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COPD and Hydrogen Therapy

Hydrogen Therapy offers promising benefits, as an adjunct treatment for individuals with Chronic Obstructive Pulmonary Disease (COPD). This is a progressive lung condition characterised by breathing difficulties and impaired lung function. Here are some of the key potential benefits of Hydrogen Therapy for COPD:

Reduces Oxidative Stress:
COPD is associated with increased oxidative stress, leading to inflammation and damage to lung tissues. Hydrogen Therapy acts as a powerful antioxidant, neutralising harmful free radicals and reducing oxidative stress in the lungs. By protecting against oxidative damage, Hydrogen Therapy can help preserve lung function and alleviate symptoms of COPD.

Anti-inflammatory Effects:
Inflammation plays a central role in the progression of COPD, contributing to airway inflammation and narrowing, mucus production, and tissue damage. Hydrogen Therapy has been shown to exert potent anti-inflammatory effects, suppressing the release of pro-inflammatory cytokines and reducing inflammation in the lungs. By dampening inflammation, Hydrogen Therapy can potentially alleviate symptoms such as coughing, wheezing, and shortness of breath.

Improves Lung Function:
COPD is characterised by airflow limitation and reduced lung function, resulting in breathing difficulties and decreased exercise tolerance. Hydrogen Therapy has been found to improve lung function parameters, including forced expiratory volume and peak expiratory flow rate (peak flow), allowing individuals with COPD to breathe more easily and engage in physical activities with greater ease.

Enhances Respiratory Muscle Strength:
Weakness of the respiratory muscles is common in COPD and can further compromise lung function and exacerbate symptoms. Hydrogen Therapy has been shown to enhance respiratory muscle strength, improving respiratory mechanics and increasing respiratory muscle endurance. This can potentially lead to improved breathing efficiency and reduced respiratory fatigue.

Supports Tissue Repair and Regeneration:
COPD is characterised by progressive damage to lung tissues, including alveolar destruction and fibrosis. Hydrogen Therapy has been demonstrated to promote tissue repair and regeneration in the lungs, stimulating the proliferation of lung epithelial cells and enhancing the regenerative capacity of damaged tissues. By promoting tissue healing, Hydrogen Therapy can help slow the progression of COPD and improve overall lung health.

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Research into the exact mechanisms of action of Hydrogen Therapy in individuals with COPD is ongoing (new H2 Therapy research articles are published often!) However, based on the existing body of evidence, Hydrogen Therapy is shown to be a safe and effective adjunctive treatment for individuals with COPD, offering symptom relief and improving overall lung function and quality of life.

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

Relevant Research Articles:

Liu, S.-F.; Li, C.-L.; Lee, H.-C.; Chang, H.-C.; Liu, J.-F.; Kuo, H.-C. The Benefit of Hydrogen Gas as an Adjunctive Therapy for Chronic Obstructive Pulmonary Disease. Medicina 2024, 60, 245. https://doi.org/10.3390/medicina60020245

Fu Z, Zhang J. Molecular hydrogen is a promising therapeutic agent for pulmonary disease. J Zhejiang Univ Sci B. 2022 Feb 15;23(2):102-122. English. doi: 10.1631/jzus.B2100420. PMID: 35187885; PMCID: PMC8861563.

Zheng, ZG., Sun, WZ., Hu, JY. et al. Hydrogen/oxygen therapy for the treatment of an acute exacerbation of chronic obstructive pulmonary disease: results of a multicenter, randomized, double-blind, parallel-group controlled trial. Respir Res 22, 149 (2021). https://doi.org/10.1186/s12931-021-01740

Li, X., & Zhou, J. (2020). Effect of Hydrogen Therapy on chronic obstructive pulmonary disease: A systematic review and meta-analysis. Journal of Traditional Chinese Medicine, 40(4), 642-650.

Yamamoto, R., & Homma, K. (2017). Hydrogen gas inhalation inhibits progression to the "irreversible" stage of shock after severe hemorrhage in rats. The Journal of Trauma and Acute Care Surgery, 83(3), 469-475.

Botek M, Krejčí J, Valenta M, McKune A, Sládečková B, Konečný P, Klimešová I, Pastucha D. Molecular Hydrogen Positively Affects Physical and Respiratory Function in Acute Post-COVID-19 Patients: A New Perspective in Rehabilitation. Int J Environ Res Public Health. 2022 Feb 10;19(4):1992. doi: 10.3390/ijerph19041992. PMID: 35206179; PMCID: PMC8872486.

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