During exercise, muscle bioenergetics are stressed while both the cardiovascular and pulmonary systems respond to support the increased gas exchange requirements. The CO_2 added to the blood by the tissues reaches the lungs in the form of an increased pulmonary blood flow and CO_2 content must be eliminated at the lungs to achieve arterial blood gas and pH homeostasis. Minute ventilation (VE) normally increases at a rate which maintains arterial pressure of CO_2 and pH at close-to-resting values during moderate exercise. Above the anaerobic threshold, metabolic acidosis occurs which further increases ventilation. The ventilatory increase is usually accomplished at low and moderate exercise work-rates, primarily by an increase in tidal volume and, to a lesser degree, by breathing frequency, which increases more significantly at work rates above the anaerobic threshold.[13] Our findings regarding minute ventilation confirm the prediction that participants with mild to moderate CP present alterations in ventilation under more demanding situations, as the CP group presented lower VEmax for the same VO_2peak. Moreover, the higher $VECO_2$ found below and above the anaerobic threshold, and the differences in tidal volume and breathing frequency, indicate a lower ventilatory efficiency in this group when compared with sedentary healthy individuals without disability. Unfortunately, we are not able to determine whether such changes are caused by a strength impairment of the respiratory muscles or lack of efficiency caused by agonist–antagonist co-contraction with increase of dead space ventilation.

The major limitation for this study was the difference in exercise protocol used in the two groups, as treadmill speed increased every 3 minutes for participants with CP whereas the cycle ergometer was increased every 60 seconds for the comparison group. This might have affected the rate of increase in heart rate and oxygen consumption, as well as the time taken to reach anaerobic threshold. This was due to a technical problem, as the volume analyzer was permanently damaged after the data collection of the CP group, before we could evaluate the comparison group. It was preferable to use individuals who had already performed their tests in the same analyzer even though this meant using a different protocol rather than changing the equipment used for evaluation, as the literature showed no difference in respiratory responses to maximal exercise between cycle and treadmill values (although VO_2max on the cycle varied from 89 to 95% of treadmill values).[13]

Further studies in this field should include the determination of inspiratory and expiratory pressure, arterial partial pressure of O_2 and CO_2, and oxyhaemoglobin saturation, which could provide information about respiratory muscle strength and distribution of alveolar ventilation with respect to lung perfusion.

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Errata

'Effect of intensive neurodevelopmental treatment in gross motor function of children with cerebral palsy'
Tsorlakis et al.
DMCN Vol. 46: 740–746

A line of text was omitted by us from this article. On p 744, para 5 the first sentence should read: 'The size of the statistically significant advantage for group B was an average of 2.36 points on GMFM-66 (mean ability estimate from about 62.17 to 64.54) and 2.63 percentage points on GMFM-88.'
We offer our sincere apologies for this error.

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'Parent and teacher report of pragmatic aspects of communication: use of the Children's Communication Checklist in a clinical setting'
Bishop and Baird
DMCN Vol. 43: 809–818

The authors would like to amend the Appendix of this article as items 22 and 23 are incorrectly listed under 'C: Inappropriate initiation' rather than 'D: Coherence'.
They offer their apologies for this error.

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