

of pharmacology are available at but slightly greater cost for addition to one's library.

O. S. ORTH, M.D.

Tranquilizing and Antidepressive Drugs.

BY WILBUR M. BENSON, M.D., PH.D., Director of Neuropharmacology and Psychopharmacology, Mead Johnson Research Center, Evansville, Indiana, AND BURTRUM C. SCHIELE, M.D., Professor of Psychiatry, University of Minnesota Medical School, Minneapolis, Minn. Cloth. \$5.25. Pp. 89, with 13 figures. Publication No. 504, American Lecture Series. Charles C Thomas, Publisher, Springfield, Ill., 1962.

In this small volume the authors propose to classify the great number of drugs having psychotherapeutic properties and to describe briefly the clinical application of these drugs. They have done this and have done it well. The work is not intended as an exhaustive review of the subject. The bibliography is representative and not complete by intention. This is a useful book for those who wish to gain a great deal of information about tranquilizing and antidepressive drugs in an evening's reading.

ROBERT T. PATRICK, M.D.

Resuscitation and Artificial Hypothermia.

BY V. A. NEGOVSKII, Professor and Head, Laboratory of Experimental Physiology of Resuscitation, Academy of Medical Sciences, Moscow, U.S.S.R. American Edition translated from the 1960 Russian Edition by Basil Haigh, M.A., M.B., B.Chir. Cloth. \$12.50. Pp. 314 with 49 figures and 9 tables. Consultants Bureau Enterprises, Inc., 227 W. 17th Street, New York City, 1962.

The author relates his experiences in resuscitation and correlates them with physiologic, pharmacologic and pathologic data obtained from world-wide as well as Russian sources. His results substantiate what others have observed and give some additional information. He believes that intra-arterial transfusion has some value beyond that of merely adding more blood to the vascular system, and gives details of data which support his belief. He also describes experiments on oxygenation

of infused blood. Combination of artificial respiration with direct cardiac massage is recommended for best conditions of resuscitation, possibly with additional arterial transfusion of oxygenated blood. The book, written in 1959, recommends "indirect" (external) cardiac massage for emergency cases, particularly outside the hospital. Considerable discussion of etiology of ventricular fibrillation and its treatment is included. Five to six minutes is repeatedly mentioned as the time limit of undamaged survival of the cerebral cortex at normal temperatures. The utilization of perfusion apparatus to support circulation artificially while resuscitation measures are instituted is mentioned as being of possible future development. An innovation which may be significant arises from experiments indicating better results when 100 per cent oxygen was used for only a few moments followed by air during most of the period of intermittent positive-pressure breathing. Instruments to produce intermittent positive-pressure breathing are mentioned. Theoretical considerations of the use of energy in the form of drugs such as cytochrome are presented. In discussing restoration of the central nervous system, Negovskii states that the role attached by Selye to nonspecific reactions as a response to pathological stimuli is unimportant in terminal states. The period of "clinical death" from which successful resuscitation may be obtained is shown to be markedly prolonged by moderate hypothermia. The "lytic cocktail" to produce such hypothermia, however, is shown to have no positive effect. Use of respiratory stimulants after five or six minutes of "clinical death" is stated to be potentially harmful.

An enthusiastic preface is written by Dr. Claude S. Beck. The book should be of interest to every physician, for we are all likely to be concerned with resuscitation. All anesthesiologists should be versed in the material presented. The book will be welcomed by anyone doing research work in resuscitation or hypothermia.

ROBERT W. VIRTUE, M.D.

Exploration du Métabolisme Glucidique chez l'Animal en Hypothermie (Exploration of Carbohydrate Metabolism in the Hypothermic Animal). BY P. MUNDELEER,

with a Foreword by H. Laborit, Chief of Research in the Army Health Services, Paris, France. Fabricoid. Pp. 182, with 12 figures and 29 tables. Published by Editions Arscia S.A., 60, rue de l'Etuve, Bruxelles, Belgium, and Librairie Maloine S.A., 27, rue de l'Ecole de Médecine, Paris, 1962.

This comprehensive monograph, containing 327 references, pursues the fundamentals in the problem of carbohydrate metabolism and pancreatic function in animals in the hypothermic state. The wealth of detail presented can be summarized as follows: (1) hypothermia diminishes glucose consumption; (2) the reactional activity of the pancreas is nearly suppressed; and (3) the glucose output of the liver is lower than in the normothermic dog. To the student of hypothermia, metabolism, or both, this presentation should prove most interesting; however, to the practicing anesthesiologist, it will not be of great benefit.

C. R. STEPHEN, M.D.

A Physical Theory of the Living State: The Association-Induction Hypothesis. BY GILBERT NING LING, B.Sc., Ph.D., Director of the Department of Molecular Biology, Pennsylvania Hospital. Cloth. Pp. 680, with illustrations. Blaisdell Publishing Co., A Division of Random House, Inc., New York, London, 1962.

The author has been noted in his field for 15 years. His work is praised by his peers, including Dr. C. N. Yang, a Nobel Laureate in Physics.

This book was written to coordinate physical chemistry, biochemistry and physiology, and explain some of the intricacies of living tissue. The contents are on such an advanced level that those familiar with one aspect may be baffled by others. To aid in overcoming this difficulty and to bridge the gap between scientific disciplines there is a glossary of 71 pages. Unfortunately, the mathematical calculations in some portions are too complicated for anyone who has not had specialized training.

The range of subjects is broad: behavior of ions, nonelectrolytes, and proteins; cellular potentials and permeability; excitation, contraction and inhibition; the actions of enzymes, hormones, and drugs; growth and neoplasm.

The author's "association-induction" hypothesis is drawn upon to explain the phenomena of chemical action in living tissue. This hypothesis states that the association between proteins and interacting particles is critically different *in vivo* and *in vitro*, and that the primary function of the polarizable resonating chain of a protein is to provide a vehicle for the transmission of an inductive effect.

The book contains many tables, graphs, diagrams and mathematical calculations to support its theses. The bibliography and references are extensive.

Every physician should read some portions of this book, to see how far the basic scientists have come in understanding the behavior of living tissue. It is of value principally as a reference book to those whose work is at the basic science level.

JAY JACOBY, M.D.

Experimental Transplantation of Vital Organs. BY V. P. DEMIKHOV. Authorized translation from the Russian by Basil Haigh, M.A., M.B., B.Chir. Cloth. Pp. 285, with 74 illustrations. Consultants Bureau, 227 W. 17th St., New York City, 1962.

This monograph dealing with transplantation experiences contains seven interesting chapters. It deals with overall problems of transplantation of tissues and organs, including altered physiology and circulation following such procedures. A survey of the literature on transplantation of tissues and organs is presented to bring the reader up-to-date as to the status of work on this problem.

The book is written in a style that makes for easy reading, and the reviewer gets the impression that the material is entirely factual. Techniques of heart and lung transplantation, as well as transplantation of the extremities, are presented. Various methods employed in the transplantation of these organs are described and discussed. Both immunological and physiological alterations are described in detail. Methods of value in the transplantation of these organs, such as the use of artificial circulation, cross circulation, etc., are presented. A very adequate bibliography of both Russian and non-Russian literature is included. The 74 illustrations are of good quality and adequately supplement the text.