
primary studies - published RCT

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

Code: PM25010405

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

Randomized Trial

Participants

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

Interventions

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

Outcome measures

Peak work rate (WR_{peak}), HR_{peak}, peak minute ventilation (V_{Epeak}), and peak oxygen uptake (V_{O2peak}).

Main results

Patients with CF attained values for absolute and relative WR_{peak} during the SRT of 82% \pm 14% and 92% \pm 14% of predicted. Nutritional status and degree of airway obstruction did not influence SRT performance. Significantly higher values were attained for WR_{peak} during the SRT compared with those during the CPET (252 \pm 60 vs 174 \pm 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.

<http://dx.doi.org/10.1249/MSS.0000000000000440>

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;