

# The Working Environment and Workers' Health in Four Large Office Buildings

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## Abstract

We conducted a 1-year epidemiologic study in Boston, Massachusetts, beginning May 1997, to examine the associations between environmental factors and office workers' health. We recruited 98 subjects (81 females and 17 males) in 21 offices in four office buildings. We conducted environmental sampling every 6 weeks and concurrently administered detailed questionnaires to collect information on work-related symptoms, psychosocial factors, and perceptions of the office environments. In multivariate analyses, eye irritation was positively correlated with floor dust [odds ratio (OR) = 1.46; 95% confidence intervals (CI), 1.14-1.86] and reported lack of office cleanliness (OR = 1.52; 95% CI, 1.11-2.08). Nonspecific symptoms were positively associated with unidentified chair fungi (OR = 1.87; 95% CI, 1.11-3.15) and several self-reported conditions, including a history of asthma (OR = 3.15; 95% CI, 1.26-7.87), more people in offices (OR = 1.71; 95% CI, 1.16-2.51), lack of office cleanliness (OR = 2.85; 95% CI, 1.72-4.73), and low job satisfaction (OR = 1.72; 95% CI, 1.06-2.81). Upper respiratory symptoms were positively associated with total fungal concentrations recovered from chair dust (OR = 1.35; 95% CI, 1.07-1.70) and the following self-reported conditions: more people in offices (OR = 1.45; 95% CI, 1.01-2.08), lack of office cleanliness (OR = 1.62; 95% CI, 1.15-2.30), and jobs frequently requiring hard work (OR = 1.43; 95% CI, 1.05-1.95). This study emphasizes the importance of maintaining a clean, uncrowded workspace and the importance of chair fungi as a correlate for health effects.