

## EFFECTS OF AEROBIC TRAINING ON PERCEPTION OF EXERCISE RELATED DYSPNOEA IN ASTHMATIC BOYS

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**Rationale:** Recently we have shown that there is a difference in perception of exercise related dyspnoea (ERD) in asthmatic children, depending on whether or not they demonstrate post exercise bronchoconstriction. In this investigation boys with asthma underwent a physical training program to determine whether this normalised their perception of ERD. **Methods:** 12 boys with diagnosed asthma aged 9-12 years participated in an 8 week aerobic running physical conditioning program (1hr, 3x per week) and completed a 10 minute treadmill exercise protocol to achieve peak aerobic power, breathing dry air, before and after the training program. Breath by breath metabolic measurements available from an Oxycon® Record (Jaeger) were averaged over the last 30s of each minute. The boys judged "how hard is the work for your breathing" at the end of each minute during the test using the Children's Effort Rating Table scale (CERT). A control group of 10 aged matched boys also underwent the training and exercise testing. **Results:** While both experimental and control groups increased peak aerobic power and minute ventilation after training ( $p<0.05$ ), peak CERT score at the end of exercise was significantly decreased only in the asthmatic boys (pre:8.45 (1.37 (SD)  $n=12$ ,  $p<0.05$ ), post:7.09 (1.8 (SD);  $p<0.05$ )), while the perception of leg effort using the CERT was not different between groups either before or after training. Throughout exercise pre training CERT scores and the CERT/Dyspnoeic index ratio were higher in the asthmatic group than controls, but after training these scores were lower and the difference between the groups disappeared. **Conclusion:** Boys with asthma have an increased perception of the effort of breathing associated with exercise compared with controls, but this difference may be normalized by aerobic conditioning.

**Key Words:** asthma, boys, exercise, training, dyspnoea, perception

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