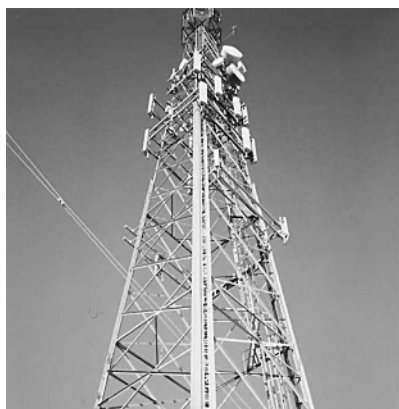




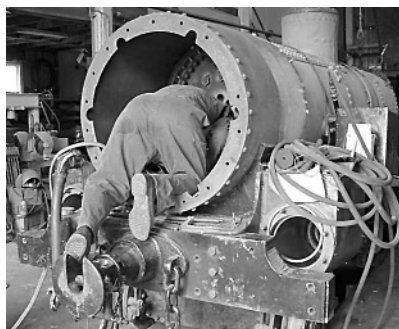
CHILDHOOD LEUKAEMIA AND ENVIRONMENTAL EXPOSURE TO HYDROCARBONS

Despite evidence linking acute leukaemia in adults to occupational and environmental exposures, including benzene, few risk factors have been identified for acute leukaemia in children. In this study from France (p. 773) Steffen and colleagues used data from interviews with parents to examine associations of possible environmental sources of hydrocarbons with acute childhood leukaemia among 280 cases and 285 controls. They report that children living near petrol stations or automobile repair shops had a substantially higher risk of acute leukaemia (odds ratio 4.0, 95% confidence interval 1.5 to 10.3), which increased with the length of residence near these facilities. There was no association with living near other types of business that might use hydrocarbons, living near high traffic roads, or with mothers' occupations. Although the authors suggest that confirmation is needed, these findings are of interest because auto refuelling is the principal source of public exposure to benzene.



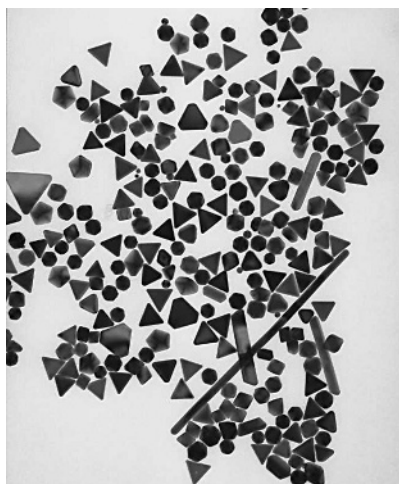
GEOGRAPHICAL VARIATION IN POWER OUTPUT FROM MOBILE TELEPHONES

Epidemiological studies exploring the possible health hazards of mobile telephones have used several indicators of exposure to radiofrequency (RF) fields, but these have not included the phones' quantitative power output, which can vary widely depending on the user's location and characteristics of the network. Lönn and colleagues (p. 769) studied records of all mobile calls during one week in four geographical areas in Sweden and observed that power output was markedly higher in a rural area, where telephone base stations were sparse, than in urban or suburban areas. The variation in output by time and day of week was less pronounced. The authors suggest that assessment of exposure to RF fields from mobile phones could be improved by incorporating information on where the phones are used.



MORTALITY AMONG PIPE TRADES WORKERS

Although most new uses of asbestos in industrialised countries were curtailed in the 1970s, workers continue to be exposed to asbestos already in place. Finkelstein and Verma (p. 736) suggest that the results of their study of mortality among 25 285 members of a Canadian pipe trades union (including plumbers, pipefitters, and others) followed from 1960 to 1999 provide evidence of a persistent hazard from asbestos. They report that lung cancer mortality was significantly higher than expected for all trades during the entire period (SMR 1.26), and increased risk was observed among workers who joined the union in the 1970s or later.



PHYSICAL WORK DEMANDS, GENDER, AND DECLINING OCCUPATIONAL INJURY RATES

Occupational injury rates are on the decline in most industrialised countries, but the reasons for this trend are not fully understood. Smith and Mustard (p. 750) used workers' compensation data from Ontario, Canada to examine relationships among women's participation in the labour force, physical work demands, and changes in injury rates from 1990 to 2000. They report that injury rates decreased for both women and men and for manual, non-manual, and mixed occupations, with the largest decreases—almost 50%—for men in manual jobs. In other analyses, the authors estimate the number of injuries expected among women and men if each gender had had the same job holding patterns as the other. According to these projections, the number of injuries among women would be nearly twice as large as actually observed if they did the same work as men. From these data, the authors suggest that male-female differences in injury rates are due, at least in part, to division of labour along gender lines.

TIME FOR NANOTOXICOLOGY?

Although industrial and commercial use of nanoparticles is not entirely new, the current "nanotechnology revolution" is driving the production and distribution of these ultrafine particles at an unprecedented pace. In an editorial on p. 727, Donaldson and colleagues argue that the time is ripe for the development of a new discipline of nanotoxicology to characterise the harmful effects of these new technologies. Traditional hazard assessment approaches may not apply because of the biological mobility of nanoparticles, their large numbers, and their high ratio of surface area to mass. The authors write that a new discipline oriented towards these concerns would contribute to the safe and sustainable growth of nanotechnology.