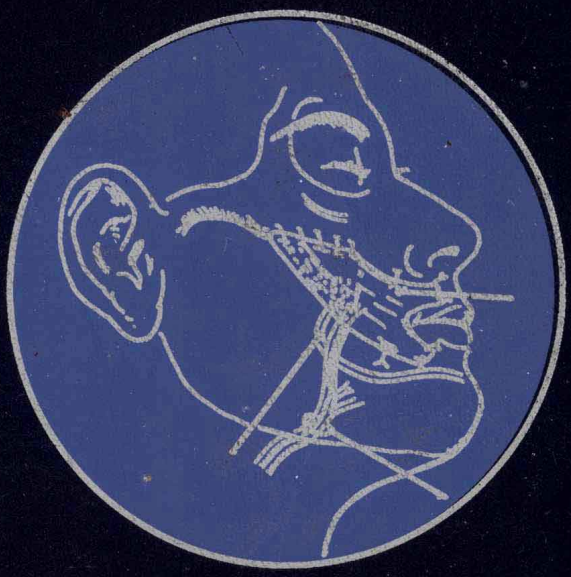
英文原版



整形外科手术学

OPERATIVE *Plastic Surgery*

GREGORY R. D. EVANS

人民卫生出版社
McGraw-Hill

OPERATIVE
Plastic Surgery

Editor
Gregory R. D. Evans, MD, FACS
The University of California
Irvine, California

With 105 contributors

With illustrations by Jan Redden

人民卫生出版社
McGraw-Hill

人民卫生出版社
McGraw-Hill
A Division of The McGraw-Hill Companies

Operative Plastic Surgery

This book was set in Garamond by The Clarinda Company.
The editors were Michael Medina and Kathleen McCullough.
The production supervisor was Phil Galea.
Project management was supervised by Gail Gavin at Clarinda Publication Services.
The designer was Mary Skudlarek.
The index was prepared by Schroeder Indexing Services.
Quebecor Printing was printer and binder.

Library of Congress Cataloging-in-Publication Data
Operative plastic surgery / editor, Gregory R. D. Evans ; with 105 contributors.

图字：01-2000-2631

ISBN 7-117-03869-1

9 787117 038690 >

整形外科手术学(英文版)

主　　编： Gregory R. D. Evans, MD, FACS
出版发行： 人民卫生出版社(中继线 67616688)
地　　址： (100078)北京市丰台区方庄芳群园 3 区 3 号楼
网　　址： http: //www. pmph. com
E - mail: pmph @ pmph. com
印　　刷： 北京市安泰印刷厂
经　　销： 新华书店
开　　本： 889×1194　1/16　　**印张：** 65
字　　数： 2000 千字
版　　次： 2000 年 10 月第 1 版　2000 年 10 月第 1 版第 1 次印刷
标准书号： ISBN 7-117-03869-1/R·3870
定　　价： 172.00 元

To Brandon, Brogan, and Ruth, for their undying patience, support, and love.

Washington University School of Medicine
Attending Staff
Barnes-Jewish Hospital
St. Louis Children's Hospital
St. Louis, Missouri
Chapter 80, "Nerve Repair"
Chapter 81, "Replantation"

Michael J. Breiner, MD
Southwest Virginia Center for Cosmetic, Plastic, and Reconstructive Surgery
Roanoke, Virginia
Chapter 17, "Brow-Lift"

Burton D. Brent, MD
Reconstructive Plastic Surgery
Woodside, California
Chapter 39, "Microtia Repair"

Richard E. Brown, MD, FACS
Springfield Clinic
Clinical Associate Professor and Hand Fellowship Director
Division of Plastic Surgery
Southern Illinois University School of Medicine
Springfield, Illinois
Chapter 78, "Extensor Tendon Repair"
Chapter 79, "Flexor Tendon Repair"

Ivan G. Camilleri, MD, FRCS
Specialist Registrar in Plastic Surgery
New Castle, United Kingdom
Chapter 19, "Blepharoplasty"

Bernard W. Chang, MD
Director, Center for Plastic and Reconstructive Surgery
Mercy Medical Center
Baltimore, Maryland
Chapter 54, "Mastopexy"

David W. Chang, MD
Assistant Professor
Department of Plastic Surgery
The University of Texas M. D. Anderson Cancer Center
Houston, Texas
Chapter 75, "Plantar Flap for Foot Reconstruction"

Michael E. Ciaravino, MD
Houston, Texas
Chapter 53, "Reduction Mammaplasty"

Norman Clark, MD, DMD
Section of Plastic and Reconstructive Surgery
Center for Craniomaxillofacial, Aesthetic (Cosmetic), Hand, and Reconstructive Surgery
Department of Surgery
New Jersey Medical School
Newark, New Jersey
Chapter 46, "Approach to Mandibular Fractures"
Chapter 47, "Approach to Upper Maxillofacial Fractures"

Benjamin E. Cohen, MD, FACS
Cohen & Cronin Clinic Association
Academic Chief of Plastic Surgery Residency Program
St. Joseph Hospital
Houston, Texas
Chapter 53, "Reduction Mammaplasty"

Victor Cohen, MD
Research Fellow
Division of Plastic Surgery
Baylor College of Medicine
Houston, Texas
Chapter 83, "Excision of Ganglion Cysts"
Chapter 86, "Metacarpal Fractures"
Chapter 87, "Phalangeal Fractures"

William A. Crawley, MD, DDS
Associate Professor
Plastic and Reconstructive Surgery
The Johns Hopkins School of Medicine
Baltimore, Maryland
Chapter 50, "Orthognathic Surgery"

Howard D. Edington, MD
Associate Professor of Surgery
Plastic and Reconstructive Surgery, Surgical Oncology
Department of Surgery
University of Pittsburgh Medical Center
Pittsburgh, Pennsylvania
Chapter 51, "Axillary Dissection"

Gregory R. D. Evans, MD, FACS
Professor of Surgery
Chair, Division of Plastic Surgery
The University of California
Irvine, California
Chapter 1, "Introduction"
Chapter 6, "Principles of Microsurgery"
Chapter 19, "Blepharoplasty"
Chapter 30, "Scalp Reconstruction"
Chapter 33, "The Radial Forearm Flap"
Chapter 34, "The Rectus Abdominis Flap"
Chapter 56, "Breast Reconstruction With the Latissimus Dorsi Flap"
Chapter 61, "Gluteal Flap for Pressure Sores"
Chapter 62, "Posterior Thigh Flap for Pressure Sores"
Chapter 69, "Rectus Abdominis Flap for Perineal Reconstruction"
Chapter 71, "Gracilis Flap for Perineal Reconstruction and Reconstruction for Anal Incontinence"

Gregory M. Fedele, MD
Clinical Assistant Professor of Surgery
Division of Plastic and Reconstructive Surgery
University of Pittsburgh Medical Center
Pittsburgh, Pennsylvania
Chapter 14, "Abdominoplasty"

James W. Ferraro, DDS, MD, FACS
Ohio Plastic Surgeons, Inc.
Associate Clinical Professor
Division of Plastic Surgery
Ohio State University
Columbus, Ohio
Chapter 22, "Genioplasty"

Thomas J. Francel, MD
Associate Clinical Professor of Surgery
St. Louis University
Chief of Plastic Surgery
St. John's Mercy Medical Center
St. Louis, Missouri
Chapter 3, "Wound Closure"

Jeffrey Friedman, MD
Assistant Professor
Division of Plastic Surgery
Baylor College of Medicine
Assistant Clinical Professor
Division of Plastic Surgery
The University of Texas M. D. Anderson Cancer Center
Houston, Texas
Chapter 4, "Closure Material"
Chapter 56, "Breast Reconstruction With the Latissimus Dorsi Flap"
Chapter 73, "Soleus Flap for Lower Leg Reconstruction"

David W. Furnas, MD
Clinical Professor and Chief
Division of Plastic Surgery
UCI Medical Center
The University of California
Irvine, California
Orange, California
Chapter 40, "Otoplasty for Protruding Ears, Crypotia, or Stahl's Ear"

J. William Futrell, MD
Professor and Chairman
Division of Plastic Surgery
University of Pittsburgh
Pittsburgh, Pennsylvania
Chapter 51, "Axillary Dissection"

Giulio Gherardini, MD, PhD
Clinical Assistant Professor
Department of Plastic Surgery
University of Rome
Rome, Italy
Chapter 10, "Costal Cartilage Grafts"
Chapter 20, "Basic Techniques in Rhinoplasty"
Chapter 44, "Pharyngeal Flap"
Chapter 62, "Posterior Thigh Flap for Pressure Sores"

Peter Giesswein, MD
Assistant Professor
Division of Plastic Surgery
University of Mississippi School of Medicine
Jackson, Mississippi
Chapter 7, "Skin Grafting"

Daniel Goldberg, MD
Assistant Professor
Case Western Reserve University
Cleveland, Ohio
Chapter 60, "Chest Wall Reconstruction"

Lawrence J. Gottlieb, MD
Professor of Clinical Surgery
Section of Plastic and Reconstructive Surgery
University of Chicago Hospitals
Chicago, Illinois
Chapter 67, "Penile Construction and Reconstruction"

Mark S. Granick, MD, FACS
Professor and Chief
Division of Plastic Surgery
MCP-Hahnemann University
Philadelphia, Pennsylvania
Chapter 32, "Parotidectomy"

Michael P. Grant, MD, PhD
Resident in Plastic, Maxillofacial, and Reconstructive Surgery
Division of Plastic, Maxillofacial, and Reconstructive Surgery
Department of Surgery
Division of Oculoplastic Surgery
Wilmer Ophthalmological Institute
The Johns Hopkins Hospital
Baltimore, Maryland
Chapter 48, "Reconstruction of Orbital Defects"
Chapter 49, "Naso-orbito-ethmoidal Complex Injuries"

Ali Gürlek, MD
Associate Professor of Plastic and Reconstructive Surgery
Department of Plastic Surgery
Inönü University School of Medicine

Turgut Özal Medical Center
Kampüs/Malatya, Turkey
Chapter 61, "Gluteal Flap for Pressure Sores"

Robert A. Hardesty, MD, FACS
Professor and Chief
Division of Plastic Surgery
Loma Linda University Medical Center and Children's Hospital
Loma Linda, California
Chapter 42, "Unilateral Cleft Lip Repair"
Chapter 43, "Cleft Palate Repair"

Philip Hawner, MD
Chief Resident
Division of Plastic Surgery
University of Mississippi School of Medicine
Jackson, Mississippi
Chapter 7, "Skin Grafting"

David A. Hidalgo, MD, FACS
Associate Professor of Surgery
Cornell University Medical College
New York, New York
Chapter 16, "Rhytidectomy: Extended SMAS and SMAS-ectomy Techniques"

Larry H. Hollier, MD
Department of Plastic Surgery
Baylor College of Medicine
Houston, Texas
Chapter 11, "Auricular Cartilage"
Chapter 12, "Septal Cartilage"

Cheryl Huang, MD
The University of San Diego Medical Center
San Diego, California
Chapter 30, "Scalp Reconstruction"

Joseph P. Hunstad, MD, FACS
The Hunstad Center for Cosmetic Plastic Surgery
Charlotte, North Carolina
Chapter 13, "Liposuction"

Nicholas T. Iliff, MD
Associate Professor of Ophthalmology and Plastic Surgery
Division of Plastic, Maxillofacial, and Reconstructive Surgery
Department of Surgery
Division of Oculoplastic Surgery
Wilmer Ophthalmological Institute
The Johns Hopkins Hospital
Baltimore, Maryland
Chapter 48, "Reconstruction of Orbital Defects"
Chapter 49, "Naso-orbito-ethmoidal Complex Injuries"

Peter Innis, MD
Assistant Professor
Department of Orthopedic Surgery
Johns Hopkins Medical School
Baltimore, Maryland
Greater Chesapeake Hand Specialists
Lutherville, Maryland
Chapter 88, "Carpal Fractures and Dislocations"

Ian T. Jackson, MD, DSc, FACS, FRCS, FRACS
Director, Craniofacial and Reconstructive Surgery
Institute for Craniofacial and Reconstructive Surgery
Affiliated with Providence Hospital
Southfield, Michigan
Chapter 5, "Local Rotational Flaps"

Sandeep S. Jejurikar, MD
Good Samaritan Hospital
Downers Grove, Illinois
Chapter 67, "Penile Construction and Reconstruction"

Ashton Kaidi, MD
Clinical Faculty
Division of Plastic Surgery
Loma Linda University Medical Center
Loma Linda, California
Newport Beach, California
Chapter 43, "Cleft Palate Repair"

Andrew Khoo, MD
Senior Registrar
Department of Plastic and Reconstructive Surgery
Singapore General Hospital
Singapore
Chapter 71, "Gracilis Flap for Perineal Reconstruction and Reconstruction for Anal Incontinence"

W. John Kitzmiller, MD, FACS
Associate Professor
Division of Plastic, Reconstructive, and Hand Surgery
University of Cincinnati College of Medicine
University Hospital Group
Cincinnati, Ohio
Chapter 64, "Groin Dissection and Regional Lymphadenectomy"

Stephen R. Klapper, MD
Department of Ophthalmology
Cullen Eye Institute
Baylor College of Medicine
Houston, Texas
Chapter 23, "Eyelid Reconstruction"

Michael Klebuc, MD
Division of Plastic Surgery
Baylor College of Medicine

Houston, Texas
Chapter 56, "Breast Reconstruction with the Latissimus Dorsi Flap"

Stephen S. Kroll, MD
Professor and Surgeon
Department of Plastic Surgery
The University of Texas M. D. Anderson Cancer Center
Houston, Texas
Chapter 27, "Repair of Lip Defects with the Abbe and Estlander Flaps"
Chapter 28, "Repair of Lip Defects with the Karapandzic Flap"

Howard N. Langstein, MD
Assistant Professor
Department of Plastic Surgery
The University of Texas M. D. Anderson Cancer Center
Houston, Texas
Chapter 38, "Scapular Osseous Flap"
Chapter 72, "Gastrocnemius Flap for Proximal Leg Reconstruction"

Laurence A. Levine, MD
Affiliated Urologist
Rush Presbyterian St. Luke's Hospital
Chicago, Illinois
Chapter 67, "Penile Construction and Reconstruction"

Sean Lille, MD
Mayo Clinic
Scottsdale, Arizona
Chapter 26, "Nasal Fractures: Reduction"

Robert F. Lohman, MD
Assistant Professor
Section of Plastic Surgery
Department of Surgery
University of Chicago
Chicago, Illinois
Chapter 6, "Principles of Microsurgery"
Chapter 69, "Rectus Abdominis Flap for Perineal Reconstruction"

Charles D. Long, MD, FACS
Assistant Professor
Division of Plastic Surgery
MCP-Hahnemann University
Philadelphia, Pennsylvania
Chapter 32, "Parotidectomy"

Michael T. Longaker, MD
John Marquis Converse Professor of Plastic Surgery Research
New York University School of Medicine
New York, New York
Chapter 41, "Correction of Facial Contour in Hemifacial Atrophy Using Microvascular Free Tissue Transfer"

Edward A. Luce, MD
Kiehn-DesPrez Professor of Plastic Surgery
Case Western Reserve University
Professor and Chief
Division of Plastic and Reconstructive Surgery
University Hospitals of Cleveland
Cleveland, Ohio
Chapter 31, "Modified and Radical Neck Surgery"

Kevin Maguire, MD
Westerly, Rhode Island
Chapter 76, "Gracilis and Rectus Abdominis Flap for Foot Reconstruction"

Paul N. Manson, MD
Professor and Chief
Division of Plastic, Maxillofacial, and Reconstructive Surgery
Department of Surgery
The Johns Hopkins Hospital
Baltimore, Maryland
Chapter 48, "Reconstruction of Orbital Defects"
Chapter 49, "Naso-orbito-ethmoidal Complex Injuries"

Jeffrey L. Marsh, MD
Professor
Division of Plastic and Reconstructive Surgery
Department of Surgery
Washington University School of Medicine
Director, Cleft Palate and Craniofacial Deformities Institute
Appoline Blair St. Louis Children's Hospital
St. Louis, Missouri
Chapter 8, "Cranial Bone Grafts"

Michael H. Mayer, MD, FACS
Attending Physician
Legacy Portland Hospitals
Portland, Oregon
Chapter 25, "Nasolabial Flap"

Frederick J. Menick, MD
Tucson, Arizona
Chapter 24, "Forehead Flap for Nasal Reconstruction"

Henry A. Mentz, MD, FACS, FICS
Aesthetic Center for Plastic Surgery
Associate Clinical Professor
Division of Plastic Surgery
St. Joseph Hospital
Associate Clinical Professor
Division of Plastic Surgery

Baylor College of Medicine
Houston, Texas
Chapter 15, "Multilayer Rhytidectomy"

Michael J. Miller, MD, FACS
Associate Professor of Plastic Surgery
Department of Plastic Surgery
The University of Texas M. D. Anderson Cancer Center
Houston, Texas
Chapter 63, "Surgical Treatment of Postmastectomy Lymphedema"
Chapter 75, "Plantar Flap for Foot Reconstruction"

Ali M. Mosharrafa, MD
Phoenix, Arizona
Chapter 44, "Pharyngeal Flap"

Scott W. Mosser, MD
Plastic Surgery Resident
Case Western Reserve University Medical School
Cleveland, Ohio
Chapter 4, "Closure Material"

Henry W. Neale, MD, FACS
Professor and Chairman
Division of Plastic, Reconstructive, and Hand Surgery
University of Cincinnati College of Medicine
Chairman, Division of Plastic, Reconstructive and Hand Surgery
University Hospital Group
Cincinnati, Ohio
Chapter 64, "Groin Dissection and Regional Lymphadenectomy"

Peter C. Neligan, MB, BCh, FRCSI, FRCSC, FACS
Associate Professor and Chairman
Division of Plastic Surgery
University of Toronto
Wharton Chair in Reconstructive Plastic Surgery
The University Health Network
Toronto, Ontario, Canada
Chapter 65, "Tensor Fascia Lata for Groin Reconstruction"
Chapter 66, "Rectus Femoris for Groin Reconstruction"

David T. Netscher, MD
Associate Professor
Division of Plastic Surgery
Baylor College of Medicine
Chief, Plastic Surgery Section
Veterans Affairs Medical Center
Assistant Chief, Hand Surgery Section
Texas Children's Hospital
St. Luke's Episcopal Hospital
Houston, Texas
Chapter 83, "Excision of Ganglion Cysts"
Chapter 86, "Metacarpal Fractures"
Chapter 87, "Phalangeal Fractures"

Michael W. Neumeister, MD, FRCSC
Assistant Professor
Institute for Plastic and Reconstructive Surgery
Southern Illinois University School of Medicine
Springfield, Illinois
Chapter 78, "Extensor Tendon Repair"
Chapter 79, "Flexor Tendon Repair"

Scott D. Oates, MD
Assistant Professor
Division of Plastic and Reconstructive Surgery
University of Texas–Houston Medical School
Houston, Texas
Chapter 85, "Infections"

Lisa Otto, BS
Department of Plastic Surgery
The University of Texas M. D. Anderson Cancer Center
Houston, Texas
Chapter 56, "Breast Reconstruction with the Latissimus Dorsi Flap"

James R. Patrinely, MD, FACS
Clinical Associate Professor
Division of Plastic Surgery
Baylor College of Medicine
Department of Ophthalmology
Cullen Eye Institute
Baylor College of Medicine
Department of Head and Neck Surgery
The University of Texas M. D. Anderson Cancer Center
Houston, Texas
Chapter 19, "Blepharoplasty"
Chapter 23, "Eyelid Reconstruction"

Jason N. Pozner, MD
Fort Lauderdale, Florida
Chapter 18, "Endoscopic Forehead Lift"

Oscar M. Ramirez, MD, FACS
Clinical Assistant Professor
The Johns Hopkins University School of Medicine
University of Maryland School of Medicine
Baltimore, Maryland
Director
Esthetique International
Timonium, Maryland
Chapter 18, "Endoscopic Forehead Lift"

Gregory P. Reece, MD, FACS
Associate Professor and Associate Surgeon
Division of Plastic Surgery
The University of Texas M. D. Anderson Cancer Center

Houston, Texas
Chapter 60, "Chest Wall Reconstruction"
Chapter 68, "Rectus Abdominis Flap for Vaginal Reconstruction"
Chapter 70, "Gracilis Flap for Vaginal Reconstruction"

Geoffrey L. Robb, MD, FACS
Professor and Chairman
Department of Plastic Surgery
University of Texas M. D. Anderson Cancer Center
Houston, Texas
Chapter 35, "Microneurovascular Reconstruction for Facial Reanimation"

Bradley C. Robertson, MD, DDS
Associate Professor and Chief of Plastic, Maxillofacial, and Reconstructive Surgery
The University of Maryland
R. Adams Cowley Shock Trauma Center
Baltimore, Maryland
Chapter 50, "Orthognathic Surgery"

Rod J. Rohrich, MD, FACS
Professor and Chairman
Holder of the Crystal Charity Ball Distinguished Chair of Plastic Surgery
Department of Plastic Surgery
University of Texas Southwestern Medical Center
Dallas, Texas
Chapter 11, "Auricular Cartilage"
Chapter 12, "Septal Cartilage"

Robert C. Russell, MD, FRACS, FACS
Doctors Hospital
Heartland Plastic Surgery Center
Springfield, Illinois
Chapter 26, "Nasal Fractures: Reduction"

Eric Santamaria, MD
Clinical Fellow, Microsurgery and Extremity Reconstruction
Department of Plastic and Reconstructive Surgery
Chang Gung Memorial Hospital
College of Medicine, Chang Gung University
Taipei, Taiwan, Republic of China
Chapter 36, "Fibula Osteoseptocutaneous Flap"

Luis R. Scheker, MD
Kleinert, Kutz and Associates Hand Care Center
Louisville, Kentucky
Chapter 77, "Nail Bed Injury"

Saleh M. Shenaq, MD, FACS
Professor and Chief
Division of Plastic Surgery
Baylor College of Medicine
Houston, Texas
Chapter 37, "Iliac Crest"

Randy Sherman, MD
Professor and Chief
Division of Plastic and Reconstructive Surgery
University of Southern California School of Medicine
Los Angeles, California
Chapter 74, "Latissimus Dorsi and Gracilis Flap for Leg Reconstruction"

Kenneth C. Shestak, MD, FACS
Associate Professor of Plastic Surgery
Division of Plastic and Reconstructive Surgery
Department of Surgery
Magee-Womens Hospital
University of Pittsburgh School of Medicine
Pittsburgh, Pennsylvania
Chapter 2, "Anesthesia: Local Nerve Blocks"
Chapter 14, "Abdominoplasty"

John V. Shufflebarger, MD
The Christine M. Kleinert Institute for Hand and Microsurgery, Inc.
Louisville, Kentucky
Department of Surgery
University of Massachusetts Medical Center
Worcester, Massachusetts
Chapter 77, "Nail Bed Injury"

John W. Siebert, MD
Associate Professor of Surgery
New York University School of Medicine
New York, New York
Chapter 41, "Correction of Facial Contour in Hemifacial Atrophy Using Microvascular Free Tissue Transfer"

Sheri Slezak, MD, FACS
Plastic Surgery
The University of Maryland
Baltimore, Maryland
Chapter 52, "Augmentation Mammaplasty"

Mark Smith, MD
Junior Faculty Associate
The University of Texas M. D. Anderson Cancer Center
Houston, Texas
Chapter 63, "Surgical Treatment of Postmastectomy Lymphedema"

Rajiv Sood, MD
Associate Professor of Surgery
Section of Plastic Surgery, Hand, and Microsurgery
Indiana University School of Medicine
Chief

Section of Plastic Surgery
Wishard Memorial Hospital
Indianapolis, Indiana
Chapter 82, "Trigger Finger"

Charles N. S. Soparkar, MD, PhD
Plastic Eye Surgery Associates
Houston, Texas
Chapter 19, "Blepharoplasty"
Chapter 23, "Eyelid Reconstruction"

Scott L. Spear, MD, FACS
Georgetown University Hospital
Washington, DC
Chapter 55, "Breast Reconstruction with Implants and Tissue Expanders"

Samuel Stal, MD, FACS
Chief, Section of Plastic Surgery
Medical Director of Craniofacial Team
Texas Children's Hospital
Houston, Texas
Chapter 10, "Costal Cartilage Grafts"
Chapter 20, "Basic Techniques in Rhinoplasty"
Chapter 44, "Pharyngeal Flap"

James M. Stuzin, MD, FACS
Miami, Florida
Chapter 16, "Rhytidectomy: SMAS and SMAS-ectomy Techniques"

John F. Teichgraeber, MD, FACS
Texas Pediatric Surgical Associates
Houston, Texas
Chapter 9, "Iliac Crest and Rib Bone Grafts"

Simon Trulek, MS
Baylor College of Medicine
Houston, Texas
Chapter 62, "Posterior Thigh Flap for Pressure Sores"

James E. Vogel, MD
Assistant Professor
Division of Plastic Surgery
Department of Surgery
The Johns Hopkins University School of Medicine
Baltimore, Maryland
Chapter 21, "Hair Restoration: The Art of Hair Transplantation"

David J. Wainwright, MD, FRCSC, FACS
Associate Professor
Division of Plastic and Reconstructive Surgery
The University of Texas Health Science Center at Houston
Houston, Texas
Chapter 84, "Palmar Fasciectomy and Fasciotomy for Dupuytren's Contracture"

Anne M. Wallace, MD
Assistant Clinical Professor
Divisions of Plastic Surgery and General Surgery
University of California, San Diego
San Diego, California
Chapter 59, "Gynecomastia"

Robert L. Walton, MD, FACS
Professor
Department of Surgery
University of Chicago
Chief, Section of Plastic and Reconstructive Surgery
University of Chicago Hospitals
Chicago, Illinois
Chapter 76, "Gracilis and Rectus Abdominis Flaps for Leg and Foot Reconstruction"

Fu-Chan Wei, MD, FACS
Professor and Chairman
Department of Plastic and Reconstructive Surgery
Chang Gung Memorial Hospital
College of Medicine, Chang Gung University
Taipei, Taiwan, Republic of China
Chapter 36, "Fibula Osteoseptocutaneous Flap"

E. F. Shaw Wilgis, MD
Associate Professor of Plastic and Orthopaedic Surgery
Chief, Division of Hand Sugery
Union Memorial Hospital
Baltimore, Maryland
Chapter 88, "Carpal Fractures and Dislocations"

Peter D. Witt, MD
Associate Professor, Surgery
Chief, Pediatric Plastic Surgery
University of Kansas Medical Center
Sutherland Institute
Kansas City, Kansas
Chapter 45, "Sphincter Pharyngoplasty for Management of Velopharyngeal Dysfunction"

Eser Yuksel, MD
Division of Plastic Surgery
Baylor College of Medicine
Houston, Texas
Chapter 36, "Iliac Crest"

Jozef Zoldos, MD, DDS
Assistant Professor
Division of Plastic Surgery
University of Kentucky
Lexington, Kentucky
Chapter 51, "Axillary Dissection"

Preface

The diverse and time-honored history of operative procedures has led to a variety of techniques that are commonly used today to effectively correct defects or deformities. In my search to learn these operative plastic surgery procedures, one of my frustrations was the lack of an atlas of material that would allow the efficient assimilation of the wealth of historical surgical creativity and individual artistic impression. In an attempt to compensate for this lack of atlas material, this book was conceived. The most common operative procedures likely to be encountered by the novice plastic surgeon or the surgeon-in-training were identified, and experts were invited to describe the procedures or repairs routinely performed. In each chapter, the authors attempt to synthesize the myriad of historical data and techniques along with their own personal experience. Obviously, not all defects and their repairs can be applied to this outline. However, we have attempted to organize each chapter to a standard format that will simplify readers' familiarity with the book.

The book itself is composed of 88 chapters that are divided into two major areas. The first involves specific anatomic defects and includes the eyes, nose, lips, ears, breast, perineum, lower extremities, and hand. The second major area comprises specific disease entities or procedures, such as facial rhytidectomy, cleft lip and palate, harvesting of bone and cartilage grafts, mandibular reconstruction, facial reanimation, and Dupuytren's contracture. Because similar flaps may be indicated for multiple problems, certain flaps may be described in more than one chapter. The book is designed, however, for the reader to use each chapter individually and, consequently, to avoid the requirement of reading several chapters to learn the operative procedure. Furthermore, because each individual defect may require alterations in flap harvest and positioning, variations in technique applicable to the defect in question are specific to each chapter. The illustrations have been rendered as line art to assist with interpretation of the operative techniques.

The approach to each chapter has followed our approach to individual patients. This includes assessment of the defect, indications and contraindications for the surgery, room setup, and patient markings. Next, the operative technique section provides the reader with a step-by-step description of the procedure. It is our intention that this descriptive method will guide the surgeon in addressing the defect or deformity to be corrected. The approach to the patient in the postoperative period is also addressed, as well as the requirements for rehabilitation. Finally, the caveat section provides the reader with the most salient points to be gleaned from a chapter. It may also provide a summary of the procedure and a list of complications that may result from the procedure.

It would be remiss of me not to thank Paul Manson, Nelson Goldberg, Randy Sherman, Geoffrey Robb, Stephen Kroll, Mark Schusterman, Michael Miller, Gregory Reece, Bonnie Baldwin, David Chang, Howard Langstein, Charles Butler, and Bita Esmali, all surgeons and my mentors and associates. In addition, I would like to thank the fellows, residents, and students with whom I have worked and from whom I have learned a great deal. These interactions constantly encourage a quest for knowledge. I would further like to express my appreciation to the contributing authors, whose expertise has assisted with the completion of this book. I would like to thank the patients with whom I have had a pleasure to interact. Their trust and honesty has kept me humble and encouraged me to remain in the health

care profession. Finally, I would especially like to thank the most important people in my life, my family. Their undying support, love, and enthusiasm refresh my spirit to meet each day with a renewed level of excitement.

I trust that this book can be of some assistance in the development of the plastic surgeon's operative career. However, it should serve only as a guide to getting started and is in no way a replacement for a continuing quest for further knowledge.

Gregory R. D. Evans

Contents

CHAPTER 1

Introduction

Gregory R. D. Evans, MD

The art of plastic surgery is the restoration of form and function with the resultant improvement not only in aesthetic outcomes but also in the quality of life. The word "plastic" is derived from the Greek *plastikos* ("fit for molding"). While the term "plastique" was used by Desault in 1798, it was the publication of Zeis's *Handbuch der plastischen Chirurgie* in 1838 that popularized the term.

> The longer you look back, the further you can look forward.
>
> —Churchill

Tissue restoration has its heritage in ancient Egypt with the first well-documented manuscript written in 1600 BC on a 12-inch-wide, 25-yard-long scroll, the Ebers Papyrus. This document described multiple operations to restore missing structures of facial expression, such as the nose and ears, in an attempt to restore socially acceptable features.

Civil and penal responsibility of the physician developed during the Assyrian period with the code of Hammurabi. The threat of hand amputation was great incentive for success in the restoration of form and function. Current litigants are much less of a threat than the former physical punishment, and the "above all, do no harm" philosophy has been maintained through today's current medical practice.

The Sushruta Samhita (circa 600 BC) from ancient India described 15 operations for restoring split or mutilated ears. Records further indicate the earliest rhinoplasty and the repair of nasal defects from cheek tissue. It was against the religious principles of the Hindu priests to contaminate themselves by contact with injured or diseased flesh. Thus, reparative surgery was relegated to the members of the lower caste.

The transformation from the Bronze to the Iron Age is exemplified by Homer's *Iliad* and *Odyssey*. This coincided with the transformation of the practice of medicine from priests or members of the lower caste to more formalized training. Hippocrates (460 to 370 BC) believed that war was the only proper school for a surgeon. He discussed in the *Corpus Hippocraticum* (400 BC) the pathology and treatment of scars (burns) in an attempt to prevent deformities and mold tissue to more acceptable results.

Celsus (25 BC to AD 50) described in detail plastic surgery on the nose, lips, eyelids, and ears. He was probably the originator of the island flap, and his techniques included molding tissue by the use of sliding grafts to cover quadrilateral and triangular defects.

After the barbarian invasions, the vestiges of Greek and Roman medicine and plastic surgery remained in the Islamic schools. The Middle Ages (AD 1096 to 1438) were devoid of innovation, and the medieval church opposed surgeons. Not until the 15th century did the invention of the printing press make possible books on tissue restoration that included medical illustrations.

The 14th through 16th centuries marked a rebirth in medicine and plastic surgery. The Renaissance produced many gifted surgeons, including Guido Lanfranchi, Guy de Chauliac, and the Brancas family. However, it was left to Gaspare Tagliacozzi (1545 to 1599) to lay the cornerstone of modern plastic surgery. A professor at the University of Bologna and chief surgeon to the Grand Duke of Tuscany, he provided the