

Other Reviews - - Other Review

## **ALPINE2: Efficacy and safety of 14-day vs 28-day inhaled aztreonam for Pa eradication in children with cystic fibrosis.**

**Code:** PM37455237

**Year:** 2024 **Date:** 11 Aug 2010

**Author:** Gilchrist FJ

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

Studies in English; RCT; subjects diagnosed as having CF; children or adolescents aged 6–18 years; exercise training intervention lasting at least 2 weeks. A control group had to be present.

### **List of included studies (4)**

Schneiderman-Walker 2000; Selvadurai 2002; Klijn 2004; Orenstein 2004

### **Participants**

4 RCT: Schneiderman-Walker et al. (control=36; aerobic=36); Selvadurai et al. (control=21; aerobic=21, resistance=22); Klijn et al. (control=9; anaerobic=11); Orenstein et al. (control=26; strength=30)

### **Interventions**

exercise intervention

### **Outcome measures**

pulmonary function (FEV1; FVC) and fitness outcomes (VO2; leg strength; peak power)

### **Main results**

gth in one or more intervention group ( $p \leq 0.03$ ); improvements lasted up to 12 months (one RCT). Findings for aerobic fitness were inconsistent (four RCTs). Exercise training was associated with significant improvement from baseline in one intervention group of one short-term RCT ( $p$

### **Authors' conclusions**

The review concluded that both aerobic exercise and strength training may benefit pulmonary function, aerobic fitness and strength among children with cystic fibrosis. Factors that limited the review included the small amount of evidence available and inconsistencies between studies. Therefore, the author's conclusions may require cautious interpretation. Both aerobic exercise and strength training may benefit pulmonary function, aerobic fitness and strength among children with cystic fibrosis. - The author stated that children with mild to severe cystic fibrosis may benefit from exercise training, especially in an in-patient setting. Both short-term and long-term strength programmes were effective, even in prepubertal children. - The author stated that research was needed into the most effective exercise programme for children with cystic fibrosis. Research needed to include which exercise modalities (or combinations) and what intensity, duration and dose of exercise were most effective. The author recommended research (RCTs included) of home-delivered exercise, strength training and anaerobic exercise that reported outcomes such as quality of life, need for chest physiotherapy, recurrent infection rate, nutritional status and physiological end points.

<http://dx.doi.org/10.1016/j.jcf.2023.06.008>

### **See also**

J Cyst Fibros. 2024 Jan;23(1):80-86. doi: 10.1016/j.jcf.2023.06.008. Epub 2023 Jul 15.

### **Keywords**

Adolescent; Child; exercise; Infant; non pharmacological intervention - devices OR physiotherapy; strength training;