

# Oral Iodinated Activated Charcoal Improves Lung Function in Patients with COPD

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## 1. Abstract

The effect of 8 weeks treatment with oral iodinated activated charcoal (IAC) on lung function of patients with moderate chronic obstructive pulmonary disease (COPD) was examined in a double blind randomized placebo controlled parallel group study with 40 patients. In the IAC group, patients showed a statistically significant improvement of FEV<sub>1</sub> baseline by 130 ml compared to placebo, corresponding to 8.2 % improvement (p=0.031\*). Correlation statistics revealed that the improvement of FEV<sub>1</sub> baseline was significantly correlated both to FEV<sub>1</sub> post-bronchodilator (p=0.0020\*\*) and FEV<sub>1</sub> post-exercise (0.033\*) values. This demonstrates that the improved baseline lung function by IAC did not inhibit a further beta2-adrenoceptor relaxation, and thus that patients did not reach a limit for maximal improvement of the lung function after IAC treatment. Eight patients in the IAC group developed abnormal thyroid hormone levels during the treatment. This side effect was not correlated to improvement of lung function (p=0.82). No serious adverse effects directly related to the treatment were recorded.

In summary, this study demonstrates that iodinated activated charcoal surprisingly and significantly improved lung function of patients with moderate COPD. The underlying mechanism of action is unclear, but is likely to be different from the drugs used today. The immediate conclusion is that further studies are now justified in order to determine clinical efficacy of IAC in COPD and explore possible mechanisms of action.

Keywords: Clinical study, COPD treatment, new mechanism.