

first employed after 1950, when oil began to replace wood as a main fuel for heating in Sweden.

**Methods** Male members of the Swedish Chimney sweeps' trade union from 1981 to 2006 were identified and added to an existing cohort of those employed 1918–1980. The total cohort (n=6374) was linked to nationwide registers of Causes of Deaths and the Total Population and followed for mortality from 1952 through 2006. Standardised mortality ratios (SMRs) were estimated using the Swedish male population as reference. Smoking and alcohol habits from a survey of over 1000 chimney sweeps active in 1972 were compared to the national average.

**Results** Total mortality was significantly increased, 1841 observed deaths gave an SMR of 1.29 (95% CI 1.24 to 1.36). Cause-specific mortality was significantly increased for ischemic heart disease, non-malignant respiratory diseases, alcoholism, liver cirrhosis, external causes and suicides (an excess cancer incidence is reported separately). Duration of employment, used as a proxy for cumulative dose, showed no consistent evidence of dose-response associations. Mortality among those first employed after 1950 was similar to that of the entire cohort.

**Conclusions** Chimney sweeps showed an excess mortality from several causes of deaths. They are exposed to high levels of toxic substances in the occupation but there were also indications of excess alcohol and smoking habits.

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#### MORTALITY AMONG SWEDISH CHIMNEY SWEEPS 1952–2006

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**Objectives** Chimney sweeps are occupationally exposed to high levels of soot and polycyclic aromatic hydrocarbons. We extended a cohort study of Swedish chimney sweeps and prolonged follow-up in order to increase power and study those