ...*, 2007 - Elsevier

We have recently showed that molecular hydrogen has great potential for selectively reducing cytotoxic reactive oxygen species, such as hydroxyl radicals, and that inhalation of hydrogen gas decreases cerebral infarction volume by reducing oxidative stress [1. ...

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[HTML] Hydrogen inhalation ameliorates oxidative stress in transplantation induced intestinal graft injury

BM Buchholz, DJ Kaczorowski... - *American Journal of ...*, 2008 - Wiley Online Library

Ischemia/reperfusion (I/R) injury during small intestinal transplantation (SITx) frequently causes complications including dysmotility, inflammation and organ failure. Recent evidence indicates hydrogen inhalation eliminates toxic hydroxyl radicals. Syngeneic, orthotopic ...

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Neuroprotective effects of hydrogen saline in neonatal hypoxia–ischemia rat model

J Cai, Z Kang, K Liu, WW Liu, RP Li, JH Zhang, X Luo... - *Brain research*, 2009 - Elsevier

Cerebral hypoxia–ischemia (HI) represents a major cause of brain damage in the term newborn. This study aimed to examine the short and long-term neuroprotective effect of hydrogen saline (H₂ saline) using an established neonatal HI rat pup model. Seven-day- ...

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S Kajiyama, G Hasegawa, M Asano, H Hosoda... - *Nutrition Research*, 2008 - Elsevier

Oxidative stress is recognized widely as being associated with various disorders including diabetes, hypertension, and atherosclerosis. It is well established that hydrogen has a reducing action. We therefore investigated the effects of hydrogen-rich water intake on ...

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Hydrogen therapy reduces apoptosis in neonatal hypoxia–ischemia rat model

J Cai, Z Kang, WW Liu, X Luo, S Qiang, JH Zhang... - *Neuroscience ...*, 2008 - Elsevier

Hypoxia–ischemia (HI) brain injury is a major cause of neuronal cell death especially apoptosis in the perinatal period. This study was designated to examine the effect of hydrogen therapy on apoptosis in an established neonatal HI rat pup model. Seven-day- ...

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Consumption of hydrogen water prevents atherosclerosis in apolipoprotein E knockout mice

I Ohsawa, K Nishimaki, K Yamagata, M Ishikawa... - *Biochemical and ...*, 2008 - Elsevier

Oxidative stress is implicated in atherogenesis; however most clinical trials with dietary antioxidants failed to show marked success in preventing atherosclerotic diseases. We have found that hydrogen (dihydrogen; H₂) acts as an effective antioxidant to reduce oxidative ...

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[Hydrogen-rich saline protects against intestinal ischemia/reperfusion injury in rats](#)

X Zheng, X Zheng, Y Mao, J Cai, [Y Li](#), W Liu... - *Free radical ...*, 2009 - Taylor & Francis

Hydrogen gas was reported to reduce reactive oxygen species and alleviate cerebral, myocardial and hepatic ischemia/reperfusion (I/R) injuries. This paper studied the effect of hydrogen-rich saline, which was easier for clinical application, on the intestinal I/R injury. ...

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[Consumption of molecular hydrogen prevents the stress-induced impairments in hippocampus-dependent learning tasks during chronic physical restraint in mice](#)

K Nagata, N Nakashima-Kamimura, T Mikami... - ..., 2009 - nature.com

Abstract We have reported that hydrogen (H₂) acts as an efficient antioxidant by gaseous rapid diffusion. When water saturated with hydrogen (hydrogen water) was placed into the stomach of a rat, hydrogen was detected at several μM level in blood. Because hydrogen ...

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