

JNS
**JOURNAL OF
NUTRITIONAL
SCIENCE**

Editor-in-Chief
G C Burdge, *University of Southampton, UK*



 **Cambridge
Open**

Journal of Nutritional Science encompasses the full spectrum of nutritional science including public health nutrition, epidemiology, dietary surveys, nutritional requirements, metabolic studies, body composition, energetics, appetite, obesity, ageing, endocrinology, immunology, neuroscience, microbiology, genetics and molecular and cell biology. The Nutrition Society fully engages with the Open Access model of publishing.

journals.cambridge.org/jns

Submit your article online
jnutsci.msubmit.net

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

CAMBRIDGE

JOURNALS

PHN

PUBLIC HEALTH NUTRITION

Editor-in-Chief

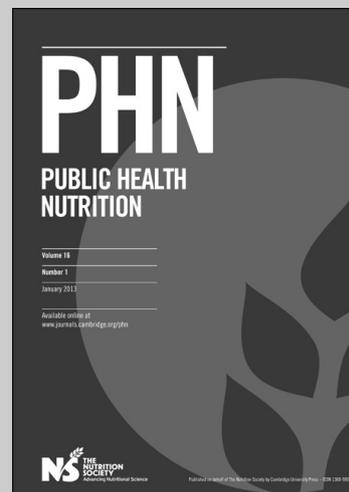
Marilyn Tseng, *California Polytechnic State University, USA*

Public Health Nutrition provides an international peer-reviewed forum for the publication and dissemination of research and scholarship aimed at understanding the causes of, and approaches and solutions to, nutrition-related public health achievements, situations and problems around the world. The journal publishes original and commissioned articles, commentaries and discussion papers for debate.

journals.cambridge.org/phn

Submit your article online
phn.msubmit.net

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



Impact Factor
2.25

Ranked **47/158**
Public,
Environmental and
Occupational Health

Ranked **34/76**
Nutrition and Dietics

2012 Journal Citation Reports®
Thomson Reuter

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

PNS

PROCEEDINGS OF THE NUTRITION SOCIETY

Editor-in-Chief

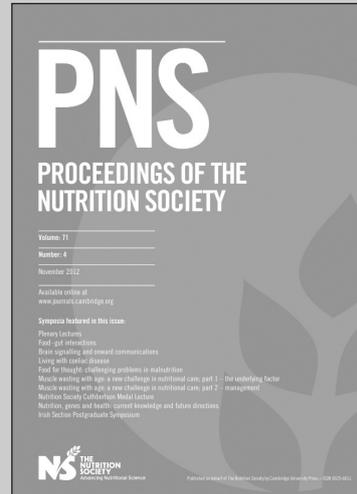
Maria O'Sullivan

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



NRR

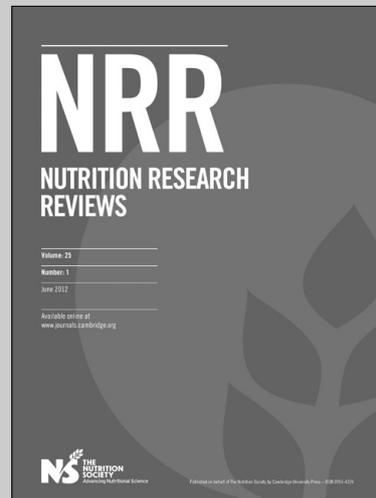
NUTRITION RESEARCH REVIEWS

Editor-in-ChiefJayne V. Woodside, *Queen's University, Belfast, UK*

Nutrition Research Reviews offers a comprehensive overview of nutritional science today. By distilling the latest research and linking it to established practice, the journal consistently delivers the widest range of in-depth articles in the field of nutritional science and has done so for the past twenty-one years. It presents up-to-date, concise and critical reviews of key topics in nutrition science, advancing new concepts and hypotheses that encourage the exchange of fundamental ideas on nutritional well-being in both humans and animals.

Submit your article online
nrr.msubmit.net

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



**Impact Factor
5.5**

Ranked **4/76**
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



Directions to Contributors can be found at journals.cambridge.org/bjn

British Journal of Nutrition
Volume 116, 2016 ISSN: 0007-1145

**Publishing, Production, Marketing, and
Subscription Sales Office:**

Cambridge University Press
Journals Fulfillment Department
UPH, Shaftesbury Road
Cambridge CB2 8BS, UK

For Customers in North America:

Cambridge University Press
Journals Fulfillment Department
1 Liberty Plaza
Floor 20
New York, NY 10006
USA

Publisher: Katy Christomanou

Special sales and supplements:

This Journal accepts relevant advertisements and inserts. We also provide bulk reprints of suitable papers to meet teaching or promotional requirements. The journal also publishes supplements on behalf of academic and corporate collaborators. Please contact Sarah Maddox at the Cambridge address for further details. E-mail: special_sales@cambridge.org

Subscription information:

British Journal of Nutrition is an international journal published by Cambridge University Press on behalf of The Nutrition Society. The twelve issues starting January 2016 comprise Volume 115, the twelve issues starting July 2016 comprise Volume 116.

Annual subscription rates:

Volumes 115/116 (24 issues):
Internet/print package £1654/\$3225/€2649
Internet only: £1149/\$2241/€1836

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

Back volumes are available. Please contact Cambridge University Press for further information.

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.

US POSTMASTERS: please send address corrections to *British Journal of Nutrition*, Cambridge University Press, 1 Liberty Plaza, Floor 20, New York, NY 10006, USA.

Directions to Contributors are available from the Society at the address below or can be found on the Society's website at <http://www.nutrition society.org>.

Offprints: The author (or main author) of an accepted paper will receive a copy of the PDF file of their article. There will be an option to purchase paper offprints, these should be ordered at proof stage. No page charges are levied by this journal.

Copyright: As of 1 July 2000 the copyright of all articles submitted to *British Journal of 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 Publications 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 is printed on acid-free paper from renewable sources. Printed in the UK by Bell & Bain Ltd., Glasgow.

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.

British Journal of Nutrition is covered in Current Contents®/Agriculture, Biology & Environmental Sciences, SciSearch®, Research Alert®, Current Contents®/Life Sciences, Index Medicus® (MEDLINE®), AGRICOLA®, CAB Abstracts™, Global Health, BIOSIS® Database, EMBASE/Excerpta Medica and Elsevier BIOBASE/Current Awareness in Biological Sciences, CINAHL, and Chemical Abstracts Service.

Molecular Nutrition

Relationship between plasma 25-hydroxyvitamin D and leucocyte telomere length by sex and race in a US study
J. J. Liu, E. K. Cahoon, M. S. Linet, M. P. Little, C. L. Dagnall, H. Higson, S. A. Savage & D. M. Freedman 953-960

Dietary choline and betaine intake, choline-metabolising genetic polymorphisms and breast cancer risk: a case-control study in China
Y.-F. Du, W.-P. Luo, F.-Y. Lin, Z.-Q. Lian, X.-F. Mo, B. Yan, M. Xu, W.-Q. Huang, J. Huang & C.-X. Zhang 961-968

Metabolism and Metabolic Studies

Analysis of the interaction between transcription factor 7-like 2 genetic variants with nopal and wholegrain fibre intake: effects on anthropometric and metabolic characteristics in type 2 diabetes patients
M. M. López-Ortiz, M. E. Garay-Sevilla, M. E. Tejero & E. L. Perez-Luque 969-978

Resveratrol primes the effects of physical activity in old mice
E. Rodríguez-Bies, B. T. Tung, P. Navas & G. López-Lluch 979-988

Developmental Biology

The effect of healthy dietary consumption on executive cognitive functioning in children and adolescents: a systematic review
J. F. W. Cohen, M. T. Gorski, S. A. Gruber, L. B. F. Kurdziel & E. B. Rimm 989-1000

Nutritional Immunology

Feeding a diet devoid of choline to lactating rodents restricts growth and lymphocyte development in offspring
E. D. Lewis, S. Goruk, C. Richard, N. S. Dellschaft, J. M. Curtis, R. L. Jacobs & C. J. Field 1001-1012

Human and Clinical Nutrition

A metered intake of milk following exercise and thermal dehydration restores whole-body net fluid balance better than a carbohydrate-electrolyte solution or water in healthy young men
S. Seery & P. Jakeman 1013-1021

Differences in metabolic biomarkers in the blood and gene expression profiles of peripheral blood mononuclear cells among normal weight, mildly obese and moderately obese subjects
U. J. Jung, Y. R. Seo, R. Ryu & M.-S. Choi 1022-1032

Preterm human milk composition: a systematic literature review
C. Boyce, M. Watson, G. Lazidis, S. Reeve, K. Dods, K. Simmer & G. McLeod 1033-1045

Mode of oral iron administration and the amount of iron habitually consumed do not affect iron absorption, systemic iron utilisation or zinc absorption in iron-sufficient infants: a randomised trial
E. A. Szymlek-Gay, M. Domellöf, O. Hernell, R. F. Hurrell, T. Lind, B. Lönnerdal, C. Zeder & I. M. Egli 1046-1060

Inflammation-driven malnutrition: a new screening tool predicts outcome in Crohn's disease
I. Jansen, M. Prager, L. Valentini & C. Büning 1061-1067

Dietary Surveys and Nutritional Epidemiology

Should urinary iodine concentrations of school-aged children continue to be used as proxy for different populations? Analysis of data from Chinese national surveys
P. Liu, X. Su, M. Li, H. Shen, J. Yu, P. J. Kelly, F. Meng, L. Liu, L. Fan, M. Li, S. Liu & D. Sun 1068-1076

Association between inflammatory potential of diet and risk of depression in middle-aged women: the Australian Longitudinal Study on Women's Health
N. Shivappa, D. A. J. M. Schoenaker, J. R. Hebert & G. D. Mishra 1077-1086

Nutrition and health claims on healthy and less-healthy packaged food products in New Zealand
H. H. Al-Ani, A. Devi, H. Eyles, B. Swinburn & S. Vandevijvere 1087-1094

Food assistance programmes are indirectly associated with anaemia status in children <5 years old in Mexico
T. Shamah-Levy, I. Méndez-Gómez-Humarán, E. B. Gaona-Pineda, L. Cuevas-Nasu & S. Villalpando 1095-1102

Macronutrient intake in advanced age: Te Puāwaitanga o Ngā Tapuwae Kia ora Tonu, Life and Living in Advanced Age: A Cohort Study in New Zealand (LiLACS NZ)
C. Wham, R. Teh, S. A. Moyes, A. Rolleston, M. Muru-Lanning, K. Hayman, A. Adamson & N. Kerse 1103-1115

Innovative Techniques

In vitro fermentability and prebiotic potential of soyabean Okara by human faecal microbiota
E. Pérez-López, D. Cela, A. Costabile, I. Mateos-Aparicio & P. Rupérez 1116-1124

Behaviour, Appetite and Obesity

Dietary whey reduces energy intake and alters hypothalamic gene expression in obese phyto-oestrogen-deprived male rats
M. F. Andreoli, C. Stoker, G. P. Lazzarino, G. Canesini, E. H. Luque & J. G. Ramos 1125-1133

Letter to the Editor

Response: food fortification as a means to increase vitamin D intake
S. Soininen, A.-M. Eloranta, V. Lindi & T. A. Lakka 1134-1135

Corrigenda

Dietary intake and food sources of added sugar in the Australian population – CORRIGENDUM
L. Lei, A. M. Rangan, V. M. Flood & J. C. Y. Louie 1136-1136

Dietary glycaemic index and glycaemic load among Australians children and adolescents – results from the 2011–2012 Australian Health Survey – CORRIGENDUM
M. E. Jones, A. W. Barclay, J. C. Brand-Miller & J. C. Y. Louie 1137-1137

Immunoprotective effects of oral intake of heat-killed *Lactobacillus pentosus* strain b240 in elderly adults: a randomised, double-blind, placebo-controlled trial – CORRIGENDUM
S. Shinkai, M. Toba, T. Saito, I. Sato, M. Tsubouchi, K. Taira, K. Kakumoto, T. Inamatsu, H. Yoshida, Y. Fujiwara, T. Fukaya, T. Matsumoto, K. Tateda, K. Yamaguchi, N. Kohda & S. Kohno 1138-1140

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