

As part of the 50th birthday celebration, we are arranging to reprint 12 papers, *the Editor's Choice*, which have appeared in previous issues of the *Journal*. They have been chosen partly to illustrate the range and scope of the *Journal* over the years and partly because they are or were important in their day. More significantly, they have been chosen because they exemplify some of the best in scientific writing and can all be read with great pleasure and all who wish to communicate their observations, their ideas, or their enthusiasms would do well to study them and learn from them.

We will publish one paper each month through the year and they will appear in the order in which they were originally published.

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## *Editor's Choice*

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# Tumours of the urinary bladder in workmen engaged in the manufacture and use of certain dyestuff intermediates in the British chemical industry

by R A M Case, Marjorie E Hosker, Drever B McDonald, and Joan T Pearson

(*British Journal of Industrial Medicine* 1954;11:75-96)

Case's study of bladder cancer in the chemical industry is a landmark in the history of occupational cancer. Under the auspices of the Association of the British Chemical Manufacturers Case and his colleagues were able to follow up over 4600 men in the chemical industry from 1920 to 1949. They found that the overall risk of dying from bladder cancer was about 30 times that of the general population and that contact with benzidine,  $\alpha$ -naphthylamine or  $\beta$ -naphthylamine (but not aniline) in either manufacture or use was liable to cause an excess number of tumours. Furthermore they confirmed what was known for other occupational tumours, that is, that both onset and death occurred at an earlier age than in non-occupational cases.

Case is a good example of the scientist who, although not primarily working in the field of occupational medicine, has nevertheless made a significant contribution to it. There are other instances in this series and it would be of interest sometime to compile a more complete list.

I met Case only once, after he had retired for reasons of ill health to the Isle of Wight. I went to his house in Ryde, accompanied by two other examiners, where he was to examine my PhD thesis. We spent a good deal of time discussing cricket and having lunch before the business began in earnest. There was a particularly nasty moment when he questioned an interpretation I had made of some of the data about latent intervals in this paper. To this day I am not sure that he was convinced that I had actually read the paper, and this is at least one reason why it is firmly imprinted in my memory.

There are two minor points in the paper which are worth noting. The first is that "The accuracy of any statistical analysis is limited by the accuracy of the information upon which it is based;" such a pity that this self evident truth is so often forgotten. The second is the statement that "accurate records of men employed should be kept, and their age, date of starting work, and occupational history noted." Those who carry out epidemiological studies will need no reminding of the extent to which this advice has been acted upon!

- 3 Cotes JE. *Lung function: assessment and application in medicine*, 4th ed. Oxford: Blackwell Scientific Publications, 1979.
- 4 Weiner JS, Lourie JA, eds. *Practical Human Biology*. London: Academic Press, 1981.
- 5 Durnin JVG, Womersley J. Body fat assessed from total body density and its estimation from skinfold thickness: measurements on 481 men and women aged from 16 to 72 years. *Br J Nutr* 1974;32:77-97.
- 6 Quanjer PHH, ed. Standardized lung function testing. *Bull Eur Physiopathol Respir* 1983;19(suppl 5):1-95.
- 7 Jones RS, Meade F. A theoretical and experimental analysis of anomalies in the estimation of pulmonary diffusing capacity by the single breath method. *Quarterly Journal of Experimental Physiology* 1961;46:131-43.
- 8 Chinn DJ, Naruse Y, Cotes JE. Accuracy of gas analysis in lung function laboratories. *Thorax* 1986;41:133-7.
- 9 Karvonen M, Orma E, Keys A, Fidanza F, Brozek J. Cigarette smoking, serum-cholesterol, blood pressure and body fatness. *Lancet* 1959;1:492-4.
- 10 Tockman M, Menkes H, Cohen B, Permutt S, Benjamin J, Ball WC Jr, et al. A comparison of pulmonary function in male smokers and nonsmokers. *Am Rev Respir Dis* 1976;114:711-22.
- 11 Knudson RJ, Kaltenborn WT, Burrows B. The effects of cigarette smoking and smoking cessation on the carbon monoxide diffusing capacity of the lung in asymptomatic subjects. *Am Rev Respir Dis* 1989;140:645-51.
- 12 Chinn DJ, Stevenson IC, Cotes JE. Longitudinal respiratory survey of shipyard workers: effects of trade and atopic status. *Br J Ind Med* 1990;47:83-90.
- 13 Cotes JE, Dabbs JM, Hall AM, Axford AT, Laurence KM. Lung volumes, ventilatory capacity and transfer factor in healthy British boy and girl twins. *Thorax* 1973;28:709-15.
- 14 Oldham PD. *Measurement in medicine. The interpretation of numerical data*. London: English University Press, 1968.
- 15 Hopper JL, Hibbert ME, Macaskill GT, Phelan PD, Landau LI. Longitudinal analysis of lung function growth in healthy children and adolescents. *J Appl Physiol* 1991;70:770-7.
- 16 Williams RJ. Standard human beings versus standard values. *Science* 1957;126:453-4.
- 17 Lawther PJ, Brooks AGF, Waller RE. Respiratory function measurements in a cohort of medical students: a ten-year follow-up. *Thorax* 1978;33:773-8.
- 18 Burrows B, Lebowitz MD, Camilli AE, Knudson RJ. Longitudinal changes in forced expiratory volume in one second in adults: methodologic considerations and findings in healthy nonsmokers. *Am Rev Respir Dis* 1986;133:974-80.
- 19 Berry G. Longitudinal observations, their usefulness and limitations with special reference to the forced expiratory volume. *Bull Eur Physiopathol Respir* 1974;10:643-55.

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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.

- 28 International Agency for Research on Cancer. *Man-made mineral fibres and radon. IARC monographs on the evaluation of the carcinogenic risks to humans, Vol 43*. Lyon: IARC, 1988.
- 29 International Programme on Chemical Safety. *Environmental health criteria 77: man-made mineral fibres*. Geneva: World Health Organisation, 1988.
- 30 Begin R, Masse S, Sebastien P, et al. Asbestos exposure and retention as determinants of airway disease and asbestos alveolitis. *Am Rev Respir Dis* 1986;134:1176-81.
- 31 Begin R, Masse S, Bureau MA. Morphologic features and function of the airways in early asbestosis in the sheep model. *Am Rev Respir Dis* 1982;126:870.
- 32 Rodriguez-Roisin R, Merchant JEM, Cochrane GM, Hickey BPH, Turner-Warwick M, Clark TJH. Maximal expiratory flow volume curves in workers exposed to asbestos. *Respiration* 1980;39:158-65.
- 33 Mohsenifar Z, Jasper AJ, Mahrer T, Koerner SK. Asbestos and airflow limitation. *J Occup Med* 1986;28:817-20.
- 34 Kilburn KH, Warshaw RH. Abnormal pulmonary function associated with diaphragmatic pleural plaques due to exposure to asbestos. *Br J Ind Med* 1990;47:611-4.
- 35 Hjortsberg U, Orbaek P, Arborelius M, Ranstam J, Welinder H. Railroad workers with pleural plaques: II. Small airway dysfunction among asbestos-exposed workers. *Am J Ind Med* 1988;14:643-7.
- 36 Oliver LC, Eisen EA, Greene R, Sprince NL. Asbestos-related pleural plaques and lung function. *Am J Ind Med* 1988;14:649-56.
- 37 Hjortsberg U, Orbaek P, Arborelius M, Ranstam J, Welinder H. Railroad workers with pleural plaques: I. Spirometric and nitrogen washout investigation on smoking and nonsmoking asbestos-exposed workers. *Am J Ind Med* 1988;14:635-41.

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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.
- 3 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.

- assessment of benzene exposure. *Int Arch Occup Environ Health* 1990;62:529-34.
- 12 Bechtold WE, Lucier G, Birnbaum LS, Yin SN, Li GL, Henderson RF. Muconic acid determinations in urine as a biological exposure index for workers occupationally exposed to benzene. *Am Ind Hyg Assoc J* 1991;52:473-8.
- 13 Van Haafden AB, Sie ST. The measurement of phenol in urine by gas chromatography as a check on benzene exposure. *Am Ind Hyg Assoc J* 1965;26:52-8.
- 14 Larsen K. Creatinine assay by a reaction-kinetic principle. *Clin Chim Acta* 1972;41:209-14.
- 15 National Institute for Occupational Safety and Health. *Manual of analytical methods, 2nd. ed. Vol 3, method S311*. Cincinnati: DHEW (NIOSH) publication 77-157C, 1977. (DHEW (NIOSH) Back up data report, benzene, method S311.)
- 16 Doctor JH, Zielhuis R. Phenol excretion as a measure of occupational exposure. *Ann Occup Hyg* 1967;10:317-36.
- 17 American Conference of Governmental Industrial Hygienists. *Threshold limit values for chemical substances and physical agents and biological exposure indices. 1991-1992*. Cincinnati: ACGIH, 1992.
- 18 Rowland M, Tozer TN. *Clinical pharmacokinetics—Concepts and applications*. Philadelphia: Lea and Febiger, 1980:174-7.
- 19 Van Welie RTH, Van Duijn P, Brouwer DH, Van Hemmen JJ, Brouwer EJ, Vermeulen NPE. Biological monitoring of Z- and E- 1,3-dichloropropene by measurement of the urinary excretion of two mercapturic acid metabolites in the Dutch flowerbulb culture. *Arch Environ Contam Toxicol* 1991;20:6-12.
- 20 Jakubowski M, Linhart I, Pielas G, Kopecky J. 2-cyanoethylmercapturic acid (CEMA) in the urine as a possible indicator of exposure to acrylonitrile. *Br J Ind Med* 1987;44:834-40.

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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.