Occupational and Environmental

Adopted as the Journal of the Faculty of Occupational Medicine of the Royal College of Physicians of London

Editor Anne Cockcroft

Deputy editor

Associate editors

Craig Jackson David Koh Mark Nieuwenhuijsen Harry Roels Malcolm Sim Peter Westerholm

Editorial board

Otto Wong

F J H van Dijk (Holland) M Eglite (Latvia) J Harrison (United Kingdom) D Koh (Singapore) G Liss (Canada) R McNamee (United Kingdom) J Myers (South Africa) M J Nieuwenhuijsen (United Kingdom)

Book review editor

R L Maynard

Commissioning editor I Kennedy

Technical editor

Margaret James

Editorial assistant

Kathryn Walsh

T Okubo (Japan) H Roels (Belgium) M Sim (Australia) D C Snashall (United Kingdom) J-D Wang (Taiwan) P Westerholm (Sweden) Otto Wong (USA) Editor, British Medical

Instructions to authors

Full instructions are available online at www.occenvmed.com Authors are required to grant *Occupational and Environmental* Medicine an exclusive licence to publish; further details available online at www.occenvmed.com/misc/ifora.shtml If you do not have web access please contact the editorial

Occupational and Environmental Medicine

BMA House Tavistock Square

London WCl 9JR, UK Telephone: +44 (0) 20 7383 6561 Fax: +44 (0) 20 7383 6668 Email: oemeditorial@bmjgroup.com

Subscription information

Occupational and Environmental Medicine is published monthly ISSN 1351-0711 (print); 1470-7926 (online)

Institutional rates

Print - 2003 rates: £235; 377; US\$377 Online - Site licences are priced on FTE basis and allow access by the whole institution. Print is available at deeply discounted rates for online subscribers; details available online at www.bmjjournals.com/subscriptions or contact the Subscription Manager in London (see below)

Print (includes online access) - £135; 217; US\$217 Online only - £65; 99; US\$99

How to subscribe

See inside back cover



www.publicationethics.org.uk

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics

© 2003 BMJ Publishing Group. All rights reserved; no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior permission of BMJ Publishing Group.

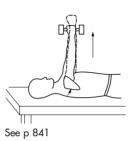
- · Occupational and Environmental Medicine is published by BMJ Publishing Group, typeset by The Charlesworth Group and printed in UK on acid free paper by Thanet Press Limited, Margate, Kent, UK
- · Periodicals postage paid, Rahway, NJ. Postmaster: send address changes to: Occupational and Environmental Medicine, c/o Mercury Airfreight International Ltd, 365 Blair Road, Avenel, NJ 07001, USA

contents OEA

Volume 60 Number 11 November 2003



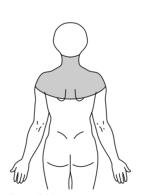
Vibration white finger (Health and Safety Laboratory); Cashmere factory, Mongolia (Mark Henley/Panos Pictures); Forest fires (NASA)



831

858

864



See p 864

Original articles

F A Whelan

Editorial

Breast cancer risk in airline cabin attendants: a nested case-control study in Iceland V Rafnsson, P Sulem, H Tulinius, J Hrafnkelsson

Cancer incidence in airline cabin crew

810 Cancer incidence in airline cabin crew: experience from Sweden A Linnersjö, N Hammar, B-G Dammström, M Johansson, H Eliasch

815 Risk factors for cutaneous malignant melanoma among aircrews and a random sample of the population V Rafnsson, J Hrafnkelsson, H Tulinius, B Sigurgeirsson, J Hjaltalin Olafsson

821 Occupational risk factors for symptomatic lumbar disc herniation; a case-control study A Seidler, U Bolm-Audorff, T Siol, N Henkel, C Fuchs, H Schug, F Leheta, G Marquardt, E Schmitt, P T Ulrich, W Beck, A Missalla,

> Healthy worker effect and changes in respiratory symptoms and lung function in hairdressing apprentices Y Iwatsubo, M Matrat, P Brochard, J'Ameille, D Choudat, F Conso, D Coulondre, R Garnier, C Hubert, F Lauzier, M C Romano, J C Pairon

841 Effects of a home exercise programme on shoulder pain and functional status in construction workers P M Ludewig, J D Borstad

850 Mechanical and psychosocial factors predict new onset shoulder pain: a prospective cohort study of newly employed workers E F Harkness, G J Macfarlane, E'S Nahit, A J Silman, J McBeth

Respiratory status in dairy farmers in France; cross sectionaland longitudinal analyses H Chaudemanche, E Monnet, V Westeel, D Pernet, A Dubiez, C Perrin, J-J Laplante, A Depierre, J-C Dalphin

Risk factors for incident neck and shoulder pain in hospital nurses J Smedley, H Inskip, F Trevelyan, P Buckle, C Cooper, D Coggon

Lung function decline in laboratory animal 870 workers: the role of sensitisation and exposure L Portengen, A Hollander, G Doekes, G de Meer, D Heederik

876 NO₂, as a marker of air pollution, and recurrent wheezing in children: a nested case-control study within the BAMSE birth cohort G Emenius, G Pershagen, N Berglind, H-J Kwon, M Lewné, S L Nordvall, M Wickman

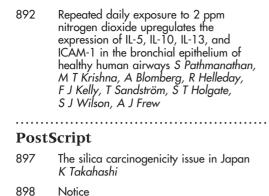
882 Primary osteoarthritis and occupations: a national cross sectional survey of 10 412 symptomatic patients M Rossignol, A Leclerc, P Hilliquin, F A Allaert, S Rozenberg, J-P Valat, B Avouac, P Coste, B Savarieau, B Fautrel

887 Does psychological distress influence reporting of demands and control at work? K Waldenström, I Lundberg, M Waldenström, A Härenstam, MOA Research Group



contents OEM

Volume 60 Number 11 November 2003



The impact of a week of simulated night

work on sleep, circadian phase, and

performance N Lamond, J Dorrian,

e14 Does computer use pose an occupational hazard for forearm pain; from the

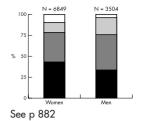
e15

e16

NUDATA study A I Kryger, J H Andersen, C F Lassen, L P A Brandt, I Vilstrup, E Overgaard, J F Thomsen, S Mikkelsen

G D Roach, K McCulloch, A L Holmes,

H J Burgess, A Fletcher, D Dawson



The effect of sulphurous air pollutant exposures on symptoms, lung function, exhaled nitric oxide, and nasal epithelial lining fluid antioxidant concentrations in normal and asthmatic adults W S Tunnicliffe, R M Harrison, F J Kelly, C Dunster, J G Ayres

High local unemployment and increased mortality in Danish adults; results from a prospective multilevel study M Osler, U Christensen, R Lund, M'Gamborg, N Godtfredsen, E Prescott

Electronic pages

Electronic pages

e13

In order to facilitate more rapid publication, authors are now being offered the option for their paper to be published online only. These papers are published in the first available issue after acceptance and are listed on the contents page of the printed journal under the heading "Electronic pages". The papers may be viewed via the OEM website (www.occenvmed.com).