

# Respiratory findings in art and medical students. Effects of the art environment

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## KEY WORDS

Art students; medical students; respiratory symptoms; lung function

## SUMMARY

**Background:** Art students are exposed to many noxious agents during their training, in contrast to medical students, who are not exposed to known environmental pollutants. **Objectives:** In order to investigate the potential effects of toxic agents in the art students' environment, we studied respiratory findings in a cohort of 117 art students and 128 medical students, matched for age, sex and smoking. **Methods:** Acute and chronic respiratory symptoms were evaluated by modifying the British Medical Research Council questionnaire. Lung function studies were performed with a spirometer (Jaeger, Germany) measuring maximum expiratory flow-volume (MEFV) curves. On these curves we calculated the forced vital capacity (FVC), one second forced expiratory volume (FEV1) and the maximal expiratory flow at 50% and the last 25% of the FVC (FEF50, FEF25). **Results:** Significantly higher prevalences of most of the chronic respiratory symptoms were recorded in art students compared to medical students ( $p < 0.05$ ). Art students who were smokers had significantly higher prevalences of many of the chronic respiratory symptoms than nonsmoking art students. Among medical students these differences were not statistically significant (NS). High prevalences of acute symptoms related to the study environment were recorded for art students. Odds ratios in male and female art students were significant for chronic cough, chronic phlegm and chronic bronchitis for the risk factor of smoking. Significantly decreased lung function values compared to predicted values were recorded mostly for FEF50 and FEF25 in male and female art students. Smoking and non-smoking art students had similar reductions of lung function. Lung function data in medical students were within predicted values. **Conclusions:** Our data indicate that art students may be at risk of developing chronic respiratory symptoms and lung function changes as a result of their environmental exposure and their smoking habits.