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0521536006 - Essential Anesthesia: From Science to Practice  
T. Y. Euliano and J. S. Gravenstein  
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## Essential Anesthesia

This is a concise, accessible introduction to the essentials of anesthesia, suitable for medical students, junior doctors and all operating theater staff. It provides a brief, broad overview of the science and practice of anesthesia without overwhelming the reader with intimidating detail. The first section of the book describes the evaluation of the patient, the different approaches to anesthesia, and the post-operative care of the patient in pain. The next section introduces the essentials of physiology and pharmacology and their role in understanding the principles of anesthesia. The final section presents a step-by-step description of clinical cases, ranging from the simplest to the most complex. These clinical vignettes give a very real introduction to the practicalities of anesthesia and will give the non-anesthetist physician an idea of how to prepare a patient for a surgical procedure.

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## From Science to Practice

**T. Y. Euliano and  
J. S. Gravenstein**

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University of Florida  
College of Medicine,  
Gainesville, Florida, USA



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**For Alix and Neil**

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## Foreword

The most recognizable part of the anesthesiologist's work consists of maintaining the stability of the patient's multiple and complex organ systems during surgical operations while providing freedom from pain. To accomplish these sometimes opposing goals, the anesthesiologist must have detailed knowledge of the diseases affecting the patient and must be able to base all therapeutic decisions on an astute understanding of physiology and pharmacology. Emphasizing the serious nature of the anesthetic state, anesthesia has been described as "a controlled overdose of drugs requiring continuous intensive care of the patient." Understandably then, many founders of critical care medicine were anesthesiologists and, by the same token, much material in this book is immediately applicable to the intensive care of critically ill patients.

The authors had set out to write a book to introduce medical students to the complexities of anesthetic practice including compassionate pre- and post-operative care. However, this little book rapidly grew beyond that early goal. Physicians and nurses outside of anesthesia will discover in these pages wonderful reviews of physiology and pharmacology and clinical pearls helpful in preparing a patient for anesthesia and surgery. That Drs. Euliano and Gravenstein have a wealth of teaching experience shows on every page. They successfully present very complex subjects in a lively manner and in relatively simple terms. I am confident that the reader will find this text not only thorough but also – how rare for a medical text – pleasant to read. This book offers answers to many questions, while simultaneously stimulating the reader to consult one of the many voluminous specialty texts that provide details, requiring much more space than available in a volume of this size.

**Jerome H. Modell, M.D.**

In Greek mythology, the night has twin sons, Thanatos (death) and Hypnos (sleep), who carry flaming torches pointing toward the floor, to light a path through the dark. Juan Marín, a Latin American anesthesia pioneer, designed this image to represent anesthesia. He placed a small light between Thanatos and Hypnos indicating the flame of life the anesthesiologist must guard. The upper half of the emblem shows the rising or setting sun of consciousness. The Confederación Latinoamericana de Anestesiología and the Revista Colombiana de Anestesiología have adopted this beautiful emblem, which in the past had been used by the World Federation of Societies of Anaesthesiologists.





## Preface

“What should I read in preparation for a rotation through the anesthesia service?” – so have asked not only students, but also other medical and non-medical visitors to the operating room. In response to this often posed question, we could recommend several wonderful and exhaustive texts, but such tomes demand an investment of time and effort only the dedicated specialist could muster. An introductory text should be easy to read, and it should be short enough to be completed in a few hours. It has to be a sketch instead of a full painting, yet it must clearly show the features of the subject. This we have striven to accomplish but, occasionally, we succumbed and included a bit of trivia. We hope the reader will forgive us for that.

We have divided the little book into three parts. The first part presents the equivalent of a miniature operating manual covering pre-, intra- and post-anesthesia tasks and the tools of the profession. In the second part, we give a synopsis of cardiovascular and respiratory physiology and pharmacology of importance to peri-operative clinical practice. The third part places the reader into the operating room looking over the shoulder of a busy anesthesiologist taking care of patients with special problems. Here, we have chosen common clinical situations, and we have incorporated difficulties – some of them avoidable – in order to highlight challenges faced in daily practice. A reader who had started at the beginning of the book and now looks at the clinical examples should be able to apply much of the information presented in the first and second sections of the book to the problems arising in the clinical cases. Of course, some might prefer to read about the cases first – perhaps in preparation for a visit to the operating room – in order to get a preview of the extraordinary world of clinical anesthesia and surgery. Such an approach should raise many questions in the reader’s mind, topics we hope to have touched on in the first two sections of the book.

Our hope is that this little text will intrigue some into further investigation of the fascinating field of anesthesiology, provide insight into the subspecialty for our colleagues in other areas, and improve the understanding of physiology, pharmacology, and peri-operative medicine for all our readers.

**T. Y. Euliano, J.S. Gravenstein**

July, 2004

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