

primary studies - published RCT

## The clinical benefits of long-term supplementation with omega-3 fatty acids in cystic fibrosis patients - A pilot study.

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### Study design (if review, criteria of inclusion for studies)

Randomized cross-over trial, single center.

### Participants

10 participants (CF and COPD) initially recruited, 2 participants analyzed separately due to history of snoring. 8 people with CF, mean age 22, 5 males and 3 females, all with severe lung disease. Selected for the study if in stable clinical state and SaO<sub>2</sub> less than 92% on random arterial blood gas.

### Interventions

Patients were studied on 2 nights, 1 with oxygen and 1 with air at 2 L/min

### Outcome measures

Measures of sleep quality, tcPCO<sub>2</sub> and SaO<sub>2</sub>, respiratory events.

### Main results

The NLFO had no effect upon sleep quality in our patients. The minimal SaO<sub>2</sub> occurred during REM sleep and averaged 79.4%. With NLFO, this improved to 92.7%. The average maximal rise in TcPCO<sub>2</sub> was 5.6 mmHg on falling asleep while breathing air; this increased a further 5.1 mmHg with NLFO. Two patients also had obstructive sleep apnea. Their SaO<sub>2</sub> improved dramatically with NLFO, with no deterioration of ventilation. In 4 patients, ventilation was measured quantitatively. The only consistent changes during air were an increase in abdominal contribution to tidal volume and a drop in minute ventilation from Stage 3-4 to REM sleep of 26%, almost entirely caused by a drop in breathing frequency. The same changes occurred with NLFO.

### Authors' conclusions

NLFO is effective in alleviating the nocturnal hypoxemia of patients with CF with stable COPD and does not cause clinically important hypercapnia.

<http://dx.doi.org/10.1016/j.plefa.2016.03.014>

### See also

Prostaglandins Leukot Essent Fatty Acids. 2016 May;108:45-50. doi: 10.1016/j.plefa.2016.03.014. Epub 2016 Mar 28.

### Keywords

non pharmacological intervention - devices OR physiotherapy; Oxygen; Ventilators; Sleep Disorders;