

ASTHMA AND PHYSICAL ACTIVITY IN CHILDREN

E.G. Vlaski¹, K.B. Stavric², L.M. Seckova¹, R.D. Isjanovska³, M.S. Kimovska¹

¹Department of Pulmonology ²Department of Immunology, University Children's Hospital ³Institute of Epidemiology With Biostatistics And Medical Informatics Skopje Macedonia;
vlaskie@osi.net.mk

Aim: The study was aimed to assess the relation between regular physical activity and asthma symptoms in children.

Material and methods: The data of 3026 children 13/14 years old from 17 randomly chosen schools in Skopje obtained from ISAAC phase 3 questionnaires in 2002 were analyzed. The relationship between physical activity (FA) and following parameters: wheezing or asthma ever (W or A); current W (W12), number of attacks (NW12), attack disturbing sleep (WS12), attack limiting speech (WSP12), exercise-induced W (EW12) and nocturnal cough (NC12) was determined. Chi-square test, odds ratios and Mantel-Haenszel test were used for statistic analysis of data.

Results: FA never in 75.4%, FA 1-2 times weekly in 15%, FA ?3 times weekly in 7.9%, W in 18.4%, A in 1.7%, W12 in 8.8%, EW12 in 14.2% and NC12 in 16.5% of the children were found. The established results of severity of W12 were as follows: 1-3 NW12 in 7.14%, 4-12 NW12 in 1.12%, ?12 NW12 in 0.46%; WS12 ?1 weekly in 2.25%, WS12 ?1 weekly in 0.63% and WSP12 in 1.2% of the children. A significant association between FA and W, W12, NW12, WS12, WSP12, EW12 was established ($p=0.0000003$, $p=0.00065$, $p=0.0089$, $p=0.0098$, $p=0.000069$, $p=0.0000$ respectively). It was determined that FA increased the risk of EW12 only (OR=0.53 95%CI 0.38-0.74; MH=15.58 $p=0.0000789$). Between A and FA a significant association was not demonstrated at all.

Conclusion: Our results suggest that regular exercise might be protective against asthma symptoms, but not against asthma. It increases the risk of exercise-induced wheezing only.

