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**Title:** Ventilation parameters in asthmatic children after one week at 1400 meters altitude

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**Body:** Introduction and background Bronchial asthma prevalence is increasing. Many triggers are known but little about protective factors. Aims and objectives To find out whether 1400 meters altitude could modify ventilation parameters, NO (Nitric Oxide) concentration and clinical symptoms in 13 children after a week of uncontrolled physical activity. Methods Thirteen asthmatic children were evaluated at arrival and departure from a mountain resort for: FVC, FEV<sub>1</sub>, FEF 25-75 and exhaled NO concentration. Unscheduled physical activity were encouraged for eight hours daily. Results All the children showed improvement of FVC, FEV<sub>1</sub>, FEF 25-75.

Main Ventilation Parameters and NO concentration

	<b>FVC mean value % predicted</b>	<b>FEV1 mean value % predicted</b>	<b>FEF 25-75 mean value % predicted</b>	<b>NO concentration ppm</b>
<b>Arrival</b>	99	93	77	53
<b>Departure</b>	111	105	87	35
<b>p*</b>	0,0002	0,0002	0,0048	0,02

\* t test paired two tails

Conclusions: after a week permanence at 1400 meters resort all subjects showed an improvement in ventilation parameters, together with no episode of asthma exacerbations. This study suggests that physical activity in an healthy environment can be safe and feasible for asthmatic children.