

THE JOURNAL OF HYGIENE

EDITED BY

GEORGE H. F. NUTTALL, M.D., PH.D., Sc.D., LL.D., F.R.S.

QUICK PROFESSOR OF BIOLOGY, DIRECTOR OF THE MOLTEÑO INSTITUTE FOR
RESEARCH IN PARASITOLOGY IN THE UNIVERSITY OF CAMBRIDGE

IN CONJUNCTION WITH

JOHN S. HALDANE, C.H., M.D., D.Sc., LL.D., F.R.S.,
Late Reader in Physiology in the University of Oxford.

SIR CHARLES J. MARTIN, C.M.G., M.D., D.Sc., F.R.S.,
Professor of Experimental Pathology in the University of London,
Director of the Lister Institute, London.

J. C. G. LEDINGHAM, C.M.G., M.B., D.Sc., F.R.S.,
Professor of Bacteriology in the University of London,
Bacteriologist-in-Chief, Lister Institute, London.

G. S. GRAHAM-SMITH, M.D., F.R.S.,
Reader in Preventive Medicine, Cambridge.

MAJOR GREENWOOD, F.R.C.P. (LOND.), F.R.S.,
Professor of Epidemiology and Vital Statistics in the University of London.

PUBLISHED QUARTERLY



CAMBRIDGE UNIVERSITY PRESS

LONDON: FETTER LANE, E.C. 4

ALSO

H. K. LEWIS AND CO. LTD., 136, GOWER STREET, LONDON, W.C.

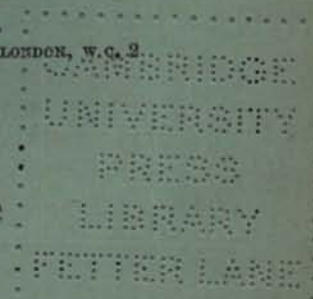
WHELDON AND WESLEY, LTD., 2-4, ARTHUR STREET, NEW OXFORD STREET, LONDON, W.C. 2

CHICAGO: THE UNIVERSITY OF CHICAGO PRESS
(AGENT FOR THE UNITED STATES)

BOMBAY, CALCUTTA, MADRAS: MACMILLAN & CO., LTD.

TOKYO: THE MARUZEN-KABUSHIKI-KAISHA

Price Twelve Shillings and Sixpence net



The University of Chicago Press

CHILDBIRTH

15s. net

By WILLIAM G. LEE, M.D.

A comprehensive study of childbirth containing reliable and practical information for the mother. Practising physicians, nurses, and beginning students in obstetrics will find the book informative and useful.

NUTRITION WORK WITH CHILDREN

17s. 6d. net

By LYDIA J. ROBERTS

A splendid survey of the subject of malnutrition,—of its causes, effects, prevention, and treatment.

THE NEWER KNOWLEDGE OF BACTERIOLOGY AND IMMUNOLOGY

75s. net

Edited by E. O. JORDAN and I. S. FALK

A collection of late researches in the field of bacteriology prepared by the leading eighty research men in the field.

LABORATORY OUTLINES IN BACTERIOLOGY AND IMMUNOLOGY

10s. net

By JOHN F. NORTON and I. S. FALK

Consists of exercises which are designed to acquaint the reader with a variety of the best methods, to give him practice in working with different groups of bacteria, and to illustrate types of immunologic phenomena.

FOOD POISONING

6s. 3d. net

By EDWIN O. JORDAN

A clear summary of our present knowledge of poisoning through foods.

THE CONTROL OF HUNGER IN HEALTH AND DISEASE

12s. 6d. net

By A. J. CARLSON

THE ANTIQUITY OF DISEASE

7s. 6d. net

By R. L. MOODIE

A picture of prehistoric pathological conditions.

PRESCRIPTION NOTES

5s. net

By A. L. TATUM

A well-made handbook in flexible covers, it contains, in addition to the text, blank pages for noting selected prescriptions.

AGENTS IN GREAT BRITAIN AND THE BRITISH EMPIRE (EXCEPT CANADA)
Cambridge University Press, Fetter Lane, London, E.C. 4

THE JOURNAL OF HYGIENE

CAMBRIDGE UNIVERSITY PRESS
LONDON: FETTER LANE, E.C. 4



H. K. LEWIS & CO., LTD., 136, GOWER STREET, LONDON, W.C. 1

CHICAGO: THE UNIVERSITY OF CHICAGO PRESS
(Agents for the United States)

BOMBAY, CALCUTTA, MADRAS: MACMILLAN & CO., LTD.

TOKYO: THE MARUZEN-KABUSHIKI-KAISHA

All rights reserved

THE JOURNAL OF HYGIENE

EDITED BY

GEORGE H. F. NUTTALL, M.D., Ph.D., Sc.D., LL.D., F.R.S.

QUICK PROFESSOR OF BIOLOGY, DIRECTOR OF THE MOLTEÑO INSTITUTE FOR
RESEARCH IN PARASITOLOGY IN THE UNIVERSITY OF CAMBRIDGE

IN CONJUNCTION WITH

JOHN S. HALDANE, C.H., M.D., D.Sc., LL.D., F.R.S.

LATE READER IN PHYSIOLOGY IN THE UNIVERSITY OF OXFORD

SIR CHARLES J. MARTIN, C.M.G., M.D., D.Sc., F.R.S.

PROFESSOR OF EXPERIMENTAL PATHOLOGY IN THE UNIVERSITY OF LONDON,
DIRECTOR OF THE LISTER INSTITUTE, LONDON

J. C. G. LEDINGHAM, C.M.G., M.B., D.Sc., F.R.S.

PROFESSOR OF BACTERIOLOGY IN THE UNIVERSITY OF LONDON,
BACTERIOLOGIST-IN-CHIEF, LISTER INSTITUTE, LONDON

G. S. GRAHAM-SMITH, M.D., F.R.S.

READER IN PREVENTIVE MEDICINE, CAMBRIDGE

MAJOR GREENWOOD, F.R.C.P. (Lond.), F.R.S.

PROFESSOR OF EPIDEMIOLOGY AND VITAL STATISTICS
IN THE UNIVERSITY OF LONDON

VOLUME XXVIII. 1928-9

CAMBRIDGE
AT THE UNIVERSITY PRESS

1929

CAMBRIDGE
UNIVERSITY
PRESS
LIBRARY
PRINTED AND
PUBLISHED BY

PRINTED IN GREAT BRITAIN

CONTENTS

No. 1 (AUGUST 1928)

	PAGE
JOE, ALEXANDER and McENTEE, J. C. J. The Stability of Schick Toxin	1
KERRIN, JOHN C. An Investigation of <i>Bacillus dysenteriae</i> (Sonne Type III)	4
EASTWOOD, ARTHUR. Further Comments on the Causation of Malignant Disease	9
LOGHEM, J. J. VAN. An Epidemiological Contribution to the Knowledge of the Respiratory Diseases. (With 7 Graphs) .	33
FELIX, A. and OLITZKI, L. The use of Preserved Bacterial Suspensions for the Agglutination Test. With especial reference to the Enteric Fevers and Typhus Fevers	55
HORNE, J. H. Furunculosis in Trout and the Importance of Carriers in the Spread of the Disease. (With a Map)	67
LEIGHTON, GERALD and BUXTON, J. BASIL. The Distribution of <i>Bacillus botulinus</i> in Scottish Soils	79
SMITH, J. and FRASER, A. M. Skin Tests for Susceptibility to Measles	83
WILLIAMS, R. STENHOUSE and HOY, W. A. The Frequency of the Appearance of Tubercle Bacilli in the Faeces of three apparently healthy Cows	89
SCHAEFFER, GEORGES, FONTÈS, G., LE BRETON, E., OBERLING, CH., and THIVOLLE, L. The dangers of certain Mineral Baking-powders based on Alum, when used for Human Nutrition .	92
HENRY, S. A. Mule Spinners' Cancer: the Time necessary for its Production. (With 2 Graphs)	100

No. 2 (NOVEMBER 1928)

STUART, G. and KRIKORIAN, K. S. Serological Diagnosis of the Enterica by the Method of Qualitative Receptor Analysis. (With a Diagram)	105
GREENWOOD, M., NEWBOLD, E. M., TOPLEY, W. W. C. and WILSON, J. On the Mechanism of Protection against Infective Disease	127

	PAGE
LAGRANGE, E. Dissociation Microbienne des Bacilles Fluorescents et Production Expérimentale de ces Variations	133
QUASTEL, J. H. The Study of "Resting" or Non-proliferating Bacteria	139
WOODS, HILDA M. Statistical Study of Scarlet Fever and Diphtheria. With special reference to (1) Changes in the Age Distribution of Mortality; (2) Effect of Isolation on the Prevalence and Mortality from Scarlet Fever	147
COOPER, E. A. and HAINES, R. B. The Influence of Temperature on Bactericidal Action. (With 1 Figure)	163
MACKIE, T. J. and FINKELSTEIN, M. H. A Study of Non-specific Complement-fixation with particular reference to the Interaction of Normal Serum and certain Non-antigenic substances. (With 10 Charts and 4 Graphs)	172
GRIFFITH, A. STANLEY. Tuberculosis in Captive Wild Animals	198

NO. 3 (DECEMBER 1928)

TWORT, C. C. and TWORT, J. M. Observations on the Reaction of the Skin to Oils and Tars	219
HARVEY, WILLIAM CLUNIE. On the Bacterial Flora of Diphtheria Carriers, Diphtheria Patients, and Normal School Children. (With 6 Graphs)	228
LAZARUS-BARLOW, P. An Investigation into the Cause of Rheumatic Fever in Children. (With 5 Charts)	237
GUNN, WILLIAM and GRIFFITH, FRED. Bacteriological and Clinical Study of One Hundred Cases of Scarlet Fever	250
GREENWOOD, MAJOR. "Laws" of Mortality from the Biological point of view	267
WILSON, G. S. Discontinuous Variation in the Virulence of <i>Bact. aertrycke</i> Mutton. (With 6 Charts)	295
PELLER, S. Typhoid Fever in Palestine	318

NO. 4 (FEBRUARY 1929)

CIUCA, PROF. A. The Reaction of Complement Fixation in Foot-and-Mouth Disease as a means of identifying the Different Types of Virus	325
BONSER, GEORGIANA M. The Incidence of Tumours of the Respiratory Tract in Leeds	340

Contents

vii

	PAGE
CLAYTON, F. H. A. and WARREN, S. H. An Unusual Bacillus recovered from Cases presenting Symptoms of Dysentery	355
SMITH, J. Green-producing Cocci in Measles	363
GARDNER, A. D. The Small-flaking or "O" Agglutination of Permanent Standardised "O" Suspensions of <i>B. typhosus</i> by the Serums of Normal, Inoculated and Infected Persons. (With 1 Chart)	376
MCKINLAY, PETER L. Some Statistical Aspects of Infant Mortality	394
FELIX, A. On the Non-specific Stimulation of Agglutinins. With Especial Reference to the Enteric Fevers and Typhus Fever	418
INDEX OF AUTHORS	449
INDEX OF SUBJECTS	451