

CAMBRIDGE

JOURNALS

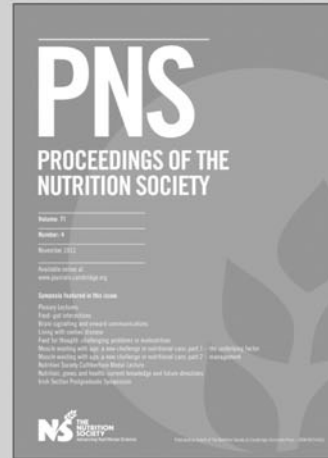
# PNS

## 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](http://journals.cambridge.org/pns)

Register for free content alerts  
[journals.cambridge.org/pns-alerts](http://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](mailto:journals@cambridge.org)

**New York:**

Phone +1 (845) 353 7500

Fax +1 (845) 353 4141

[subscriptions\\_newyork@cambridge.org](mailto:subscriptions_newyork@cambridge.org)



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](http://journals.cambridge.org/phn)

Submit your article online  
[phn.msubmit.net](http://phn.msubmit.net)

Register for free content alerts  
[journals.cambridge.org/phn-alerts](http://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](mailto:journals@cambridge.org)

**New York:**

Phone +1 (845) 353 7500  
Fax +1 (845) 353 4141  
[subscriptions\\_newyork@cambridge.org](mailto:subscriptions_newyork@cambridge.org)



**CAMBRIDGE**  
UNIVERSITY PRESS

Directions to Contributors can be found at [journals.cambridge.org/bjn](http://journals.cambridge.org/bjn)

**British Journal of Nutrition**  
Volume 111, 2014 ISSN: 0007-1145

**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 Department  
100 Brook Hill Drive  
West Nyack  
New York 10994-2133  
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](mailto: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 2014 comprise Volume 111, the twelve issues starting July 2014 comprise Volume 112.

**Annual subscription rates:**

Volumes 111/112 (24 issues):  
Internet/print package £1432/\$2792/€2294  
Internet only: £1023/\$1994/€1634

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, 100 Brook Hill Drive, West Nyack, New York 10994-2133.

**Directions to Contributors** are available from the Society at the address below or can be found on the Society's website at <http://www.nutritionociety.org> (an abbreviated Notes for Authors can be found inside the back cover).

**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](http://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.

**Invited Commentary**

Maternal fatty acids and offspring development: extending beyond the cardiovascular and endocrine systems.  
K. Rooney & S. E. Ozanne 955–956

**Molecular Nutrition**

Actinidin from kiwifruit (*Actinidia deliciosa* cv. Hayward) increases the digestion and rate of gastric emptying of meat proteins in the growing pig.  
C. A. Montoya, S. M. Rutherford, T. D. Olson, A. S. Purba, L. N. Drummond, M. J. Boland & P. J. Moughan 957–967

**Metabolism and Metabolic Studies**

Assessment of tissue distribution and concentration of  $\beta$ -cryptoxanthin in response to varying amounts of dietary  $\beta$ -cryptoxanthin in the Mongolian gerbil.  
M. R. La Frano, C. Zhu & B. J. Burri 968–978

Food restriction by intermittent fasting induces diabetes and obesity and aggravates spontaneous atherosclerosis development in hypercholesterolaemic mice.  
G. G. Dorighello, J. C. Rovani, C. J. F. Luhman, B. A. Paim, H. F. Raposo, A. E. Vercesi & H. C. F. Oliveira 979–986

Anti-mouse CD52 monoclonal antibody ameliorates iron-deficient anaemia in IL-10 knockout mice.  
H. Wang, J. Dong, L. Zuo, J. Liu, W. Zhu, Y. Li, L. Gu, J. Zhao, L. Zhang, J. Gong, W. Zhang, N. Li & J. Li 987–995

Long-chain *n*-3 DHA reduces the extent of skeletal muscle fatigue in the rat *in vivo* hindlimb model.  
G. E. Peoples & P. L. McLennan 996–1003

Parameter identifiability and Extended Multiple Studies Analysis of a compartmental model for human vitamin A kinetics: fixing fractional transfer coefficients for the initial steps in the absorptive process.  
H. Park & M. H. Green 1004–1010

mRNA Expression of lipogenic enzymes in mammary tissue and fatty acid profile in milk of dairy cows fed flax hulls and infused with flax oil in the abomasum.  
M.-F. Palin, C. Côrtes, C. Benchaar, P. Lacasse & H. V. Petit 1011–1020

**Developmental Biology**

Gestational methyl donor deficiency alters key proteins involved in neurosteroidogenesis in the olfactory bulbs of newborn female rats and is associated with impaired olfactory performance.  
S. El Hajj Chehadeh, G. Pourié, N. Martin, J.-M. Alberto, J.-L. Daval, J.-L. Guéant & B. Leininger-Muller 1021–1031

**Nutritional Immunology**

Glutamine modulates acute dextran sulphate sodium-induced changes in small-intestinal intraepithelial  $\gamma\delta$ -T-lymphocyte expression in mice.  
M.-H. Pai, J.-J. Liu, S.-L. Yeh, W.-J. Chen & C.-L. Yeh 1032–1039

**Nutritional Toxicology**

Diets high in fermentable protein and fibre alter tight junction protein composition with minor effects on barrier function in piglet colon.  
J. F. Richter, R. Pieper, S. S. Zakrzewski, D. Günzel, J. D. Schulzke & A. G. Van Kessel 1040–1049

**Microbiology**

Resembling breast milk: influence of polyamine-supplemented formula on neonatal BALB/cOlaHsd mouse microbiota.  
C. Gómez-Gallego, M. Carmen Collado, G. Pérez, T. Ilo, U.-M. Jaakkola, M. J. Bernal, M. J. Periago, R. Frias, G. Ros & S. Salminen 1050–1058

**Human and Clinical Nutrition**

Expression of iron-related proteins in the duodenum is up-regulated in patients with chronic inflammatory disorders.  
A. Sukumaran, J. James, H. P. Janardhan, A. Amaladas, L. M. Suresh, D. Danda, V. Jeyeseelan, B. S. Ramakrishna & M. Jacob 1059–1068

Breast-fed infants and their later cardiovascular health: a prospective study from birth to age 32 years.  
S. Piriälä, M. Taskinen, H. Viljakainen, O. Mäkitie, M. Kajosaari, U. M. Saarinen-Pihkala & M. Turanlahti 1069–1076

*TaqIB* polymorphism in the cholesteryl ester transfer protein (*CETP*) gene influences lipid responses to the consumption of kiwifruit in hypercholesterolaemic men.  
C. S. Gammon, A. M. Minihane, R. Kruger, C. A. Conlon, P. R. von Hurst, B. Jones & W. Stonehouse 1077–1084

**Dietary Surveys and Nutritional Epidemiology**

Interactions between plasma concentrations of folate and markers of vitamin B<sub>12</sub> status with cognitive performance in elderly people not exposed to folic acid fortification: the Hordaland Health Study.  
E. L. Doets, P. M. Ueland, G. S. Tell, S. E. Vollset, O. K. Nygård, P. van't Veer, L. C. P. G. M. de Groot, E. Nurk, H. Refsum, A. D. Smith & S. J. P. M. Eussen 1085–1095

Maternal intake of vitamins A, E and K in pregnancy and child allergic disease: a longitudinal study from the Danish National Birth Cohort.  
E. Maslova, S. Hansen, M. Strøm, T. I. Halldorsson & S. F. Olsen 1096–1108

Dietary *N*-nitroso compounds and risk of colorectal cancer: a case-control study in Newfoundland and Labrador and Ontario, Canada.  
Y. Zhu, P. P. Wang, J. Zhao, R. Green, Z. Sun, B. Roebathan, J. Squires, S. Buehler, E. Dicks, J. Zhao, M. Cotterchio, P. T. Campbell, M. Jain, P. S. Parfrey & J. R. Mclaughlin 1109–1117

Rice and noodle consumption is associated with insulin resistance and hyperglycaemia in an Asian population.  
Y. L. M. Zuñiga, S. A. Rebello, P. L. Oi, H. Zheng, J. Lee, E. S. Tai & R. M. Van Dam 1118–1128

Which characteristics of nursing home residents influence differences in malnutrition prevalence? An international comparison of The Netherlands, Germany and Austria.  
N. C. van Nie-Visser, J. Meijers, J. Schols, C. Lohrmann, S. Bartholomeyczik, M. Spreeuwenberg & R. Halfens 1129–1136

**Behaviour, Appetite and Obesity**

Effects of repeated consumption on sensory-enhanced satiety.  
M. R. Yeomans, K. McCrickerd, J. M. Brunstrom & L. Chambers 1137–1144

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