

A double blind dietary challenge of food allergic subjects. By MARY BROWN, M. J. GIBNEY, M. J. RADCLIFFE and P. R. HUSBANDS	41A
Dietary fibre, sodium and blood pressure. By P. M. DODSON, D. M. HUMPHREYS, O. PATRICK and E. V. COX	42A
Effects on serum tri-iodothyronine and reverse tri-iodothyronine concentrations, of an acute intake of sucrose or glucose in man. By N. SHARIEF and P. MARSDEN	43A
Additivity of effects of ruminal acetate and either portal propionate or rumen distension on food intake in sheep. By G. B. ADAMS and J. M. FORBES	44A
Comparative evaluation of apparent digestibility in dogs and cats. By P. T. KENDALL	45A
The effect of maternal protein source on the induction of immune tolerance to dietary protein in weanling rabbits. By CHITRA PATHIRANA, N. J. GOULDING, M. J. GIBNEY, P. J. GALLAGHER, JENNIFER PITTS and T. G. TAYLOR	46A
Excretion of iron in the bile of calves infected with <i>Fasciola hepatica</i> . By H. W. SYMONDS, C. B. MALLINSON, DENISE L. MATHER and D. L. HUGHES	47A
The maximum capacity of the bovine liver to remove manganese from plasma. By EVELINE D. HALL, H. W. SYMONDS and C. B. MALLINSON	48A
Quantitative effects of defaunation on rumen fermentation and digestion in the sheep. By J. B. ROWE, A. DAVIES and A. W. J. BROOME	49A
Whole-body protein synthesis in cattle sustained by infusion of volatile fatty acids and casein. By P. J. REEDS, E. R. ORSKOV and N. A. MACLEOD	50A
Carbohydrate conservation in the obese: a theory to explain the ease of weight gain. By D. J. NAISMITH, M. D. HOLDSWORTH, J. L. BAILEY and A. P. FLEWITT	51A
 <i>The Three Hundred and Fifty-fourth Scientific Meeting</i> <i>The Witts Lecture Theatre, Radcliffe Infirmary, Woodstock Road, Oxford</i> 5 FEBRUARY 1981	
Estimates of energy intake by obese women on reducing diets. By MERRIL L. DURRANT	53A
Weight gain of young rats fed on a cafeteria diet following excision of interscapular brown adipose tissue. By D. N. STEPHENS	54A
Measurement of body size—an evaluation of indices based on anthropometric observations. By M. D. ELSTON	55A
Some characteristics of obese British adults and their children. By MARY GRIFFITHS, M. D. ELSTON and P. T. FOX	56A
The relationship between the growth pattern of children in Britain during the first five years of life and the fatness of their parents. By P. T. FOX, M. D. ELSTON and MARY GRIFFITHS	57A
Increased resistance to obesity following early exposure to the cafeteria diet. By SARAH L. BROOKS, NANCY J. ROTHWELL and M. J. STOCK	58A
Effect of $\beta$ -adrenergic blockaid on thyroid hormone metabolism and resting oxygen consumption in fasted and refed rats. By M. ELIZABETH SAVILLE and M. J. STOCK	59A
The influence of dietary obesity on milk composition in the rat. By B. A. ROLLS, J. D. EDWARDS-WEBB, M. I. GURR, BARBARA J. ROLLS and E. A. ROWE	60A
Effects of obesity on maintenance of body-weight in the lactating rat. By BARBARA J. ROLLS, E. A. ROWE and S. E. FAHRBACH	61A
The status of education on salt iodization in New Zealand. By J. A. BIRKBECK and M. F. GILLIES	62A
The maximum capacity of the bovine liver to metabolize ammonia. By H. W. SYMONDS, DENISE L. MATHER and K. A. COLLIS	63A
Growth and development of artificially reared well-fed and underfed rats. By J. L. SMART, H. B. KATZ and D. N. STEPHENS	64A
Urinary fluoride in the Bedfordshire brickworks area. By G. THOMPSON and C. GEISSLER	65A
Low digestibility of legume nitrogen. By A. E. BENDER and H. MOHAMMADIHA	66A
 <i>Three Hundred and Fifty-sixth Scientific Meeting</i> <i>One Hundred and Fortieth Scottish Meeting</i> <i>School of Agriculture, 581 King Street, Aberdeen</i> 6 MARCH 1981	
The effect of iron and molybdenum on copper metabolism in cattle. By W. R. HUMPHRIES, B. W. YOUNG, M. PHILLIPPO and I. BREMNER	68A
Effect of variation in dietary iron concentration on copper metabolism in rats. By I. BREMNER and B. W. YOUNG	69A
Species differences in the retention of orally administered cupric oxide 'needles' in the alimentary tract. By N. F. SUTTLE and E. VALENTE	70A
Influence of dietary sulphide on the response of rats to ammonium tetrathiomolybdate. By C. F. MILLS, N. T. DAVIES, H. G. WILSON and I. BREMNER	71A
The effect of frequencies of feeding and magnesium supplementation on the efficiency of absorption of magnesium by sheep. By A. C. FIELD, R. A. DINGWALL and C. S. MUNRO	72A
Gum arabic metabolism in the rat colon. By A. H. McLEAN ROSS, LINDA F. MCKAY, A. BUSUTTIL, D. M. W. ANDERSON, W. G. BRYDON and M. A. EASTWOOD	73A
The influence of pentose on breath methane excretion. By LINDA F. MCKAY, W. G. BRYDON, M. A. EASTWOOD and J. H. SMITH	74A
The digestion of plant cell wall material in an artificial rumen (Rusitec). By R. E. BRICE and I. M. MORRISON	75A
Biochemical signs of human selenium depletion. By G. S. FELL, P. STROMBERG, A. MAIN, R. SPOONER, R. CAMPBELL, R. RUSSELL, A. BROWN and J. M. OTTAWAY	76A
Variable changes in heavy metal absorption after milk feeding. By J. QUARTERMAN	77A

# Proceedings of the Nutrition Society

CONTENTS OF VOL. 40, No. 2, MAY 1981

## SYMPOSIUM PROCEEDINGS

*Three Hundred and Fiftieth Scientific Meeting  
One Hundred and Thirty-sixth Scottish Meeting  
Biochemistry Department, University of Glasgow  
30 SEPTEMBER 1980*

IMPORTANCE OF ASSESSMENT OF VITAMIN STATUS IN MAN AND ANIMALS  
*Chairman: K. C. CALMAN, Department of Oncology, University of Glasgow*

	PAGE
The level of vitamin C reserves required in man: towards a solution to the controversy. By C. J. SCHORAH	147
Red cell enzyme tests of vitamin status: do marginal deficiencies have any physiological significance? By D. I. THURNHAM	155
The assessment of biotin status in man and animals. By C. C. WHITEHEAD	165
The assessment of vitamin A status. By G. A. J. PITT	173
Vitamin D: metamorphosis from nutrient to hormonal system. By S. W. STANBURY	179
Assessment of vitamin E status in animals and man. By G. F. COMBS	187

### *Boyd Orr Memorial Lecture*

Crisis for nutrition. By J. C. WATERLOW	195
---	-----

*Three Hundred and Fifty-second Scientific Meeting  
One Hundred and Thirty-eighth Scottish Meeting  
Hospital Centre, Western General Hospital, Edinburgh  
7 NOVEMBER 1980*

### NUTRITION AND DIABETES

*Chairman: J. M. STOWERS, University of Aberdeen, Aberdeen*

Atherosclerosis, diabetes and obesity. By R. J. JARRETT	209
Diet and the development of clinical diabetes in man. By JOYCE D. BAIRD	213
High-carbohydrate, high-fibre diets for diabetics. By H. C. R. SIMPSON	219
Slow release carbohydrate and the treatment of diabetes. By D. J. A. JENKINS and T. M. S. WOLEVER	227
Effect of environmental factors including nutrition on genetically determined diabetes of Chinese hamsters. By G. C. GERRITSEN, M. A. CONNELL and M. C. BLANKS	237
Dietary management of diabetes mellitus. By D. R. HADDEN and E. ANNE WILSON	247

## ABSTRACTS OF COMMUNICATIONS

*Three Hundred and Fifty-third Scientific Meeting  
Main Lecture Theatre, Faculty of Letters, University of Reading,  
Whiteknights Park, Reading  
18 DECEMBER 1980*

Source and level of supplemental N for cows early in lactation. By J. D. OLDHAM, R. J. FULFORD and D. J. NAPPER	30A
The role of the stomach in the digestion of protein and carbohydrate in growing pigs. By TERESA ZEBROWSKA, A. G. LOW and HANNA ZEBROWSKA	31A
The influence of feed intake, protein:energy value and environmental temperature on the efficiency of protein utilization in the pig. By F. BERSCHAUER, W. H. CLOSE and D. B. STEPHENS	32A
The influence of the protein:energy value of the ration on the efficiency of energy utilization in the pig. By W. H. CLOSE and F. BERSCHAUER	33A
The ingestion of sows' faeces by piglets. By B. F. SANSOM and P. T. GLEED	34A
Prevention of piglet anaemia by feeding sows during lactation with diets enriched with iron. By B. F. SANSOM and P. T. GLEED	35A
Tyrosine oxidation during pregnancy in normal and protein deficient rats. By S. MAYEL-AFCHAR, R. F. GRIMBLE and T. G. TAYLOR	36A
Dietary restriction and the kinetics of glucose absorption across the rat small intestine. By E. S. DEBNAM	37A
The replacement of sucrose by xylitol in the diet, and its influence on the level of dental caries in the rat. By T. H. GRENBV	38A
The importance of free T <sub>4</sub> measurements in assessing thyroid status in protein deficient rats. By M. D. COX, SHREDEVI S. DALAL and C. R. C. HEARD	39A
The effects of zinc supplementation in aged persons on serum albumin and binding capacity. By W. H. PARRY, D. M. FLINT, M. L. WAHLQVIST, P. A. DRYDEN, D. M. PRINSLEY and F. AL-MUKHTAR	40A

[Continued on p. iii of wrapper]

© The Nutrition Society, 1981

CAMBRIDGE UNIVERSITY PRESS

The Pitt Building, Trumpington Street, Cambridge CB2 1RP  
32 East 57th Street, New York, N.Y. 10022

Lampart Gilbert Printers Ltd., Reading, England.