

PNS

PROCEEDINGS OF THE NUTRITION SOCIETY

Editor-in-Chief

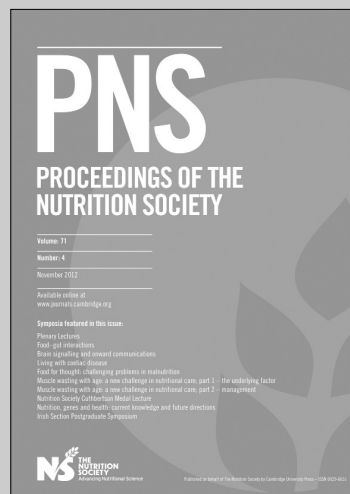
Maria O'Sullivan

Trinity College Medical Centre, Republic of Ireland

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.'

journals.cambridge.org/pns

Register for free content alerts
journals.cambridge.org/pns-alerts



Impact Factor
3.674

Ranked **14/76**
Nutrition and Dietics

2012 Journal Citation Reports®
Thomson Reuters

To subscribe contact
Customer Services

Cambridge:

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

New York:

Phone +1 (845) 353 7500
Fax +1 (845) 353 4141
subscriptions_newyork@cambridge.org



CAMBRIDGE
UNIVERSITY PRESS

Public Health Nutrition

Volume 18, 2015 ISSN: 1368-9800
journals.cambridge.org/phn

Publishing, Production, Marketing, and Subscription Sales Office:

Cambridge University Press
Journals Fulfillment Department
University Printing House
Shaftesbury Road
Cambridge CB2 8BS
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 Sarah Maddox at Cambridge University Press for further details (email: smaddox@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 18, 2015 (18 issues):
Internet/print package: £1276/\$2448 Americas only/€2045 EU only
Internet only: £924/\$1752 Americas only/€1469 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. 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.

Public Health Nutrition (PHN) provides a forum for the presentation of original research findings and high quality reviews of key topics, and for discussion of and debate on of current issues and controversies. It also publishes special issues on major topics of interest. Our field includes research, scholarship, and discussions on public health nutrition, that take a population, health promoting and preventive approach. Papers that do not have this emphasis may be directed to more appropriate journals. Potential contributors are encouraged to read the aims and scope of the journal, and to note and follow the guidelines set out below.

Content:

- **Original research findings and scientific reviews** are published as full papers usually less than 5000 words, not including the abstract, references, tables, figures and acknowledgements.
- **Editorials** express the opinion of the journal, as represented by its central editorial team, on topics judged by them to be important. Editorials, including guest editorials, are usually co-ordinated and developed by the editorial team.
- **Position papers**, including declarations and other statements of policy, may be invited or unsolicited.
- **Invited commentaries and book reviews** are expressions of opinion on a topical subject. These are commissioned by the members of the editorial team.
- **Letters to the Editors** are usually in response to material published in *PHN*. Submissions are sent to the author for comment and, when possible, published together with the author's reply.

Submission: PHN operates an online submission and reviewing system. All manuscripts should be submitted to <http://mc.manuscriptcentral.com/phnutr>. Please contact the Editorial Office on phn.edoffice@cambridge.org regarding any other types of submission.

Refereeing: Review articles and articles reporting original research are subject to external review by two or more referees who evaluate manuscripts based on their importance, relevance, and originality. Authors are asked to submit names and contact details (including email address) of up to four potential referees. All other contributions (editorials, position papers, invited commentaries, book reviews, and letters to the Editors) undergo an internal review process by at least two members of the editorial team. Invited commentaries and book reviews may also be checked externally as necessary to avoid technical errors and to improve salience.

Copyright: At the time of acceptance, authors will be asked to provide a completed copy of the 'Licence to Publish' (in lieu of copyright transfer), available at <https://www.nutritionociety.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 the full Directions to Contributors on our website (<http://www.nutritionociety.org>). Manuscripts should be in clear and concise English, and spelling should follow the Oxford English Dictionary. For authors whose native tongue is not English, in-house editorial attention to their contributions will improve clarity. On acceptance, all contributions are subject to editorial amendment to conform to house style. Manuscripts should be prepared in a common word processing package (Word for Windows is preferred) in Times New Roman or other common typeface, prepared with double-spaced text, at least 2 cm margins, and page and line numbers. Standard abbreviations and SI units must be used.

Disclosure of financial support and any competing interests.

The submission must include a statement within an Acknowledgements section reporting any competing interests, all sources of funding, and the nature of the contribution of each author to the manuscript. If there are no competing interests, this must be stated. Authors are asked to provide this information during the submission process and should not include it as part of the manuscript to allow for double-blind reviewing.

Arrangement of papers:

1. **Title page** should include the article title, author(s), affiliation(s), up to eight keywords, one author identified for correspondence (with full postal address, telephone and fax numbers, and email address), and a running title of up to 45 characters. The title page should be submitted online as a separate cover letter, not as part of the manuscript, to enable double-blind reviewing.
2. **Abstract** should be structured, usually using the following internal headings: Objective, Design, Setting, Subjects, Results, Conclusions. Abstracts should be intelligible without reference to text or figures and should not exceed 250 words.
3. **Text** should be divided under headings (typically to include Introduction, Methods, Results, Discussion and Conclusions), and sub-headings as appropriate. Conclusions should include recommendations that derive from the research and that are concrete, feasible, and potentially effective. Emphasising that more research is needed is usually not necessary unless there is specific reason to say so. All submissions must include a statement that the research was conducted in accordance with guidelines laid down by the Declaration of Helsinki and approved by an ethics review committee.
4. **Acknowledgements** (sources of funding, competing interests declaration, authorship responsibilities, acknowledgements) should be provided during the submission process, not as part of the manuscript.
5. **References** should be in Vancouver style. Please refer to the full Directions to Contributors.
6. **Tables** should be reduced to the simplest form and should not be used where text or figures give the same information. Each table must be accompanied by a clear and concise caption that is comprehensible without reference to the text. Longer tables may be published online only.
7. **Figures** should be numbered, and legends should be provided. Each figure, with its legend, should be comprehensible without reference to the text and include definitions of abbreviations.

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.

Offprints: The corresponding author will receive a PDF of the published paper free of charge. Offprints are available to purchase and must be ordered before publication.

Editorial

Public health nutrition and sustainability
*M Lawrence, B Burlingame, M Caraher,
 M Holdsworth, R Neff and L Timotijevic* 2287

Sustainability

Food security and sustainability:
 can one exist without the other?
*EM Berry, S Dernini, B Burlingame,
 A Meybeck and P Conforti* 2293

Sustainability in the Qatar national
 dietary guidelines, among the first to
 incorporate sustainability principles
B Seed 2303

Dietary guidelines to nourish humanity
 and the planet in the twenty-first century.
 A blueprint from Brazil
*CA Monteiro, G Cannon, J-C Moubarac,
 APB Martins, CA Martins, J Garzillo,
 DS Canella, LG Baraldi, M Barciotte,
 MLC Louzada, RB Levy, RM Claro
 and PC Jaime* 2311

'Sustainability does not quite get the
 attention it deserves': synergies and
 tensions in the sustainability frames
 of Australian food policy actors
H Trevena, JC Kaldor and SM Downs 2323

Formulating policy activities to promote
 healthy and sustainable diets
*MA Lawrence, S Friel, K Wingrove,
 SW James and S Candy* 2333

Evaluation of the Balanced Menu
 Challenge: a healthy food and
 sustainability programme in hospitals
 in Maryland
*TD Ranke, CL Mitchell, DM St. George
 and CR D'Adamo* 2341

The Danish Organic Action Plan 2020:
 assessment method and baseline status
 of organic procurement in public kitchens
*NN Sørensen, AD Lassen, H Løje and
 I Tetens* 2350

Sustenance and sustainability:
 maximizing the impact of school gardens
 on health outcomes
JN Davis, MR Spaniol and S Somerset 2358

The Green Eating Project: web-based
 intervention to promote environmentally
 conscious eating behaviours in
 US university students
*JT Monroe, IE Lofgren, BL Sartini
 and GW Greene* 2368

Sustainability and public health
 nutrition at school: assessing the
 integration of healthy and environmentally
 sustainable food initiatives in Vancouver
 schools
*JL Black, CE Velazquez, N Ahmadi,
 GE Chapman, S Carten, J Edward,
 S Shulhan, T Stephens and A Rojas* 2379

Linking vegetable preferences, health
 and local food systems through
 community-supported agriculture
JL Wilkins, TJ Farrell and A Rangarajan 2392

A workplace farmstand pilot programme
 in Omaha, Nebraska, USA
*FMW Bertmann, HE Fricke, LR Carpenter,
 DJ Schober, TM Smith, CA Pinard
 and AL Yaroeh* 2402

Farmers' market shopping and dietary
 behaviours among Supplemental Nutrition
 Assistance Program participants
*SBJ Pitts, Q Wu, CL Demarest, CE Dixon,
 CJM Dortche, SL Bullock, J McGuirt,
 R Ward and AS Ammerman* 2407

Food system sustainability for health
 and well-being of Indigenous Peoples
HV Kuhnlein 2415

Comparing the water, energy, pesticide
 and fertilizer usage for the production of
 foods consumed by different dietary
 types in California
*HJ Marlow, H Harwatt, S Soret and
 J Sabaté* 2425

Greenhouse gas emission of diets in the
 Netherlands and associations with food,
 energy and macronutrient intakes
*EHM Temme, IB Toxopeus, GFH Kramer,
 MCC Brosens, JMM Drijvers, M Tyszler
 and MC Ocké* 2433

Red and processed meat consumption
 and purchasing behaviours and
 attitudes: impacts for human health,
 animal welfare and environmental
 sustainability
*A Clonan, P Wilson, JA Swift,
 DG Leibovici and M Holdsworth* 2446

Is the future of meat palatable?
 Perceptions of *in vitro* meat as
 evidenced by online news comments
LI Laestadius and MA Caldwell 2457

How may a shift towards a more
 sustainable food consumption pattern
 affect nutrient intakes of Dutch children?
*EHM Temme, HME Bakker, SM Seves,
 J Verkaik-Kloosterman, AL Dekkers,
 JMA van Raaij and MC Ocké* 2468

Application of the Nutrition Functional
 Diversity indicator to assess food system
 contributions to dietary diversity and
 sustainable diets of Malawian households
*BG Lockett, FAJ DeClerck, J Fanzo,
 AR Mundorf and D Rose* 2479

Which functional unit to identify
 sustainable foods?
G Masset, F Vieux and N Darmon 2488

An integrated approach to identifying
 and characterising resilient urban food
 systems to promote population health
 in a changing climate
SW James and S Friel 2498

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