## Bibliographic identification

HAVLIŠTOVÁ, Michaela. *Respiratory physiotherapy affects the quality of life of children with SMA - how, when and why?* Prague: Charles University, 2nd Faculty of Medicine, Department of rehabilitation and sport medicine, 2012. 81 p. Supervisor Doc. PaedDr. Libuše Smolíková, Ph. D.

## Annotation

This thesis deals with the influence respiratory function in children with spinal muscular atrophy (SMA). The theoretical part provides an overview of respiratory physiotherapy techniques that can be used in the care of the airways in people with SMA. The practical part deals with the question whether it is possible using the selected techniques of respiratory physiotherapy after six weeks of training to affect ventilatory parameters in children with SMA. The group of six probands with SMA I. - III. type in the range of the age from 3.5 to 12 years participated in this study. To objectively assess changes was performed spirometry efore the beginning of the therapy and after its conclusion.

The main therapy was daily training with inspiratory breath simulator CliniFlo. After the finishing of therapy there was a positive change in all measured parameters except for vital capacity (VC) and maximal expiratory flow at 75% of FVC (MEF75), where the values didn't change. Statistically significant change ($p < 0.05$) was confirmed only in the inspiratory reserve volume parameter (IRV). In the monitored sample of 6 probands was confirmed after six weeks of therapy, specifically the effect of selected techniques to improve lung function in patients with SMA.

## Keywords

spinal muscular atrophy, respiratory physiotherapy, lung functions, inspiratory and expiratory muscle training