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Title: Workers' respiratory health status in a medium-sized building yard

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Body: Aim. Construction industry is known as an industrial branch where cold and heat stress, various air dusts (with possible irritants and/or allergic respiratory effects) represents a real occupational hazard. The authors aimed to study the respiratory disorders with their different clinical aspects that can appear among builders. Material/Methods. A cross-sectional study was performed in a medium-sized construction enterprise. The exposed lot: 80 subjects (mean age 39.5 ± 6.7 years, mean length of service 20.1 ± 6.25 years) was compared with a matched-control group, both being never smokers. They were investigated by a complex protocol including clinical, biochemical, immunological and pulmonary functional tests. Results. Only 12% of exposed were healthy. Builders had more complaints concerning nose, throat, and lower airways disorders including chronic bronchitis (OR 12.4, 95% CI 2.95–110.5) compared to control group. Cough with phlegm was increasingly encountered in persons working for more than 10 years ($r=0.22$, $p<0.05$). Decrease of FEV1 and FEF25–75% (considered to be sensitive in detecting small airway obstructions) was strongly associated with occupational exposure (Yates $\chi^2 = 16.1$, $p<0.005$). Blood SOD activity correlated with serum lipoperoxides in the whole exposed group. Conclusions. The results of our study support the initial assumption that exposure to air dusts can induce a higher prevalence of respiratory symptoms. The builders had a significant decrement in small airway function and an increase in airway oxidative stress which correlated with length of service. We conclude that technical and organizational measures are necessary to reduce occupational exposure of construction workers to respiratory dust.