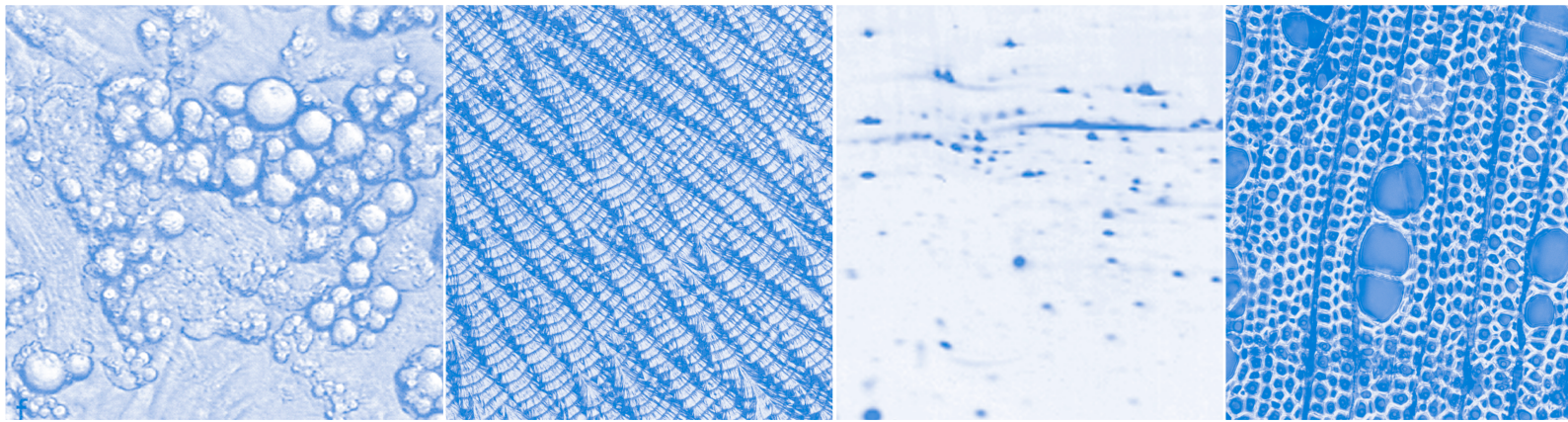


British Journal of Nutrition

Published online by Cambridge University Press

BJN An International Journal of Nutritional Science

Volume 104 Number 3 14 August 2010



Published on behalf of The Nutrition Society by Cambridge University Press

ISSN 0007-1145

British Journal of Nutrition
An International Journal of Nutritional Science
Volume 104, 2010 ISSN: 0007-1145

Aims and Scope

The *British Journal of Nutrition* is an international, peer-reviewed journal publishing original papers, review articles, short communications and technical notes on human and clinical nutrition, animal nutrition and basic science as applied to nutrition. Correspondence is encouraged in a Nutrition Discussion Forum. The Journal recognizes the multidisciplinary nature of nutritional science and encourages the submission of material from all of the specialities involved in research and clinical practice. The Journal also publishes supplements on topics of particular interest.

The *British Journal of Nutrition* is published twice monthly by Cambridge University Press on behalf of
 The Nutrition Society.

The *British Journal of Nutrition* is available online to subscribers at journals.cambridge.org/bjn
 Tables of contents and abstracts are available free at the same website.

Editor-in-Chief

P C Calder, *School of Medicine, University of Southampton, Southampton, UK*

Deputy Editors

F Bellisle, *INRA, University of Paris, Bobigny, France*

D R Jacobs Jr, *School of Public Health, University of Minnesota, Minneapolis, MN, USA*

R J Wallace, *Gut Health Programme, Rowett Institute of Nutrition and Health, University of Aberdeen, Aberdeen, UK*

S J Whiting, *College of Pharmacy and Nutrition, University of Saskatchewan, Saskatoon, Sask., Canada*

I S Wood, *Department of Medicine, University of Liverpool, Liverpool, UK*

Reviews Editors

J C Mathers, *Institute of Ageing and Health, Newcastle University, Newcastle upon Tyne, UK*

P Aggett

Systematic Reviews Editor

M Makrides, *Women's and Children's Health Research Institute and University of Adelaide, Adelaide, Australia*

Supplements Editor

C Seal, *School of Agriculture, Food and Rural Development, Newcastle University, Newcastle upon Tyne, UK*

Book Reviews Editor

O B Kennedy, *School of Food Biosciences, University of Reading, Reading, UK*

Editorial Board

J J B Anderson, *Chapel Hill, NC, USA*

D Attaix, *Ceyrat, France*

Y Bao, *Norwich, UK*

J H Beattie, *Aberdeen, UK*

G Bell, *Stirling, UK*

M Blaut, *Bergholz-Rehbrücke, Germany*

K Botham, *London, UK*

G C Burdge, *Southampton, UK*

A E Buyken, *Dortmund, Germany*

J Buyse, *Leuven, Belgium*

K D Cashman, *Cork, Ireland*

M S Choi, *Daegu, Korea*

A Chwalibog, *Frederiksberg, Denmark*

S J Duthie, *Aberdeen, UK*

K Eder, *Halle/Saale, Germany*

A Esmaillzadeh, *Isfahan, Iran*

C J Field, *Edmonton, Alta., Canada*

J L Firkins, *Columbus, OH, USA*

J K Friel, *Winnipeg, MB, Canada*

S Garnett, *Sydney, Australia*

B A Griffin, *Surrey, UK*

E Herrera, *Madrid, Spain*

M M Hetherington, *Leeds, UK*

E J Johnson, *Boston, MA, USA*

S J Kaushik, *Saint Pée-sur-Nivelle, France*

D S Kelley, *Davis, Ca., USA*

C W C Kendall, *Toronto, Ont., Canada*

H J Lightowler, *Oxford, UK*

A M López-Sobaler, *Madrid, Spain*

H C Lukaski, *Grand Forks, ND, USA*

R D Mattes, *West Lafayette, IN, USA*

C Mayer, *Aberdeen, UK*

S McCann, *Buffalo, NY, USA*

N M McKeown, *Boston, MA, USA*

G McNeill, *Aberdeen, UK*

J G Mercer, *Aberdeen, UK*

A M Minihane, *Auckland, New Zealand*

T A Mori, *Perth, Australia*

M Murphy, *Reus, Spain*

P Nestel, *Southampton, UK*

U Nöthlings, *Kiel, Germany*

M C Ocké, *Bilthoven, The Netherlands*

J H Y Park, *Chuncheon, Korea*

C J Petry, *Cambridge, UK*

V Ravindran, *Palmerston North, New Zealand*

W D Rees, *Aberdeen, UK*

G Rimbach, *Kiel, Germany*

S M Robinson, *Southampton, UK*

E Ros, *Barcelona, Spain*

S Salminen, *Turku, Finland*

M B Schulze, *Nuthetal, Germany*

A J Sinclair, *Geelong, Australia*

C R Sirtori, *Milan, Italy*

K S Swanson, *Urbana, IL, USA*

M W A Verstegen, *Wageningen, The Netherlands*

F Visioli, *Paris, France*

M S Westerterp-Plantenga, *Maastricht, The Netherlands*

The Netherlands

B Woodward, *Guelph, Ont., Canada*

Publications Staff

C Goodstein (*Publications Manager*), C Jackson (*Deputy Publications Manager*), L Weeks,

H Zdravics and C T Hughes (*Publications Officers*)

The Nutrition Society has as its objective the advancement of the scientific study of nutrition and its applications to the maintenance of human and animal health.

Application of membership is invited from anyone whose work has contributed to the scientific knowledge of nutrition, whether such work has been in the laboratory, the field or the clinic, and whether experimental, clinical, agricultural or statistical in nature. There is also a student membership scheme with reduced subscriptions.

Particulars of The Nutrition Society and application forms for membership are available from The Nutrition Society, 10 Cambridge Court, 210 Shepherds Bush Road, London W6 7NJ, UK. Tel: +44 (0)20 7602 0228, Fax: +44 (0)20 7602 1756, Email: office@nutsoc.org.uk

The Nutrition Society Home Page is at <http://www.nutritionssociety.org>

Contents

Horizons in Nutritional Science

- Avoidance of vitamin D deficiency in pregnancy in the United Kingdom: the case for a unified approach in National policy.
E. Hyppönen & B. J. Boucher 309–314

Invited Commentary

- Vitamin D in the spotlight – time for urgent action?
S. Lanham-New 315–317

Short Communication

- The incorporation of marine *n*-3 PUFA into platelets and adipose tissue in pre- and postmenopausal women: a randomised, double-blind, placebo-controlled trial.
P. M. Witt, J. H. Christensen, M. Ewertz, I. V. Aardestrup & E. B. Schmidt 318–325

Molecular Nutrition

- Molecular mechanism of green microalgae, *Dunaliella salina*, involved in attenuating balloon injury-induced neointimal formation.
M.-J. Sheu, H.-C. Cheng, Y.-C. Chien, P.-Y. Chou, G.-J. Huang, J.-S. Chen, S.-Y. Lin & C.-H. Wu 326–335
- Quercetin supplementation and its effect on human monocyte gene expression profiles *in vivo*.
I. Boomgaarden, S. Egert, G. Rimbach, S. Wolffram, M. J. Müller & F. Döring 336–345

Metabolism and Metabolic Studies

- Effects of fish oil and starch added to a diet containing sunflower-seed oil on dairy goat performance, milk fatty acid composition and *in vivo* Δ 9-desaturation of [¹³C]vacaccenic acid.
L. Bernard, J. Mourirot, J. Rouel, F. Glasser, P. Capitan, E. Pujos-Guillot, J.-M. Chardigny & Y. Chilliard 346–354
- Intestinal tumours, colonic butyrate and sleep in exercised Min mice.
L. Basterfield & J. C. Mathers 355–363
- Effects of oat bran, processed to different molecular weights of β -glucan, on plasma lipids and caecal formation of SCFA in mice.
T. Immerstrand, K. E. Andersson, C. Wange, A. Rascon, P. Hellstrand, M. Nyman, S. W. Cui, B. Bergenstahl, C. Trägårdh & R. Öste 364–373
- Different digestion of caprine whey proteins by human and porcine gastrointestinal enzymes.
E. K. Eriksen, H. Holm, E. Jensen, R. Aaboe, T. G. Devold, M. Jacobsen & G. E. Vegarud 374–381
- Exposure to zinc deficiency in fetal and postnatal life determines nitric oxide system activity and arterial blood pressure levels in adult rats.
A. Tomat, R. Elesgaray, V. Zago, H. Fasoli, A. Fellet, A. M. Balaszczuk, L. Schreier, M. A. Costa & C. Arranz 382–389

Microbiology

- Lactobacillus plantarum* inhibits intestinal epithelial barrier dysfunction induced by unconjugated bilirubin.
Y. Zhou, H. Qin, M. Zhang, T. Shen, H. Chen, Y. Ma, Z. Chu, P. Zhang & Z. Liu 390–401

Human and Clinical Nutrition

- Effect of pomegranate seed oil on hyperlipidaemic subjects: a double-blind placebo-controlled clinical trial.
P. Mirmiran, M. R. Fazeli, G. Asghari, A. Shafiee & F. Azizi 402–406
- Relative glycaemic impact of customarily consumed portions of eighty-three foods measured by digesting *in vitro* and adjusting for food mass and apparent glucose disposal.
J. A. Monro, A. Wallace, S. Mishra, S. Eady, J. A. Willis, R. S. Scott & D. Hedderley 407–417
- Effects of peanut processing on body weight and fasting plasma lipids.
F. McKiernan, P. Lokko, A. Kuevi, R. L. Sales, N. M. B. Costa, J. Bressan, R. C. G. Alfenas & R. D. Mattes 418–426

- Improvement in nutrition-related knowledge and behaviour of urban Asian Indian school children: findings from the 'Medical education for children/Adolescents for Realistic prevention of obesity and diabetes and for healthy ageing' (MARG) intervention study.
P. Shah, A. Misra, N. Gupta, D. K. Hazra, R. Gupta, P. Seth, A. Agarwal, A. K. Gupta, A. Jain, A. Kulshreshtha, N. Hazra, P. Khanna, P. K. Gangwar, S. Bansal, P. Tallikoti, I. Mohan, R. Bhargava, R. Sharma, S. Gulati, S. Bharadwaj, R. M. Pandey & K. Goel 427–436
- Effect of multiple-micronutrient supplementation on maternal nutrient status, infant birth weight and gestational age at birth in a low-income, multi-ethnic population.
L. Brough, G. A. Rees, M. A. Crawford, R. H. Morton & E. K. Dorman 437–445
- Dietary Surveys and Nutritional Epidemiology***
- Selecting informative food items for compiling food-frequency questionnaires: comparison of procedures.
M. L. Molag, Jeanne H. M. de Vries, N. Duif, M. C. Ocké, P. C. Dagnelie, R. A. Goldbohm & P. van't Veer 446–456
- Monosodium glutamate is not associated with obesity or a greater prevalence of weight gain over 5 years: findings from the Jiangsu Nutrition Study of Chinese adults.
Z. Shi, N. D. Luscombe-Marsh, G. A. Wittert, B. Yuan, Y. Dai, X. Pan & A. W. Taylor 457–463