

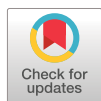


# Normative multiple-breath washout data in school-aged children corrected for sensor error

Anne-Christianne Kentgens<sup>1</sup>, Philipp Latzin<sup>1</sup>, Pinelopi Anagnostopoulou<sup>1,2,3</sup>, Renee Jensen<sup>4</sup>, Mirjam Stahl<sup>5,6,7,8,9</sup>, Alana Harper<sup>10</sup>, Sophie Yammine<sup>1</sup>, Rachel E. Foong<sup>10,11</sup>, Graham L. Hall<sup>10,11</sup>, Florian Singer<sup>1</sup>, Sanja Stanojevic<sup>4</sup>, Marcus A. Mall<sup>7,8,9</sup>, Felix Ratjen<sup>4</sup> and Kathryn A. Ramsey<sup>1,10,12</sup>

<sup>1</sup>Division of Paediatric Respiratory Medicine and Allergology, Department of Paediatrics, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland. <sup>2</sup>Institute of Anatomy, University of Bern, Bern, Switzerland. <sup>3</sup>Medical School, University of Cyprus, Nicosia, Cyprus. <sup>4</sup>Division of Respiratory Medicine, The Hospital for Sick Children and Translational Medicine, SickKids Research Institute, University of Toronto, Toronto, ON, Canada. <sup>5</sup>Department of Translational Pulmonology, Translational Lung Research Center Heidelberg (TLRC), German Center for Lung Research (DZL), University of Heidelberg, Heidelberg, Germany. <sup>6</sup>Division of Pediatric Pulmonology and Allergy and Cystic Fibrosis Center, Department of Pediatrics, University of Heidelberg, Heidelberg, Germany. <sup>7</sup>Department of Pediatric Respiratory Medicine, Immunology and Intensive Care Medicine, Charité-Universitätsmedizin Berlin, Berlin, Germany. <sup>8</sup>Berlin Institute of Health at Charité, Universitätsmedizin Berlin, Berlin, Germany. <sup>9</sup>German Center for Lung Research (DZL), associated partner, Berlin, Germany. <sup>10</sup>Wal-yan Respiratory Research Centre, Telethon Kids Institute, Perth, Australia. <sup>11</sup>School of Allied Health, Curtin University, Perth, Australia. <sup>12</sup>School of Child Health Research, University of Western Australia, Perth, Australia.

Corresponding author: Kathryn A. Ramsey ([kathryn.ramsey@telethonkids.org.au](mailto:kathryn.ramsey@telethonkids.org.au))



Shareable abstract (@ERSpublications)

**This study provides updated reference values for nitrogen multiple-breath washout outcomes in healthy, white, school-aged children in a commercially available device corrected for a known sensor error.** <https://bit.ly/3mzBoyR>

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*To the Editor:*

The nitrogen (N<sub>2</sub>) multiple-breath washout (MBW) technique is a lung function test used to assess ventilation distribution and lung volumes. The lung clearance index (LCI) is a marker of global ventilation inhomogeneity from the technique. It is calculated by the number of functional residual capacity (FRC) turnovers required to wash out resident N<sub>2</sub> from the lungs by breathing 100% oxygen (O<sub>2</sub>) [1]. We have previously published normative data for MBW outcomes in healthy, white, school-aged children measured using the commercially available Exhalyzer D MBW device (Eco Medics, Duernten, Switzerland) in the *European Respiratory Journal* [2]. Recently, WYLER *et al.* [3] identified an error in the cross-sensitivity correction for the O<sub>2</sub> and carbon dioxide gas sensors within the Exhalyzer D device. This error results in an overestimation of N<sub>2</sub> concentration and MBW outcomes, including LCI and FRC. Correction of this error and reanalysis of MBW data is possible and has now been implemented into an updated software version by the manufacturer (Spiroware version 3.3.1; Eco Medics). The aim of this study was to provide updated N<sub>2</sub>MBW normative data in healthy children collected on the Exhalyzer D device and analysed using Spiroware 3.3.1, and to report the differences in outcomes from the previous version Spiroware 3.2.1 [2].