

# Occupational and Environmental Medicine



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Physicians of London

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If requested, authors shall produce the data on which the manuscript is based, for examination by the Editor.

**Authors are asked to submit with their manuscript the names and addresses of three people who they consider would be suitable independent reviewers. They will not necessarily be approached to review the paper.**

Papers are considered on the understanding that they are submitted solely to this *Journal* and do not duplicate material already published elsewhere. In cases of doubt, where part of the material has been published elsewhere, the published material should be included with the submitted manuscript to allow the Editor to assess the degree of duplication. The Editor cannot enter into correspondence about papers rejected as being unsuitable for publication, and the Editor's decision in these matters is final.

**Papers should include a structured abstract of not more than 300 words, under headings of Objectives, Methods, Results, and Conclusions. Please include up to three keywords or key terms to assist with indexing.**

Papers should follow the requirements of the International Committee of Medical Journal Editors (*BMJ* 1991;302:338–41). Papers and references must be typewritten in *double spacing* on one side of the paper only, with wide margins. SI units should be used.

Short reports (including case reports) should be not more than 1500 words including a brief abstract. They should comprise sections of Introduction, Methods, Results, and Discussion with not more than one table or figure and up to 10 references. The format of case reports should be Introduction, Case report, and Discussion.

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**References** References will not be checked by the editorial office; responsibility for the accuracy and completeness of references lies with the authors. 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. References cited only in tables or in legends to figures should be numbered in accordance with a sequence estab-

lished by the first identification in the text of a particular table or illustration. Include only references essential to the argument being developed in the paper or to the discussion of results, or to describe methods which are being used when the original description is too long for inclusion. Information from manuscripts not yet in press or personal communications should be cited in the text, not as formal references.

Use the Vancouver style, as in this issue for instance, for a standard journal article: authors (list all authors when seven or fewer, when eight or more, list only six and add *et al*), title, abbreviated title of journal as given in *Index Medicus* (if not in *Index Medicus* give in full), year of publication, volume number, and first and last page numbers.

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Editor, *British Medical Journal*

- 9 Merchant CJ, Renew DC, Swanson J. Occupational exposure to power frequency magnetic fields in the electricity supply industry. *Journal of Radiological Protection* 1994; 14:155-64.
- 10 Merchant CJ, Renew DC, Swanson J. Exposures to power-frequency magnetic fields in the home. *Journal of Radiological Protection* 1994;14:77-87.
- 11 International Agency for Research on Cancer. *Monographs on the evaluation of carcinogenic risks to humans 1972-1995*. Lyon: IARC, 1995:1-60.
- 12 Hartman DE. *Neuropsychological toxicology. Identification and assessment of human neurotoxic syndromes*. New York: Pergamon Press, 1988.
- 13 Breslow NE, Day NE. *Statistical methods in cancer research Vol II. The design and analysis of cohort studies*. Lyon: International Agency for Research on Cancer, 1987. (IARC Sci Publ No 82.)
- 14 Kromhout H, Loomis DP, Mihlan CJ, Peipens LA, Kleckner RC, Iriye R, Savitz DA. Assessment and grouping of occupational magnetic field exposure in five electric utility companies. *Scand J Work Environ Health* 1995;21:43-50.
- 15 Delpizzo V, Borghesi JL. Exposure measurement errors, risk estimate and statistical power in case control studies using dichotomous analysis of a continuous exposure variable. *Int J Epidemiol* 1995;24:851-62.
- 16 Speers MA, Dobbins JG, Miller VS. Occupational exposure and brain cancer mortality: a preliminary study of east Texas residents. *Am J Ind Med* 1988;13:629-38.
- 17 Thomas TL, Stolley PD, Stemhagen A, Fonham ETH, Bleeker ML, Stewart RA, Hoover RN. Brain tumour mortality risk among men with electrical and electronic jobs. A case control study. *J Natl Cancer Inst* 1987;79: 223-8.
- 18 Floderus B, Tornqvist S, Stenlund C. Incidence of selected cancers in Swedish railway workers 1961-79. *Cancer Causes Control* 1994;5:189-94.
- 19 Tynes T, Reitan JB, Anderson A. Incidence of cancer among workers in Norwegian hydroelectric power companies. *Scand J Work Environ Health* 1994;20:339-44.
- 20 Savitz DA, Pearce N, Poole C. Update on methodological issues in the epidemiology of electromagnetic fields and cancer. *Epidemiol Rev* 1993;15:558-66.
- 21 Kheifets LI, Afifi AA, Buffler P, Zhang ZW. Occupational electric and magnetic fields exposure and brain cancer: a meta-analysis. *J Occup Environ Med* 1995;37:1327-41.

## Occupational and Environmental Medicine and the electronic age

OEM has an Email address which is 100632.3615@compuserve.com. We welcome contact by Email, including letters to the editor. Some of our reviewers already send us their reports by Email, helping to speed up the peer review process.

We are moving towards electronic publishing and for some months now we have been asking authors to send us their revised papers on disk as well as a hard copy. I am delighted to report that nearly all our authors are managing to comply with this

request. Oddly enough, the few authors who have not sent us a disk version of their revised papers have been almost exclusively from the United Kingdom. I would be interested in suggestions for why this might be. Perhaps United Kingdom based authors read our correspondence and instructions less assiduously? Watch for revised Instructions to Authors.

*The Editor*

constriction.

In conclusion, the present study showed a strong dose dependent relation between concentrations of inhaled HF and plasma fluoride. Among the subjective symptoms that were registered during the 24 hours after one hour of exposure at low doses of HF, symptoms of the upper airways and eyes dominated and appeared even at concentrations similar to those occurring in the work atmosphere of primary aluminium production. According to our findings, the concentrations of HF should be kept well below 2.5 mg/m<sup>3</sup> to avoid symptoms of the upper airways and eyes.

We are indebted to Mari-Anne Boe for performing the lung function tests and recording the symptoms and associate professor Sven Ove Samuelsen for statistical advice. The study was supported by the Working Environment Fund of the Confederation of Norwegian Business and Industry, the Nordic Aluminium Industry's Secretariat for Health, Environment, and Safety (AMS), the Research Council of Norway, the Norwegian Asthma and Allergy Association, the Glaxo Research Fund, Norway, the Astra Research Fund, Norway, the Swedish Medical Research Council Project Numbers 11257-01A and 09439-05X, and the Swedish Patent Revenue Research Fund.

- 1 Kongerud J, Boe J, Søyseth V, Naalsund A, Magnus P. Aluminium potroom asthma: the Norwegian experience. *Eur Respir J* 1994;7:165-72.
- 2 Søyseth V, Kongerud J, Harr D, Strand O, Bolle R, Boe J. Relation of exposure to airway irritants in infancy to prevalence of bronchial hyper-responsiveness in school-children. *Lancet* 1995;345:217-20.
- 3 Lund K, Refsnes M, Søstrand P, Schwarze P, Boe J, Kongerud J. Inflammatory cells increase in bronchoalveolar lavage fluid following hydrogen fluoride exposure. *Am J Respir Crit Care Med* 1995;151:A259.
- 4 Machle W, Thamann F, Kitzmiller K, Cholak J. The inhalation of hydrogen fluoride. I The response following exposure to high concentrations. *J Ind Hyg* 1934;16:129-45.
- 5 Flood S. Hydrofluoric acid burns. *Am Fam Physician* 1988;37:175-82.
- 6 Chela A, Reig R, Sanz P, Huguet E, Corbella J. Death due to hydrofluoric acid. *Am J Forensic Med Pathol* 1989;10:47-8.
- 7 Machle W, Kitzmiller K. The effects of the inhalation of hydrogen fluoride. II Response following exposure to low concentration. *J Ind Hyg* 1935;17:223-9.
- 8 Largent EJ. The metabolism of fluoride in man. *Arch Ind Health* 1960;21:318-23.
- 9 Alexeeff GV, Lewis DC, Ragle NL. Estimation of potential health effects from acute exposure to hydrogen fluoride using a "benchmark dose" approach. *Risk Anal* 1993;13:63-9.
- 10 Ehrnebo M, Ekstrand J. Occupational fluoride exposure and plasma fluoride levels in man. *Int Arch Occup Environ Health* 1986;58:179-90.
- 11 Abramson MJ, Włodarczyk JH, Saunders NA, Hensley MJ. Does aluminium smelting cause lung disease? *Am Rev Respir Dis* 1989;139:1042-57.
- 12 Nagy K, Keul E. Evaluation of the FLAKT Sintelizer, a new semiautomatic system for fluorine analysis within the aluminium industry. Presented at the Metallurgical Society, TMS paper selection. Metallurgical Society, 1978:A78-39.
- 13 Quanjer PH. Standardized lung function testing. *Eur Respir J Suppl* 1993;16:5-40.
- 14 Ekstrand J. A micromethod for the determination of fluoride in blood plasma and saliva. *Calcified Tissue Research* 1977;23:225-8.
- 15 Morris JB, Smith F. Regional deposition and absorption of inhaled hydrogen fluoride in the rat. *Toxicol Appl Pharmacol* 1982;62:81-9.
- 16 Smith F, Ekstrand J. The occurrence and chemistry of fluoride, chapter 1: *Fluoride in dentistry*. 2nd ed. Feierskov O, Ekstrand J, Burt B, Munksgaard, eds. Copenhagen:1996.
- 17 Hjortsberg U, Ørbæk P, Arborelius M Jr, Karlsson JE. Upper airway irritation and small airways hyperreactivity due to exposure to potassium aluminium tetrafluoride flux: an extended case report. *Occup Environ Med* 1994;51:706-9.
- 18 Wing JS, Sanderson LM, Brender JD, Perrotta DM, Beauchamp RA. Acute health effects in a community after a release of hydrofluoric acid. *Arch Environ Health* 1991;46:155-60.
- 19 Sandström T, Kolmodin-Hedman B, Stjernberg N, Andersson MC, Lofvenius G. Challenge test for sulfur dioxide—symptom and lung function measurements. *Scand J Work Environ Health* 1988;14:77-9.
- 20 Stavert DM, Archuleta DC, Behr MJ, Lehnert BE. Relative acute toxicities of hydrogen fluoride, hydrogen chloride and hydrogen bromide in nose- and pseudo-mouth-breathing rats. *Fundam Appl Toxicol* 1991;16:636-55.

## Correspondence and editorials

*Occupational and Environmental 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. Tables 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 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.

- 4 McCrae IC, Williams ID. Road traffic pollution and public nuisance. *Sci Total Environ* 1994;146/147:81-91.
- 5 Stalker WW, Robison CB. A method for using air pollution measurements and public opinion to establish ambient air quality standards. *Journal of Air Pollution Control Association* 1967;17:142-4.
- 6 Nitta H, Sato T, Nakai S, Maeda K, Aoki S, Ono M. Respiratory health associated with exposure to automobile exhaust. I. Results of cross-sectional studies in 1979, 1982, and 1983. *Arch Environ Health* 1993;48:53-8.
- 7 Wjst M, Reitmeir P, Dold S, Wulff A, Nicolai T, Loeffelholz-Colberg EF, Mutius E. Road traffic and adverse effects on respiratory health in children. *BMJ* 1993;307:596-600.
- 8 Edwards J, Walters S, Griffiths RK. Hospital admissions for asthma in pre-school children: relationship to major roads in Birmingham, United Kingdom. *Arch Environ Health* 1994;49:223-7.
- 9 Evans GW, Colome SD, Shearer DF. Psychological reactions to air pollutions. *Environ Res* 1988;45:1-5.
- 10 Samet JM, Utell MJ. The risk of nitrogen dioxide: what have we learned from epidemiological and clinical studies? *Toxicol Ind Health* 1990;6:247-62.
- 11 Berglund M, Boström C-E, Bylin G, Ewetz L, Gustavsson L, Moldeus P, et al. Health risk evaluation of nitrogen oxides. *Scand J Work Environ Health* 1993;19(suppl 2: 1-720).
- 12 Rossi OVJ, Kinnula V, Tienari J, Huhti E. Association of severe asthma attacks with weather, pollen, and air pollutants. *Thorax* 1993;48:244-8.
- 13 Moseholm L, Tandorf E, Frosig A. Pulmonary function changes in asthmatics associated with low-level SO<sub>2</sub> and NO<sub>2</sub> air pollution, weather, and medicine intake. *Allergy* 1993;48:334-44.
- 14 Clench-Aas J, Larssen S, Bartonova A, Aarnes MJ, Myhre K, Christensen CC, et al. *The health effects of traffic pollution as measured in the Våleberga area of Oslo—summary report*. Lilleström: Norwegian Institute for Air Research, 1991.
- 15 McStay JR, Dunlap RE. Male-female differences in concern for environmental quality. *International Journal of Women's Studies* 1983;6:291-301.
- 16 Howe HL. Predicting public concern regarding toxic substances in the environment. *Environ Health Perspect* 1990;87:275-81.
- 17 Stenberg B, Wall S. Why do women report sick building symptoms more than men? *Soc Sci Med* 1995;40:491-502.

## Vancouver style

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

*Occup Environ 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 the *BMJ*, 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 *Occup Environ Med*

should include: the names of all authors if there are seven or less or, if there are more, the first six 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. Titles not in *Index Medicus* should be given in full.

Examples of common forms of references are:

- 1 International Steering Committee of Medical Editors, Uniform requirements for manuscripts submitted to biomedical journals. *BMJ* 1979;1:532-5.
- 2 Soter NA, Wasserman SI, Austen KF. Cold urticaria: release into the circulation of histamine and eosinophil 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.

- 4 Skinhoj P, Hollinger FB, Hovind-Hougen K, Lous P. Infectious liver diseases in three groups of Copenhagen workers: correlation of hepatitis A infection to sewage exposure. *Arch Environ Health* 1981;36:139-43.
- 5 Heng BH, Goh KT, Doraisingham S, Quek GH. Prevalence of hepatitis A virus infection among sewage workers in Singapore. *Epidemiol Infect* 1994;113:121-8.
- 6 Timothy EM, Mephan P. Outbreak of infective hepatitis amongst sewage sludge spreaders. *Communicable Disease Report CDR Rev* 1984;3:3.
- 7 De Serres G, Levesque B, Higgins R, Major M, Laliberté D, Boulianne N, *et al*. Need for vaccination of sewer worker against leptospirosis and hepatitis A. *Occup Environ Med* 1995;52:505-7.

### Rejected manuscripts

From February 1994, authors whose submitted articles are rejected will be advised of the decision and one copy of the article, together with any reviewers' comments, will

be returned to them. The *Journal* will destroy remaining copies of the article but correspondence and reviewers' comments will be kept.

**Natural and man-made mineral fibres: UK research priorities.** By the INSTITUTE FOR ENVIRONMENT AND HEALTH. Report of workshops held 14th October 1994 and 11 January 1995. Report R3. (Pp 126; price £25.) 1995. Leicester: Institute of Environment and Health. ISBN 1-899110-03-8.

Experimental research on mineral fibre toxicology goes back a long way in the United Kingdom. Pioneering studies of animal exposure to asbestos were carried out by Beattie in Sheffield in 1912, by Stewart in Leeds, and by Kettle at St Bartholomew's Hospital, London in the 1930s, and tissue culture studies with asbestos were carried out by Belt, Friedmann, and King at Hammersmith in London in the late 1930s and early 1940s. A flourishing programme of research studying a range of mineral fibres was conducted by Wagner and Timbrell in the 1960s and 1970s under the Medical Research Council (MRC) until their unit was disbanded.

This report was commissioned by the MRC Committee on Toxic Hazards in the Environment and Workplace, to advise its Physiological Medicine and Infections Board on priority areas for research in the field of mineral fibres. It is the fruit of two days of workshops at the Institute for Environment and Health. (The MRC is to be congratulated. How did it get agreement for an Institute for Environment and Health (a Phoenix born out of Lawther's and Connors' units?), while there is still opposition to the establishment of a much needed National Institute for Health?) The workshop report, constituting a quarter of the booklet, considers the extent of the problem and the research needs, and makes recommendations for the United Kingdom research programme.

The main portion is an appendix made up of a series of reviews of research on mineral fibres and the identification of gaps in knowledge. The discussions and conclusions are wise and predictable. This booklet was preceded by a number of reviews including the following:

World Health Organisation (Europe). *Conferences on man-made mineral fibre*. April 1982 and October 1986. Geneva: WHO, 1982 and 1986.

International Programme on Chemical Safety. *Man-made mineral fibres*. Geneva: WHO, 1988. (Environmental Health Criteria 77.)

International Agency for Research on Cancer. *Man-made mineral fibres and radon*. *LARC Monogr* 1988;43.

International Agency for Research on Cancer. CEC initiative. Non-occupational exposure to mineral fibres. *LARC Sci Publ* 1989;90.

World Health Organisation (Europe). *Indoor air quality EHC. Inorganic fibres and other particulate matter*. Geneva: WHO, 1991.

The unequivocal message from these reports was that the problem required a broad programme of research overlapping other interests, and would involve cooperation on an international scale. Although printed some time ago their advice has not been overtaken by events. One wonders what different advice the MRC expected. The studies of Mearl Stanton corresponded with a flowering of research on fibre toxicology: his death coincided with changes in the political, scientific, and economic climates,

which led to the closure of units and have militated against national programmes of study let alone international ones. The present state of ignorance on important aspects of fibre toxicity is our legacy.

MORRIS GREENBERG

**Asbestos: medical and legal aspects.** 4th ed. By BARRY I CASTLEMAN. (Pp 950; price \$110.00.) 1996. New Jersey: Aspen Law and Business. ISBN 1-56706-275X.

The author's aim in this publication, primarily addressed to people engaged in litigation, has been to provide a global and comprehensive account of the development of the asbestos industry and of the knowledge on asbestos diseases. It is based on a review of material that has been published or obtained by legal discovery. Recent legal discovery, having thrown open such volumes of papers not previously available for study, has justified a new edition. Although physically a slimmer volume, it includes a further 200 pages in an attempt to keep abreast of the situation, and continues its attractive format. Members of the flourishing and lucrative United States asbestos litigation industry will get a good read for their money, although they will be left in no doubt that it is not an apologia for the industry. People wishing to acquaint themselves with the literature will find that it has useful bibliographies.

Those who mispent their youth seeing too many American B films and reading too much pulp literature of the "politician, scandal, horror, shock" variety, and subsequently learnt that things ain't necessarily so, may be sceptical about an American expose (good enough for the New Yorker). However, take for example the account of Richard Schilling, an earlier illustrious editor of the original *Occupational and Environmental Medicine* and the request for him not to publish Doll's paper on lung cancer in asbestos workers, and the scheming to have Doll or the Medical Research Council withdraw the paper. The documentation is now available, as it is for several other events. Suppressed research results, and the machinations of gamekeepers turned poachers, are documented and exposed to daylight. Those people unfamiliar with the field may have been led to think that the asbestos problem is a matter of purely historical interest. Unfortunately it is not. The developed world has vastly reduced its asbestos consumption (although it still has its legacy from past usage), but the developing world has replaced it as a major user.

The reader, whether new to the field or an old hand, will get a lot of information from this edition. However, unless gifted with a high degree of sensitivity, the reader will not get a full sense of the stupidity and wickedness that comes over when handling actual documents concerned in this saga. The historical side is selective of the individual people whose contributions to our knowledge and ignorance of matters asbestos are discussed and the index is somewhat sparse. (Where are the Beatties, Grieve, Smither, Corbett McDonald?) Historical accuracy requires more detailed evaluation of the roles of the players in the drama than would seem to be possible within the constraints of this volume.

MORRIS GREENBERG

## NOTICES

### 1997 Continuing education: sponsored by NIOSH

7-10 January. Cincinnati, OH. Basic instructor course in occupational safety and health standards for the construction industry (OSHA 500).

14-17 January. St Paul, MN. Occupational safety and health standards for the construction industry (OSHA 510). 25-28 February. St Paul, MN. 4-7 November. Cincinnati, OH.

28-31 January. St Paul, MN. Guide to voluntary compliance in the industrial hygiene area (OSHA 521). 17-20 March. Cincinnati, OH.

28-31 January. St Paul, MN. Electrical standards (OSHA 309A). 13-16 October. Cincinnati, OH.

10-13 February. Cincinnati, OH. Hazardous materials (OSHA 201A). 24-27 March. St Paul, MN.

8-11 April. St Paul, MN. Collateral duty course for other federal agencies (OSHA 600). 21-24 July. Cincinnati, OH.

10-13 June. St Paul, MN. Machinery and machine guarding standards (OSHA 204A). 9-12 September. Cincinnati, OH.

22-25 July. St Paul, MN. Principles of ergonomics (OSHA 225).

9-12 September. St Paul, MN. A guide to voluntary compliance in safety and health (OSHA 501). 9-12 December. Cincinnati, OH.

Further information from: Midwest Center for Occupational Health and Safety, Program in Continuing Education, University of Minnesota, 640 Jackson Street, St Paul, MN 55101, (612) 221-3992. Web Site Url: <http://www.healthpartners.com/mcohs/mcohs.html>

### Molecular advances in cancer epidemiology and prevention. 20-22 February 1997. Sheraton Palace Hotel, San Francisco, California

This programme provides an overview of developments in biomolecular research that have defined the fundamental mechanisms of carcinogenesis in human populations, and which point the way to innovative approaches to cancer epidemiology and prevention. The programme will focus on applications of molecular diagnostics for identifying human exposures to carcinogenic hazards, new techniques for detecting genetically susceptible people, and screening high risk cancer populations. The programme is designed for physicians and researchers in the disciplines of epidemiology, genetics, pathology, molecular biology, and public health.

The format features lectures and discussion with faculty. Major topics to be covered include:

- Disease pathways and gene products
- Mutational spectra: insights into causation and prognosis
- Breast cancer screening: controversy and promise of molecular markers
- Highly penetrant cancer susceptibility genes
- Genetic modifiers and gene-environment interaction

Co-chaired by John E Conte, Jr, MD, Michelle M Manos, PhD, and John K Wiencke, PhD, this programme is presented by the Department of Epidemiology and Biostatistics of the University of California School of Medicine at San Francisco. The programme is sponsored by UCSF's Office of Continuing Medical Education.

UCSF is accredited by the Accreditation Council for Continuing Medical Education. This programme will meet the criteria for Category 1 credit.

**Further information from:** The Office of Continuing Medical Education, Room MCB-630, University of California, San Francisco, California 94143-0742. Phone: (415) 476-4251; Fax: (415) 476-0318; e-mail: [inquire@ocme.ucsf.edu](mailto:inquire@ocme.ucsf.edu); <http://cme.ucsf.edu>

#### **NIVA 1997 calendar: advanced courses and symposia in occupational health and safety**

Assessment of functional capacity and physical work load—a participatory approach. 3–7 March 1997, Finnish Sports Institute, Vierumäki, Finland.

Evaluation of occupational health services. 10–14 March 1997, Brunnsvik, Folk High-School, Ludvika, Sweden.

Occupational dermatoses. 8–13 April 1997, Hotel Riekonlinna, Saariselkä (Lapland), Finland.

Occupational exposure limits—health-based values or administrative norms? 21–25 April 1997, Conference Center Sjudarehöjden, Sigtuna, Sweden.

Assessment of psychological factors at work. 5–9 May 1997, Hotel Voksenåsen, Oslo, Norway.

Health effects of physical and mental work loads. 12–16 May 1997, Hotel Loftleidir, Reykjavik, Iceland.

Current trends in research on work-related musculoskeletal disorders and their prevention. 2–6 June 1997, Vår Gärd, Saltsjöbaden (Stockholm), Sweden.

Gender, work, and psychosocial health. 9–13 June 1997, Hotel Eckerö, Eckerö, Åland, Finland.

Epidemiological study design. 11–22 August 1997, Hanasaari Cultural Centre, Espoo (Helsinki), Finland.

Introduction to occupational epidemiology. 18–29 August 1997, Hotel Gentofte, Copenhagen, Denmark.

Safety research. First week: 6–10 October 1997, Schaeffergaarden Conference Centre, Gentofte (Copenhagen), Denmark.

Risk assessment and risk management of the work environment. 13–17 October 1997, Schaeffergaarden, Copenhagen, Denmark.

The basics of occupational health. 10–14 November 1997, Institute of Experimental and Clinical Medicine, Tallinn, Estonia.

Occupational health and safety in practice. 17–21 November 1997, Institute of Experimental and Clinical Medicine, Tallinn, Estonia.

Further information from: NIVA Topeliuksenkatu 41 a A, FIN-00250 Helsinki, Finland. Tel. +358 0 47471, Fax +358 0 4747 497.

**The 2nd international conference on work environment and cardiovascular diseases. 22–25 March 1998. Tel-Aviv, Israel**

The conference is being held under the aus-

pices of the International Commission on Occupational Health (ICOH), the Scientific Committee on Cardiology in Occupational Health. The main topics addressed will be:

- Pre-employment screening for cardiovascular disease
- Risk factors of cardiovascular disease and fitness for work
- Surveillance and monitoring workers and the work environment
- Effects of the work environment on cardiovascular risk including: noise, shift work, chemical and other exposures, psychosocial stressors, and specific occupations
- Mechanisms linking the work environment and cardiovascular disease
- Return to work of cardiac patients; comprehensive rehabilitation programmes
- The contribution of medical, psychological, occupational and organisational factors to work capacity and the ability to return to work
- Health promotion at the workplace
- Modification of the work environment to reduce risk of cardiovascular disease.

For further information please contact: Dr S Melamed, Occupational Health and Rehabilitation Institute, Loewenstein Hospital, PO Box 3, Raanana, 43100, Israel. Tel 972-9-7710094; fax 972-9-7712212.

#### **Health and the Musician. 23–27 March 1997. University of York, England**

The need for such a conference became clear at the last international congress of FIM—the Fédération Internationale des Musiciens—when grave concern was expressed at the number of musicians, especially those in orchestras, who had performance related medical problems. Considerable advances have been made over recent years, especially in the United Kingdom, and through the work of the British Association for Performing Arts Medicine (BAPAM), and the Association of Medical Advisers to British Orchestras (AMABO).

The conference is being planned for FIM by BAPAM and the British Musicians Union, with the assistance of the Association of British Orchestras. Conference topics will include:

- Stress and its links with health
- Overuse and misuse injuries in musicians
- Dystonias
- Embouchure problems and treatments
- Anxiety, depression and psychosomatic illness
- Posture, technique, and illness
- Stage fright and its causes and treatments
- Burn-out
- Problems of women performers
- The different problems of classical, jazz, and rock musicians

For further information contact: Conference Secretariat: British Association for Performing Arts Medicine, 18 Ogle Street, London W1P 7LG, England. Tel + 44 (0)717-636-6860; Fax + 44 (0)171-636-6880; E-mail: [bpamt@dial.pipex.com](mailto:bpamt@dial.pipex.com)

**Occupational dermatoses (and skiing) in Lapland, Finland: 5th international course on occupational dermatoses. 8–13 April 1997. Hotel Riekonlinna, Saariselkä (Lapland), Finland**

Four international courses on occupational dermatoses have so far been arranged by

NIVA, in 1982, 1986, 1991 and 1994. Each course was attended by about 80–100 participants. Occupational dermatoses causes a significant percentage of industrial disabilities and a great number of lost work days. It has proved difficult even for an experienced dermatologist to determinate the agent causing an occupational skin disease.

The aim of this course is to provide the participants with detailed up-to-date knowledge on occupational dermatoses. The course will comprise the latest knowledge on the progress of occupational dermatology of practical importance. The language of the course is English, and the course leader is Professor Lasse Kanerva.

Each lecture is followed by in depth discussions. Group teaching will take place daily tutored by a faculty member. The groups will discuss problems brought in by the participants, and will review and solve questions that have come up during the lectures. Active participation of the participants is highly encouraged. Reports related to occupational dermatology can also be presented as posters.

The course is aimed at occupational dermatologists, dermatologists, and clinicians in industrial medicine with a good basic knowledge of occupational dermatology.

#### **Main topics**

- Allergic contact dermatitis
- Irritant contact dermatitis
- Immunology of contact dermatitis
- Epidemiology of occupational dermatoses
- Contact urticaria
- Immediate allergy skin testing
- Patch testing problems
- New allergens.

Saariselkä, 200 miles north of the Arctic Circle, is the most popular ski resort in Finland. Skiing is possible daily during an extended lunch break.

For further information contact: Pirjo Turtiainen, NIVA, Topeliuksenkatu 41aA, FIN-00250 Helsinki, Finland. Tel + 358 9 4747 349; fax + 358 9 4747 497; E-mail: [pirjo.turtiainen@occuphealth.fi](mailto:pirjo.turtiainen@occuphealth.fi)

#### **Second European Forum on Quality Improvement in Health Care. 24–26 April 1997. Paris, France**

The forum will consist of one day teaching courses, invited presentations, posters and presentations selected from submissions and a scientific session.

For more information contact: BMA, Conference Unit, PO Box 295, London, WC1H 9TE. Tel: +44 (0) 171 383 6478 Fax: +44 (0) 171 383 6869.

#### **European conference of costs and benefits of occupational safety and health. 28–30 May 1997. The Hague, The Netherlands**

Specific aims are:

- To exchange information and review national and international experiences in the implementation of health and safety policies and cost and benefit analyses
- To identify and discuss the key factors influencing costs and benefits of occupational safety and health policy at the individual, the company, the national, and the European level
- To explore strategies for the future in policy, science and practice to improve



the efficiency and effectiveness of occupational safety and health initiatives.

Simultaneous interpretation will probably be provided in English, French and German.

The conference is hosted by the Ministry of Social Affairs and Employment of the Netherlands in cooperation with the European Foundation for the Improvement of Living and Working Conditions in Dublin, on the occasion of the Dutch presidency of the European Union in the first half of 1997. The conference is organized by the TNO Centre for Occupational Safety and Health.

For further information contact: C/o Holland Organizing Centre, Parkstraat 29, NL 2514 JF The Hague, The Netherlands. Telephone + 31 70 365 7850; Telefax + 31 70 364 5748. E-mail: Conference97@hoc.nl.

**8th International meeting on low frequency noise and vibration. 3-5 June 1997. Hotel 11, Maskingatan Gothenburg**

*The meeting is sponsored by: The Journal of Low Frequency Noise and Vibration*

The topics of the conference will be those of the sponsoring journal, among which are:

- Sources of infrasound, low frequency noise and vibration, including hand arm and whole body vibration
- Detection, measurement, and analysis
- Control, especially active control
- Propagation
- Perception and subjective effects

For further information contact: Multi-science Publishing Co Ltd, 107 High street, Brentwood, Essex CM14 4RX, United Kingdom. Telephone 01277 224632; Fax 01277 223453.

**Electricity—safety and progress. 18-20 June 1997. Dublin Castle Conference Centre**

This will be the motto of the 12th international colloquium of the "international section of the international social security association for the prevention of occupational accidents and illness due to electricity".

Main topics:

- Current electrotechnical topics:

**Electrophysiology**

Methods of working on cables and overhead cable systems

Protection and aids for methods of working, personal protective equipment, installation of electrical equipment in special areas, protection against electric shocks

- **European activities:**

EU regulations and national law

Regulations proposed by ISSA

European standards on:

the operation of electrical equipment, high-voltage systems, requirements imposed on equipment, protection against accidental contact

Test and certification procedures

Safety regulations for test equipment

- **Selected topics from other areas:**

New media for basic and advanced training

Methods of working for gas and water utilities

Working on overhead cables

Occupational safety rules for non-ionizing radiation

Further information from: Secretariat of the ISSA Section "Electricity", c/o Berufsgenossenschaft der Feinmechanik und Elektrotechnik, Gustav-Heinemann-Ufer 130, D-50968 Köln. Tel (0)221/37 78-448 or -456; Fax (0)221/37 78-457 or -134.

**International Ergonomics Association 13th Triennial Congress. 29 June to 4 July 1997. Tampere, Finland.**

The theme of the Congress is: *from experience to innovation*, which emphasises the multifaceted nature of the knowledge needed in ergonomics. The programme consists of:

- 17 Keynote addresses
- 18 Separate symposia
- Numerous workshops, poster sessions and free communications
- Special programme for students.

For further information contact: Mr Markku Leppänen, Tampere University of Technology, PO Box 589, FIN-33101 Tampere. Tel +358-31-316 2581; fax +358-31-316 2671; email: mleppane@cc.tut.fi

**VI International symposium of the international section of the ISSA for the prevention of occupational risks in the**

**iron and metal industry: 20-22 October, 1997, Barcelona.**

The main themes of the symposium are:

- Management, organisation, and control in the field of safety and health at the workplace (programmes, risk analysis, assessment, normalisation, quality . . .)
- Specific problems of occupational safety and health in small and medium sized enterprises as well as possibilities for counselling and support
- Current problems of occupational hygiene (dust, mineral fibres, surface treatments . . .)

Furthermore, the symposium will discuss other current problems and solutions, such as the transposition of European Directives or outsourcing.

The symposium is aimed at safety engineers, occupational physicians and hygienists, human resources managers, management representatives, experts in various fields from the industry, representatives of the social partners, the social insurances, and the authorities.

Further information from: Secretariate of the ISSA Section "Metal", c/o Kongressbüro, Allgemeine Unfallversicherungsanstalt, Adalbert-Stifter-Strasse 65, A-1200 Vienna, Austria. Tel +43-1-33111-537; Fax +43-1-33111-469.

**Global theme issue on aging: invitation to submit papers.**

Many international journals, including *Occupational and Environmental Medicine*, have agreed to participate in a global theme issue on aging, in October 1997. There are many aspects of aging that are relevant to occupational and environmental medicine. We are commissioning several articles and also invite submission of articles on this theme. Particular aspects of aging relevant to the journal that we have identified include: biomonitoring, psychosocial stresses, accidents, musculoskeletal problems, prejudices based on age, occupational health services and an aging workforce, pre-employment screening, and placement of older workers. If you have work in these or other relevant areas, please send it to the editorial office as soon as possible. All submitted articles will, of course, be subject to the usual peer review process.