



# CLINICAL ANESTHESIA

## A Manual Of Clinical Anesthesiology

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*WITH 266 ILLUSTRATIONS*

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*"Life is short—The Art is long—Opportunity is fleeting—  
Experiment is perilous—Decision difficult"*

—HIPPOCRATES

## FOREWORD\*

In the early days of anesthetization of surgical patients, chloroform was the anesthetic agent, administered by the oldest and most responsible medical man available. Next came the A.C.E. mixture, consisting of one part alcohol, two parts chloroform, and three parts ether. Then came ether, which held the stage for many years.

In the last twenty years local anesthesia induced with various substances, of which procaine has been most generally used, has attained a very satisfactory place, especially when used for block anesthesia and, to a growing extent, for caudal or spinal anesthesia. As adjuncts to this type of anesthetic agent, there recently have appeared many substances or aids which have increased the efficiency of anesthesia, decreased the dangers, and added so greatly to the comfort of the patient as almost to revolutionize surgical anesthesia.

Among the workers who have contributed most to the whole subject of anesthesia, not only from the standpoint of research and experimentation but also from the standpoint of practical use of modern methods of anesthesia, is Dr. John S. Lundy who, with his efficient corps of assistants, has most carefully tried out the various anesthetic agents and their combinations and has relieved anesthesia not only of its terrors but its discomforts. In this book Dr. Lundy presents in a practical form the place of anesthesia in modern surgery.

WILLIAM J. MAYO.

\* Dr. Mayo was much interested in preparation of the manuscript of this book. He wrote this foreword after one of his many conversations with the author.

## PREFACE

Interest in development of anesthesia at the Mayo Clinic has long been established. In 1919, in Paris, Dr. Charles H. Mayo saw Dr. Gaston Labat's work in local anesthesia and, on Dr. Mayo's invitation, Dr. Labat spent ten months in Rochester in 1920. Eighteen years ago, at the suggestion of Dr. William J. Mayo, I adopted the point of view that in my work I would not only meet the recurring emergencies and the demands of the daily routine but, also, I would accumulate an experience which, some day, I would pass on to others in print. Throughout my practice, both in Seattle and in Rochester, I have kept records of particularly instructive cases apart from the general records. Approximately 1200 such records have directly contributed to passages in this book and still are used in current teaching.

I planned to prepare a book describing most of the methods of anesthesia that I regularly employ and some that I use only occasionally. I wished to present, particularly for fellows in anesthesia in the Mayo Foundation, instructions which were to be complemented by various other methods of teaching carried out daily. Recently, because of the present emergency, I was asked to modify the arrangement of the material in this book, to make it useful for military as well as civil use.

In so far as possible, I have eliminated theories and have limited descriptions of technic to the necessary maneuvers. Other information and instructions have been placed separately, many of them in a chapter of miscellaneous subjects called "Instructions to Nurses and Assistants; Equipment and Drugs Used in Anesthesiology." The bibliography I limited in so far as possible to definite references or to articles that contained comprehensive bibliographies in themselves. Historical material has been outlined by Mr. Keys in Chapter XXIX. Many points have been repeated so that, in military use, a busy person might refer quickly and easily to the subject on which he required information, if possible without even consulting the index.

Often if a man has possessed special knowledge of methods with which he has had much experience, I have quoted him or he has prepared and contributed material. Most of these men were, or are, my colleagues on the staff of the Mayo Clinic or the faculty of the Mayo Foundation, Graduate School, University of Minnesota. I am grateful to the many authors and publishers who have kindly consented to allow me to quote from published material. I am grateful to everyone who has helped in any way with the preparation of the material. I am especially grateful to Mrs. LaPlante who has prepared most of the manuscript for editing and to Mrs. Cutting, my first

secretary, who helped me to plan a method of collecting much of the material in this book. I wish to express my grateful appreciation to Dr. Richard M. Hewitt, who has been untiring in his patience and helpful service, and to the other members of the Editorial Department of the Mayo Clinic, to Mr. Russell Drake and the other members of the Art Department, to Mr. Leonard Julin and his co-workers in the Photographic Department, to Dr. A. H. Bulbulian, Dr. A. E. Osterberg, Mr. Dana Rogers, Mr. Richard Grounds, Dr. J. W. Kernohan, Dr. J. A. Heidbrink and Mr. R. H. McElrath of the Heidbrink Division of the Ohio Chemical and Manufacturing Company, Mr. Leo Blix of the Abbott Laboratories, Mr. L. L. Wright of the Eli Lilly Company, to Dr. Grace Roth, to the manufacturers of the gas machines listed in table 20 in Chapter VI, who were kind enough to submit information concerning their machines and later to check the entire table, to Miss Florence McQuillen who made the index and to Dr. R. M. Tovell who read duplicate proofs and made suggestions thereon. All my friends and associates have helped me to eliminate as many errors as possible from the book. Those that remain are my sole responsibility.

JOHN S. LUNDY.

ROCHESTER, MINNESOTA.

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