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## WORK STRESS AND DEMENTIA

Dementia seems to be positively associated with living alone, having no social ties, never having married, and psychosocial and physical inactivity decades before diagnosis. One previous case-control study suggests that social relations and activity in mid-life may protect against the later onset of Alzheimer's disease. Seidler *et al* (p. 962) have taken the hypothesis one stage further by investigating whether occupational psychosocial factors play a part in the aetiology of dementia. Some 229 cases of dementia were recruited from clinics around Frankfurt-on-Main and compared with population and clinic controls in normal mental health. A structured interview was used to establish work history, and jobs were classified using a job exposure matrix for their demand and control opportunities. Decreased odds ratios were found for jobs classified as being challenging or involving high social demands, whereas a higher odds ratio was found for jobs with greater potential for mistakes.

The study provides some evidence that psychosocial factors play an aetiological role in dementia, but alternatively, job choices in the preclinical phase could be influenced by latent disease. The findings are likely to stimulate further targeted research.



## AIR POLLUTION CASE CROSSOVER ANALYSIS

The case crossover design provides an attractive means of investigating the acute effects of an exposure. Each person who experiences an event is matched with their self at another non-event period with respect to exposures of interest. The approach has been used successfully to estimate the risk of myocardial infarction after sexual intercourse and that of accident risk while driving and using a mobile phone. In this edition, Schwartz (p. 956) applies the design to a 14 city US study of air pollution. Exposures to PM<sub>10</sub> around the time of death were compared with exposures on nearby survival days. Matching in this way enabled control for confounding by slowly changing covariates such as age and smoking. Matching was also employed to control for temperature. A 10 µ/m<sup>3</sup> increase in PM<sub>10</sub> was associated with a 0.36% increase in daily deaths from internal causes. The findings changed little when control days were chosen by alternative criteria and were similar to those obtained by Poisson regression modelling. Schwartz discusses the attractions of using the case crossover approach and finds much to commend it. In an accompanying editorial, Checkoway (p. 953) offers further insights.



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## AUSTRALIAN VETERANS OF THE GULF WAR

More than 10 years after the 1991 Gulf war, veterans are still reporting many categories of symptom more often than matched controls. This is the main finding of a new cross-sectional study of 1456 Australian veterans (p. 1006). Symptom reporting was related in a dose dependent way to several exposures, including multiple immunisations, pyridostigmine bromide tablets, antibiological warfare tablets, pesticides, and insect repellents. Post-traumatic stress disorder was also more common in the veterans. Kelsall *et al* argue that the findings, which are supported by medical assessments, are not due to over-reporting or selective participation.

In a companion paper (p. 1014), they explore the clustering of symptoms. A three-factor solution, labelled "psycho-physiological distress", "somatic distress", and "arthro-neuromuscular distress", is derived, similar to that for controls. Although no unique pattern was found, the degree of expression of factors was greater among the veterans. This appears consistent with the higher prevalence of symptoms found in their first study and in other investigations of Gulf War Veterans.



## HEART ATTACKS IN SWEDISH PROFESSIONAL DRIVERS

Professional drivers have an increased risk of myocardial infarction (MI), but for reasons that aren't fully clear. Contributory factors may include unhealthy smoking and alcohol intake, obesity, inactivity, and hypertension, as well as psychosocial stressors and road transport pollution. Bigert *et al* (p. 987) have investigated time trends in the incidence of MI among professional drivers from Stockholm County during 1977–96. Coronary events among men aged 40–69 years were identified from hospital discharge records and death certificates. In a nested case-control comparison, more than 20 000 cases (1183 professional drivers) were compared with 136 000 controls (6072 drivers). In the first decade of follow up, lorry, bus, and taxi drivers all had a higher incidence of MI than other manual workers. Later on, their risk of MI declined more steeply than for the general Swedish population. By the second decade taxi and lorry drivers had similar risks to other manual workers, but the risk among bus drivers was still increased and this group remains a target for preventive efforts.