

## REVIEWS OF BOOKS : BOEKRESENSIES

### POLIOMYELITIS VACCINATION

*Poliomyelitis Vaccination: A Preliminary Review.* World Health Organization: *Technical Report Series*, 1956, No. 101; 40 pages. 1s. 9d. Available also in French and Spanish. Local Sales Agent: Van Schaik's Bookstore (Pty.) Ltd., P.O. Box 724, Pretoria.

*Contents:* 1. Introduction. 2. Experience with poliomyelitis vaccination in various countries. 3. Safety testing. 4. Selection of strains for inactivated poliomyelitis vaccine. 5. Antigenicity tests. 6. Theoretical complications of vaccination against poliomyelitis. 7. Public health application of inactivated poliomyelitis vaccine under different epidemiological conditions. 8. Live virus vaccines. 9. Design and techniques of serological surveys. 10. Conclusions. Annex 1. Poliomyelitis vaccine antigenicity and potency tests. Annex 2. Selection of strains for inactivated poliomyelitis vaccine. Annex 3. Present status of work on immunization of human beings with living attenuated poliomyelitis virus. Annex 4. Studies of immunization of man against poliomyelitis with living attenuated virus.

Poliomyelitis vaccination is of great current interest in South Africa, as in other countries. The rapid transition of poliomyelitis vaccine from a laboratory development to a widely used public health weapon was, almost inevitably, accompanied by serious difficulties. The occurrence of accidents during large-scale application in the USA in 1955 gave rise to much caution on the part of health authorities in many countries, and vaccination programmes were suddenly halted, as in South Africa.

In November 1955 the WHO convened in Stockholm a group

of scientists qualified to review the present position of poliomyelitis vaccination and to provide some measure of guidance for public health authorities. Included in this group was Dr. J. H. S. Gear, Director of Research, Poliomyelitis Research Foundation, Johannesburg, who was appointed as rapporteur of the group. The collective views of this international group are presented in this WHO Technical Report which is termed a 'preliminary review' of poliomyelitis vaccination.

Following a brief introduction, the report describes experience with poliomyelitis vaccination in a number of countries (the USA, Canada, Denmark, France, Germany, the Union of South Africa and Sweden), as summarized by members of the group. Attention is then turned to problems in the production of the vaccine. First, there is a detailed consideration of the safety tests currently applied to the vaccine in different countries, including control of the inactivation process, the final tissue-culture safety test, the monkey safety test, and other safety tests. This is followed by sections on selection of strains for inactivated poliomyelitis vaccine and on antigenicity tests. Other parts of the report are devoted to discussion of the theoretical complications of vaccination against poliomyelitis; live virus vaccines, which are considered to be in the early experimental stages of development; and the design and techniques of serological surveys in connexion with poliomyelitis vaccination.

Under the heading 'Public health application of inactivated

poliomyelitis vaccine under different epidemiological conditions', an attempt is made to answer the questions with which the health officer is faced when he has to decide whether or not to recommend poliomyelitis vaccination as a general public-health measure. The various risks and benefits are weighed, and attention is drawn to the 'unknowns' in poliomyelitis vaccination.

The report proper is concluded with a summary of the views of the group on the routine use of poliomyelitis vaccine and an outline of the problems on which further research is needed.

Technical annexes contain brief papers, by authorities of renown, on (1) poliomyelitis vaccine antigenicity and potency tests, (2) the selection of strains for inactivated poliomyelitis vaccine, (3) the present status of work on immunization of human beings with living attenuated poliomyelitis viruses, and (4) studies of immunization of man against poliomyelitis with living attenuated virus.

This report meets an immediate need. It provides an authoritative review, by a group of internationally known scientists, on one of the most promising of recent developments in disease prevention.

#### EXPERT COMMITTEE ON BIOLOGICAL STANDARDIZATION

*Expert Committee on Biological Standardization, Eighth Report. World Health Organization: Technical Report Series, 1955, No. 96, 19 pages. 1s. 9d. Available also in French and Spanish. Local Sales Agent: Van Schaik's Bookstore (Pty.) Ltd., P.O. Box 724, Pretoria.*

*Contents:* Immunological. 1. Blood-typing sera. 2. Cholera vaccines, antigens, and sera. 3. *Clostridium welchii* (perfringens) antitoxins. 4. Diphtheria toxoid and Schick-test toxin. 5. Influenza vaccines and diagnostic reagents. 6. Opacity, International Reference Preparation. 7. Pertussis vaccine and serum. 8. Poliomyelitis vaccines. 9. Q-Fever serum. 10. Rabies serum and vaccine. 11. Swine erysipelas serum, anti-N. 12. Syphilis diagnostic reagents and sera. 13. Tuberculin, avian. 14. Typhoid and paratyphoid sera and vaccines. Pharmacological. Antibiotics. 15. Oxytetracycline. 16. Newer antibiotics (carbomycin, erythromycin, neomycin, polymyxin B, tetracycline, viomycin). 17. Procaine benzylpenicillin in oil with aluminium monostearate (PAM). Hormones (and Protamine). 18. Anterior pituitary hormones (adrenocorticotrophic hormone, prolactin, thyrotrophin). 19. Insulin. 20. Protamine. Miscellaneous. 21. Dextran sulfate. 22. Hyaluronidase. 23. Male fern. 24. Melaminyl trypanocides. 25. Ouabain. 26. Pyrogens. 27. Vitamin A. 28. Author's Preparations. 29. Stability of international standards. 30. Biological assay methods for the *Pharmacopoea Internationalis*. 31. International shigella centres. Annex. Notes on Author's Preparations.

The eighth report of the Expert Committee on Biological Standardization records the establishment of International Standards and Reference Preparations for a number of substances: Schick Test Toxin (Diphtheria); *Clostridium welchii* (perfringens) Antitoxins, Type B and Type D; Swine Erysipelas Serum, Anti-N; Purified Protein Derivative of Avian Tuberculin; Thyrotrophin; Protamine; and the melaminyl trypanocides Mel B and MSB. International Units were assigned by the Committee to some of these newly established standards and reference preparations and also to the International Standard for Anti-Q-Fever Serum, which was established last year.

#### DRIED BCG VACCINE

*Dried BCG Vaccine.* By Yogi Obayashi, M.D. Pp. 220, with tables. £1 5s. 0d. Geneva: World Health Organization. 1955.

*Contents:* 1. Cultivation and Human Inoculation Tests. 2. Cultivation Test of BCG Vaccine. 3. Present Method of Production. 4. Hand Shaking Method of BCG Production with Crystal or Agate Balls. 5. Culture Period of BCG on Sauton Medium. 6. Method of Freeze-Drying. 7. Effect of Freeze-Drying on Potency of BCG Vaccine. 8. Effect of Storage on Viability and Potency of BCG Vaccine, with Special Reference to Storage Temperature. 9. Effect of Light on Viability and Potency of BCG Vaccine. 10. Effect of Degree of Vacuum on Preservability of Dried BCG Vaccine. 11. Effect of Residual Moisture on Preservability of Dried BCG Vaccine. 12. Viability and Allergic Potency of Mass-Produced Dried BCG Vaccine. Conclusions. References. Index.

One of the major problems in mass BCG-vaccination campaigns, especially in tropical and sub-tropical countries, is the deterioration of the liquid vaccine during its transport over long distances from production centre to vaccination centre: heat and light weaken the antigenic potency of the vaccine by decreasing the number of viable bacilli, with a consequent reduction in the efficacy of the vaccine. For several years the possibility of freeze-drying BCG has been considered, in the hope of thus obtaining a product which would be more stable and, at the same time, retain its full potency. In Japan in particular, research on this subject has been given much attention; in fact, freeze-dried BCG vaccine has been produced on a semi-industrial scale in that country since 1949.

In this monograph WHO makes available to all concerned the results of Japanese studies which have previously been accessible to workers in other countries only in the form of summaries. Following chapters on cultivation and inoculation tests used in his experiments, Dr. Obayashi describes the present method of production of dried BCG vaccine. He discusses in detail the freeze-drying method and the effects of this procedure on the potency of the vaccine. He then compares dried and liquid vaccine from the standpoints of viability, preservability, and potency. He concludes that the data indicate a quantitative rather than qualitative difference between liquid and dried BCG vaccine, this difference being due to the decrease in viability which occurs during the process of freeze-drying.

The dried BCG vaccine being produced at present in Japan is considered, in that country, to have reached the stage at which it can be used more conveniently and effectively than the liquid vaccine; but, generally speaking, it does not yet fulfil all the conditions required for practical application on a large scale. Much more investigation is needed and is in progress.

#### WORLD HEALTH ORGANIZATION TECHNICAL REPORT

*World Health Organization Technical Report Series No. 92. Joint ILO/WHO Committee on the Hygiene of Seafarers. Second Report. Pp. 20. 1s. 9d. Geneva: World Health Organization. 1955.*

*Contents:* 1. Medical Advice by Radio to Ships at Sea. 2. Examination of Seafarers to Detect Tuberculosis. 3. Medicine Chests on Board Ship. 4. Maritime Aspects of the Prevention and Treatment of Venereal Diseases. 5. Future Programme. Annex.

The health of seafarers has been a matter of international as well as national concern for many years. WHO has assumed the responsibilities of the Health Organization of the League of Nations and the Office International d'Hygiene Publique in this domain, working particularly through a committee with the International Labour Organization—the Joint ILO/WHO Committee on the Hygiene of Seafarers.

This report of the Joint Committee deals first with the question of medical advice by radio to ships at sea. The existing facilities for transmitting such advice by radio seem to be satisfactory. However, the attention of governments is drawn to the desirability of ensuring that radio advice should be available at any hour of the day or night; that this advice should, where necessary, include specialist advice; and that adequate use should be made of the facilities available, with an up-to-date and complete list of the radio stations through which medical advice can be given being supplied to every ship.

Tuberculosis and venereal diseases are singled out as particular health problems among seafarers. It is recommended that all new entrants into a merchant navy be examined for tuberculosis and that periodic re-examination be encouraged, through a continuous campaign of health education. Venereal infections, although less of a problem that formerly in some countries, thanks to penicillin treatment, still warrant special consideration. Mention is made in the report of a WHO study now in progress on treatment facilities and methods at ports. The importance of contact tracing and of the treatment of infected contacts is stressed, although it is recognized that tracing contacts in the case of seafarers is often difficult and requires a system of international reporting.

A large part of the report is devoted to the subject of medicine chests on board ship. The contents and purpose of such chests are discussed, and lists of suggested medicaments and surgical instruments, appliances, and equipment are given. All countries with more than coastal shipping trade are urged to prepare comprehensive, standard, medical guides for the use of medicine chests at sea, if they do not already possess such guides.

#### LOCAL ANALGESIA

*Local Analgesia Head and Neck.* By Sir Robert Macintosh, D.M., F.R.C.S. (Edin.), F.F.A.R.C.S., M.D. (hon. causa), and Mary Ostlere, M.B., M.R.C.P.E., F.F.A.R.C.S. Pp. 138 + vii, with 145 illustrations. 27s. 6d. Edinburgh and London: E. & S. Livingstone Ltd. 1955.

*Contents:* 1. Anatomy: 1. The Trigeminal Nerve. 2. The Facial Nerve. 3. The Glossopharyngeal, Vagus, Accessory, and Hypoglossal Nerves. 4. The Cervical Plexus. 5. The Autonomic Nervous System in the Head and Neck. 6. The Cul-

aneous Innervation. 7. The Orbit and the Eye. 8. The Nasal Cavity and Paranasal Sinuses. 9. The Mouth. 10. The Tonsil. *II. Technique.* 11. General Considerations. 12. Analgesia for Surgery of the Nose and Air Sinuses. 13. Analgesia for Tonsillectomy. 14. Analgesia for Laryngology. 15. Analgesia for Dental Surgery. 16. Analgesia for Ophthalmic Operations. 17. Analgesia of the Superficial Tissues. 18. Stellate Ganglion Block. Index.

In keeping with the traditions of its University, the Nuffield Department of Anaesthetics at Oxford has always emphasized simplicity. In this monograph the considerable contributions which simple local analgesic techniques can make to successful surgery of the head and neck are described.

Professor Macintosh and Dr. Mary Ostlere have devoted more than half their book to a vividly illustrated description of the anatomy which must be understood before adequate local analgesia about the head and neck can be practised. The profuse use of excellent illustrations considerably simplifies their exposition and it is remarkable that the publishers have been able to offer so much of quality for a not unreasonable price.

The monograph lacks perhaps the broader approach to the general considerations of local analgesia. The use of reassurance and of sedation, and the insistence upon an adequate interval of time to enable full analgesia to develop before commencing surgery, are simple but essential rules which could well have been added to Chapter XI. The technique for bronchoscopy 'on an unconscious, unresisting subject', described on page 108, is perhaps also open to criticism by those who are conscious of the flight of time when one is fully occupied. While 90 seconds of apnoea may not seriously reduce available oxygen reserves in the patient, this brief period will allow the carbon-dioxide tension in the tissues to double in value.

Nevertheless the book is a scholarly contribution to the literature on anaesthesia and should adorn the shelves of every anaesthetist's library, as it adorns the reputation of authors, publishers and University alike.

C.S.J.

#### EXPERT COMMITTEE ON DRUGS LIABLE TO PRODUCE ADDICTION

*Expert Committee on Drugs Liable to Produce Addiction. Sixth Report. World Health Organization: Technical Report Series, 1956, No. 102, 21 pages. Price 1s. 9d. Published in English, French and Spanish. Local Sales Agent: Van Schaik's Bookstore (Pty.) Ltd., P.O. Box 724, Pretoria.*

*Contents:* Report on the tenth session of the Commission on Narcotic Drugs of the United Nations Economic and Social Council. 2. Resolutions of the United Nations Economic and Social Council. 3. Morphine and its derivatives. 4. Papaverine. 5. Synthetic substances with morphine-like effect. 6. List of the narcotic drugs under international control. 7. Abuse of amphetamine. 8. Pethidine. 9. International non-Proprietary names. Annex. The amphetamine problem in Japan.

In the sixth report of the WHO Expert Committee on Drugs Liable to Produce Addiction, it is recommended that the following synthetic substances with morphine-like effect be considered addiction-producing drugs and therefore subjected to the relevant controls: 3-hydroxy-N-phenethylmorphinan, 4-morpholino-2, 2-diphenyl ethyl butyrate, 4-dimethylamino-1, 2-diphenyl-3-methyl-2-propionoxybutane, 3-diethylamino-1, 1-di-(2'-thienyl)-1-butene (diethylthiambutene), and 1,3-dimethyl-4-phenyl-4-propionoxyhexamethyleneimine. However, (—)-hydroxy-N-allylmorphinan (levallorphan) and certain related compounds are not to be regarded as addiction-producing. The report points out that the myristyl ester of benzylmorphine, although it possesses no addiction-producing liability in itself, constitutes a public-health hazard because of its ready convertibility into benzylmorphine.

It is noted in the report that the world licit production of dia-

cetylmorphine (heroin) has shrunk from 839 kg in 1948 to 132 kg in 1954, and that, of the 20 States which have supplied estimates for this substance for 1956, only 4 are not prepared to suppress its licit medical use. It is concluded that more and more physicians are now finding it possible to substitute less dangerous drugs for heroin.

Also considered in this report are the abuse of amphetamine in various areas, a matter which is as yet one for local rather than international action, and the use of pethidine, which is complicated by the fact that this drug is marketed under a variety of names, so that the physician is not always aware of the drug with which he is dealing and of the consequent dangers. The latter problem, the report points out, emphasizes the importance of identifying each new drug by its recommended or proposed international non-proprietary name.

#### A HUNDRED YEARS OF NURSING

*A Hundred Years of Nursing.* By Sir Zachary Cope. Pp. 144. 10s. 6d. net. London: William Heinemann — Medical Books-Ltd. 1955.

*Contents:* Preface. I. The Background. II. St. Mary's Hospital, Working with Untrained Staff, 1851-1867. III. Steps Toward Training, 1867-1876. IV. The Birth of the Training School. V. Discard. VI. Peaceful Development. VII. The Turning Point, 1906-1913. VIII. Years of Change, 1913-1928. IX. A New Era, 1928-1949. X. The New Health Service, 1949-1955. XI. The Nursing Staff. References to Publications. Index.

It is seldom that I have enjoyed reading a book on the history of nursing as much as I have appreciated this. Sir Zachary's long association with St. Mary's gives a personal touch which adds to the charm of his writing: I am sure that all who have links with St. Mary's will welcome this pleasant reading. But, although the author deals with St. Mary's Hospital mainly, the reader is able, in the more intimate setting of a famous hospital, to get an over-all picture of the progress of hospital nursing.

A.H.T.

#### FEMALE SEX LIFE

*A Psychosomatic Medicine Monograph. Maternal Emotions. A Study of Woman's Feelings Toward Menstruation, Pregnancy, Childbirth, Breast Feeding, Infant Care and Other Aspects of their Femininity.* By Niles Newton, Ph.D. Pp. 140 + xi. \$3.00. New York: Paul B. Hoeber, Inc. 1955.

*Contents:* 1. The Problem. 2. Research Methods. 3. Women's Feelings About Menstruation. 4. Women's Feelings About Pregnancy. 5. Women's Feelings About Childbirth. 6. Women's Feelings About Breast Feeding. 7. Women's Feelings About Care of Their Babies. 8. Women's Envy of Men. 9. Sexual Intercourse: Its Relation to the Rest of Women's Sexual Role. 10. Biological Femininity versus Cultural Femininity. 11. Conclusions. Appendices. Index.

The author has sought to analyse and record the varying emotions of womanhood and inevitably deals with them in their relation to her basic sex factors. A glance at the chapter titles above will show how he has divided and classified them.

The method he has employed is first to deal with established facts as set out in published works of medical, psychological and sociological research and to review and record the findings; and secondly to undertake a planned research project to give information on the basic questions before him.

This was done by the study of a normal healthy group of child-bearing women. His conclusions will be of interest to those who deal with women and may help them to understand them better.

A.H.T.