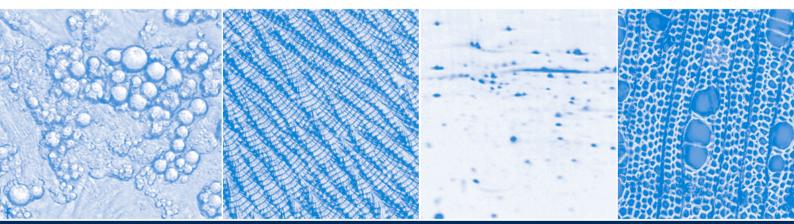
British Journal of Nutrition

BJN An International Journal of Nutritional Science

Volume 106 Number 4 28 August 2011



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 106, 2011 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, Institute of Ageing and Chronic Disease, University of Liverpool, Liverpool, UK

Reviews Editors

D J Millward, Faculty of Health and Medical Sciences, University of Surrey, UK

P Aggett

Systematic Reviews Editor

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

Supplements Editor

J Woodside, Nutrition and Metabolism Group, Centre for Public Health, Queen's University, Belfast, UK

Editorial Board

J J B Anderson, Chapel Hill, NC, USA Y Bao, Norwich, UK J H Beattie, Aberdeen, UK G Bell, Stirling, UK M Blaut, Bergholz-Rehbrücke, Germany S Brix Pedersen, Lyngby, Denmark G C Burdge, Southampton, UK A E Buyken, Dortmund, Germany J Buyse, Leuven, Belgium K D Cashman, Cork, Ireland R S Chapkin, College Station, TX, USA M S Choi, Daegu, Korea A Collins, Oslo, Norway S J Duthie, Aberdeen, UK U Ekelund, Cambridge, UK A Esmaillzadeh, Isfahan, Iran B A Fielding, Oxford, UK J L Firkins, Columbus, OH, USA J K Friel, Winnipeg, MB, Canada M Fukushima, Obihiro City, Japan S Garnett, Sydney, Australia B A Griffin, Surrey, UK

J C G Halford, Liverpool, UK E Herrera, Madrid, Spain D J Hoffman, New Brunswick, NJ, USA E J Johnson, Boston, MA, USA S J Kaushik, Saint Pée-sur-Nivelle, France D S Kelley, Davis, Ca., USA CWC Kendall, Toronto, Ont., Canada J P Lallès, Rennes, France A Laviano, Rome, Italy H J Lightowler, Oxford, UK A M López-Sobaler, Madrid, Spain J A Lovegrove, Reading, UK R D Mattes, West Lafayette, IN, USA C Mayer, Aberdeen, UK S McCann, Buffalo, NY, USA J P McClung, Natick, MA, USA N M McKeown, Boston, MA, USA S McMullen, Nottingham, UK D McMurray, College Station, TX, USA J G Mercer, Aberdeen, UK A M Minihane, Norwich, UK 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 E Perissinotto, Padova, Italy C J Petry, Cambridge, UK S M Phillips, Hamilton, Ont., Canada S Proctor, Edmonton, Alta., Canada 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 T Sheehy, Cork, Ireland A J Sinclair, Geelong, Australia C R Sirtori, Milan, Italy K S Swanson, Urbana, IL, USA D Tomé, Paris, France F Visioli, Madrid, Spain M R Yeomans, Sussex, UK

Publications Staff

C Goodstein (*Publications Manager*), C Jackson (*Deputy Publications Manager*), L Weeks, H Zdravics and C T Hughes (*Publications Officers*) and S Hui and D Owen (*Publications Assistants*)

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.nutritionsociety.org

© Nutrition Society 2011

British Journal of Nutrition

Contents

Invited Commentary Impact of phytosterols on mitochondrial functions. <i>G. Lizard</i>	461-462
 Short Communications Umbilical venous-arterial plasma composition differences suggest differential incorporation of fatty acids in NEFA and cholesteryl ester pools. <i>R. M. Lewis, M. A. Hanson & G. C. Burdge</i> A variant near the melanocortin-4 receptor gene regulates postprandial lipid metabolism in a healthy Caucasian population. 	463-467
 P. Perez-Martinez, A. Garcia-Rios, J. Delgado-Lista, N. Delgado-Casado, M. M. Malagon, C. Marin, P. Gomez-Luna, J. Caballero, F. Perez-Jimenez & J. Lopez-Miranda Nutrient-based standards for school lunches complement food-based standards and improve pupils' nutrient intake profile. 	468-471
D. Haroun, L. Wood, C. Harper & M. Nelson	472–474
Molecular Nutrition Protective effect of β -(1,3 \rightarrow 1,6)-D-glucan against irritant-induced gastric lesions. Ki. Tanaka, Y. Tanaka, T. Suzuki & T. Mizushima	475-485
Metabolism and Metabolic Studies Preliminary findings on the role of <i>PLIN1</i> polymorphisms on body composition and energy metabolism response to energy restriction in obese women. J. R. Ruiz, E. Larrarte, J. Margareto, R. Ares, P. Alkorta & I. Labayen	486-490
 A grape polyphenol extract modulates muscle membrane fatty acid composition and lipid metabolism in high-fat-high-sucrose diet-fed rats. M. Aoun, F. Michel, G. Fouret, A. Schlernitzauer, V. Ollendorff, C. Wrutniak-Cabello, JP. Cristol, MA. Carbonneau, C. Coudray & C. Feillet-Coudray 	491-501
 Developmental Biology Modulation of mammary gland development in pre-pubertal mice as affected by soya and milk protein supplements. B. Alston-Mills, J. J. Lepri & C. A. Martin Beneficial effects of dietary fibre supplementation of a high-fat diet on fetal development in rats. Y. Lin, Xf. Han, Zf. Fang, Lq. Che, J. Nelson, Th. Yan & D. Wu 	502–509 510–518
 Nutritional Immunology Dietary fish oil and curcumin combine to modulate colonic cytokinetics and gene expression in dextran sodium sulphate-treated mice. Q. Jia, I. Ivanov, Z. Z. Zlatev, R. C. Alaniz, B. R. Weeks, E. S. Callaway, J. S. Goldsby, L. A. Davidson, YY. Fan, L. Zhou, J. R. Lupton, D. N. McMurray & R. S. Chapkin Modulatory effect of α-linolenic acid-rich garden cress (Lepidium sativum L.) seed oil on 	519-529
inflammatory mediators in adult albino rats. B. T. Diwakar, B. R. Lokesh & K. A. Naidu	530-539
 Nutritional Toxicology Phytosterol supplementation reduces metabolic activity and slows cell growth in cultured rat cardiomyocytes. F. Danesi, F. Ferioli, M. F. Caboni, E. Boschetti, M. Di Nunzio, V. Verardo, V. Valli, A. Astolfi, A. Pession & A. Bordoni 	540-548
 Microbiology Effect of the continuous intake of probiotic-fermented milk containing Lactobacillus casei strain Shirota on fever in a mass outbreak of norovirus gastroenteritis and the faecal microflora in a health service facility for the aged. S. Nagata, T. Asahara, T. Ohta, T. Yamada, S. Kondo, L. Bian, C. Wang, Y. Yamashiro & 	
K. Nomoto	549-556

Human and Clinical Nutrition

Compliance, tolerability and safety of two antioxidant-rich diets: a randomised controlled trial	
in male smokers.	
A. Karlsen, M. Svendsen, I. Seljeflot, MA. Sommernes, J. Sexton, A. Brevik, I. Erlund,	
M. Serafini, N. Bastani, S. Fagertun Remberg, G. I. Borge, M. H. Carlsen,	
S. K. Bøhn, M. C. Myhrstad, L. O. Dragsted, A. K. Duttaroy, K. Haffner, P. Laake,	
C. A. Drevon, H. Arnesen, A. Collins, S. Tonstad & R. Blomhoff	557-571
The influence of selenium-enriched milk proteins and selenium yeast on plasma selenium levels	
and rectal selenoprotein gene expression in human subjects.	
Y. Hu, G. H. McIntosh, R. K. Le Leu, J. M. Upton, R. J. Woodman & G. P. Young	572-582
The oligosaccharide α -cyclodextrin has modest effects to slow gastric emptying and modify the	
glycaemic response to sucrose in healthy older adults.	
D. Gentilcore, L. Vanis, J. C. Teng, J. M. Wishart, J. D. Buckley, C. K. Rayner, M. Horowitz	
& K. L. Jones	583-587
Black tea is not significantly different from water in the maintenance of normal hydration in	
human subjects: results from a randomised controlled trial.	
C. H. Ruxton & V. A. Hart	588-595
Dietary Survey and Nutritional Epidemiology	
Diet before pregnancy and the risk of hyperemesis gravidarum.	
M. Haugen, Å. Vikanes, A. L. Brantsæter, H. M. Meltzer, A. M. Grjibovski & P. Magnus	596-602
Behaviour, Appetite and Obesity	
Both obesity-prone and obesity-resistant rats present delayed cutaneous wound healing.	
A. P. do Nascimento & A. Monte-Alto-Costa	603-611
Differential expression of liver proteins between obesity-prone and obesity-resistant rats in	
response to a high-fat diet.	
X. Wang, JW. Choi, J. I. Joo, D. H. Kim, T. S. Oh, D. K. Choi & J. W. Yun	612-626