

Work in brief



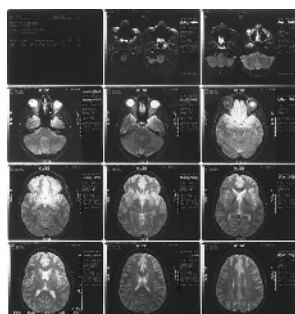
Keith Palmer, Editor

ROAD NOISE AND BLOOD PRESSURE



The relationship between road traffic noise and blood pressure is controversial. Theory has it that stress, arising from persistent exposure to vehicle noise, could cause permanent vascular changes leading to established hypertension, but the evidence supporting this hypothesis is fairly weak. Bluhm *et al*¹ report new findings in a population sample of adults from a Swedish municipality near Stockholm. The diagnosis of hypertension was established by postal questionnaire, while the outdoor equivalent traffic noise level (Leq 24 h) at the residence of each respondent was determined using noise-dispersion models and manual noise assessments. The odds of hypertension increased almost 1.4 fold per 5 A-weighted decibels of increasing noise exposure, associations being stronger in women and in residents living at their current address for more than 10 years. Other associations were found with having a bedroom window facing the street (odds ratio 2.47) and not having triple glazed windows. The findings offer several pointers to an adverse impact on health.

MAGNETIC FIELDS AND DEMENTIA



Several case-control studies have highlighted a potential association between dementia and exposure to low-frequency magnetic fields, and a pathophysiological mechanism has been hypothesised involving intracellular calcium ions and soluble amyloid β production. However, epidemiological findings have not been wholly consistent. To clarify the position, Seidler *et al*² recruited 195 patients with dementia from 23 general practices in Germany as well as 122 population controls and 107 other patients. An administered interview with the next of kin was used to reconstruct lifetime occupational histories and exposures to low-frequency magnetic fields were estimated by expert rating. Their findings were broadly reassuring; no significant associations were found with various magnetic field exposure metrics. On the other hand, an increased risk of dementia was found for blue-collar occupations in general, a finding that could generate further precautionary research.

HEAT- AND COLD-RELATED DEATHS



Extremes of temperature are bad for health. The bitterly cold winter of 2005/ 2006 saw many deaths in central and eastern Europe, as did the dramatic heat wave in western Europe in 2003. Hajat *et al*³ have investigated sub-groups of the population at greater risk, to assist planning of national public health measures. Their study, an ecological time series of daily mortality for England and Wales from 1993 to 2003, indicates a 3% increase in mortality rates per degree rise over the 95th percentile of regional temperature distribution, and a 6% increase per degree fall below the 5th percentile. The impact was observed mainly among elderly people from nursing and care homes, and this group of the population is seen as a specific target for intervention.

DISINFECTANTS IN THE FOOD INDUSTRY



In the food industry, hygiene is all. Stringent cleaning standards dictate the application of a range of cleaning agents (chloramines, formaldehyde, glutaraldehyde, quaternary ammonium compounds) with irritant and sensitising potential. Massin *et al*⁴ measured exposures to nitrogen trichloride and aldehydes among cattle, pig, fowl and ovine slaughterhouse workers engaged in cleaning and disinfection operations, and have related these exposures to respiratory symptoms, indices of lung function and bronchial hyper-responsiveness (BHR) to methylcholine. In total, 277 air samples were taken across 17 food industry plants. A dose-response relationship was found between cumulative exposure and irritation of the eyes, nose and throat, but fortunately no relation was found to BHR.

References

- 1 Bluhm GL, Berglund N, Nordling E, *et al*. Road traffic noise and hypertension. *Occup Environ Med* 2007;**64**:122–6.
- 2 Seidler A, Geller P, Nienhaus A, *et al*. Occupational exposure to low frequency magnetic fields and dementia: a case-control study. *Occup Environ Med* 2007;**64**:108–14.
- 3 Hajat S, Kovats RS, Lachowycz K. Heat-related and cold-related deaths in England and Wales: who is at risk? *Occup Environ Med* 2007;**64**:93–100.
- 4 Massin N, Hecht G, Ambroise D, *et al*. Respiratory symptoms and bronchial responsiveness among cleaning and disinfecting workers of the food industry. *Occup Environ Med* 2007;**64**:75–81.