

primary studies - published RCT

## Effects of salmeterol on arterial oxyhemoglobin saturations in patients with cystic fibrosis.

Code: PM12112791

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

Placebo-controlled cross-over trial over 4 days

### Participants

23 participants: 14 responders (8 males), mean age 21.4 years, age range 18.5 - 36.6 years; 9 non-responders (5 males), mean age 22.1, range 18.8 - 25.4

### Interventions

Day 1: albuterol challenge (200 mcg via MDI) to determine responders Day 2: 45 minutes before bed 4 puffs of inhaled salmeterol (84 mcg) or placebo. Overnight transcutaneous oxygen saturations measured Day 3: morning spirometry Day 4: repeat of Day 2

### Outcome measures

Changes in spirometry (FEV1, FEF25-75), changes in oxygen saturation (data not included in analysis)

### Main results

Salmeterol administration before sleep resulted in statistically significant increases in mean arterial oxyhemoglobin saturation and in FEV(1) and FEF(25-75) on awakening compared to placebo values, but only in patients responding to daytime albuterol inhalation by showing improvement in lung function.

### Authors' conclusions

Salmeterol inhalation at bedtime could prevent or reduce nocturnal hypoxemia in daytime albuterol-responsive CF patients, thus improving the long-term clinical outcome of CF lung disease.

<http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/585/CN-00395585/frame.html>

### See also

Pediatr Pulmonol. 2002 Jul;34(1):11-5.

### Keywords

Adrenergic beta-Agonists; Adult; Albuterol; Bronchodilator Agents; Inhalation OR nebulised; pharmacological\_intervention; salmeterol; Respiratory System Agents; non pharmacological intervention - devices OR physiotherapy;