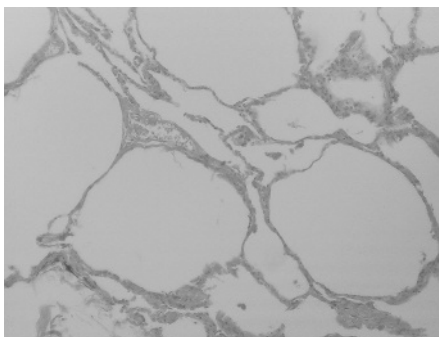


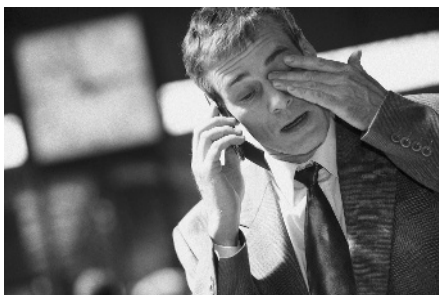
# Work in brief

Keith Palmer, Editor



## NUISANCE DUST AND THE ROLE OF SURFACE AREA

So called “nuisance” dusts (low-solubility, low-toxicity particles) are regulated in occupational settings on the basis of their mass. However, ultrafine nanoparticles may be more toxic than equivalent mass larger particles. To investigate whether surface area is a more relevant metric than mass, Monteiller *et al* conducted an in vitro experiment.<sup>1</sup> Human alveolar epithelial type II cells were treated with various sizes of titanium dioxide or carbon black particles and certain markers of pro-inflammatory response were measured. In all assays, nanoparticles produced a much stronger response than same-mass doses of fine particles. Exposure-response relationships were observed, consistent with the hypothesis that the high surface area of nanoparticles is an important factor driving inflammatory potential.



## CELL PHONE USE AND RISK OF BRAIN TUMOURS

Concerns about the possible effects of cell phone use have prompted numerous investigations, notably those evaluating risk of brain tumours. Hardell *et al* draw current evidence in this area together and summarise the findings of two cohort and 16 case-control studies involving mobile phone use, including a number of studies with a reasonable length of follow-up.<sup>2</sup> They report “a consistent pattern of increased risk for acoustic neuroma and glioma”. In meta-analysis, the odds of ipsilateral phone use were increased 2.4- and 2.0-fold respectively, assuming a latency period of  $\geq 10$  years. Several much-discussed issues limit the evidence base (typically including small numbers, heterogeneity of outcome, retrospective self-reporting of exposure and the need for long follow-up periods to evaluate longer-term health risks), but in reporting these findings the authors call for a precautionary stance and stress the need for continuing long-term research into use of mobile phones.



## DRINKING AT WORK: ROLE OF WORKPLACE NORMS AND CULTURE

Workplace attitudes to alcohol are likely to influence drinking behaviour, both at work and outside it. This is the message of a paper by Barrientos-Gutierrez *et al*, which examines the impact of workgroup membership on drinking patterns.<sup>3</sup> The authors studied 5338 workers from 137 supervisor workgroups in 16 work sites. Multivariate analysis suggested that members belonging to workgroups with an abstemious culture (tending to discourage drinking) were substantially more likely to be teetotal at work and also substantially less likely to be heavy or frequent drinkers overall. The authors consider that public efforts at reducing drink-related problems, illnesses and injuries, could usefully incorporate social interventions in the workplace.



## ELSEWHERE IN THE JOURNAL

This month's issue of the Journal also includes a simple diagnostic model that can be used to rule out silicosis in the health surveillance of construction workers,<sup>4</sup> a novel investigation of a surfactant blend agent used in polymer production<sup>5</sup> and an educational review by Checkoway *et al*<sup>6</sup> on a topic of importance in occupational epidemiology—how to tailor the choice of study design to the research objectives in question.

- 1 Monteiller C, Tran L, MacNee W, *et al*. The pro-inflammatory effects of low-toxicity low-solubility particles, nanoparticles and fine particles, on epithelial cells in vitro: the role of surface area. *Occup Environ Med* 2007;**64**:609–15.
- 2 Hardell L, Carlberg M, Söderqvist F, *et al*. Long-term use of cellular phones and brain tumours: increased risk associated with use for  $\geq 10$  years. *Occup Environ Med* 2007;**64**:626–32.
- 3 Barrientos-Gutierrez T, Gimeno D, Mangione TW, *et al*. Drinking social norms and drinking behaviours: a multilevel analysis of 137 workgroups in 16 worksites. *Occup Environ Med* 2007;**64**:602–8.
- 4 Suarathana E, Moons KGM, Heederik D, *et al*. A simple diagnostic model for ruling out pneumoconiosis among construction workers. *Occup Environ Med* 2007;**64**:595–601.
- 5 Mundt DJ, Mundt KA, Luippold RS, *et al*. Clinical epidemiological study of employees exposed to surfactant blend containing perfluorononanoic acid. *Occup Environ Med* 2007;**64**:589–94.
- 6 Checkoway H, Pearce N, Kriebel D. Selecting appropriate study designs to address specific research questions in occupational epidemiology. *Occup Environ Med* 2007;**64**:633–8.