





# Operative Surgery

## PRINCIPLES AND TECHNIQUES

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# Preface

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IN THE preparation of this Second Edition every effort has been made to present a book both comprehensive in scope and contemporary in the discussion of principles and techniques of clinical surgery.

Several chapters have been added and new illustrations have been included to complement the revised or additional text. The changing attitude toward the treatment of breast disease is reflected in the chapter on reconstructive surgery of the breast. Other chapters pertain to the basic principles of treatment of surgical infection, a better defined approach to the treatment of soft tissue tumors, and transplantation associated with vascular access surgery, which has emerged as appropriate therapy for the patient with end-stage renal disease.

Many existing chapters have been extensively revised and expanded to include: discussions of the modern techniques of coronary artery surgery; the

influence of computerized axial tomography and ultrasonography in a variety of clinical settings; current approaches to the treatment of shock; the availability of synthetic, nonabsorbable sutures; stapling instruments and microsurgical techniques; better delineation of staging tumors, whether in the breast, skin, soft tissue, or lymphatics; improved standardization of burn therapy; and advances in the surgical approaches to portal hypertension and vascular disease. The book continues to be addressed to both the experienced clinical surgeon and the surgical resident.

I would like to thank Lynda Yanez for secretarial help and Kathy Sisson for many of the new illustrations that are part of this edition. I also appreciate the help and support of the Lea & Febiger staff, especially Edward Wickland and Thomas Colaiezzi, in the production of this book.

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# Introduction

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# 1

## Principles of Operative Surgery

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### PART I

### *General Considerations*

THOMAS F. NEALON JR.

CARLO E. GROSSI

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The aim of the surgeon should be to correct his patient's problem with a minimum of patient trauma and the least disruption of normal physiology. To properly care for his patient he must be concerned with the patient, his emotional makeup, his physiology, and his diseases. He must be able to evaluate these and to correct any aberration. He can do this effectively if he has an adequate knowledge of his tools and of their influence on tissues both healthy and impaired.

Individual chapters will be devoted to problems peculiar to specific anatomic areas. This segment will be devoted to general considerations which apply to the patient as an individual and to his tissues as a specific entity. The discussion will concern (1) the patient, (2) his wound, and (3) materials and techniques used in the treatment of his wound or disease.

### PREOPERATIVE EVALUATION AND PREPARATION

Care of the surgical patient begins at the first meeting of surgeon and patient. The rapport established at that time may well influence the results of any treatment. The surgeon who makes an effort to put the patient at ease, and is courteous, polite, straightforward, and yet decisive will gain his confidence at once. It is sometimes worthwhile to discuss generalities until

the patient is sufficiently relaxed to discuss his medical problems.

A thorough preoperative evaluation consists of a good history, a complete physical examination, and pertinent laboratory and roentgenographic studies. The value of a history often is not recognized, but careful questioning of the patient often brings to light conditions that otherwise might be overlooked.

The physical examination should be conducted systematically, covering all anatomic areas. Rectal, pelvic, and neurologic examinations and palpation of peripheral pulses should be included. All data, both normal and abnormal, should be recorded.

Preoperative laboratory studies range from the routine blood count and urinalysis to elaborate batteries of studies, depending on the age and condition of the patient. Some surgeons add blood urea nitrogen and blood sugar determinations as screening tests. Depleted blood volume is particularly significant in elderly patients with marginal reserves, and this type of abnormality can be corrected prior to operation.

Cardiothoracic problems can be improved preoperatively with treatment, results of which should be monitored with pulmonary function studies. For pulmonary emphysema or chronic lung disease, intermittent positive pressure breathing is indicated. If the patient has bronchiectasis, postural drainage and specific antibiotics are added to the pressure therapy. All such patients should be advised to stop smoking.

For operations on the gastrointestinal tract, the usual preparation consists of cathartics, enemas, low residue diet, and antibiotics. Although mechanical cleansing of the bowel can be overdone, an enema may be necessary to remove traces of barium or to permit proper preparation of the operative site. Bowel preparation is important in colorectal surgery. Regarding bacteriologic preparation of the bowel, it is unwise to combine antibiotics because of the greater danger of postoperative enterocolitis. Some surgeons omit antibiotics altogether preoperatively, depending on mechanical cleansing alone.