

# **AIR POLLUTION AND CHILDRENS' RESPIRATORY MORBIDITY IN THE TATA AREA, HUNGARY**

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## **SUMMARY**

Air pollution represents one of the most important environmental health hazards in Hungary. Irritant gases, like SO<sub>2</sub> and NO<sub>2</sub> levels exceed national and international standards in many settlements. Tata, a small town, situated in a basin, is one of the most polluted areas in Hungary.

Longitudinal and cross-sectional studies have been conducted in children in the winter period of 1993/1994, with respect to SO<sub>2</sub> and NO<sub>2</sub> concentration. Average SO<sub>2</sub> levels exceeded the national standard levels and daily peaks as high as 450 µg/m were recorded. Excessive NO<sub>2</sub> levels were also found but they were not as high as those of SO<sub>2</sub>.

Acute respiratory morbidity, based on a uniform protocol was recorded daily and evaluated on a daily and weekly basis. A statistically significant correlation with SO<sub>2</sub> levels was observed in relation to the frequency of acute daily respiratory morbidity.

Other health parameters, like pulmonary function, haematology and sensory performance were also tested. Although no statistically significant correlations were observed, the tendency in all parameters demonstrated impairment, in relation with ambient air pollution. Smoking history of the family did not alter significantly the pulmonary functions of other parameters.

*Key words:* air pollution, children, respiratory morbidity, irritant gases

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