HEALTH INVESTIGATIONS IN SEWAGE WORKERS

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Abstract

A cohort study has been performed on 29 workers in 6 sewage treatment plants and unexposed controls. The workers were interviewed using a modified organic dust questionnaire and airway responsiveness was determined using a methacholine challenge test. The levels of airborne endotoxin and water soluble as well as water insoluble (1→3)-β-D-glucan was determined at the various work sites. The results show that work related tiredness (41%) was the most prominent symptom present. In addition, a higher prevalence of headache (34%), diarrhea and joint pains (31%), throat irritation (24%), and cough with phlegm (21%), was reported by the workers. Airway responsiveness was increased in the most heavily exposed groups. Endotoxin levels varied between 0.8 and 24.3 µg/m3 but no significant levels of (1→3)-β-D-glucan were detected. The results suggest that airborne sewage water has the capacity to induce inflammation and that a major target site is the gastrointestinal tract, probably because of differences in aerosol particle size.

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