# Public Health Nutrition

An international journal published on behalf of The Nutrition Society by Cambridge University Press



## Public Health Nutrition

Volume 12, 2009 ISSN: 1368–9800 Twelve issues per year

### Aims and Scope

To provide 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.

Public Health Nutrition publishes original and commissioned articles, commentaries and discussion papers for debate. Public Health Nutrition is interested in papers that:

- · identify causation relevant at a population level
- develop and test new methods and approaches
- share experience about the development, implementation, and evaluation of programmes of work aimed at improving health
- describe, discuss and debate food and nutrition policy
- debate and propose new models and approaches to improving food and nutrition-related public health, particularly in those populations most at risk and vulnerable
- discuss work-force development and educational issues

Public Health Nutrition is interested in research and scholarship that takes a population and preventive approach; and welcomes ideas and suggestions for topics for debate, as well as open contributions for peer review. Public Health Nutrition publishes special issues.

This journal is available on the Internet at: journals.cambridge.org/phn

### **International Editorial Board**

### Editor-in-Chief

Associate Professor Agneta Yngve

Department of Biosciences and Nutrition Karolinska Institutet Novum SE 141 57 Huddinge, Sweden Fax: +46 8 774 6833

Email: phn@nutsoc.org.uk

### **Deputy Editors**

Professor Barrie Margetts

University of Southampton, UK

Dr Roger Hughes

University of the Sunshine Coast, Queensland, Australia

Dr Marilyn Tseng

Fox Chase Cancer Center, Philadelphia, USA

### **Associate Editors**

**Dr Faruk Ahmed,** Kuwait University, Kuwait

**Professor Barbara Ainsworth,** Arizona State University, USA

Professor Lenore Arab, UCLA, USA

**Professor Thomas Baranowski,** Baylor College of Medicine, USA

Professor Sheila Bingham, MRC Dunn Nutrition Centre, UK

**Dr Francesca Branca,** World Health Organization, Denmark

Professor Janet Cade, Leeds University, UK
Mr Geoffrey Cannon, World Health Policy Forum, Brazil
Dr Junshi Chen, Institute of Nutrition and Food

Dr Ian Darnton-Hill, UNICEF, New York, USA

Dr Ann Fox, University of Toronto, Canada

Hygiene, China

Professor Emeritus Leif Hambraeus, Karolinska Institutet, Sweden

Dr Festo Kavishe, UNICEF Representative, Eritrea Dr Nick Kennedy, Trinity College Dublin, Ireland

Professor Victor Kipnis, National Institutes on Health, USA

 $\textbf{Dr Lucie Malaba,} \ \textit{University of Zimbabwe, Zimbabwe}$ 

**Professor Carlos A. Monteiro,** *University of São Paulo, Brazil* 

Dr Michael Nelson, University of London, UK Professor Marion Nestle, New York University, USA Professor Kerin O'Dea, University of Melbourne, Australia

**Dr Carmen Perez-Rodrigo,** Unidad de Nutrición Comunitaria, Spain

**Professor Pirjo Pietinen,** National Public Health Institute, Finland

**Dr Shobha Rao,** Agharkar Research Institute, India

Dr Aiguo Ren, Peking University, China

Dr Elio Riboli, Imperial College, London, UK

**Professor David Roberts,** Australian Food and Grocery Council, Australia

Professor Jaap Seidell, VU University, The Netherlands Professor Lluis Serra-Majem, University of Las Palmas de Gran Canaria, Spain

Professor Prakash Shetty, University of Southampton, UK

Professor Nelia Steyn, MRC, Cape Town, RSA

Dr Heizo Tanaka, Koshien University, Japan

Professor Douglas L. Taren, University of Arizona, USA

**Professor Inga Thorsdottir,** *University of Iceland, Iceland* 

Professor Antonia Trichopoulou, University of Athens,

Professor Ricardo Uauy, London School of Hygiene & Tropical Medicine, UK, and INTA, Chile

**Dr Megumi Utsugi,** National Institute of Health and Nutrition, Japan

**Professor Hester Vorster,** North West University, South Africa

**Professor Susan Walker**, University of the West Indies, Jamaica

### The Nutrition Society

The society has as its objective the advancement of the scientific study of nutrition and its application to the maintenance of human and animal health.

Particulars of The Nutrition Society and application forms for membership are available from the Honorary Secretary, The Nutrition Society, 10 Cambridge Court, 210 Shepherds Bush Road, London W6 7NJ, UK.

Telephone +44 (0)20 7602 0228,

Fax +44 (0)20 7602 1756

The Nutrition Society home page is at: http://www.nutritionsociety.org

# Contents

Editorial Diet, cancer and public health nutrition  M Tseng	737
In this issue R Hughes	738
Meals and snacks from the child's perspective: the contribution of qualitative methods to the development of dietary interventions <i>I Husby, BL Heitmann and K O'Doherty Jensen</i>	739
A content analysis of children's television advertising: focus on food and oral health  M Morgan, R Fairchild, A Phillips, K Stewart and L Hunter	748
Effect of combining multiple micronutrients with iron supplementation on Hb response in children: systematic review of randomized controlled trials <i>T Gera, HPS Sachdev and P Nestel</i>	756
Prevalence and determinants of physical activity and lifestyle in relation to obesity among schoolchildren in Israel DN Kaluski, GD Mazengia, T Shimony, R Goldsmith and EM Berry	774
Longitudinal growth of infants born to HIV-1-infected mothers in Belo Horizonte, Brazil  MA Fausto, M Carneiro, CMF Antunes, EA Colosimo and JA Pinto	783
Determinants of low birth weight in urban Pakistan  NZ Janjua, E Delzell, RR Larson, S Meleth, S Kristensen, E Kabagambe and  N Sathiakumar	789
Comparison of the effects of four commercially available weight-loss programmes on lipid-based cardiovascular risk factors LM Morgan, BA Griffin, DJ Millward, A DeLooy, KR Fox, S Baic, MP Bonham, JMW Wallace, I MacDonald, MA Taylor and H Truby	799
Low-cost foods: how do they compare with their brand name equivalents? A French study  N Darmon, F Caillavet, C Joly, M Maillot and A Drewnowski	808
Hyperlipidaemia and its risk factors in the Guangxi Bai Ku Yao and Han populations  Y Ruixing, Y Dezhai, L Shuquan, C Yuming, Y Hanjun, F Qiming,  P Shangling, L Weixiong, T Jing and L Yiyang	816
Dietary consumption of phytochemicals and breast cancer risk in Mexican women  L Torres-Sanchez, M Galvan-Portillo, MS Wolff and L Lopez-Carrillo	825
Influence of acculturation among Tunisian migrants in France and their past/present exposure to the home country on diet and physical activity <i>C Méjean, P Traissac, S Eymard-Duvernay, F Delpeuch and B Maire</i>	832
Coffee intake and risk of incident diabetes in Puerto Rican men: results from the Puerto Rico Heart Health Program  BJ Fubrman, E Smit, CJ Crespo and MR Garcia-Palmieri	842
Iodine deficiency in pregnant women in eastern Turkey (Malatya Province): 7 years after the introduction of mandatory table salt iodization <i>M Egri, C Ercan and L Karaoglu</i>	849
Diet and pregnancy status in Australian women A Hure, A Young, R Smith and C Collins	853
Age, period and cohort effects on body weight and body mass index in adults: The Doetinchem Cohort Study  ACJ Nooyens, TLS Visscher, WMM Verschuren, AJ Schuit, HC Boshuizen,  W van Mechelen and JC Seidell	862
Small changes in snacking behaviour: the potential impact on CVD mortality F Lloyd-Williams, M Mwatsama, R Ireland and S Capewell	871

Review Prevention of cancer. A colossal achievement, with much more to do <i>B Swinburn</i>	877
Out of the Box <i>G Cannon</i>	879
Letters to the Editor	882
Corrigendum Household food security was associated with growth of infants and young children in rural Bangladesh – Corrigendum KK Saha, EA Frongillo, DS Alam, SE Arifeen, LÅ Persson and KM Rasmussen	884