

Die Lungenfunktion. Physiologie und Pathophysiologie, Methodik [Lung function. Physiology and pathophysiology, methods.] By WOLFGANG T. ULMER, GERHARD REICHEL, and DIETRICH NOLTE. Stuttgart, Georg Thieme Verlag, 1970. Pp. 219. Illustrations 112, tables 21. DM 38 (cloth bound).

The evaluation of lung function has become a clinical tool which often decisively influences the indications for medical or surgical treatment. This volume deals with the foundations of modern lung-function tests. In three divisions of about equal length, physiology, pathophysiology, and methods are presented in a concise manner. In conscious simplification the authors try to work out the pathophysiologic bases of clinical treatment, the goal being to aid the practicing physician. They succeed admirably. The clear style and a multitude of illustrations aid in understanding. The monograph's usefulness is further enhanced by the index and an appendix of physiologic tables; the more than 500 references will help the interested reader to find more information. The detailed description of the commonly employed methods, including instrumentation, constitutes another important asset.

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Airway Dynamics. Physiology and Pharmacology. EDITED BY ARNOLD BOUHUYS. Springfield, Illinois, Charles C Thomas, 1970. Pp. 345. \$29.50.

"Airway Dynamics," the published papers of a meeting held at Haverford College, Haverford, Pennsylvania, is the best all-inclusive current work on airway dynamics. Both physiologic and pharmacologic considerations are presented, and every aspect of airway dynamics has been approached through the investigative work and concepts of American, European, and Japanese groups. The major parts of the book include: physics (I), physiology (II), pharmacology (III), and aerosol clearance (IV). Every chapter is presented by experienced and acknowledged workers in the particular areas. Some repetition occurs, but this is minimal and not disturbing. New concepts are introduced, and especially noteworthy is the chapter by Varenne and Jacquemin, offering a new method for computation of airway resistance. Their approach is based upon an improved method for determination of airway resistance during exercise and voluntary hyperventilation. Information utilizing modern techniques to study functional properties of smooth muscle of airways and their responses to stimuli is presented. Descriptions of the effects of exogenous and endogenous bronchoactive agents, such as histamine, serotonin, and bradykinin are clearly delineated.

"Airway Dynamics" is mandatory reading for the investigator of the mechanics of respiration; it is a useful text for broadening the concepts and defining the mechanism of airway dynamics for students and physicians interested in the subject. Anesthesiologists, respiratory physiologists, pharmacologists, and biomedical engineers will profit from its contents. It is highly recommended as a worthwhile contribution to the physiologic and pharmacologic literature.

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Origins of Psychopharmacology from CPZ to LSD. BY ANNE E. CALDWELL. Springfield, Illinois, Charles C Thomas, 1970. Pp. 225. \$12.00.

This book is an attempt to chronicle the development of chlorpromazine (CpZ) as an anti-psychotic drug. It also briefly describes the chemical agents used to influence behavior in antiquity and during the late nineteenth century.

In the development of CpZ, the main focus is on the ideas and experience of the French surgeon, Laborit, who first suggested the use CpZ in psychiatry, based on his observation of its effects in surgical stress, and the previous use by investigators of other phenothiazines in the treatment of psychotic patients. We are not, however, given any information about the personal experience and feelings of Laborit or other early pioneers in the use of CpZ in this endeavor. The role of the search for improvements in pre- and postoperative medications in the development of CpZ, as well as its alleged use in diminishing the amounts of general anesthetic agents necessary for surgery, should be of particular interest to anesthesiologists.

A brief six-year chronologic report of the introduction of CpZ into psychiatric treatment in various countries of the world is presented. Very limited mention of the recent history of other drugs of interest to contemporary psychopharmacologists, such as reserpine and LSD (but only in relationship to CpZ), is provided. Separate chapters are devoted to the contemporary use of CpZ in psychiatry and how drugs are evaluated for clinical use in psychiatry. The role of chance vs. intuition and insight in the recognition of new drugs is briefly discussed. The book concludes with nearly 60 pages of notes, which the author intends to be an autonomous presentation of background information on CpZ and various other psychoactive drugs.

There is little doubt of the historical importance of the subject matter of this book, and the interesting story that could be made of it. However, there is so much that is objectionable in style and organization, as well as so much mistatement, apparently due to lack of direct experience by the

author in either clinical psychiatry or psychopharmacology, that the reviewer cannot recommend this volume except to those who have an extraordinary tolerance for excessive, flowery rhetoric and do not mind the repeated discussion of the same point, in the same way, with perhaps a new detail being added as a pretext for retelling the same story. Had there been good editorial assistance, what is central to this book could have been cited in less than 30 pages.

As an example of the strange ideas and literary style: on page 5 we are told that Cpz is a drug "psychoanalysts were ready to give up their dreams for." At the least, most psychoanalysts I know are indifferent to chemotherapy; many are, in fact, hostile to it. An interesting story would be the careful investigation of their attitudes. That is not the style of this book. On page 40, a reference is cited which the author says tells us

"why the efficacy of Cpz is spectacular in some psychoses but considerably less so in certain atypical forms." There is no accepted explanation, on a biochemical or neurophysiologic level, for the efficacy of Cpz in any type of mental illness. Beginning on page 100, there is a five-page analogy between drug testing and evaluating string instruments which truly tells us nothing about either activity. Throughout, there is evidence of a lack of authoritative mastery of the key issues in the changes that occurred in the psychiatric world, at macro and micro levels, in the chemotherapeutic revolution which Cpz heralded.

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Surgery

HEART TRANSPLANT As the surgical techniques associated with cardiac transplantation are relatively straightforward, virtually any hospital equipped to perform open-heart surgery is a potential cardiac transplant facility. Before committing the hospital to entering the transplant field, administration and the governing board must give careful attention to the availability of specialty support for the particular area of transplant activity being considered. In addition to the surgeon's skills, the need for expertise in immunology, cardiology, electroencephalography, neurology, neurosurgery, nephrology, infectious disease, pulmonary medicine, radiology, psychiatry, psychology, pathology, and tissue typing must be evaluated. The bills for transplantation have ranged from a low of \$3,302 for a pediatric patient who lived only hours after surgery to a high of \$111,975 for a patient who lived 497 days and was hospitalized continuously after undergoing the heart transplant. The average bill was about \$25,000. A transplant program requires the ultimate in team effort dedicated to providing the best care possible for the donor and recipient while simultaneously providing an uninterrupted flow of services to the other patients in the hospital. (Reinhard, Henry C., Jr.: *Heart Transplant: The Whole World Watches*, *Mod. Hosp.* 115: 72 (July) 1970.) **ABSTRACTER'S COMMENT:** Anesthesiology should be added to the list of areas of expertise required for successful transplant surgery.

PERCUTANEOUS CORDOTOMY Two deaths directly attributable to cordotomy occurred when the procedure was performed in 93 patients. One patient died after bilateral lesions had been made three weeks apart; the other died after midcervical analgesia had been produced as a treatment for carcinoma of the breast with metastases to the brachial plexus. Both patients died "quietly" during the fourth postoperative night, obviously because of loss of central respiratory function. The manner of death of the patient who had bilateral lesions fitted the classic high-bilateral-lesion sleep of Ondine ("Ondine's curse"). The woman who had the unilateral lesion had had an infarction of the brainstem on the contralateral side 13 years before, from which she seemingly had recovered. When the respiratory center is compromised bilaterally, as has been reported many times in cases in which high bilateral cervical levels of analgesia have been produced, sleep-induced apnea is frequently encountered. (Onofrio, B. M.: *Recent Results with Percutaneous Cordotomy*, *Mayo Clin. Proc.* 45: 589 (Oct.) 1970.)