

S. C. CULLEN

# ANESTHESIA

FIFTH  
EDITION

# ANESTHESIA

*A Manual for*

STUDENTS & PHYSICIANS

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FIFTH EDITION

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TO MY WIFE *who, without complaint and with courage and with the pioneer spirit of many physicians' wives, endured many months of privation and solitude while the requisite training for a specialty was being obtained.*



## Preface to Fifth Edition

THE YEARS spent teaching, practicing and participating in research in the field of anesthesia have consistently impressed the author with the number and extent of the defects in our knowledge. Perhaps in no other discipline in medicine has advance been so rapid and concepts so often subjected to change. Those entering or caught in this fluid state, this relatively uncharted wilderness, are strongly tempted to grasp at dogma, to construct convenient signposts or to seize floating bits of information in efforts to establish stability. The authoritarian can exploit these defects in knowledge and satisfy those who are bewildered and seeking refuge by establishing routines for the practice of anesthesia.

Although a strenuous effort has been made, in preparing previous editions of this book, to avoid dogmatism born of incomplete information and understanding of the complex processes attendant upon the state of anesthesia, the effort has been unsuccessful in some parts. The changes that have been made in this edition have been based on an increasing realization by the author that, in a field so challenging as anesthesia, progress will be enhanced only if the mind is uncluttered by fixed notions. The material is of a fundamental nature and directed at assisting the student and physician in acquiring a basic approach to the solution of problems in anesthesia. As such, it can be fairly represented as a manual for all students (undergraduate or graduate) and physicians rather than a practical guide for the general practitioner, as it may have appeared to be under the old title.

The chapter on Use of Depressant Drugs has been entirely revised in an attempt to change the emphasis from a consideration of drugs to a consideration of the patient and his needs. Some will be disappointed to find the table of drug dosages eliminated. The author feels that his additional experience in the use of depressant drugs makes him less inclined to defend the presentation of fixed patterns in doses and combinations of drugs.

Other material has been critically reviewed. Pertinent information has been added where indicated. Generous subtraction of obsolete, misleading and erroneous material has been accomplished. Changes in the concept of problems and the approaches to their solution have been made.

As in the past, the reader may not expect "pat" answers in specific problems. The author continues to feel that rational solution of problems will be the result of application of fundamental principles.

The author is indebted to Dr. William K. Hamilton for valuable assistance in reviewing the material and to many others who have contributed constructive criticism.

## Preface to First Edition

IN THE COURSE of developing a comprehensive but not detailed course of instruction in anesthesiology for senior medical students, notes were prepared for a series of lectures covering the topics included in this book. These lecture notes have been amplified to some extent in the preparation of the material in this text, but an attempt has been made to confine the presentation of the subject to fundamental and practical considerations.

The book is to be construed not as a complete text in anesthesiology but rather as a manual useful to the medical student, the part-time anesthetist and others who may be called upon to employ depressant drugs, alleviate respiratory depression or obstruction and treat hypoxia or shock. No attempt is made to include minute specific technical details because it is felt that a more satisfactory solution of anesthesiologic problems can be obtained by the reader if the emphasis is placed on establishing a basis for a rational approach to these problems.

The author is indebted to the members of the Division of Anesthesiology for their efforts in providing material, to Mr. Frederick Kent for excellent advice on the illustrations, to Mr. Robert Gadbois for the cartoons and to Miss Jane Rogers for secretarial assistance.



