primary studies - published RCT

A possible alternative exercise test for youths with cystic fibrosis: the steep ramp test.

Code: PM25010405 **Year:** 2015 **Date:** 2015 **Author:** Bongers BC

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

Randomized Trial

Participants

Forty patients with CF (17 boys and 23 girls; mean +/- SD age, 14.7 +/- 1.7 years; forced expiratory volume in 1 s, 86% +/- 18% of predicted)

Interventions

Steep ramp test (SRT) vs standard cardiopulmonary exercise test (CPET).

Outcome measures

Peak work rate (WRpeak), HRpeak, peak minute ventilation (V Epeak), and peak oxygen uptake (V O2peak).

Main results

Patients with CF attained values for absolute and relative WRpeak during the SRT of 82% +/- 14% and 92% +/- 14% of predicted. Nutritional status and degree of airway obstruction did not influence SRT performance. Significantly higher values were attained for WRpeak during the SRT compared with those during the CPET (252 +/- 60 vs 174 +/- 46 W; P

Authors' conclusions

The SRT seems to be a quick, convenient, and low-cost exercise test that is well-tolerated in patients with CF with mild-to-moderate airway obstruction. It provides an indication of exercise capacity and can potentially be used when exercise testing using gas exchange measurements is not possible.

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See also

Med Sci Sports Exerc. 2015 Mar;47(3):485-92. doi: 10.1249/MSS.0000000000000440.

Keywords

Child; Adolescent; exercise; non pharmacological intervention - devices OR physiotherapy; shuttle; non pharmacological intervention - diagn; cycle ergometer;