The British Journal of Nutrition

an international journal devoted to the Science of Human and Animal Nutrition



CAMBRIDGE UNIVERSITY PRESS

EDITED FOR THE NUTRITION SOCIETY

Editorial Board

| D. E. BEEVER | M. A. EASTWOOD | D. J. KILPATRICK | P. E. SPARROW |
|------------------|----------------|------------------|-----------------|
| P. J. BUTTERY | G. S. FELL | A. G. LOW | P. THOMAS |
| J. K. CHESTERS | C. FISHER | J. D. OLDHAM | R. G. VERNON |
| J. M. COBBY | D. R. FRASER | G. L. S. PAWAN | H. F. WALKER |
| W. A. COWARD | R. J. FULFORD | P. J. REEDS | T. E. C. WEEKES |
| J. W. CZERKAWSKI | M. F. FULLER | P. ROYSTON | B. A. WHARTON |
| S. W. DUFFY | F. A. HARRISON | D. W. SALT | E. F. WHEELER |

ROY H. SMITH (Chairman) J. W. T. DICKERSON (Assistant Chairman)

The Nutrition Society has as its object the advancement of the scientific study of nutrition and its application to the maintenance of human and animal health.

Application for 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 may be had from the Honorary Secretary, The Nutrition Society, Chandos House, 2 Queen Anne Street, London W1M 9LE.

The Proceedings of the Nutrition Society, published by the Cambridge University Press, in part record meetings of the Symposium type, at which experts in a particular field are invited by Council to make contributions on specific parts of it and at which general discussion follows these invited contributions. The contributions will be published in extenso; such summaries of the ensuing discussions as circumstances warrant may also be published. The Society also holds scientific meetings at which papers are communicated by members and others on original work carried out by them. It is proposed at present to publish summaries of the papers read at each meeting, each communication being recorded in the Society's Proceedings by means of an abstract not exceeding in length 400 words or the equivalent space in print. The Proceedings are published three times a year.

The subscription to the *Proceedings* is £52.00 net (US \$135.00 in USA and Canada). Single issues are £19.00 (US \$50.00 in USA and Canada) each; postage extra.

The British Journal of Nutrition (ISSN 0007-1145) is published once every two months by the Cambridge University Press for The Nutrition Society, which owns it and controls its publication. A volume consists of three parts and two volumes appear each year.

Subscriptions to the Society's Publications. For non-members of The Nutrition Society the subscription including postage, to volumes 51 and 52, 1984, of the *Journal*, is £104.00 net per annum, payable in advance to Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, or to any bookseller. The subscription in USA and Canada is US \$270.00, and inquiries there should be addressed to Cambridge University Press, 32 East 57th Street, New York, N.Y. 10022. Single issues are £20.00 (US \$53.00 in USA and Canada); postage extra. All orders must be accompanied by payment POSTMASTER: send address changes in USA and Canada to *British Journal of Nutrition*, Cambridge University Press, 32 East 57th Street, New York, N.Y. 10022.

A claim for the replacement of a publication lost in transmission will not be entertained unless made immediately on receipt of the subsequent issue.

Second class postage paid at New York, N.Y. and at additional mailing offices.

© The Nutrition Society 1984

Copying. This journal is registered with the Copyright Clearance Center, 21 Congress Street, Salem, Mass. 01970. 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 the US copyright law) subject to payment to C.C.C. of the per-copy fee of \$05.00. This consent does not extend to multiple copying for promotional or commercial purposes. Code 0007–1145/84/0051–0052 \$05.00.

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

For all other use, permission should be sought from the Cambridge or New York offices of the Cambridge University Press.