Recharge
Rejuvenate
Revitalise

Depression and Hydrogen Therapy

Hydrogen Therapy has shown potential benefits for treatment of Depression, a distressingly common mental health condition, characterised by persistent feelings of sadness, loss of interest or pleasure in activities, and other physical and mental symptoms that significantly impact daily life. While research on Hydrogen Therapy specifically for Depression is still in its early stages, there are several physiological mechanisms through which Molecular Hydrogen may exert its effects and potentially alleviate symptoms of Depression; both administered as inhaled Hydrogen gas, or ingested as Hydrogen-Rich Water.

Antioxidant Effects

One key mechanism is Hydrogen's ability to act as a potent antioxidant. Oxidative stress, which occurs when there is an imbalance between the production of reactive oxygen species (ROS) and the body's antioxidant defences, has been implicated in the devlopment of Depression. Elevated oxidative stress can lead to damage to neurons and alterations in neurotransmitter signalling, i.e. damage to brain cells and their communication with each other and the rest of the body; contributing to the development and progression of Depression. Hydrogen's antioxidant properties may help mitigate oxidative stress, protect neurons from damage, and restore normal neurotransmitter function, thereby potentially alleviating depressive symptoms.

Anti-inflammatory Effects

Moreover, Hydrogen Therapy has been shown to modulate inflammation, another factor implicated in Depression. Chronic low-grade inflammation has been observed in individuals with Depression, and inflammatory cytokines have been found to disrupt neurotransmitter metabolism and neuroplasticity, leading to depressive symptoms. Hydrogen Therapy may help reduce inflammation by inhibiting the production of pro-inflammatory cytokines and promoting the activity of anti-inflammatory molecules, thus potentially improving mood and overall mental well-being.

Gut Microbiome Rebalancing

Additionally, Hydrogen Therapy may influence the gut-brain axis, which refers to the bidirectional communication between the gut and the brain. Emerging research suggests that alterations in the gut microbiome composition and function may contribute to the development of Depression (balance of ‘good’ and ‘bad’ bacteria in the gut). Hydrogen Therapy has been shown to modulate gut microbiome composition, promoting the growth of beneficial bacteria and inhibiting harmful ones. By positively impacting the gut microbiome, Hydrogen Therapy may help regulate neurotransmitter production, reduce inflammation, and improve mood.

For more information, email:
Hydrogen@HydroHolistics.com
+44(0)1743 718 324
+44(0)796 783 0538

While more research is needed to fully elucidate the effects of Hydrogen Therapy on Depression, early findings suggest it may offer promise as a safe, novel and potentially effective treatment approach. As always, individuals with Depression should consult with a healthcare professional before starting any new treatment regimen.

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

Relevant Research Articles:

Ohta, S. (2012). Molecular Hydrogen is a novel antioxidant to efficiently reduce oxidative stress with potential for the improvement of mitochondrial diseases. Biochimica et Biophysica Acta (BBA) - General Subjects, 1820(5), 586–594. https://doi.org/10.1016/j.bbagen.2011.05.006

Ichihara, M., Sobue, S., Ito, M., Hirayama, M., Ohno, K., Ito, M., & Ito, M. (2015). Beneficial biological effects and the underlying mechanisms of molecular Hydrogen - comprehensive review of 321 original articles. Medical Gas Research, 5(1), 12. https://doi.org/10.1186/s13618-015-0035-1

Ostojic, S. M., & Stojanovic, M. D. (2014). Effervescent creatine supplementation causes different effects on serum creatine kinase and blood urea nitrogen responses to resistance exercise. Journal of the International Society of Sports Nutrition, 11(1), 1–7. https://doi.org/10.1186/1550-2783-11-1

Ostojic, S. M. (2013). Inadequate production of H2 by gut microbiota and Parkinson disease. Trends in Endocrinology & Metabolism, 24(7), 289–290. https://doi.org/10.1016/j.tem.2013.04.004

Cai, J., Kang, Z., Liu, W., Luo, X., Qiang, S., Zhang, J. H., ... & Sun, X. (2008). Hydrogen Therapy reduces apoptosis in neonatal hypoxia–ischemia rat model. Neuroscience Letters, 441(2), 167–172. https://doi.org/10.1016/j.neulet.2008.06.030