

Studio longitudinale della funzionalità polmonare in esposti ad alti livelli di polvere di legno

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KEY WORDS

Wood dust; longitudinal pulmonary function tests; FEV₁ loss

SUMMARY

«*Longitudinal changes of pulmonary function in workers with high wood dust exposure levels*». **Background:** *It is well known that wood dust exposure can induce sino-nasal cancers, rhinitis and asthma; induction of chronic bronchial obstruction, pulmonary fibrosis and lung cancer are also suggested, but data are often inconclusive and in disagreement.* **Objectives:** *The study evaluated the decrease in lung function in a group of 31 non-smokers exposed to high levels of wood dust (>5 mg/m³ also) and in 2 non-smoking control groups with comparable lung function tests at first examination: 39 mechanical workers without respiratory hazards (group 1) and 30 forestry workers (group 2).* **Methods:** *Assessment of lung function was repeated at least 5 times during 11.2±2.4 years for wood workers and 12.3±4.2 years for group 1 (n.s.) and 15.0±2.6 years for group 2 (p<0.0005). Linear regression for annual loss of VC and FEV₁ was calculated from observed data for each subject.* **Results:** *No significant differences were observed in VC loss or FEV₁ loss between woodworkers and control group1 (20.67±16.9 vs 19.0±23.2 and 31.37±22.3 vs 36.2±22.4 ml/year respectively), while control group 2 showed an accelerated (p<0.005) VC and FEV₁ loss (32.8±22.1 and 46.6±21.2 ml/years respectively). In conclusion, the study did not show any alterations in the longitudinal decrease in pulmonary function due to high wood dust exposure levels, perhaps due to the poor inhalability of wood particles that are mostly trapped in the nose; further studies are needed to investigate chronic effects of wood dust exposure on development of Chronic Obstructive Pulmonary Disease, pulmonary fibrosis and also lung cancer.*