

---

# PHN

## PUBLIC HEALTH NUTRITION

---

Volume 18

---

Number 15

---

October 2015

---

Available online at  
[www.journals.cambridge.org/phn](http://www.journals.cambridge.org/phn)

# Public Health Nutrition

Volume 18, 2015 ISSN: 1368-9800

Eighteen issues per year

## Aims and Scope

*Public Health Nutrition* provides an international forum for the publication and dissemination of research and scholarship in the form of peer-reviewed original papers and reviews, and for discussion in the form of editorials, commentaries, and correspondence, with a specific focus on nutrition-related public health.

The scope of *Public Health Nutrition* includes food systems and supplies, patterns of diet, foods and drinks, nutrients, body composition, physical activity, and associated factors, and their effects on disease, health and well-being, and the whole living and physical world. We welcome papers that:

- Address nutritional status **assessment, monitoring, and surveillance**
- Identify and analyse social, cultural, biological, environmental, economic and political **determinants of nutrition-related public health**
- Build intelligence about the development and evaluation of environmental and settings-based **interventions** focused on the availability of foods including interventions in the out of home eating environment.

- Describe, discuss, debate and influence **food and nutrition policy**
- Focus on improving food and nutrition-related public health, particularly in **populations that are most vulnerable and at risk**.
- Discuss and **build capacity** for effective public health nutrition action, including workforce development and educational issues
- Develop and test **innovative and emerging models, methods and approaches** to public health nutrition practice and research.

We prefer papers that are innovative and contribute new knowledge to the literature. Papers should be succinct (ie, usually well under 5,000 words not including the abstract, references, tables, figures and acknowledgements). Short communications are welcome. We publish research, scholarship, and discussions that take a population and preventive approach. In addition to original contributions, ideas and suggestions for topics for debate are also welcome. We publish special issues.

*Public Health Nutrition* is available on the Internet at: [journals.cambridge.org/phn](http://journals.cambridge.org/phn)

### Editor-in-Chief

**Research Professor Marilyn Tseng**  
California Polytechnic State University  
San Luis Obispo, USA  
Email: [phn@nutsoc.org.uk](mailto:phn@nutsoc.org.uk)

### Deputy Editors

**Dr Allison Hodge**  
University of Melbourne, Australia

**Dr Carl Lachat**  
Gent University, Belgium

**Dr Eduardo Villamor**, University of Michigan  
School of Public Health, USA

**Dr. Stefanie Vandevijvere**, University of  
Auckland, New Zealand

### Supplement and Special Issues Editor

**Dr Irja Haapala**  
University of Eastern Finland, Finland

### Statistics Editor

**Mrs Zulfa Abrahams** *Human Sciences Research  
Council, South Africa*

**Dr Flávia Barbosa** *State University of Rio de  
Janeiro, Brazil*

**Dr Vassiliki Bountziouka** *University College  
London, UK*

**Mr Fabio S. Gomes** *National Cancer Institute,  
Brazil*

**Dr Vassilis Vasdekis** *Athens University of  
Economics and Business, Greece*

**Systematic Reviews and Meta-Analyses Editor  
Dominique Roberfroid**, *Institute of Tropical  
Medicine, Belgium*

### Associate Editors

**Dr Leila Azadbakht**, *Isfahan University of  
Medical Sciences, Iran*

**Dr Kaleab Baye**, *Addis Ababa University, Ethiopia*

**Dr Shawna Berenbaum**, *University of  
Saskatchewan, Canada*

**Dr Maxine Bonham**, *Monash University, Australia*

**Dr Julie Kay Brimblecombe**, *Royal Darwin  
Hospital Campus, Australia*

**Dr Maree Brinkman**, *University of Melbourne,  
Australia*

## International Editorial Board

**Dr Mona Calvo**, *U.S. Food and Drug  
Administration Department of Health and  
Human Services, USA*

**Professor Karen Cullen**, *Baylor College of  
Medicine, USA*

**Professor Lisbeth Dahl**, *National Institute of  
Nutrition and Seafood Research, Norway*

**Prof. Hélène Delisle**, *University of Montreal,  
Canada*

**Dr Colleen Doak**, *VU University, Amsterdam*

**Associate Professor Eva-Charlotte Ekström**  
*Uppsala University, Sweden*

**Professor Mieke Faber**, *Medical Research Council,  
South Africa*

**Dr. Jayne A. Fulkerson**, *University of Minnesota*

**Dr. Anouk Geelen**, *Wageningen University,  
The Netherlands*

**Professor Denise Gigante**, *Federal University of  
Pelotas, Brazil*

**Professor Ted Greiner** *Hanyang University, Republic  
of Korea*

**Dr Jennifer L Harris**, *Yale University, USA*

**Dr Lisa Houghton**, *University of Otago,  
New Zealand*

**Dr Alexis Hure**, *University of Newcastle, Australia*

**Dr Bridget Kelly**, *University of Wollongong, Australia*

**Dr Colette Kelly**, *National University of Ireland,  
Northern Ireland*

**Dr Cécile Knai**, *London School of Hygiene &  
Tropical Medicine, University of London, UK*

**Professor Salome H Kruger**, *North-West  
University, Potchefstroom, South Africa*

**Professor Christel Lamberg-Allardt**  
*University of Helsinki, Finland*

**Associate Professor Mark Lawrence**  
*Deakin University, Australia*

**Dr Cindy Leung**, *University of California,  
United States*

**Dr Nanna Lien**, *University of Oslo, Norway*

**Dr Zandile Mchiza**, *Medical Research Council  
of South Africa, South Africa*

**Dr Rachael McLean**, *University of Otago,  
New Zealand*

**Professor Bent Egberg Mikkelsen**  
*Aalborg University, Denmark*

**Dr Parvin Mirmiran**, *Research Institute for  
Endocrine Sciences, Iran*

**Assistant Professor Androniki Naska**  
*University of Athens Medical School, Greece*

**Associate Professor Aydin Nazmi**  
*California Polytechnic State University, USA*

**Dr Punam Ohri-Vachaspati**  
*Arizona State University, USA*

**Professor Nicholas Ollberding**, *Cincinnati  
Children's Hospital Medical Center, United States*

**Dr Mohammadreza Pakseresh**, *University of  
Alberta, Canada*

**Dr Demosthenes Panagiotakos**,  
*Harokopio University, Greece*

**Professor Lisa Pawloski**, *George Mason  
University, USA*

**Dr Natalie Pearson**, *Loughborough  
University, UK*

**Professor Rosangela Pereira**, *Federal University  
of Rio de Janeiro, Brazil*

**Associate Professor Eva Roos**, *Folkhälsan  
Research Institute, Finland*

**Professor Rosely Sichieri**, *State University  
of Rio de Janeiro, Brazil*

**Dr Kevin Sullivan**, *Rollins School of Public Health  
at Emory University, USA*

**Professor Janice Thompson**, *University of  
Birmingham, UK*

**Dr Lukar E Thornton**, *Deakin University,  
Australia*

**Dr Anne Marie Thow**, *University of Sydney,  
Australia*

**Professor Gavin Turrell**, *Queensland University of  
Technology, Australia*

**Dr Jesus Vioque**, *Universidad Miguel Hernandez,  
Spain*

**Dr Yanfang Wang**, *Peking University Clinical  
Research Institute, China*

**Dr. Wilma E. Waterlander**, *University of  
Auckland, New Zealand*

**Assistant Professor Wen You**  
*Virginia Polytechnic University, USA*

**Dr Shannon Zenk**, *University of Illinois  
at Chicago, USA*

## 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.nutrition-society.org>