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**Title:** To study the effect of chronic inhalation of street dust on pulmonary functions in street cleaners

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**Body:** **PURPOSE:** Street cleaners who sweep streets manually are exposed to different types of dusts, which have deleterious effect on pulmonary functions. We carried out this study to know the status of pulmonary functions in these occupationally exposed persons. **METHODS:** One hundred ten street cleaners, 80 non-smokers and 30 smokers, who were cleaning the streets for more than 5 years were included in this study. Sixty controls, 30 smokers and 30 non smokers, were also included for comparison. Their lung functions FVC, FEV<sub>1</sub>, PEF<sub>R</sub> and FEV<sub>25-75</sub> were assessed by spirometry. Statistical analysis of data was done according to unpaired 't' test using SPSS version 16.0 software. **RESULTS:** The mean FVC, FEV<sub>1</sub>, PEF<sub>R</sub> and FEV<sub>25-75</sub> were 85.87±15.16%, 63.82±14.79%, 65.65±16.22% and 53.31±20.20% respectively in nonsmoker cleaners, while in smoker cleaners these were 85.0±15.96%, 59.96±17.35%, 60.90±16.91% and 51.78±19.31% respectively. FVC was not found to be affected in these persons while other parameters were significantly decreased as compared to those in controls. In controls these were 88.66±12.92%, 88.50±18.80%, 90.16±14.30% and 84.00±18.20% respectively in nonsmokers and 84.25±11.2%, 78.42±16.80%, 60.62±18.22% and 62.30±16.50% respectively in smokers. **CONCLUSIONS:** Obstructive pattern was observed in both smoker and non smoker cleaners. Smoker cleaners had significantly higher obstruction than smoker controls. Thus street dust was found to act synergistically with smoking and further deteriorated the lung functions. **CLINICAL IMPLICATIONS:** Street dust acts synergistically with smoking and further aggravates obstruction in airways so these persons should take proper preventive measures.