



Long Covid and Hydrogen Therapy

Long COVID, also known as post-acute sequelae of SARS-CoV-2 infection (PASC), is characterised by persistent symptoms that can last for weeks or months after the acute phase of COVID-19. These symptoms can include fatigue, shortness of breath, cognitive difficulties, and muscle weakness, among others. While the exact mechanisms behind Long Covid are still being understood, Hydrogen Therapy shows potential in alleviating these symptoms and promoting recovery.

While research specific to Molecular Hydrogen's effects on Long COVID is limited, its therapeutic properties suggest several potential mechanisms through which it could alleviate symptoms and improve overall well-being in individuals experiencing Long COVID. In parts of Asia, OxyHydrogen Therapy (provided by advanced models of Hydrogen inhalation machines, such as the HydroMagic Max), has been accepted and acknowledged as a safe and beneficial treatment for Covid and Long Covid, in mainstream hospitals and clinics. Here's how Molecular Hydrogen may be helpful for you, if you're dealing with Long COVID:

Anti-inflammatory Effects:

Persistent inflammation has been shown to play a role in the development of Long COVID symptoms. Molecular Hydrogen has been shown to exert anti-inflammatory effects by modulating inflammatory signal pathways in the body and suppressing the production of pro-inflammatory cytokines. i.e. reducing chronic inflammation. By reducing systemic inflammation, Molecular Hydrogen may help alleviate symptoms such as fatigue, joint pain, and cognitive dysfunction.

Reduction of Oxidative Stress:

Long Covid is believed to involve oxidative stress as one of its underlying mechanisms, contributing to symptoms such as fatigue, brain fog, and muscle weakness. Molecular Hydrogen acts as a potent antioxidant, selectively scavenging harmful reactive oxygen species and reactive nitrogen species, while sparing beneficial molecules. By reducing oxidative stress, Molecular Hydrogen helps protect cells from damage and supports overall cellular function, potentially alleviating symptoms of Long COVID.

Enhancement of Cellular Energy Metabolism:

Fatigue and muscle weakness are common symptoms of Long COVID and may be associated with impaired cellular energy metabolism. Molecular Hydrogen has been shown to enhance mitochondrial function, optimise ATP production, and improve cellular energy metabolism. By increasing cellular energy levels, Molecular Hydrogen may help alleviate fatigue and improve physical function in individuals with Long COVID.



*Recharge
Rejuvenate
Revitalise*

Neuroprotective Effects:

Many individuals diagnosed with Long COVID suffer from neurological symptoms such as brain fog, memory problems, and difficulty concentrating. Molecular Hydrogen crosses the blood-brain barrier and exerts neuroprotective effects (i.e. prevents damage to brain cells) by reducing oxidative stress, suppressing inflammation, and promoting neuronal (nerve cell) survival. These neuroprotective effects may help alleviate cognitive symptoms and improve overall brain function in individuals with Long COVID.

Moreover, hydrogen therapy has been shown to modulate immune responses, promoting a balanced immune system. In the context of Long Covid, where immune dysregulation may contribute to persistent symptoms, this immune-modulating effect could be beneficial.

In conclusion, Hydrogen Therapy offers a novel approach to managing Long Covid symptoms by targeting oxidative stress, reducing inflammation, and modulating the immune system. While further research is needed to fully understand its effectiveness and mechanisms of action, it holds potential as a safe, natural and very accessible treatment option for individuals struggling with the Long-term effects of Covid-19.

Ready to buy your own Hydrogen Water Bottle?

Rent your own Hydrogen Inhalation machine?

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to speak with our medically-trained staff.**

References:

Ohta, S. (2015). Molecular Hydrogen as a preventive and therapeutic medical gas: initiation, development and potential of Hydrogen medicine. *Pharmacology & Therapeutics*, 144(1), 1-11.

Itoh, T., Fujita, Y., Ito, M., Masuda, A., Ohno, K., & Ichihara, M. (2011). Molecular Hydrogen suppresses FcεpsilonRI-mediated signal transduction and prevents degranulation of mast cells. *Biochemical and Biophysical Research Communications*, 411(1), 143-149.

LeBaron, T. W., Laher, I., Kura, B., Slezak, J. (2020). Hydrogen gas: from clinical medicine to an emerging ergogenic molecule for sports athletes. *Canadian Journal of Physiology and Pharmacology*, 98(3), 148-153.

Ostojic SM, Vukomanovic B, Calleja-Gonzalez J, Hoffman JR. Effectiveness of oral and topical hydrogen for sports-related soft tissue injuries. *Postgrad Med*. 2021;133(6):630-638. doi:10.1080/00325481.2021.1913787