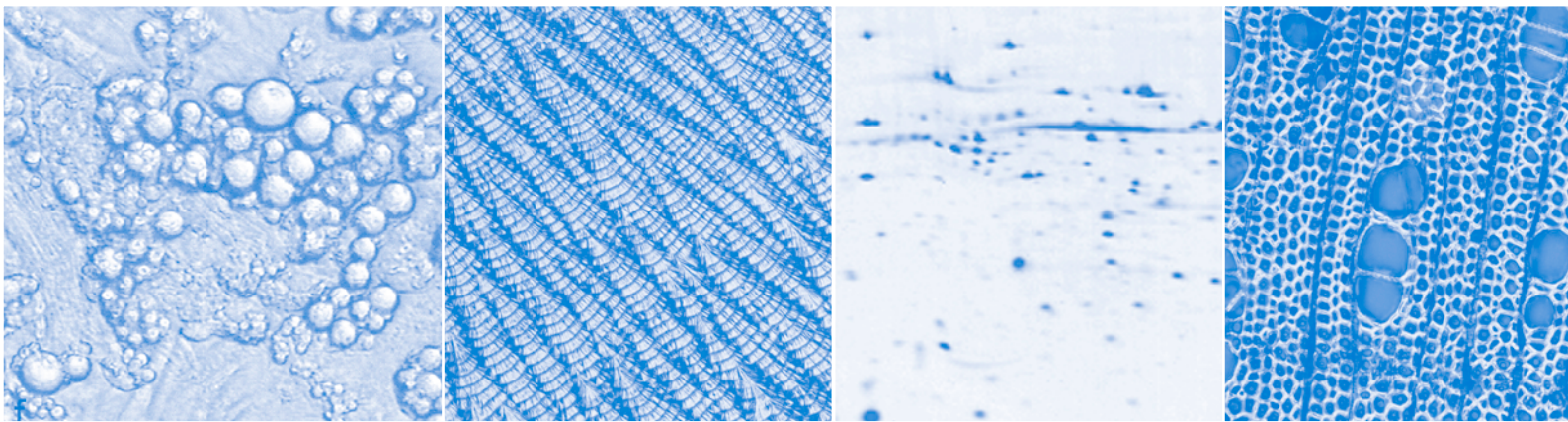


British Journal of Nutrition

Published online by Cambridge University Press

BJN An International Journal of Nutritional Science

Volume 103 Number 2 28 January 2010



Published on behalf of The Nutrition Society by Cambridge University Press

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 Research Institute, Aberdeen, UK*

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

Reviews Editor

J C Mathers, *School of Clinical Medical Sciences, University of Newcastle upon Tyne, Newcastle upon Tyne, UK*

Supplements Editor

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

J R Arthur, *Aberdeen, UK*

S B Astley, *Norwich, UK*

D Attaix, *Ceyrat, France*

Y Bao, *Norwich, UK*

G Bell, *Stirling, UK*

M Blaut, *Bergholz-Rehbrücke, Germany*

K Botham, *London, UK*

G C Burdge, *Southampton, UK*

J Buyse, *Leuven, Belgium*

M D Carro, *León, Spain*

M S Choi, *Daegu, Korea*

A Chwalibog, *Frederiksberg, Denmark*

K Eder, *Halle/Saale, Germany*

G C Fahey Jr, *Urbana, IL, USA*

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

J K Friel, *Winnipeg, MB, Canada*

S Garnett, *Sydney, Australia*

F Ginty, *Niskayuna, NY, USA*

B A Griffin, *Surrey, UK*

E Herrera, *Madrid, Spain*

M M Hetherington, *Liverpool, UK*

G Holtrop, *Aberdeen, UK*

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

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

I Kyriazakis, *Karditsa, Greece*

H J Lightowler, *Oxford, UK*

A M López-Sobaler, *Madrid, Spain*

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

H J McArdle, *Aberdeen, UK*

N M McKeown, *Boston, MA, USA*

E L Miller, *Cambridge, UK*

C Moinard, *Paris, France*

A M Molloy, *Dublin, Ireland*

T A Mori, *Perth, Australia*

P Nestel, *Southampton, UK*

J H Y Park, *Chuncheon, Korea*

M A Pereira, *Minneapolis, MN USA*

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*

C R Sirtori, *Milan, Italy*

I Tetens, *Søborg, Denmark*

K Tucker, *Boston, MA, USA*

M van Baak, *Maastricht, The Netherlands*

M W A Verstegen, *Wageningen, The Netherlands*

F Visioli, *Paris, France*

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

I S Wood, *Liverpool, UK*

B Woodward, *Guelph, Ont., Canada*

P Yaqoob, *Reading, UK*

Publications Staff

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

H Zdravics and C Isherwood (*Publications Officers*), C T Hughes (*Sub-editor*)

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

Short Communication

- Association between habitual coffee consumption and normal or increased estimated glomerular filtration rate in apparently healthy adults.
K. Nakajima, K. Hirose, M. Ebata, K. Morita & H. Munakata 149–152

Molecular Nutrition

- Disodium ascorbyl phytostanol phosphate (FM-VP4), a modified phytostanol, is a highly active hypocholesterolaemic agent that affects the enterohepatic circulation of both cholesterol and bile acids in mice.
J. Méndez-González, S. Süren-Castillo, L. Calpe-Berdiel, N. Rotllan, M. Vázquez-Carrera, J. C. Escolà-Gil & F. Blanco-Vaca 153–160
- n*-3 and *n*-6 Polyunsaturated fatty acids suppress sterol regulatory element binding protein activity and increase flow of non-esterified cholesterol in HepG2 cells.
M. Di Nunzio, D. van Deursen, A. J. M. Verhoeven & A. Bordoni 161–167
- Epicatechin induces NF- κ B, activator protein-1 (AP-1) and nuclear transcription factor erythroid 2p45-related factor-2 (Nrf2) via phosphatidylinositol-3-kinase/protein kinase B (PI3K/AKT) and extracellular regulated kinase (ERK) signalling in HepG2 cells.
A. B. Granado-Serrano, M. A. Martín, G. Haegeman, L. Goya, L. Bravo & S. Ramos 168–179

Metabolism and Metabolic Studies

- Lupin protein isolate and cysteine-supplemented casein reduce calcification of atherosclerotic lesions in apoE-deficient mice.
K. Weisse, C. Brandsch, F. Hirche, K. Eder & G. I. Stangl 180–188
- Fish oil diets do not improve insulin sensitivity and secretion in healthy adult male pigs.
C.-A. Castellano, I. Audet, J.-P. Laforest, Y. Chouinard & J. J. Matte 189–196
- Genistein inhibits glucose and sulphate transport in isolated rat liver lysosomes.
H.-F. Chou, K.-H. Chuang, Y.-S. Tsai & Y.-J. Chen 197–205
- The effect of the protein level in a pre-starter diet on the post-hatch performance and activation of ribosomal protein S6 kinase in muscle of neonatal broilers.
N. Everaert, Q. Swennen, S. M. Coustard, H. Willemsen, C. Careghi, J. Buyse, V. Bruggeman, E. Decuyper & S. Tesseraud 206–211

Nutritional Endocrinology

- Terminalia bellirica* stimulates the secretion and action of insulin and inhibits starch digestion and protein glycation *in vitro*.
V. Kasabri, P. R. Flatt & Y. H. A. Abdel-Wahab 212–217

Nutritional Immunology

- Comparison of gut microbiota and allergic reactions in BALB/c mice fed different cultivars of rice.
K. Sonoyama, T. Ogasawara, H. Goto, T. Yoshida, N. Takemura, R. Fujiwara, J. Watanabe, H. Ito, T. Morita, Y. Tokunaga & T. Yanagihara 218–226

Microbiology

- The effect of age and non-steroidal anti-inflammatory drugs on human intestinal microbiota composition.
H. Mäkituokko, K. Tiihonen, S. Tynkkynen, L. Paulin & N. Rautonen 227–234

Human and Clinical Nutrition

- Supplementation of DHA but not DHA with arachidonic acid during pregnancy and lactation influences general movement quality in 12-week-old term infants.
S. A. van Goor, D. A. J. Dijck-Brouwer, B. Doornbos, J. J. H. M. Erwich, A. Schaafsma, F. A. J. Muskiet & M. Hadders-Algra 235–242
- Dose-dependent increases in heart rate variability and arterial compliance in overweight and obese adults with DHA-rich fish oil supplementation.
N. J. Sjöberg, C. M. Milte, J. D. Buckley, P. R. C. Howe, A. M. Coates & D. A. Saint 243–248
- The relationship between fasting plasma concentrations of selected flavonoids and their ordinary dietary intake.
J. Cao, Y. Zhang, W. Chen & X. Zhao 249–255
- Classification of individuals with dyslipidaemia controlled by statins according to plasma biomarkers of oxidative stress using cluster analysis.
P. B. Botelho, C. O. Fioratti, D. S. P. Abdalla, M. C. Bertolami & I. A. Castro 256–265

Dietary Surveys and Nutritional Epidemiology

- Early introduction of oats associated with decreased risk of persistent asthma and early introduction of fish with decreased risk of allergic rhinitis.
S. M. Virtanen, M. Kaila, J. Pekkanen, M. G. Kenward, U. Uusitalo, P. Pietinen, C. Kronberg-Kippilä, T. Hakulinen, O. Simell, J. Ilonen, R. Veijola & M. Knip 266–273
- Dietary fibre and phytate – a balancing act: results from three time points in a British Birth Cohort.
C. J. Prynne, A. McCarron, M. E. J. Wadsworth & A. M. Stephen 274–280
- Food, energy and macronutrient contribution of out-of-home foods in school-going adolescents in Cotonou, Benin.
E. S. Nago, C. K. Lachat, L. Huybregts, D. Roberfroid, R. A. Dossa & P. W. Kolsteren 281–288
- The longitudinal change in anthropometric measurements and the association with physical function decline in Japanese community-dwelling frail elderly.
S. Izawa, H. Enoki, Y. Hirakawa, M. Iwata, J. Hasegawa, A. Iguchi & M. Kuzuya 289–294

Innovative Techniques

- Baselines representing blood glucose clearance improve *in vitro* prediction of the glycaemic impact of customarily consumed food quantities.
J. A. Monro, S. Mishra & B. Venn 295–305