#### British Journal of

# INDUSTRIAL MEDICINE

Editor: H A Waldron

Assistant Editors: P J Baxter L Magos J C McDonald K M Venables

Technical Editor: N B Haynes

Editorial Committee:

M J Gardner J A Lunn G H G McMillan A J Newman Taylor

D C Snashall

Editor, British Medical Journal

NOTICE TO CONTRIBUTORS The British Journal of Industrial Medicine is intended for the publication of original contributions relevant to occupational and environmental medicine, including fundamental toxicological studies of industrial and agricultural chemicals. Short papers relating to particular experience in occupational medicine may be submitted. Other short papers dealing with brief observations relevant to occupational medicine that do not warrant a full paper, such as individual case histories, preliminary reports, or modifications to analytical techniques, will also be considered. Extended book reviews may also be included but these should not be sent without first consulting the Editor. Review articles should also not be sent in unless the Editor has first been approached as to their suitability for the Journal. Letters to the Editor are always welcome.

All papers should be submitted in triplicate to The Editor, British Journal of Industrial Medicine, BMJ Publishing Group, BMA House, Tavistock Square, London WC1H 9JR. Each author must sign the covering letter as evidence of consent to publication. Papers reporting results of experiments on human subjects will not be considered unless the authors state explicitly that each subject gave his or her informed written consent to the procedure and that the protocol was approved by the appropriate ethical committee.

Papers are accepted on the understanding that they are contributed solely to this journal and are subject to editorial revision. The editor cannot enter into correspondence about papers rejected as being unsuitable for publication, and his decision is final. Papers should follow the requirements of the International Steering Committee of Medical Editors (Br Med J 1979;i:532-5). Papers should be prefaced by an abstract of the argument and findings which should be more comprehensive than a summary. Papers and references must be typewritten on one side of the paper only, both in double spacing, and with a wide margin. Both SI units and their equivalents must be given throughout (Baron et al, J Clin Pathol 1974;27:590-7). Photographs and photomicrographs on glossy paper should be submitted unmounted. Charts and graphs should be carefully drawn in black ink on tracing linen or Bristol board or stout white paper. Legends to figures should be typed on a separate sheet of paper.

References will not be checked by the editorial office; responsibility for the accuracy and completeness of references lies with the author. Number references consecutively in the order in which they are first mentioned in the text. Identify references in texts, tables, and legends by Arabic numerals above the line. References cited only in tables or in legends to figures should be numbered in accordance with a sequence established by the first identification in the text of a particular table or illustration. The number of references should be kept to the absolute minimum and only those essential to the argument being developed by the authors or to the discussion or if they describe methods which are being used

when the original is too long for inclusion. Usually one reference per typed page of manuscript should be sufficient.

Use the form of references adopted by *Index Medicus*—for instance, for a standard journal article: authors (list all authors when six or fewer, when seven or more, list only three and add *et al*), title, abbreviated title of journal, year of publication; volume number: **first and last page numbers**.

**Proofs** Contributors will receive one proof, but it is assumed that all but verbal corrections have been made in the original manuscript.

**Reprints** Reprints will be charged for; the number of reprints should be inserted on the form provided with the proofs.

Copyright © 1992 British Journal of Industrial Medicine. This publication is copyright under the Berne Convention and the International Copyright Convention. All rights reserved. Apart from any relaxations permitted under national copyright laws, no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means without the prior permission of the copyright owners. Permission is not, however, required to copy abstracts of papers or of articles on condition that a full reference to the source is shown. Multiple copying of the contents of the publication without permission is always illegal.

NOTICE TO ADVERTISERS Applications for advertisement space and for rates should be addressed to the Advertisement Manager, British Journal of Industrial Medicine, BMJ Publishing Group, BMA House, Tavistock Square, London WC1H 9JR.

NOTICE TO SUBSCRIBERS British Journal of Industrial Medicine is published monthly. The annual subscription rates are £114.00 (USA \$199.00). Orders should be sent to the Subscription Manager, British Journal of Industrial Medicine, BMJ Publishing Group, BMA House, Tavistock Square, London WCIH 9JR. Orders may also be placed with any leading subscription agent or bookseller. (For the convenience of readers in the USA subscription orders with or without payment may also be sent to British Medical Journal, Box 560B, Kennebunkport, Maine 04046. All inquiries, however, must be addressed to the publisher in London). All inquiries regarding air mail rates and single copies already published should be addressed to the publisher in London.

Subscribers may pay for their subscriptions by Access, Visa, or American Express by quoting on their order the credit or charge card preferred together with the appropriate personal account number and the expiry date of the card.

Second class postage paid Rahway NJ. Postmaster: send address changes to: British Journal of Industrial Medicine, c/o Mercury Airfreight International Ltd Inc, 2323 Randolph Avenue, Avenel, NJ 07001, USA.

tests of tremor and neuromuscular functions. Am Ind Hyg Assoc J 1978;39:976-84.

- 32 Roels H, Abdeladim S, Braun M, Malchaire J, Lauwerys R. Detection of hand tremor in workers exposed to mercury vapor: A comparative study of three methods. *Environ Res* 1989:45:152-65.
- 1989;45:152-65.
  33 Langworth S, Kölbäck K-G, Åkesson A. Mercury exposure from dental fillings. II. Release and absorption. Swed Dent J

1988;12:71-2.

34 Mackert JR Jr. Factors affecting estimation of dental amalgam mercury exposure from measurements of mercury vapour levels in intra-oral and expired air. J Dent Res 1987;66: 1775-80.

Accepted 6 January 1992

### 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 (Manson¹ confirmed other reports²-5...). 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:

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.

Weinstein L, Swartz MN. Pathogenic properties of invading micro-organisms. In: Sodeman WA Jr, Sodeman WA, eds. Pathologic physiology: mechanisms of disease. Philadelphia: W B Saunders, 1974:457-72.

Occupational Diseases, 144 De Korte Street, Braamfontein, 2001 Republic of South Africa.

- 1 McDonald JC, Liddell FDK, Gibbs GW, Eyssen GE, McDonald AD. Dust exposure and mortality in chrysotile mining, 1910–1975. Br J Ind Med 1980;37:11–24.
- 2 Gardner MJ, Winter PD, Pannett B, Bennett C. Follow-up study of workers manufacturing chrysotile asbestos cement products. Br J Ind Med 1986;43:726-32.

  Thomas HF, Benjamin IT, Elwood PC, Sweetnam PM. Further
- follow-up study of workers from an asbestos cement factory. Br J Ind Med 1982;39:273-6.
- 4 Newhouse ML, Sullivan KR. A mortality study of workers manufacturing friction materials, 1941-86. Br J Ind Med
- 5 Acheson ED, Gardner MJ, Pippard EC, Grime LP. Mortality of two groups of women who manufactured gasmasks from chrysotile and crocidolite asbestos: a 40 year follow up. Br J Ind Med 1982;39:344-8.
- 6 McDonald AD, Fry JS, Woolley AJ, McDonald JC. Dust exposure and mortality in an American chrysotile textile plant.
- Br J Ind Med 1983;40:361-7.
  7 De Klerk NH, Armstrong BK, Musk AW, Hobbs MST. Cancer mortality in relation to measures of occupational exposure to crocidolite at Wittenoom Gorge in Western Australia. Br J Ind
- Med 1989;46:529-36.

  8 Jones JSP, Smith PG, Pooley FD, Berry G, et al. The consequences of exposures to asbestos dust in a war-time gas-mask factory. In Wagner IC, ed. Biological effects of mineral fibres. Lyon: International Agency for Research on Cancer,
- 9 McDonald AD, McDonald JC. Mesothelioma after crocidolite exposure during gasmask manufacture. Environ Res 1978;17:340-6.
- 10 Seidman H, Selikoff IJ, Hammond EC. Short term asbestos work exposure and long term observation. Ann NY Acad Sci 1979;300:61-89.
- 11 Acheson ED, Gardner MJ, Winter PD, Bennett C. Cancer in a factory using amosite asbestos. Int J Epidemiol 1984;13:3-10.
- 12 Berry G. The analysis of mortality by the subject-years method. Biometrics 1983;39:173-84.

- 13 Liddell FDK. The development of cohort studies in epidemiology: a review. J Clin Epidemiol 1988;41:1217-37.
- 14 Marsh GW, Preminger M. A user-orientated occupational cohort mortality analysis program. American Statistician 1080:34:245-6
- 15 Liddell FDK. Simple exact analysis of the Standardised Mor-
- tality Ratio. J Epidemiol Community Health 1984;38:85-8.
  16 Baker RJ, Nelder JA. The GLIM system, release 3. Oxford:
- Numerical Algorithms Group, 1978.

  17 Armitage P, Berry G. Statistical methods in medical research. 2nd ed. Oxford: Blackwell, 1987:372-4.
- 18 Peto J, Seidman H, Selikoff IJ. Mesothelioma mortality in asbestos workers: implications for models of carcinogenesis and risk assessment. Brit J Cancer 1982;45:124-35.
- 19 McDonald AD, McDonald JC. Epidemiology of malignant mesothelioma. In: Antman K, Aisner J, eds. Asbestos-related malignancy. Orlando, Florida: Grune and Stratton, 1986:
- 20 Liddell D. Epidemiological observations on mesothelioma and their implications for non-occupational exposure to asbestos. In Spengler JD, Özkaynak H, McCarthy JF, Lee H, eds. Symposium on health effects of exposure to asbestos in buildings 14-16 December, 1988. Cambridge MA: Harvard University
- Energy and Envioronmental Policy Center, 1988:47-69.

  Wyndham CH, Bezuidenhout BN, Greenacre MJ, Sluis-Cremer GK. Mortality of middle aged white South African gold miners. Br J Ind Med 1986;43:677-84.
- 22 Fournier-Massey G, Becklake MR. Pulmonary function profiles in Quebec asbestos workers. Bulletin de Physio-pathologie Respiratoire 1975;11:429-45.
- 23 Ohlson C, Rydman T, Sundell L, Bodin L, Hogstedt C. Decreased lung function in long-term asbestos cement work-
- ers: a cross-sectional study. Am J Ind Med 1984;5:359-66.

  24 Cookson WOC, Musk AW, Glancy JJ, DeKlerk NH, Yin R.
  Compensation, radiographic changes and survival in applicants for asbestosis compensation. Br J Ind Med 1985;42:461-8.
- 25 Asbestosis Research Council. The management of asbestos dust by the membrane filter method: technical note 1. Rochdale: Asbestosis Research Council, 1968 (rev 1971.)

Accepted 11 November 1991

#### 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.

- layoff and rehire on respiratory variables of grain elevator workers. Am Rev Respir Dis 1980;122:601-8.

  15 James AL, Zimmerman MJ, Ee H, Ryan G, Musk AW.
- Exposure to grain dust and changes in lung function. Br J Ind Med 1990;47:466-72.
- 16 Ferris BG. Epidemiology standardization project. II. Recommended respiratory disease questionnaires for use with adults and children in epidemiological research. Am Rev Respir Dis 1978;118:7-53.
- 17 American Thoracic Society. Snowbird workshop on standard-
- ization of spirometry. Am Rev Respir Dis 1979;119:881-8. 18 Crapo RO, Morris AH, Gardner RM. Reference spirometric values using techniques and equipment that meet ATS recommendations. Am Rev Respir Dis 1981;123:659-64
- 19 Knudson RJ, Slatin RC, Lebowitz MD, Burrows B. The

- maximal expiratory flow-volume curve. Am Rev Respir Dis 1976;113:587-600.
- 20 SAS Institute Inc. SAS/STAT Users guide. Release 6.03. Edition. Cary NC: SAS Institute Inc. 1985:549-640.
- 21 Koskela R-S, Luoma K, Hernberg S. Turnover and health selection among foundry workers. Scand J Work Environ Health 1976;2(suppl 1):90-105.
- 22 Koskela R-S, Jarvinen E, Korhonen H, Mutanen P. Health selection among metal workers. Scand J Work Environ Health 1983;9:155-61.
- 23 Chan-Yeung M, Enarson DA, MacLean L. Longitudinal study of workers in an aluminium smelter. Arch Environ Health 1989;44:134-9.

Accepted 11 November 1991

### 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.

### CORRESPONDENCE

## Cigarette smoking and small irregular opacities

Sir,—The article by Weiss (1991;48: 841-4) contains some misinformation and the findings could be interpreted differently from the conclusions reached by the author.

The International Labour Office (ILO) guidelines are clear that 0/1 films are to be considered category 0—that is, normal—and films graded 1/0 are ultimately considered to be category 1 and therefore abnormal. The ILO guidelines do not delineate "suspect" pneumoconiosis, but rather boundary films with clear delineation into a normal and abnormal category.

Ultimately, considering the 23 cases of 0/1 films as normal, one is left with five cases in category 1, and considering that if asbestos had been used at this facility, even bystanders with no known asbestos exposure could well have been exposed, accounting for the changes seen here.

To consider a 0/1 category as containing small irregular opacities flies in the face of convention. Also, standard reference texts on the reading of radiographs, such as Fraser and Paré, do not support the view held by this author that cigarette smoking will produce small irregular opacities.

ARTHUR L FRANK
Department of Preventive Medicine
and Environmental Health,
Chandler Medical Center,
University of Kentucky,
Lexington, Kentucky,
40536-0084, USA.

Author's reply:

Frank's primary contention seems to be based on the naive assumption that

the ILO scale clearly distinguishes normal films from abnormal ones. If this were true, there would be no need for a 12-point scale. The 4-point scale, however, is a rather gross semiquantitative scheme. Instead of recognising an arbitrary stratification of this sort, nature gives us a continuum from normal to abnormal and this continuum is better served with the 12-point scale. Unfortunately this scale is complicated by the variation in perception between observers and even within the same observer and I considered this at some length in my discussion. Consequently it is simplistic to argue that the ILO guidelines create a "clear delineation into a normal and abnormal category." To do so would lead to a loss of information.

The 1980 guidelines for the use of ILO international classification of radiographs of pneumoconioses (my reference 4) state on page 3 that "if the appearances might be due to pneumoconiosis, record the observations according to the classification. . . "On page 4 the guidelines say "By using the 12-point scale of profusion, the classification recognises the existence of a continuity of change from no small opacities to the most advanced category." On page 14 (note 8) the guidelines state (as paraphrased in my discussion) that "for instance, categories 0/1 and 1/0 may be used to represent 'suspect' pneumoconiosis." Quod erat demonstrandum.

Frank used the term "boundary films." As yet there are no such films in general use. They were recommended for future research in the guidelines on page 31 with the statement that they "would be particularly useful in helping to distinguish between categories 0/1 and 1/0." Such research would be highly desirable, especially if accompanied by radiographic—pathological correlation.

### NOTICE

The eleventh international lead conference—Pb93—will take place at Le Zitelle Congress Centre in Venice from 24 to 27 May 1993

Organised by the European lead development committee, comprising lead associations and information centres in Belgium, France, Germany, Italy, Scandinavia, Spain, and the United Kingdom, Pb93 will continue the successful series of lead conferences that began in London in 1962.

As on previous occasions, the conference will bring together lead producers and consumers from around the world as well as many others interested in the future of the metal to discuss technological developments, research, and market trends for lead. The impact of economic climate and of the revolutionary changes in eastern Europe will be a particular focus of attention. The increasingly important issues of environmental control and risk management will also be closely examined. There will be simultaneous interpretation into Italian and English throughout the sessions. A trade exhibition of lead products and services will be held in an area adjacent to the conference room in Le Zitelle Congress Centre throughout the conference and there will be a sightseeing programme taking in some of the main attractions of the Venice area for accompanying persons.

A programme and registration form will be issued shortly. Further details are available from: the conference secretariat; Lead Development Association, 42 Weymouth Street, London W1N 3LQ. Telephone 071 499 8422; fax 071 493 1555; telex 261286 (contact David Wilson or Caroline Baggott).