

can result in variable and erroneously high ZPP readings on haematofluorometers.<sup>6</sup> Also, the instrument reading is routinely standardised by the use of reference slides, rather than blood specimens, and valid quality assurance procedures must therefore be included to avoid analytical bias.

The present study has shown a considerable variation in individual susceptibility to lead, with some subjects reaching ZPP concentrations severalfold higher than others at the same B Pb concentrations. This observation does not mean that the ZPP test should be abandoned. The analysis is useful in determining trends in individual long term exposures to lead. Also, ZPP concentration may have an independent diagnostic value, but this needs to be defined in detail.

This study was supported by the Working Environment Foundation.

Requests for reprints to: Dr P Grandjean, Institute of Community Health, J B Winsløvsvej 17, DK-5000 Odense C, Denmark.

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## Correspondence and editorials

The *British Journal of Industrial Medicine* welcomes correspondence relating to any of the material appearing in the journal. Results from preliminary or small scale studies may also be published in the correspondence column if this seems appropriate. Letters should be not more than 500 words in length and contain a minimum of references. Table and figures should be kept to an absolute minimum. Letters are accepted on the

understanding that they may be subject to editorial revision and shortening.

The journal now also publishes editorials which are normally specially commissioned. The Editor welcomes suggestions regarding suitable topics; those wishing to submit an editorial, however, should do so only after discussion with the Editor.

- Singapore. *Proceedings of the XII Singapore-Malaysia Congress of Medicine*, the Academy of Medicine, Singapore, 1977:587-95.
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  - 11 Froneberg B, Johnson PL, Zandrigan PJ. Respiratory illness caused by overheating of polyvinylchloride. *Br J Ind Med* 1982;39:239-43.

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## Vancouver style

All manuscripts submitted to the *Br J Ind Med* should conform to the uniform requirements for manuscripts submitted to biomedical journals (known as the Vancouver style).

The *Br J Ind Med*, together with many other international biomedical journals, has agreed to accept articles prepared in accordance with the Vancouver style. The style (described in full in *Br Med J*, 24 February 1979, p 532) is intended to standardise requirements for authors.

References should be numbered consecutively in the order in which they are first mentioned in the text by Arabic numerals above the line on each occasion the reference is cited (Manson<sup>1</sup> confirmed other reports<sup>2-5</sup> . . .). In future references to papers submitted to the *Br J Ind Med* should include: the

names of all authors if there are six or less or, if there are more, the first three followed by *et al*; the title of journal articles or book chapters; the titles of journals abbreviated according to the style of *Index Medicus*; and the first and final page numbers of the article or chapter.

Examples of common forms of references are:

- 1 International Steering Committee of Medical Editors. Uniform requirements for manuscripts submitted to biomedical journals. *Br Med J* 1979;1:532-5.
- 2 Soter NA, Wasserman SI, Austen KF. Cold urticaria: release into the circulation of histamine and eosino-phil chemotactic factor of anaphylaxis during cold challenge. *N Engl J Med* 1976;294:687-90.
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**Destruction of manuscripts**

From 1 July 1985 articles submitted for publication will not be returned. Authors whose papers are rejected will be advised of the decision and the manuscripts will be kept under security for three months to deal with any inquiries and then destroyed.

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## CORRESPONDENCE

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### Employment in pulp mills as a possible risk factor for soft tissue sarcoma: a case report

Sir,—A 60 year old man was admitted to our department in 1989 with a soft tissue sarcoma (malignancy grade III) of the neurofibrosarcoma type located in the heart. He had been employed in sulphate pulp mills since 1951 and since 1970 he supervised the drainage of the sludge from the whole mill. He was thus in skin contact with both the sludge and the drainage water. The mill used chlorine bleaching.

In four case-control studies we have associated soft tissue sarcoma with exposure to chlorinated phenols,<sup>1-4</sup> a finding also reported in other studies as discussed in our latest report.<sup>4</sup> We have recently attributed the increased risk to dioxin contaminated phenoxyacetic acids or chlorophenols.<sup>4</sup> Furthermore dioxins are carcinogenic in animal experiments.<sup>5,6</sup> In several studies it has been clearly shown that dioxins are produced in the chlorine bleaching process of the pulp, and that the concentrations are directly related to the amount of chlorine used in the bleaching process.<sup>7</sup> Dioxins appear to be concentrated in pulp mill sludges and in sediments outside pulp mills creating a long term exposure situation for affected areas.<sup>7</sup> This might be a source of exposure to dioxin for employees in the pulp industry and thus of aetiological significance for our patient described above. We are currently investigating this possible association further.

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- 1 Hardell L, Sandström A. A case-control study: soft-tissue sarcomas and exposure to phenoxyacetic acids or chlorophenols. *Br J Cancer* 1979; 39:711-7.
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- 3 Hardell L, Eriksson M. The association between soft tissue sarcomas and exposure to phenoxyacetic acids. A new case-referent study. *Cancer* 1988; 62:652-6.

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ment of Environmental Health Sciences, The Johns Hopkins University School of Hygiene and Public Health, 615 North Wolfe Street, Room 6001, Baltimore, Maryland 21205, USA.

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## NOTICE

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### Fourth Summer Institute in Environmental Health Studies, Baltimore MD, 3-14 June 1991.

The Fourth Summer Institute in Environmental Health Studies will present courses during a two week period for academic credit or for continuing education credit. It will be possible to register for more than one course. The Summer Institute is designed for the following groups: (1) people unable to take the traditional four quarters of graduate study leading to a degree, (2) practising health professionals—that is, physicians, nurses, industrial hygienists, toxicologists, and safety engineers, (3) men and women with responsibility for health, safety, and environmental matters in either government service or the corporate world, (4) public health practitioners. Subjects will include: principles of toxicology, risk communication of environmental hazards, fundamentals of occupational health, physical agents in environmental health sciences, contemporary problems in radiation health sciences, risk assessment and risk management, and case studies and principles of industrial hygiene. For further information contact Dr Jacqueline Corn, Director, Continuing Education Program or Catherine Walsh, Course Coordinator, Depart-

### Correction

**Biological effect monitoring of occupational exposure to 1,3-dichloropropane: effects on liver and renal function and on glutathione conjugation** (1991;48 (March):167-72).

In the fourth line of the second column of the abstract "... creatinine excretion" should read "... creatinine concentration."