

20% badanych występuje zespół drobnych oskrzeli, nie stanowi on jednak czynnika zagrożenia rozwoju jawnej obstrukcji w badanym okresie.

**Słowa kluczowe:** palenie tytoniu, obturacyjna choroba płuc

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**Smoking and the development of early stages of chronic obstructive pulmonary disease.**

**SUMMARY**

The paper aims to answer the question regarding early tobacco dependent early changes of results of lung activity tests, leading to the development of open obstruction of air flow. The studied population consisted of 1456 miners employed under the surface in the Bogdanka mine. Smokers (70%) dominated the group, while non-smokers constituted 1/3 of the group. The total resistance of the pulmonary tracks (Raw), the *torracial* capacity of gas (ITGV), the exhale flow at 75, 50 and 25% of vital capacity (FEF 75,50 and 25% VC) and peak exhale flow (PEF), first second pitch exhale volume, the remaining volume (RV) and total lung capacity were marked with the use of cabin constant volume bodyplethysmograph. The activity examinations were conducted before and after the test of inhaled provocation with the use of 10% metacholine. The above-described studies were conducted over 8 years. The group of smokers and non-smokers did not differ significantly regarding Raw, TLC, FVC, FEV1, FEV1%FVC, RV, FEF75, 50%VC and PEF. ITGV and its proportion to TLC were significantly higher among smokers as compared with non-smokers. Tests conducted after the provocation with metacholine reveal more differences. The Raw and RV appeared to be significantly higher among smokers as compared to non-smokers and FEV1, FEV1%FVC, FEF25%FVC appeared to be significantly lower. The inhaled metacholine provocation revealed therefore, the 'hidden' irregularities of lung activity studies. In the prospective study, the initially increased ITGV together with decreased FEF25%FVC significantly reduces the chance to maintain the correct values of FEV1 over the time. The early, nicotine dependent changes of the pulmonary system were discovered in the studied population of miners very frequently – 20% suffer the syndrome of small bronchial, which does not constitute however the risk factor regarding the development of open obstructive pulmonary disease in the observed period of time.

**Key words:** tobacco smoking, obstructive pulmonary disease

**PIŚMIENNICTWO**

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