Contents

Editorial	
Making the best of international conferences A Yngve	1309
In this issue	
Oh Canada <i>R Hughes</i>	1311
Contribution of fish to intakes of micronutrients important for fetal development: a dietary survey of pregnant women in the Republic of Seychelles MP Bonham, EM Duff, PJ Robson, JM Wallace, GJ Myers, PW Davidson, TW Clarkson, CF Shamlaye, JJ Strain and MBE Livingstone	1312
Elevated iron stores are associated with HIV disease severity and mortality among postpartum women in Zimbabwe <i>R Rawat, JH Humphrey, R Ntozini, K Mutasa, PJ Iliff and RJ Stoltzfus</i>	1321
Distribution of macro- and micronutrient intakes in relation to the meal pattern of third- and fourth-grade schoolchildren in the city of Quetzaltenango, Guatemala <i>M Vossenaar, G Montenegro-Bethancourt, LDJ Kuijper, CM Doak and NW Solomons</i>	1330
Trends in dietary intakes of vitamins A, C and E among Japanese men and women from 1974 to 2001 Y Kato, S Ikehara, K Maruyama, M Inagawa, M Oshima, K Yokota, T Yamazaki, M Kishi, S Murai, M Umesawa, E Ma, K Yamagishi, T Tanigawa, M Kurokawa, S Sato, T Shimamoto and H Iso	1343
A multilevel analysis of diet and socio-economic status in Scotland: investigating the 'Glasgow effect' <i>L Gray and AH Leyland</i>	1351
Nutrition labels: a survey of use, understanding and preferences among ethnically diverse shoppers in New Zealand <i>D Gorton, CN Mhurchu, M-h Chen and R Dixon</i>	1359
Dietary patterns in relation to socio-economic and lifestyle characteristics among Greek adolescents: a multivariate analysis <i>G Kourlaba, DB Panagiotakos, K Mihas, A Alevizos, K Marayiannis, A Mariolis</i> <i>and Y Tountas</i>	1366
Iron intake does not significantly correlate with iron deficiency among young Japanese women: a cross-sectional study K Asakura, S Sasaki, K Murakami, Y Takahashi, K Uenishi, M Yamakawa, Y Nishiwaki, Y Kikuchi, T Takebayashi and the Japan Dietetic Students' Study for Nutrition and Biomarkers Group	1373
Association between the food retail environment surrounding schools and overweight in Canadian youth LM Seliske, W Pickett, WF Boyce and I Janssen	1384
Dietary fibre intake of pregnant women attending general practices in southern Brazil – The ECCAGE Study C Buss, MA Nunes, S Camey, P Manzolli, RM Soares, M Drehmer, A Giacomello, BB Duncan and MI Schmidt	1392
Action or inaction? Food and nutrition in Australian local governments <i>H Yeatman</i>	1399
Evaluation of the Mediterranean Diet Quality Index (KIDMED) in children and adolescents in Southern Spain <i>M Mariscal-Arcas, A Rivas, J Velasco, M Ortega, AM Caballero and F Olea-Serrano</i>	1408
Ethnic variance in iron status: is it related to dietary intake? CR Wall. DR Brunt and CC Grant	1413

Contents continued on backmatter

Cambridge Journals Online For further information about this journal please go to the journal website at: journals.cambridge.org/phn



Mixed Sources
Product group from well-managed
forests and other controlled sources
www.fsc.org Cert no. Tr-C0C-002769
0 1996 Forest Stewardship Council



Public Health Nutrition

Notes for Authors

Public Health Nutrition provides a forum for the presentation of original research findings in the field of Public Health Nutrition. It offers a population-based approach to the practical application of research findings. The Journal provides a timely vehicle for lively discussion of current controversies. In addition, it also includes high quality reviews of key topics and seeks to identify and publish special supplements on major topics of interest to readers. As a contributor you should note and follow the guidelines set out below.

Content:

- Original research findings published as either full papers of 4000 words, not including tables, figures or references, or Short Communications of about 2000 words on key issues, fast-tracked through the editorial system.
- Topical review papers the Editors will invite topical reviews and also consider suggestions from authors who should submit an outline of the review in the first instance.
- Editorial comment including guest editorials on key papers published in the journal.
- Letters to the Editors addressing material published in *Public Health Nutrition.*

Submission: All manuscripts must be submitted onto our online submission system: http://phn.msubmit.net

Refereeing: All contributions are read by two or more referees to ensure both accuracy and relevance, and revision may thus be required before final acceptance. Authors are asked to submit the names and contact details (including email address if available) of up to four potential referees for their paper. On acceptance, contributions are subject to editorial amendment to conform to house style.

Copyright: At the time of acceptance the authors will be asked to provide a completed copy of the 'Licence to Publish' (in lieu of copyright transfer), which is available on the Nutrition Society's web pages (http://www.nutritionsociety.org). It is the author's responsibility to obtain written permission to reproduce any material (including text and figures) that has appeared in another publication.

Preparation of Manuscripts: Please refer to our Full Directions to Authors on our website: (http://www.nutritionsociety.org). You should write in clear and concise English and spelling should follow the Oxford English Dictionary. Authors whose native tongue is not English are assured that in-house editorial attention to their contributions will improve clarity.

Manuscripts should be prepared in a common word processing package (Word for Windows is preferred), in Times New Roman, or other common typeface, set up as double-spaced text with ample margins. Page and line numbers should be inserted. Standard abbreviations (e.g. Fig. and Figs.) and SI units must be used.

The submission must include a statement reporting any conflicts of interest, all sources of funding and the contribution of each author to the manuscript. If there are no conflicts of interest this must be stated. The author will be asked to provide this information during the submission process and should not include it as part of the manuscript. This enables double-blind reviewing.

Arrangement of Papers:

- Title page including the article title, author(s), affiliation(s), keywords and one author identified for correspondence (please include the full postal address, telephone and fax numbers, and an email address where available). A short title of up to 45 characters should be provided as a running head. The title page should be submitted online as a separate cover letter, not as part of the manuscript. This enables double-blind reviewing.
- A structured abstract using the following headings: Objective, Design, Setting, Subjects, Results, Conclusions. The abstracts should be intelligible without reference to text or figures. It should not exceed 250 words in total.
- 3. The text divided under appropriate headings.
- Acknowledgements (sources of funding, conflict of interest declaration, authorship responsibilities, acknowledgements): should be provided when requested during the submission process, not as part of the manuscript.
- 5. **References** should be in Vancouver style please refer to the full Directions to Authors.
- 6. **Tables** should be reduced to the simplest form and should not be used where the text or figures give the same information. Each table must be accompanied by a clear and concise caption.
- 7. **Figures** should be numbered and legends should be provided. Each figure, with its legend, should be comprehensible without reference to the text and should include definitions of abbreviations.

Offprints: The main author will receive a PDF of their published paper free of charge. Offprints are available to purchase and can be ordered before publication.

Proofs: Correspondence and proofs for correction will be emailed to the first named author unless otherwise indicated. The author will receive a PDF proof for checking. It is important that proofs be returned promptly. Authors may be charged for any alterations in excess of 10 % of original setting.

Submission of manuscripts and correspondence:

PHN operates an on-line submission and reviewing system (eJournalPress). Authors should submit to the following address: http://phn.msubmit.net/ If any difficulties are encountered, please contact the Publications Office immediately at phn@nutsoc.org.uk

Public Health Nutrition – published by Cambridge University Press on behalf of The Nutrition Society

Public Health Nutrition

Volume 12, 2009 ISSN: 1368–9800 journals.cambridge.org/PHN

Publishing, Production, Marketing, and Subscription Sales Office:

Cambridge University Press The Edinburgh Building Shaftesbury Road Cambridge CB2 8RU UK

For Customers in North America:

Cambridge University Press Journals Fulfillment Dept 100 Brook Hill Drive West Nyack New York 10994–2133 USA

Publisher: Katy Christomanou

Special sales and supplements

This journal accepts advertising and inserts. We also provide bulk reprints of suitable papers to meet teaching or promotional requirements. The journal also publishes supplementary material including conference proceedings on behalf of academic and corporate sponsors. Please contact Katy Christomanou at Cambridge University Press for further details (amail, kshiistomanou@cambridge.org)

(email: kchristomanou@cambridge.org).

Subscription information

Public Health Nutrition is an international journal published 12 times per year by Cambridge University Press on behalf of the Nutrition Society. The online edition is available at

journals.cambridge.org/PHN, with free table of contents alert (upon registration).

Annual subscription rates

Volume 12, 2009 (12 issues): Internet/print package: £670/\$1286 Americas only/€1074 EU only Internet only: £589/\$1116 Americas only/€936 EU only

Any supplements to this journal published in the course of the annual volume are normally supplied to subscribers at no extra charge.

Claims for non-receipt of journal issues will be considered on their merit and only if the claim is received within six months of publication. Replacement copies supplied after this date will be chargeable.

Advertising: The Nutrition Society is willing to include advertisements in its journals. However, it will retain the right to make decisions on which advertisements are acceptable and which are not, and will not be obliged to give reasons to prospective advertisers for its decisions. The appearance of an advertisement in the Society's journals does not imply endorsement by the Society. For further details, please contact Cambridge University Press.

Back volumes will be available in due course. Please contact Cambridge University Press for further information.

US POSTMASTERS: Please send address corrections to Public Health Nutrition Cambridge University Press 100 Brook Hill Drive West Nyack New York 10994–2133 USA

Notes for Authors are available from the publisher at the given address and can be found inside the back cover.

Offprints: The author (or main author) of an accepted paper will receive a free PDF of their paper and a copy of the issue in which their paper has been published. Additional offprints are available for a fee and must be ordered at proof stage. **No page charges are levied by this journal.**

Copyright: As of 1 January 2001 the copyright of all articles submitted to *Public Health Nutrition* are retained by the authors or their institutions. For articles prior to this date permission for reproduction of any part of the journal (text, figures, tables or other matter) in any form (on paper, microfiche or electronically) should be sought directly from the Society, at: The Editorial Office, The Nutrition Society, 10 Cambridge Court, 210 Shepherds Bush Road, Hammersmith, London, W6 7NJ, UK.

Disclaimer: The information contained herein, including any expression of opinion and any projection or forecast, has been obtained from or is based upon sources believed by us to be reliable, but is not guaranteed as to accuracy or completeness. The information is supplied without obligation and on the understanding that any person who acts upon it or otherwise changes his/her position in reliance thereon does so entirely at his/her own risk. Neither the Society, nor Cambridge University Press accepts responsibility for any trade advertisement included in this publication.

This journal issue has been printed on FSC-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see www.fsc.org for information. Typeset by Macmillan India Limited, Bangalore, India and Printed in Europe by Bell and Bain, Glasgow.

Public Health Nutrition is covered in Science Citation Index Expanded (Web of Science), Current Contents, Agriculture, Biology & Environmental Sciences, Current Contents, Clinical Medicine, CAB ABSTRACTS[®], Global Health, Index Medicus[®] (MEDLINE[®]), EMBASE, Excerpta Medica, BIOSIS[®] Database and CINAHL[®] Database Public Health Nutrition participates in the following initiatives: HINARI by WHO and AGORA by FAO.

CAMBRIDGE

JOURNALS



British Journal of Nutrition

Published on behalf of The Nutrition Society

British Journal of Nutrition is available online at: http://journals.cambridge.org/bjn

To subscribe contact Customer Services

in Cambridge: Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

in New York: Phone +1 (845) 353 7500 Fax +1 (845) 353 4141 Email subscriptions_newyork@cambridge.org *Editor-in-chief* P.C. Calder, University of Southampton, UK

British Journal of Nutrition is a leading international peerreviewed journal covering research on human and clinical nutrition, animal nutrition and basic science as applied to nutrition. The journal recognises the multidisciplinary nature of nutritional science and includes material from all of the specialities involved in nutrition research, including molecular and cell biology and the emerging area of nutritional genomics.

Price information is available at: http://journals.cambridge.org/bjn



For free online content visit: http://journals.cambridge.org/bjn



CAMBRIDGE

JOURNALS



Proceedings of the Nutrition Society

Published on behalf of The Nutrition Society

Proceedings of the Nutrition Society is available online at: http://journals.cambridge.org/pns

To subscribe contact Customer Services

in Cambridge:

Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

in New York: Phone +1 845) 353 7500 Fax +1 (845) 353 4141 Email subscriptions_newyork@cambridge.org

Editor-in-Chief

C. J. Newbold, Institute of Rural Science, University of Wales, Aberystwyth, UK

Proceedings of the Nutrition Society publishes papers and abstracts presented by members and invited speakers at the scientific meetings of The Nutrition Society. The journal provides an invaluable record of the scientific research currently being undertaken, contributing to 'the scientific study of nutrition and its application to the maintenance of human and animal health.'

Price information is available at: http://journals.cambridge.org/pns





Keynote Speaker



Dr. Tadataka Yamada, President, Global Health Program, Bill & MelindaGates Foundation, USA Addressing Nutrition and Health Challenges for the 21st Century

The main theme of ICN 2009 is "**Nutrition Security for All.**" The theme of the Congress will be addressed through thirteen different sub-themes broadly representing proximal determinants and ecological, social and cultural determinants of nutrition security for all people.

Plenary Sessions

Global Efforts towards Achieving the MDGs and Nutrition Well-being

Dr. Ala Alwan, World Health Organization, Switzerland

Agriculture, Food Supply Systems and Trade for Nutrition Security

Security Alexander Muller, Assistant Director General, Food and Agricultural Organization, Italy

Molecular Genetics, Environment, and Diet-Related Diseases Prof. Gordon H. Williams, Harvard Medical School, USA

Cascade Lectures

Jung Han Yoon Park, Korea Role of Bioactive Food Components in Chemoprevention

Hans Herren, Switzerland / Meera Shekar, USA Food Policy and Systems in Time of Global Crisis

David Barker, USA *Fetus to Adults: What have We Learned?* Nutrition, Lifestyle and Cancer Prof. John Milner, National Cancer Institute, USA

Global Partnerships for Combating Obesity and Chronic Diseases

Prof. Srinath Reddy, Public Health Foundation of India, and Prof. Phillip James, International Obesity Task Force, Public <u>Health Policy</u> Group, UK

Nutrition as a Sound Investment for Human Capital

Prof. Juan Rivera, Instituto Nacional de Salud Publica, Mexico, and Prof. Susan Horton, Wilfrid Laurier University, Canada

Ben Van Ommen, Netherlands / Michael Muller, USA - Advances in Nutrigenomics

Berthold Koletzko, Germany Long-chain Polyunsaturated Fatty Acids in Pregnancy, Lactation and Infancy

Urban Jonsson, Kenya *Paradigms in Applied Nutrition*

Exhibition Features:

- Leading food and nutrition companies, research and development companies and suppliers of nutrition medical devices
- Free exhibition entry for Congress delegates
- Show dates 5-9 October 2009

ICN 2009 Exhibition 80% of Space Sold

ICN 2009 Exhibition Book your Booth at the ICN 2009 Exhibition Now Floorplan and registration form available online, visit: http://icn2009.com/exhibition.html

For more information on ICN, please visit: www.icn2009.com



CAMBRIDGE

JOURNALS



Nutrition Research Reviews

Editor-in-chief

Published on behalf of The Nutrition Society

K. Younger, Dublin Institute of Technology, Ireland

Nutrition Research Reviews is available online at: http://journals.cambridge.org/nrr

To subscribe contact Customer Services

in Cambridge: Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

in New York: Phone +1 (845) 353 7500 Fax +1 (845) 353 4141 Email subscriptions_newyork@cambridge.org Nutrition Research Reviews presents up-to-date, concise, critical reviews of key topics in nutritional science in order to advance new concepts and hypotheses. The journal encourages the exchange of fundamental ideas on nutritional well-being in both humans and animals.

Price information is available at: http://journals.cambridge.org/nrr

Free email alerts Keep up-to-date with new material – sign up at http://journals.cambridge.org/alerts

For free online content visit: http://journals.cambridge.org/nrr



Short communications Origins of intrusions in children's dietary recalls: data from a validation study concerning retention interval and information from school food-service production records <i>SD Baxter, JA Royer, CH Guinn, JW Hardin and AF Smith</i>	1569
Allium vegetables intake and endometrial cancer risk C Galeone, C Pelucchi, LD Maso, ENM Montella, A Zucchetto, R Talamini and CL Vecchia	1576
Invited commentary How to stop public health conferences becoming trade fairs <i>C Bodini, A Martino, D McCoy, K Bozorgmehr, D Nascimento,</i> <i>C Giugliani and W Jassat</i>	1581
Out of the Box G Cannon	1584
Letters to the Editor	1588

Contents continued from outside back cover

Effect of a community-based intervention on nutritional behaviour in a developing country setting: the Isfahan Healthy Heart Programme N Mohammadifard, R Kelishadi, M Safavi, N Sarrafzadegan, F Sajadi, GH Sadri, M Magbroon, H Alikhasi, S Heydari and F Sarmadi	1422
Iodine status in a Sherpa community in a village of the Khumbu region of Nepal EE Heydon, CD Thomson, J Mann, SM Williams, SA Skeaff, KT Sherpa and	1431
JL Heydon Food deprivation is integral to the 'hand to mouth' existence of homeless youths in Toronto V Tarasuk, N Dachner, B Poland and S Gaetz	1437
The well-being of children in food-insecure households: results from The Eastern Caribbean Child Vulnerability Study 2005 <i>EF Racine, K Jemison, LR Huber and AA Arif</i>	1443
Two-year controlled effectiveness trial of a school-based intervention to prevent obesity in Chilean children <i>J Kain, B Leyton, R Cerda, F Vio and R Uauy</i>	1451
Multilevel modelling of sociodemographic predictors of various levels of anaemia among women in Mali I Ngnie-Teta, B Kuate-Defo and O Receveur	1462
Community-specific modifications are essential for objective assessment of maternal dietary intake – Pune Maternal Nutrition Study <i>S Rao, AN Kanade, SR Josbi and CS Yajnik</i>	1470
Evaluation of relative intake of fatty acids according to the Northern Sweden FFQ with fatty acid levels in erythrocyte membranes as biomarkers <i>M Wennberg, B Vessby and I Johansson</i>	1477
Variations in prevalence and conduct of school food gardens in tropical and subtropical regions of north-eastern Australia <i>S Somerset and A Bossard</i>	1485
Dietary patterns and metabolic syndrome factors in a non-diabetic Italian population MLC Leite and A Nicolosi	1494
Associations among the food environment, diet quality and weight status in Cree children in Québec SM Downs, A Arnold, D Marshall, LJ McCargar, KD Raine and ND Willows	1504
Iodine nutritional status of children on the island of Tanna, Republic of Vanuatu <i>M Li, N McKelleher, T Moses, J Mark, K Byth, G Ma and CJ Eastman</i>	1512
Intake of wholegrain products is associated with dietary, lifestyle, anthropometric and socio-economic factors in Denmark <i>R Egeberg, K Frederiksen, A Olsen, NF Johnsen, S Loft, K Overvad and</i> <i>A Tjønneland</i>	1519
The politics of developing reference standards for nutrient intakes: the case of Australia and New Zealand <i>S Thuraisingam, L Riddell, K Cook and M Lawrence</i>	1531
Effect of dietary factors on anaemia among rural elderly women in south-west China: a case–control study <i>L Meng, J Liu, J Zhang, C Wang, Q Man and L Li</i>	1540
Folic acid food fortification prevents inadequate folate intake among preschoolers from Ontario <i>K Hennessy-Priest, J Mustard, H Keller, L Rysdale, J Beyers, R Goy and</i> <i>JR Simpson</i>	1548
Household food security is associated with growth of infants and young children in rural Bangladesh <i>KK Saha, EA Frongillo, DS Alam, SE Arifeen, LÅ Persson and KM Rasmussen</i>	1556
A social marketing approach to improving the nutrition of low-income women and children: an initial focus group study SE Hampson, J Martin, J Jorgensen and M Barker	1563