

Work in Brief

Keith Palmer, *Editor*

Landfill sites and birth abnormalities

Landfill sites are necessary repositories of domestic and hazardous waste; but living near them may carry a greater risk of congenital malformation, as evidenced over the past decade by a number of major European studies. In this issue, Elliot *et al*¹ report a weak spatial association between risk of certain congenital abnormalities (notably cardiovascular defects, hypospadias and epispadias) and geographical density of waste sites. Research in this area is challenging, as an accompanying editorial explains,² because of the problem of achieving an accurate assessment of exposures. The study by Elliot *et al* is of special interest in its use of sophisticated mapping and statistical techniques to refine exposure estimation, although the authors and the editorial by Vrijheid highlight another continuing limitation on understanding—uncertainty about potential exposure pathways and mechanisms. Reassuringly, this study found no excess risks of birth defect in relation to sites handling ordinary domestic waste.



EMFs and human health – research priorities

The occupational literature is replete with studies of low-frequency electric and magnetic fields (EMF) and human health, embracing a broad range of outcomes—from cancer through to suicide and neurodegenerative diseases. In reviewing this large body of information, an expert workshop has concluded that there is no strong, consistent evidence of a causal relation between EMFs and major health endpoints of interest.³ Several methodological weaknesses of prior studies have been emphasized, however, by the workshop participants, who report in this issue on their recommendations for

improved research. A call is made in particular to give higher priority to exposure assessment (for example, detailed job-exposure matrices that incorporate measures of job title, work environment, task, and exposure to electric and magnetic fields, spark discharge and contact current); and for targeted studies on the specific health outcome of amyotrophic lateral sclerosis.



Health effects from mobile phone base stations

Although a recent EU report has concluded that there are no established adverse health effects related to radio frequency EMFs, public perception about the hazard (especially among those living near mobile phone base stations) differs from that of scientists. Measured exposures in nearby households tend to be low, but some 40% of EU citizens consider that such base stations are affecting their health, if the findings of one recent study are to be believed. In this issue, Blettner *et al*⁴ assess perceptions among 30,000 German citizens. Around one in five respondents expressed concern about potential health effects and another 10% ascribed their own symptoms to radio frequency EMFs, health complaints being somewhat more common in those living within 500 metres of a base station. RF-EMF measures were made in the homes of some 3,500 participants, but no major differences



were found between exposed and non-exposed subjects as judged by five health score indicators.⁵ This study highlights the continuing mismatch between public perceptions and direct evidence of harm.

Elsewhere in the journal

This month's journal includes a report on traffic-related air pollution and asthma severity in children,⁶ an assessment of screening tools for incident work-related asthma and allergic symptoms,⁷ and a survey of lung function and respiratory symptoms in chemical workers producing diacetyl for food flavouring.⁸



REFERENCES

1. Elliot P, Richardson S, Abellan JJ, *et al*. Geographic density of landfill sites and risk of congenital anomalies in England. *Occup Environ Med* 2009;**66**:81–89.
2. Vrijheid M. Landfill sites and congenital anomalies – have we moved forward? *Occup Environ Med* 2009;**66**:71.
3. Kheifets L, Bowman JD, Checkoway H, *et al*. Future needs of occupational epidemiology of extremely low frequency electric and magnetic fields: review and recommendations. *Occup Environ Med* 2009;**66**:72–80.
4. Blettner M, Schlehofer B, Breckenkamp J, *et al*. Mobile phone base stations and adverse health effects: phase 1 of a population-based, cross-sectional study in Germany. *Occup Environ Med* 2009;**66**:118–23.
5. Berg-Beckhoff G, Blettner M, Kowall B, *et al*. Mobile phone base stations and adverse health effects: phase 2 of a cross-sectional study with measured radio frequency electromagnetic fields. *Occup Environ Med* 2009;**66**:124–30.
6. Chang J, Delfino RJ, Gillen D, *et al*. Repeated respiratory hospital encounters among children with asthma and residential proximity to traffic. *Occup Environ Med* 2009;**66**:90–8.
7. Suarathana E, J-L Malo, D Heederik, *et al*. Which tools best predict the incidence of work-related sensitisation and symptoms. *Occup Environ Med* 2009;**66**:111–17.
8. van Rooy, Smit LAM, Houba R, *et al*. A cross-sectional study of lung function and respiratory symptoms among chemical workers producing diacetyl for food flavourings. *Occup Environ Med* 2008;**66**:105–10.



Work in Brief

Occup Environ Med 2009 66: i

Updated information and services can be found at:

<http://oem.bmj.com/content/66/2/i.full.html>

These include:

References

This article cites 8 articles, 7 of which can be accessed free at:

<http://oem.bmj.com/content/66/2/i.full.html#ref-list-1>

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:

<http://group.bmj.com/group/rights-licensing/permissions>

To order reprints go to:

<http://journals.bmj.com/cgi/reprintform>

To subscribe to BMJ go to:

<http://group.bmj.com/subscribe/>