

Ozone, temperature and cardiovascular mortality

Increasingly, as the harmful effects of climate extremes and air pollution have become delineated, researchers have turned their focus to the interaction of these hazards. In this issue Ren *et al*, for example, have investigated how ozone modifies the relation between temperature and cardiovascular mortality using data from the US National Morbidity, Mortality, and Air Pollution Study.¹ Time series regression models were constructed for 95 large US communities during the summers of 1987–2000. They found a positive interaction, such that for a 10°C increase in temperature, cardiovascular mortality was more than seven times higher in the communities with the highest ozone concentrations than in those with the lowest. The mechanism of interaction remains unclear but its impact needs to be considered in evaluating control policies on climate change and air pollution.



Hip and knee osteoarthritis in builders

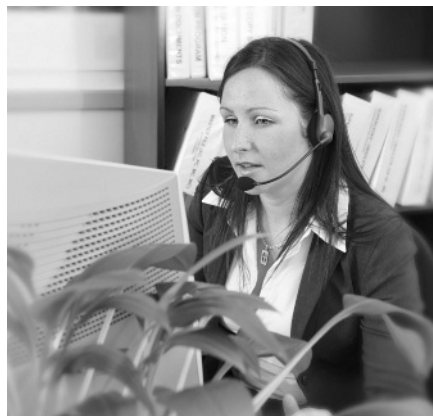
Evidence is accumulating that heavy physical loading increases the risk of osteoarthritis in the hip and the knee. Järholm *et al* have further investigated the relationship, with special focus on its relative impact at different anatomical sites.² A cohort of over 200 000 Swedish male construction workers



were followed between 1987 and 1998, with incident cases of surgically treated osteoarthritis identified by linkage with hospital discharge records. For knee osteoarthritis, incidence rates adjusted for age and body mass index were significantly elevated in floor layers, asphalt workers, plumbers, bricklayers and a number of other construction trades, with estimated attributable fractions as high as 79%, but the pattern was weaker for hip osteoarthritis. The authors estimate that 50% of cases of severe knee osteoarthritis may be preventable through attention to occupational risk factors.

Intervening on sickness absence

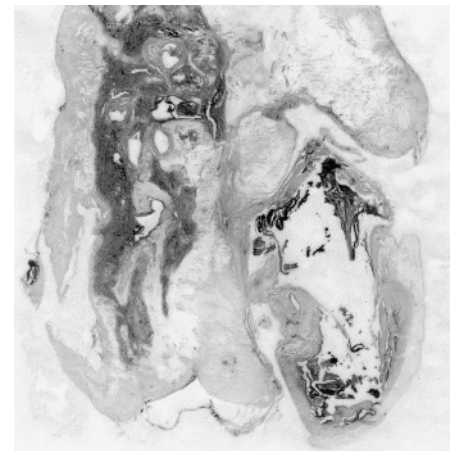
The prevention of sickness absence is a growing priority, especially in westernised countries with aging populations. Relatively few randomised controlled trials have been conducted to evaluate the effectiveness and cost-effectiveness of occupational health interventions. However, Taimela *et al* report two randomised controlled trials in this issue, together with an economic evaluation.^{3,4} Following initial screening of some 1300 construction, service and maintenance workers, those classed as being at intermediate and high risk were entered into trials that involved personal consultation and specialist referral as necessary (high risk group) or telephone counselling (intermediate risk group). Intervention in the high-risk group was associated with an average of 11 fewer days of sickness absence over the next 12 months but telephone advice in the intermediate group did not have an impact. Mean direct healthcare costs were also lower in the high risk intervention group than in usual care controls (€974 (£724/\$1411) vs €1049



(£779/\$1519) at 2004 prices) and the authors conclude that this was a cost-effective use of healthcare resources.

Elsewhere in the Journal

This month's issue of the Journal also includes a trend analysis of male mesothelioma in Spain with projections to 2016,⁵ a survey of organic solvent exposure and hearing loss⁶ and a study of occupational lung cancer risk across several industrial sectors in the Netherlands.⁷



References

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