primary studies - published RCT

Effect of albuterol on maximal exercise capacity in cystic fibrosis.

Code: PM17426226 **Year:** 2007 **Date:** 2007 **Author:** Serisier DJ

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

Placebo-controlled cross-over trial over 2 days

Participants

12 participants (6 males), age range 17 - 39 years. Histamine challenge test was performed to assess bronchial hyper-reactivity but no information given.

Interventions

Randomised to either single dose salbutamol 600 mcg or placebo via MDI with spacer before cycle ergometry

Outcome measures

Exercise capacity (data not included in analysis) Changes in spirometry (FEV1 and maximal exercise)

Main results

Ventilatory limitation to exercise was demonstrated in 16 subjects (80%). Significant bronchodilation occurred with exercise alone (end-exercise FEV(1), 2.24 +/- 0.8 L; vs preexercise FEV(1), 2.09 +/- 0.77 L; p

Authors' conclusions

Despite causing significant acute bronchodilation, inhaled albuterol did not improve maximal exercise performance in ventilatory-limited CF adults, adding to the body of literature that fails to show any clinical benefit of SAbetaAs in CF subjects. The current results provide further evidence to question the widespread use of these agents, although the potential for adrenergic beta-agonists to instead improve submaximal exercise performance merits further investigation.

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See also

Chest. 2007 Apr;131(4):1181-7.

Keywords

Adult; Albuterol; Artificial Ventilation; Bronchodilator Agents; exercise; Inhalation OR nebulised; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Ventilators; Salbutamol; Adrenergic beta-Agonists; Respiratory System Agents;