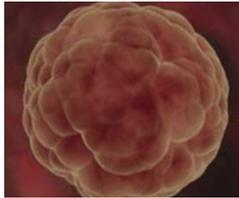


JOURNAL OF DEVELOPMENTAL ORIGINS OF HEALTH AND DISEASE



CONTENTS

FROM THE PRESIDENT

The Importance of Not Dropping Our 'H's
Mark A. Hanson

IN THIS ISSUE

Michael G. Ross

REVIEWS

Impact of the periconceptual environment on the programming of adult disease

A. J. Watkins, E. S. Lucas and T. P. Fleming

Genetic influences on the association between fetal growth and susceptibility to type 2 diabetes

B. M. Shields, R. M. Freathy and A. T. Hattersley

ORIGINAL ARTICLES

Agreement between self-reported birth weight and birth certificate weights

D. J. Jaworowicz Jr, J. Nie, M. R. Bonner, D. Han, D. Vito, A. Hutson, N. Potischman, M. Trevisan, P. Muti and J. L. Freudenheim

85

86

106

Size at birth is associated with blood pressure but not insulin resistance in 6–8 year old children in rural Nepal

C. P. Stewart, P. Christian, K. J. Schulze, U. S. Shah, G. Subedi, S. C. LeClerq and S. K. Khatry

87

114

Birth weights smaller or larger than the placenta predict BMI and blood pressure at age 7 years

D. P. Misra, C. M. Salafia, A. K. Charles and R. K. Miller

96

123

Maternal copper deficiency perpetuates altered vascular function in Sprague-Dawley rat offspring

C. M. Anderson and W. T. Johnson

131

EDITORIAL POLICY

Journal of Developmental Origins of Health and Disease publishes leading research in the field of developmental origins of health and disease (DOHaD), focusing on how the environment during early animal and human development, and interactions between environmental and genetic factors, influence health in later life and risk of disease. It publishes original research articles, short communications and reviews, and plans regular themed issues, with guest editors; it is also a platform for conference/workshop reports, and for opinion, comment and interaction. The journal is multi-disciplinary, with contributions from basic scientists working in the fields of physiology, nutrition, endocrinology and metabolism, developmental biology, molecular biology and epigenetics, human biology and anthropology, evolutionary developmental biology, and clinicians, nutritionists, epidemiologists, social scientists, economists, public health specialists and policy makers.

SUBSCRIPTIONS

Journal of Developmental Origins of Health and Disease (print ISSN 2040-1744, electronic ISSN 2040-1752) is published bimonthly in February, April, June, August, October and December, 6 parts forming a volume, by Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK/Cambridge University Press, 32 Avenue of the Americas, New York, NY 10013-2473, USA. The institutional subscription price (excluding VAT) including electronic access of Volume 1 (2010) is £250 net (US \$413 in the USA, Canada and Mexico). The electronic-only price available to institutional subscribers is £210 (US \$347 in USA, Canada and Mexico). The print-only price available to institutional subscribers is £230 (US \$380 in the USA, Canada and Mexico). Single parts are £42 (US \$70 in the USA, Canada and Mexico) plus postage. Back volumes are also available.

Orders, which must be accompanied by payment, may be sent to a bookseller, subscription agent or direct to the publisher: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK; or in the USA, Canada and Mexico: Cambridge University Press, Journals Fulfillment Department, 100 Brook Hill Drive, West Nyack, New York 10994-2133. EU subscribers (outside the UK) who are not registered for VAT should add VAT at their country's rate. VAT registered subscribers should provide their VAT registration number. Japanese prices for institutions are available from Kinokuniya Company Ltd, PO Box 55, Chitose, Tokyo 156, Japan. Prices include delivery by air.

DOHaD MEMBERS SUBSCRIPTION

Members of the International Society for Developmental Origins of Health and Disease (DOHaD) receive electronic access to the journal as part of their subscription to the Society (Standard membership rate: £45 / US\$70 / €50; Student membership rate: £20 / US\$30 / €22; Developing Country rate: see www.mrc.soton.ac.uk/dohad). For membership application details please visit www.mrc.soton.ac.uk/dohad. For additional print subscription members are asked to contact the Membership Secretary (dohad@mrc.soton.ac.uk) at DOHaD.

COPYRIGHT AND PERMISSIONS

This journal is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA. Organizations in the USA who are also registered with C.C.C. may therefore copy material (beyond the limits permitted by sections 107 and 108 of U.S. Copyright law) subject to payment to C.C.C. of the per-copy fee of \$25.00. This consent does not extend to multiple copying for promotional or commercial purposes. Code 2040-1744/2010 \$25.00.

ISI Tear Sheet Service, 3501 Market Street, Philadelphia, PA 19104, USA, is authorized to supply single copies of separate articles for private use only.

Organizations authorized by the Copyright Licensing Agency may also copy material subject to the usual conditions.

For all other use, permission should be sought from Cambridge or the American Branch of Cambridge University Press.

ADVERTISING

Advertising queries for all parts of the world except the USA, Canada and Mexico to the Journals Advertising Co-ordinator:

Rebecca Roberts, ad_sales@cambridge.org

Address enquiries in the USA, Mexico and Canada only to:

Lisa Pang, journals_advertising@cup.org

OTHER BUSINESS CORRESPONDENCE

All other business correspondence should be sent to Dan Edwards, Commissioning Editor: dedwards@cambridge.org

INSTRUCTIONS FOR CONTRIBUTORS

Full Instructions for Contributors are available for download from journals.cambridge.org/doh

INTERNET ACCESS

This journal is included in the Cambridge Journals Online service which can be found at journals.cambridge.org. For further information on other Press titles access cambridge.org

DISCLAIMER

The views expressed in this journal represent those of the authors only. In no way can they be construed to necessarily reflect the views of either the Editors, the Publishers, or the Society.

© Cambridge University Press and the International Society for Developmental Origins of Health and Disease 2010

Printed in the United Kingdom by Latimer Trend, Plymouth

This journal issue has been printed on FSC-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see www.fsc.org for information.

journals.cambridge.org

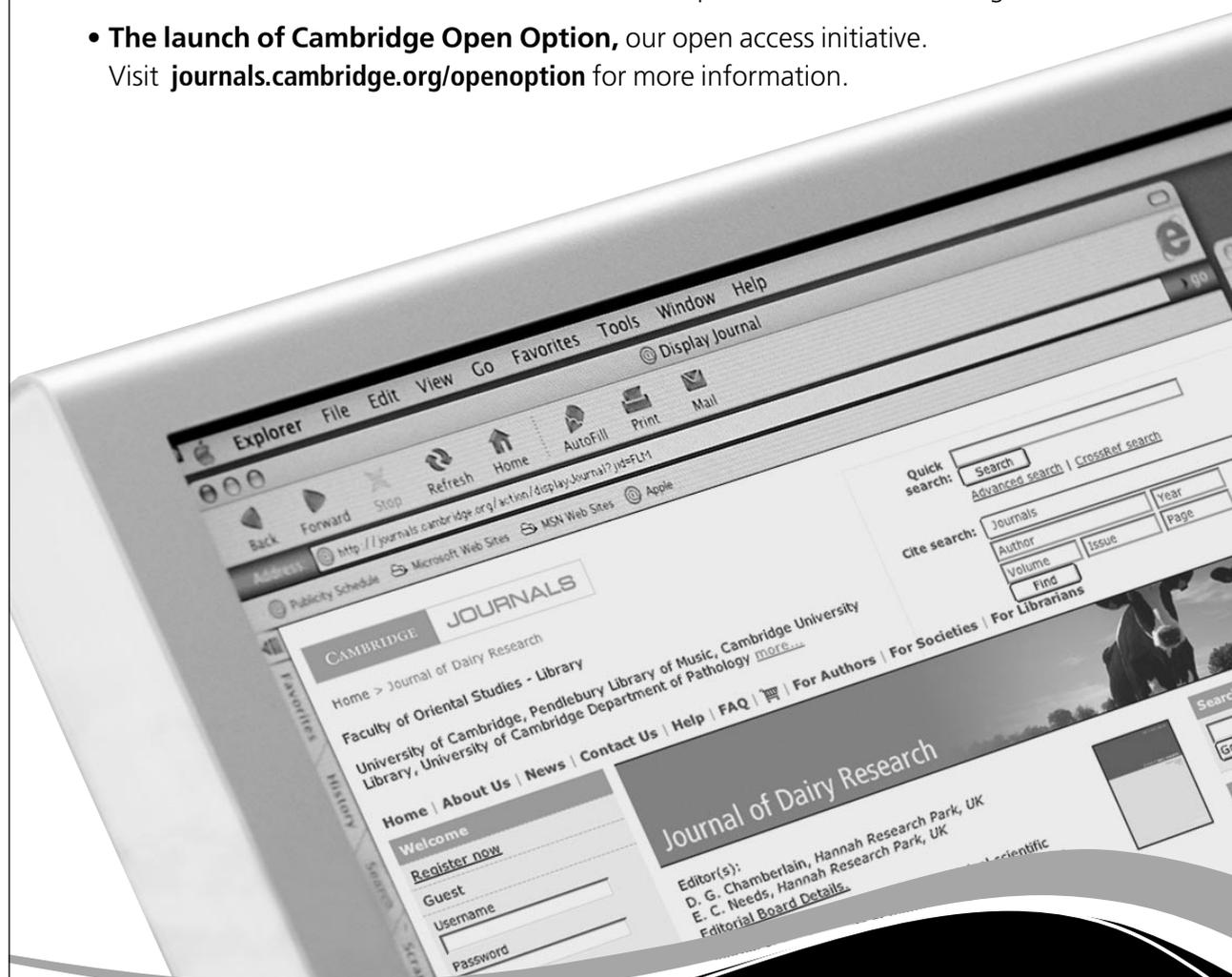
Advancing research. Increasing access.

Informed by detailed consultation with the library and research communities, we are constantly developing our industry-leading online journals platform.

Some recent advances include:

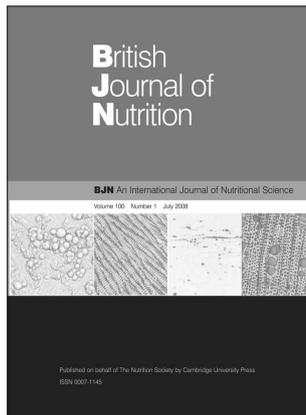
- **Refreshed site design**, facilitating rapid access to the most relevant content.
- **New advanced search interface** and a more detailed, fielded quick search function.
- **Enriched content** in the form of multimedia companions and editorial blogs.
- **The launch of Cambridge Open Option**, our open access initiative.

Visit journals.cambridge.org/openoption for more information.



CAMBRIDGE

JOURNALS



British Journal of Nutrition

Published on behalf of The Nutrition Society

British Journal of Nutrition

is available online at:

<http://journals.cambridge.org/bjn>

**To subscribe contact
Customer Services**

in Cambridge:

Phone +44 (0)1223 326070

Fax +44 (0)1223 325150

Email journals@cambridge.org

in New York:

Phone +1 (845) 353 7500

Fax +1 (845) 353 4141

Email

subscriptions_newyork@cambridge.org

Editor-in-chief

P.C. Calder, University of Southampton, UK

British Journal of Nutrition is a leading international peer-reviewed journal covering research on human and clinical nutrition, animal nutrition and basic science as applied to nutrition. The journal recognises the multidisciplinary nature of nutritional science and includes material from all of the specialities involved in nutrition research, including molecular and cell biology and the emerging area of nutritional genomics.

Price information is available at:
<http://journals.cambridge.org/bjn>

Free email alerts

Keep up-to-date with new material – sign up at
<http://journals.cambridge.org/alerts>

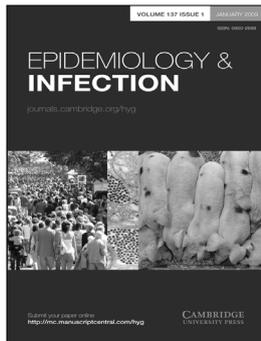
For free online content visit:
<http://journals.cambridge.org/bjn>



**CAMBRIDGE
UNIVERSITY PRESS**

CAMBRIDGE

JOURNALS



EPIDEMIOLOGY & INFECTION

Epidemiology and Infection

is available online at
<http://journals.cambridge.org/hyg>

To subscribe contact Customer Services

in Cambridge:

Phone +44 (0)1223 326070
Fax +44 (0)1223 325150
Email journals@cambridge.org

in New York:

Phone +1 (845) 353 7500
Fax +1 (845) 353 4141
Email
subscriptions_newyork@cambridge.org

Managing Editor

Norman Noah, London School of Hygiene and Tropical
Medicine, UK

Epidemiology and Infection publishes original reports and reviews on all aspects of infection in humans and animals. Emphasis is given to the epidemiology, prevention and control of infectious diseases, but coverage includes microbiology, virology, immunology, tropical infections, food hygiene, statistics and the clinical, social and public-health aspects of disease.

Price information is available at
<http://journals.cambridge.org/hyg>

Free email alerts

Keep up-to-date with new material – sign up at
<http://journals.cambridge.org/alerts>

For free online content visit
<http://journals.cambridge.org/hyg>



CAMBRIDGE
UNIVERSITY PRESS