

**ASSESSMENT OF CHOSEN RESPIRATORY PARAMETERS IN  
CHILDREN WHO ARE DEAF OR HARD OF HEARING**

**M. Fortuna<sup>1</sup>, A. Kolcz-Trzesicka<sup>1</sup>, G. Zurek<sup>2</sup>, I. Pirogowicz<sup>3</sup>, A. Zurek<sup>4</sup>**

<sup>1</sup>Institute of Physiotherapy, Medical University of Wrocław;

<sup>2</sup>Dept. of Biostructure, University School of Physical Education in Wrocław;

<sup>3</sup>Dept. of Hygiene, Medical University of Wrocław;

<sup>4</sup> Institute of Psychology, University of Wrocław, Poland

Disturbances in the respiratory system in children who are deaf or hard of hearing are widely discussed in the literature among physicians, speech therapist, psychologist, and physiologist. The studies show the existence of various dysfunctions which impact the learning of talk, especially in a group of people with mild defects in the organs which are responsible for speech. The aim of this study was to determine the effects of the lack of the ability to hear and articulate the physiological sounds on chosen respiratory parameters in deaf or hard hearing children using the sign language. Thirty boys, aged 6-10, from the Lower Silesia Special School for deaf children in Wrocław, Poland, participated in the research. The children were subject to regular physical exercise. The study was conducted using a BTL-08 Spiro Pro spirometer, and the values obtained were compared against the ECCS/ERS 1993 reference values. The study was based on the assessment of selected spirometric parameters: FVC, FEV1, and FEV1/FVC. We found that the parameters studied were in the lower range of reference data. The average results were the following: FVC 95%, FEV1 94%, and FEV1/FVC ratio 105% of predicted. We conclude that the lack of the ability to articulate sound results in a functional lung decline as reflected in the spirometric values.