

# OFFICE-BASED COSMETIC PROCEDURES AND TECHNIQUES

IN THE LAST TWENTY YEARS, there has been an explosion of new cosmetic surgery procedures developed for a large base of office-based dermatologists, cosmetic surgeons, plastic and reconstructive surgeons, and otolaryngologists. Tricks and techniques are swapped across the globe, with practitioners in Europe, Asia, and North and South America. This is a practical, simple manual of those tricks and techniques, with input from specialists around the world. This book is aimed at practitioners who want to add new procedures to their scope of practice and learn new methods of application. A wide range of procedures, from fillers and neurotoxins to suture suspension and chemical peels, are covered here in a comparative format and are accompanied by more than two hundred color illustrations. In addition to detailing the procedures, chapters also cover anesthetic techniques and brands. This book is designed to be an easy and useful reference for the beginning practitioner or more senior physician. More than fifty internationally renowned dermatologists, plastic surgeons, facial plastic surgeons, and cosmetic surgeons have contributed to this text.

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OFFICE-BASED  
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PROCEDURES  
AND TECHNIQUES

Edited by

**Sorin Eremia**

University of California, Los Angeles



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# Preface

TOGETHER WITH the help of many of my friends and colleagues, I have attempted to provide the reader of this textbook with practical, up-to-date information on the broad range of cosmetic procedures that are generally performed in an office setting.

This textbook is focused on the common cosmetic applications of fillers; neurotoxins; laser, light, radiofrequency, and ultrasound devices; chemical peels; and microdermabrasion. Supporting chapters on anatomy, anesthesia, minimally invasive suture suspension lifts, and mesotherapy round out the text.

This is an international, multispecialty, multiauthored textbook. The fifty senior contributing authors include experts in various topics from the fields of dermatology, facial and general plastic surgery, and cosmetic surgery and medicine and hail from the United States, Canada, Europe, South America, and Asia. Because the United States lags far behind the rest of the world with respect to the variety of options available for fillers and neurotoxins, American readers can benefit greatly from such author diversity.

The sections on lasers and other energy devices for resurfacing, skin tightening, and treatment of fat and cellulite attempt to cover some of the most recent devices available, with some short sections devoted to specific individual brands. Brand names are frequently mentioned in this text, not to promote the products but to make it easy for readers to identify the products discussed.

The book is divided into five parts. Part One, “Anatomy and the Aging Process,” is limited to discussions of the anatomy of the aging face and neck and is written by Dr. Pierre Nicolau, a well-known, Paris-based general plastic surgeon trained in both France and England, with a strong interest and background in fillers. For a more detailed study of anatomy, readers are referred to any of a number of detailed textbooks on the subject. In general, face lift and blepharoplasty textbooks offer some of the best and

most detailed clinically practical information on face and neck anatomy. Needless to say, a strong understanding of anatomy is essential to performing any cosmetic procedure. Because nothing beats hands-on study of anatomy, an excellent weeklong course is offered annually at the University of California, San Diego, called the Greenway Superficial Anatomy Course.

Part Two, “Anesthesia and Sedation for Office Cosmetic Procedures,” provides detailed and practical information on local, topical, nerve block, and mild to moderate anesthesia methods that are applicable to the procedures covered in this textbook. I particularly recommend that less surgically oriented practitioners learn the art of nerve blocks. That chapter is written by Dr. Joseph Niamtu III, a highly experienced cosmetic surgeon with an oral and maxillofacial surgery background.

Part Three is called “Fillers and Neurotoxins.” The filler chapters attempt to cover, in as much practical detail as possible, the various classes of fillers currently in use, including hyaluronic acid; collagen; hydroxyapatite; polylactic acid; various permanent fillers, including silicone; and finally, fat. Understanding why and how fillers work is essential, so I strongly recommend the chapters on how structure affects function: Chapter 7, by Dr. Johannes Reinmüller, a German plastic surgeon with a strong interest in fillers, on hyaluronic acid fillers and Chapter 19, by Dr. Pierre Nicolau, on long-lasting and permanent fillers. The introductory chapter, by Drs. Eric Williams, David J. Kouba, and Ronald L. Moy, provides excellent background information and a list of various fillers available in the United States or in the Food and Drug Administration (FDA) pipeline.

Multiple sections by various authors, including Derek Jones, Hayes B. Gladstone, Michael H. Gold, C. William Hanke, Rhoda S. Narins, B. Kent Remington, and Neil S. Sadick, from the field of dermatology, cover individual



products such as the Restylane, Juvéderm, and Puragen families of nonanimal stabilized hyaluronic acid fillers; collagens; Sculptra; Radiesse; Artecoll; and silicone. American and international facial plastic and general plastic surgeons' perspectives are provided by Drs. Andrew B. Denton, Taro Kono, Devinder S. Mangat, Arturo Prado, and Constantin Stan.

Fat grafting is extensively covered by Drs. Mark Berman, Kimberly J. Butterwick, and William P. Coleman III, and the European perspective on commercial fillers versus fat is covered by Dr. Stan.

BOTOX and Dysport, the latter of which is now finally available in the United States, are the main focus of the neurotoxins section of Part Three. The Dysport chapter is written by one of the deans of French cosmetic dermatology, Dr. Bernard Rossi. Drs. Prado and Kono also provide excellent discussions of these and other neurotoxins (and fillers) available around the world in their respective chapters. A novel device for minimally invasive corrugator muscle denervation is discussed by Stanford facial plastic surgeon Dr. James Newman.

Part Four is devoted to laser, broadband light, radio-frequency, and ultrasound devices. The senior author for the chapter on treatment of vessels and vascular lesions, and for the chapter on aminolevulinic acid, is one of the foremost authorities in that field, Dr. Mitchel P. Goldman. Other well-known senior authors include Dr. Christopher B. Zachary, writing on fractional CO<sub>2</sub> lasers; Dr. Thomas Rohrer, writing on hair removal; and Dr. E. Victor Ross, writing on the treatment of acne and acne scars with energy devices. Individual devices or treatment techniques are discussed by multiple authors, including laser experts Drs. Tina S. Alster, Michael H. Gold, Gregory S. Keller, Vic A. Narurkar, Javier Ruiz-Esparza, and Neil S. Sadick.

Together with my old friend and University of California, Los Angeles (UCLA) colleague Dr. Bernard I. Raskin, and with the assistance of Drs. Edgar F. Fincher and Joseph F. Greco, we share our extensive experience in chapters on classic ablative laser resurfacing and nonablative infrared lasers. The new fractional laser systems and the latest in radiofrequency systems are also thoroughly covered.

Dr. Mat Avram, from Harvard, covers recent advances in fat and cellulite treatment devices. The two eagerly awaited ultrasonic fat reduction devices now available in Europe and Latin America, UltraShape and LipoSonix, are covered by Dr. Karyn Grossman, with assistance from Mexico City

plastic surgeon Dr. Ernesto Gadsden, principal investigator for LipoSonix.

Part Five is devoted to three topics:

1. Minimally invasive suture suspension techniques are briefly discussed. Although ContourThreads, the U.S. patented version of barbed sutures, has been pulled off the market, if new versions become available, the same principles of use would apply. APTOS sutures remain widely available in the rest of the world. I summarize my five years of experience with the larger cogged, slowly absorbable multianchor sutures (AnchorSuture), and Dr. Nicanor Isse discusses the FDA-approved intermediate-type cogged suture, Silhouette Sutures, the only cogged suture actively marketed in the United States as of June 2009.
2. A section on chemical peels and microdermabrasion is headed by a chapter authored by Dr. Suzan Obagi, who needs no introduction.
3. A section on mesotherapy comprises a chapter written by Dr. Adam M. Rotunda, the foremost American scientific authority on the subject.

I hope this brief road map for the textbook will help direct the reader to his or her area of greatest interest.

A special mention goes to my UCLA colleagues Dr. Gary Lask, Dr. Jenny Kim, Dr. Fred Beddinfield, Dr. Bernard Raskin, and Dr. Teresa Soriano, who not only helped contribute to this book but also provided great moral support for this project. Special thanks go to Dr. Ron Moy, Dr. Mitch Goldman, and Dr. Neil Sadick for their always-friendly encouragement over the years and for their support for this book as well. Special thanks also go to Ms. Sharon Sausedo for her assistance with the images for the text.

Eternal gratitude goes to my late wife, Dr. Susie Van-Holten, and our son Dylan, for their understanding of the time my academic pursuits have taken away from our family life.

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