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Rejuvenate  
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## Dementia and Hydrogen Therapy

Hydrogen Therapy, particularly in the form of Hydrogen-rich Water or Molecular Hydrogen (H<sub>2</sub>) gas, has garnered interest for its potential benefits in managing Dementia of all stages, including Alzheimer's disease (AD). While research in this area is still evolving, some potential benefits have been suggested:

### **Antioxidant Properties:**

Molecular Hydrogen acts as a potent antioxidant, neutralising harmful free radicals that contribute to oxidative stress, which is recognised as a key factor in the progression of neurodegenerative diseases like Alzheimer's. By reducing oxidative stress, Hydrogen Therapy may help protect neurons from damage and slow the progression of cognitive decline.

### **Anti-inflammatory Effects:**

Hydrogen has shown anti-inflammatory properties by modulating inflammatory cytokines and pathways. Chronic inflammation in the brain is associated with the development and progression of Alzheimer's disease. By reducing inflammation, Hydrogen Therapy may help mitigate neuronal (nerve cell) damage and preserve cognitive function.

### **Neuroprotective Effects:**

Studies suggest that Hydrogen Therapy may exert neuroprotective (brain cell-protecting) effects by preventing neuronal apoptosis (cell death) and promoting neuronal survival. This is a really important effect and could potentially slow down the degenerative processes characteristic of Alzheimer's disease and other forms of dementia.

### **Improved Cognitive Function:**

Some preliminary studies have reported improvements in cognitive function and memory in animal models of Alzheimer's disease treated with Hydrogen-rich Water or Hydrogen gas. While more research is needed, these findings hint strongly at the therapeutic potential of Hydrogen Therapy in managing dementia-related cognitive decline. There's additional anecdotal evidence from around the world, that a combination of drinking Hydrogen Water, and inhaling Hydrogen gas, regularly, can have a significant benefit on cognitive function, even at the later stages of Dementia.

### **Safe and Well-Tolerated:**

Hydrogen Therapy, particularly in the form of Hydrogen-rich Water, is very accessible to all, and considered safe and well-tolerated with minimal side effects. This makes it an attractive option for long-term use in managing many chronic conditions, including forms of Dementia.



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While the evidence supporting the benefits of Hydrogen Therapy for dementia, including Alzheimer's disease, is promising, more large-scale clinical trials involving human subjects are needed to confirm its efficacy and establish optimal dosing regimens. In the meantime, Hydrogen Therapy offers a safe and easily-accessible therapy, which could provide great benefit and relief to Dementia sufferers and their loved ones.

**Ready to buy your own Hydrogen Water Bottle?**  
**Rent your own Hydrogen Inhalation machine?**  
**Visit [www.HydroHolics.com](http://www.HydroHolics.com), or call +44(0)1743 718 324**  
**to speak with our medically-trained staff.**

### **Relevant Research Articles:**

Ohta, S. (2014). Molecular Hydrogen as a preventive and therapeutic medical gas: initiation, development and potential of Hydrogen medicine. *Pharmacology & therapeutics*, 144(1), 1-11.

Hong, Y., Chen, S., & Zhang, J. M. (2019). Hydrogen as a selective antioxidant: a review of clinical and experimental studies. *Journal of International Medical Research*, 47(10), 4898-4916.

Nagata, K., Nakashima-Kamimura, N., & Mikami, T. (2009). Ohsawa, I. et al. (2007) Consumption of Molecular Hydrogen prevents the stress-induced impairments in hippocampus-dependent learning tasks during chronic physical restraint in mice. *Neuropsychopharmacology*, 34(2), 501-508.

Gu, Y., Huang, C. S., Inoue, T., Yamashita, T., & Ishida, T. (2010). Hydrogen-rich saline attenuates hippocampal damage induced by chronic restraint stress in rats. *Neurochemical research*, 35(8), 1368-1378.

Ichihara, M., Sobue, S., Ito, M., Ito, M., & Hirayama, M. (2015). Safety of intravenous administration of Hydrogen-enriched fluid in patients with acute cerebral ischemia: initial clinical studies. *Medical gas research*, 5(1), 1-9.