

EFFECTS OF ENVIRONMENTAL EXPOSURE ON FRACTIONAL EXHALED NITRIC OXIDE IN YOUTH.

K. Gojny¹, M. Drozd², K. Gomułka¹, A. Pirogowicz-Hirnle³, M. Sobieszczańska⁴

¹Department of Internal Medicine, Pneumology and Allergology, Wrocław Medical University, ul. Marii Skłodowskiej-Curie 66, 50-369 Wrocław, Poland, gojny.karina@gmail.com

² Sports Training Department, Academy of Physical Education in Katowice

³ Radiology and Diagnostic Imaging Department, Maria Skłodowska-Curie National Research Institute of Oncology in Gliwice

⁴Department and Clinic of Geriatrics, Wrocław Medical University

We already know that many factors may influence FeNO testing values – the majority of which we know is patient-related like genetics, sex, weight and height, diet, medication (for example anti-inflammatory drugs), exposition to tobacco smoke and atopy. Nevertheless we still know just a little about environment-related factors.

The aim of the study was to assess if there is an effect of environmental exposure to primary NO_x (mixtures of NO₂ and NO) but also to other pollutants on FeNO testing values.

85 children aged 10 - 15 (mean 12,5) took part in the study. There were 22 Cieszków (Lower Silesia) and 30 Katowice (Upper Silesia) citizens. FeNO was measured during summer twice on two different occasions (2 weeks apart). Additional questionnaire was filled in. Additionally, 30 children aged 10 - 15 (mean 12,64) were enrolled in subgroup, who was measured during autumn.

The results showed 4,5 ppm (1.), and 2,72 ppm (2.) as a mean value among children from Cieszków and 11,6 ppm (1.), and 13,92 ppm (2.) as a mean value among Katowice citizens. Additionally, the mean FeNO level in third group was 32,38 ppm.