

*Two Hundred and Ninety-fourth Scientific Meeting
Middlesex Hospital Medical School, London
21 MAY 1976*

The effect of dietary sucrose on the metabolism of pentobarbitone. By A. H. NASH and A. E. BENDER ... 132A
 A defective response to cold in the obese (obob) mouse and the obese Zucker (fafa) rat. By P. TRAYHURN, P. L. THURLBY and W. P. T. JAMES ... 133A
 Estimation of heat loss from human subjects at four experimental temperatures, using a direct calorimeter and heat flow meters. By W. H. CLOSE, M. J. DAUNCEY and D. L. INGRAM ... 134A
 Fat mobilization during exercise following dietary and exercise-induced changes in muscle glycogen. By C. WILLIAMS, R. L. MAUGHAN, G. R. KELMAN, DORIS M. CAMPBELL and DIANNA HEPBURN ... 135A
 Time of glucose syrup ingestion to alleviate initial exercise hypoglycaemia. By J. D. BROOKE, K. LLEWELYN and L. F. GREEN ... 136A
 Role of glucocorticoid in the enzyme overshoot response to starvation-refeeding. By CAROLYN D. BERDANIER, R. L. WURDEMAN and R. B. TOBIN ... 138A
 The effect of ethanol on resting metabolic rate. By KATHRYN ROSENBERG and J. V. G. A. DURNIN ... 139A
 The fermentation of polyalcohols by rumen microbes in vitro. By E. POUTIAINEN, M. TUORI and IRMA SIRVIO ... 140A
 Pyridoxine deficiency in severe liver disease. By D. LABADARIOS, J. E. ROSSOUW, M. DAVIS and R. WILLIAMS ... 141A
 An explanation of the paradoxical activities of α -retinol. By S. R. WILLETTS, SUSAN E. HOUGHTON, G. JONES and G. A. J. PITT ... 142A
 The significance of the 'free' folate content of foods is questioned. By J. D. MALIN ... 143A
 Altered morphology and pathways of DNA synthesis in small intestinal epithelium in dietary folate deficiency. By A. M. TOMKINS, J. BADCOCK and W. P. T. JAMES ... 144A
 Influence of Dieldrin on the production and characteristics of the egg and utilization of calcium and phosphorus in the quail (*Coturnix coturnix japonica*). By G. VARELA, M. ANDUJAR and M. P. NAVARRO ... 144A
 Anthropometry in a Sudanese village: changes after 7 years. By M. Y. SUKKAR, J. R. KEMM, A. MAKEEN and M. HABEEB ... 146A
 Variations in serum chemistry in normal subjects without changes in diet. By D. A. BENDER ... 146A
 Alteration of the immune response in mice by dietary factors: effects of irradiating, autoclaving and essential fatty acid deficiency of rodent diets. By P. B. MEDAWAR, RUTH HUNT, C. J. MEADE and J. MERTIN ... 147A
 Determination of methionine in the seeds of legumes. By A. DUNCAN, A. MCINTOSH and GABRIELLE M. ELLINGER ... 148A
 The effect of dietary carbohydrate on the utilization of protein by the growing pig. By M. F. FULLER ... 149A
 The oxidation in vivo of uniformly and carboxyl-¹⁴C-labelled methionine by young pigs. By E. R. CHAVEZ and H. S. BAYLEY ... 150A

INDEX OF AUTHORS

Andujar, M. 144A	Ingram, D. L. 134A	Pitt, G. A. J. 142A
Badcock, J. 144A	James, W. P. T. ... 133A, 144A	Porter, P. 273
Bayley, H. S. 150A	Johnson, A. R. 130A	Poutiainen, E. 140A
Bender, A. E. 132A	Jones, G. 142A	Price Jones, C. 120A
Bender, D. A. 146A	Kelman, G. R. 135A	Pulsinelli, J. 117A
Berdanier, C. D. 138A	Kemm, J. R. 146A	Reeds, P. J. 339
Braude, R. 377	Labadarios, D. 141A	Richardson, D. P. 124A
Brooke, J. D. 136A	Laws, B. M. 115A	Ritchie, C. D. 124A
Bryant, J. S. 123A	Lister, D. 351	Rosenberg, K. 139A
Campbell, D. M. 135A	Llewelyn, K. 136A	Rossouw, J. E. 141A
Chavez, E. R. 150A	Luyken, R. 116A	Rothwell, N. J. 129A
Close, W. H. 134A	McCance, R. A. 309	Rowlands, M. G. M. 369
Cole, T. J. 369	MacDonald, I. A. 129A	Sanders, T. A. B. 125A
Cook, D. J. 122A	McFarlane, H. 263	Sirvio, I. 140A
Dauncey, M. J. 134A	McIntosh, A. 148A	Smith, I. M. 122A
Davies, D. F. 293	Makeen, A. 146A	Soothill, J. F. 283
Davies, J. E. W. 117A	Malin, J. D. 143A	Stock, M. J. 129A
Dickerson, J. W. T. 125A	Marigo, C. 253	Sukkar, M. Y. 146A
Duncan, A. 148A	Maughan, R. J. 135A	Tanner, J. M. 315
Durnin, J. V. G. A. 139A	Meade, C. J. 147A	Taylor, T. G. 127A, 128A
Duthie, I. F. 115A	Medawar, P. B. 147A	Thurby, P. L. 133A
Ellinger, G. M. 148A	Mertin, J. 147A	Tobin, R. B. 138A
Ellis, F. R. 125A	Miller, B. G. 128A	Tomkins, A. M. 144A
Elsley, F. W. H. 323	Miller, E. L. 115A	Trayhurn, P. 133A
Fogerty, A. C. 130A	Miller, T. B. 106A	Tuori, M. 140A
Fuller, M. F. 149A	Millward, D. J. 339	Turner, M. R. 123A, 127A
Garlick, P. J. 339	Munday, K. A. 127A	Van Dokkum, W. 116A
Garrow, J. S. 363	Munro, H. N. 297	Varela, G. 144A
Goodenough, P. W. 122A	Murray, D. R. 118A	Whitehead, R. G. 369
Green, L. F. 136A	Naismith, D. J. 124A	Whittemore, C. T. 383
Grimble, R. F. 128A	Nash, A. H. 132A	Willowson, E. M. 357
Habeeb, M. 146A	Navarro, M. P. 144A	Willettts, S. R. 142A
Hassall, C. 120A	Owen, D. E. 127A	Williams, C. 135A
Hepburn, D. 135A	Owen, E. 115A	Williams, R. 141A
Hill, R. 122A	Owers, M. J. 115A	Wilson, C. W. M. 121A
Houghton, S. E. 142A	Page Faulk, W. 253	Wilson, H. K. 120A
Hughes, R. E. ... 117A, 118A, 120A	Pearson, J. A. 130A	Wright, R. 285
Hunt, R. 147A	Pinto Paes, R. 253	Wurdeman, R. L. 138A

Proceedings of the Nutrition Society

CONTENTS OF VOL. 35, No. 3, DECEMBER 1976

SYMPOSIUM PROCEEDINGS

*Two Hundred and Ninety-third Scientific Meeting
Llandaff College of Education/Home Economics
9 APRIL 1976*

NUTRITION AND IMMUNOLOGY

Chairman: Dr P. C. ELWOOD, MRC Epidemiology Unit, Cardiff

	PAGE
The immunological system in health and malnutrition. By W. PAGE FAULK, R. PINTO PAES and C. MARIGO	253
Malnutrition and impaired immune response to infection. By H. MCFARLANE	263
Immunoglobulin mechanisms in health and nutrition from birth to weaning. By P. PORTER	273
Allergy and infant feeding. By J. F. SOOTHILL	283
Immunology of food intolerance in adults. By R. WRIGHT	285
Immunological aspects of atherosclerosis. By D. F. DAVIES	293

Boyd Orr Memorial Lecture

*The Middlesex Hospital Medical School, London
21 MAY 1976*

Regulation of body protein metabolism in relation to diet. By H. N. MUNRO	297
--	-----

Two Hundred and ninety-fifth Scientific Meeting

*Cockcroft Lecture Theatre, Cambridge
8 and 9 JULY 1976*

NUTRITION AND GROWTH*

Chairman: SIR FRANK YOUNG, Darwin College, Cambridge

Critical periods of growth. By R. A. MCCANCE	309
Growth as a monitor of nutritional status. By J. M. TURNER	315

Chairman: DR L. E. MOUNT, ARC Institute of Animal Physiology, Babraham, Cambridge

Limitations to the manipulation of growth. By F. W. H. ELSLEY	323
The energy cost of growth. By D. J. MILLWARD, P. J. GARLICK and P. J. REEDS	339

Chairman: DR R. G. WHITEHEAD, MRC Dunn Nutrition Unit, Dunn Nutritional Laboratory, Cambridge

Effects of nutrition and genetics on the composition of the body. By D. LISTER	351
Cellular growth and function. By ELSIE M. WIDDOWSON	357

Chairman: PROFESSOR A. M. THOMSON, MRC Reproduction and Growth Unit, Princess Mary Maternity Hospital, Newcastle upon Tyne

Underfeeding and overfeeding and their clinical consequences. By J. S. GARROW	363
Infection, nutrition and growth in a rural African environment. By R. G. WHITEHEAD, M. G. M. ROWLAND and T. J. COLE	369
Growth promoting substances. By R. BRAUDE	377
A study of growth responses to nutrient inputs by modelling. By C. T. WHITTEMORE	383

ABSTRACTS OF COMMUNICATIONS

*Two Hundred and Ninety-second Scientific Meeting
Llandaff College of Education/Home Economics
8 APRIL 1976*

A preparation of field bean (<i>Vicia faba</i> L.) cotyledons as a substitute for dried skim-milk in calf feeding. By I. F. DUTHIE, E. OWEN, E. L. MILLER, B. M. LAWS and M. J. OWERS	115A
Evaluation of the quality of a soya-bean-protein concentrate by nitrogen balance studies with human volunteers. By W. VAN DOKKUM and R. LUYKEN	116A
Ascorbic acid saturation levels in young and old guinea-pigs. By J. E. DAVIES, J. PULSINELLI and R. E. HUGHES	117A
The influence of dietary ascorbic acid on the concentration of mercury in guinea-pig tissues. By D. R. MURRAY and R. E. HUGHES	118A
Orange-peel flavonoids and the growth and ascorbic acid status of hypovitaminotic C guinea-pigs. By H. K. WILSON, C. HASSALL, C. PRICE JONES and R. E. HUGHES	120A
The role of ascorbic acid in allergic reactions. By C. W. M. WILSON	121A
The absorption and distribution of ⁵⁹ Fe in chicks with acute <i>Salmonella gallinarum</i> infection. By R. HILL and I. M. SMITH	122A
The nutritional implications of changes in pre-packed mushrooms stored under optimum conditions. By P. W. GOODENOUGH and D. J. COOK	122A
Insulin secretion in young and adult offspring of rats given diets of varying protein and sucrose content during pregnancy and lactation. By M. R. TURNER and J. S. BRYANT	123A
Dietary protein and energy as determinants of foetal growth in the rat. By D. J. NAISMITH, D. P. RICHARDSON and CAROLYN D. RITCHIE	124A
Are long-chain polyunsaturated fatty acids necessary in the human diet? By T. A. B. SANDERS, F. R. ELLIS and J. W. T. DICKERSON	125A
The possible nature of the hypocholesterolaemic action of a mould (<i>Fusarium</i>). By D. E. OWEN, K. A. MUNDAY, T. G. TAYLOR and M. R. TURNER	127A
Measurement of liver protein turnover in genetically obese mice using DL-[2- ³ H]glutamic acid. By B. G. MILLER, R. F. GRIMBLE and T. G. TAYLOR	128A
Lipolytic and lipogenic activities of adipose tissue during spontaneous fat depletion and repletion. By I. A. MACDONALD, NANCY J. ROTHWELL and M. J. STOCK	129A
The role of biotin in the stress-induced death of chickens exhibiting fatty liver and kidney syndrome. By A. R. JOHNSON, R. L. HOOD, JUDITH A. PEARSON and A. C. FOGERTY	130A

[Continued on p. iii of wrapper]

© The Nutrition Society, 1976

CAMBRIDGE UNIVERSITY PRESS
Bentley House, 200 Euston Road, London NW1 2DB
32 East 57th Street, New York, N.Y. 10022

*Copies of this complete symposium may be obtained from:
Dr G. A. J. Pitt (The Nutrition Society), Department of
Biochemistry, University of Liverpool, P.O. Box 147,
Liverpool L69 3BX.
The cost is £1.00 (\$2.50). Remittance should be sent with
the order: Cheques or Postal Orders should be made
payable to 'The Nutrition Society'.

Lampport Gilbert Printers Ltd., Reading, England.