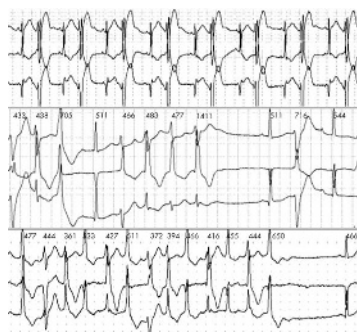


Work in brief

Keith Palmer, Editor



AIR POLLUTION AND VENTRICULAR ARRHYTHMIAS

Episodes of particulate air pollution have been associated with increased cardiovascular mortality and morbidity, while a number of studies indicate short term changes in heart rate variability and a liability to ventricular arrhythmias. Rich *et al*¹ have assessed the last of these effects among a cohort of patients with implantable cardioverter defibrillators. These devices, which are designed to detect and treat life-threatening ventricular arrhythmias, offer a research opportunity to monitor heart rhythm during pollution episodes. A case-crossover design was used to compare periods in which ventricular arrhythmias occurred with control periods matched on week day, hour of day, and calendar month, with adjustment for various climatic factors. The authors estimate a significant 24% increase in risk for each 5 ppb increase in mean sulphur dioxide, and non-significant rises in relation to nitrogen dioxide and elemental carbon in the previous 24 hours. Their findings are consistent with earlier observations, even though the constituent pollutants are likely to have varied between studies. An accompanying editorial discusses the issues raised.²

NOISE AND CHILDREN'S BLOOD PRESSURE

Noise is all around us—on the road, in the air, and in places of work, entertainment, and schooling. Some of its effects, such as annoyance, sleep disturbance, and hearing loss, are obvious or well known, but others such as physiological effects on blood pressure (BP) and pathological effects on risk of heart disease are current focuses of investigation. Van Kempen *et al*³ describe the effect of noise on children's BP. Participants (children aged 9–11 years) were drawn from 62 primary schools located near European airports. Aircraft noise exposure was related to a statistically significant increase in BP in the time spent at home, both during the day and at night-time. However, as in earlier research there were some mixed observations: differences were found between Dutch and British samples, and a surprising negative relation between BP and estimates of road traffic noise. Further research is needed to resolve lingering uncertainties, and to develop the evidence base used to frame regulatory policy on ambient noise levels.

CHOOSING WHEN YOU WORK

Workers who feel they have control over their working hours may be better placed to cope with work demands, maintain a healthy work-life balance, and avoid occupational stress. This in turn could lead to lower levels of sickness absenteeism. To investigate, Ala-Mursula *et al*⁴ conducted a cohort study involving 25 703 public sector employees from 10 towns in Finland. Data were collected on working hours and self-report of control over working hours in 2001–02. Responses were linked with registered data on the number of self-certified (<3 days) and medically certified (>3 days) sickness absences until the end of 2003. Low control over daily work time predicted medically certified absences in both sexes and self-certified absences in men. The authors suggest that control over work hours could protect health by helping workers to manage their occupational and domestic responsibilities more effectively.

ELSEWHERE IN THE JOURNAL

Also in this month's Journal are a systematic review and meta-analysis of occupational exposure to trichloroethylene and risk of non-Hodgkin's lymphoma;⁵ and two surveys of women working during pregnancy—one on solvents and birth defects,⁶ and a topical report on mothers' occupation and the development of atopic disease in their children.⁷

- 1 Rich DQ, Kim MH, Turner JR, *et al*. Association of ventricular arrhythmias detected by implantable cardioverter defibrillator and ambient air pollutants in the St Louis, Missouri metropolitan area. *Occup Environ Med* 2006;**63**:591–6.
- 2 Künzli N, Forastiere F. Air pollution and arrhythmia: the case is not over. *Occup Environ Med* 2006;**63**:577–8.
- 3 van Kempen E, Van Kamp I, Fischer P, *et al*. Noise exposure and children's blood pressure and heart rate: the RANCH project. *Occup Environ Med* 2006;**63**:632–9.
- 4 Ala-Mursula L, Vahtera J, Kouvonen A, *et al*. Long hours in paid and domestic work and subsequent sickness absence: does control over daily working hours matter? *Occup Environ Med* 2006;**63**:608–16.
- 5 Mandel JH, Kelsh MA, Mink PJ, *et al*. Occupational trichloroethylene exposure and non-Hodgkin's lymphoma: a meta-analysis and review. *Occup Environ Med* 2006;**63**:597–607.
- 6 Chevrier C, Dananché B, Bahuau M, *et al*. Occupational exposure to organic solvent mixtures during pregnancy and the risk of non-syndromic oral clefts. *Occup Environ Med* 2006;**63**:617–23.
- 7 Magnusson LL, Wennborg H, Bonde JP, *et al*. Wheezing, asthma, hay fever, and atopic eczema in relation to maternal occupations in pregnancy. *Occup Environ Med* 2006;**63**:640–6.