

# Essentials

for students



AMERICAN SOCIETY OF  
PLASTIC SURGEONS

**plastic surgery**

**AMERICAN SOCIETY OF PLASTIC SURGEONS  
YOUNG PLASTIC SURGEONS STEERING COMMITTEE**

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## INTRODUCTION

This book has been written primarily for medical students, with constant attention to the thought, “Is this something a student should know when he or she finishes medical school?” It is not designed to be a comprehensive text, but rather an outline that can be read in the limited time available in a burgeoning curriculum. It is designed to be read from beginning to end. Plastic surgery had its beginning thousands of years ago, when clever surgeons in India reconstructed the nose by transferring a flap of cheek and then forehead skin. It is a modern field, stimulated by the challenging reconstructive problems of the unfortunate victims of the World Wars. The advent of the operating microscope has thrust the plastic surgeon of today into the forefront of advances in small vessel and nerve repair, culminating in the successful replantation of amputated parts as small as distal fingers. Further, these techniques have been utilized to perform the first composite tissue transplantations of both hands and partial faces. The field is broad and varied and this book covers the many areas of involvement and training of today’s plastic surgeons. The American Society of Plastic Surgeons is proud to provide complimentary copies of the Plastic Surgery *Essentials for Students* handbook to all third year medical students in the United States and Canada.

**Continually updated information about various procedures in plastic surgery and other medical information of use to medical students and other physicians can be found at the ASPS/PSF website at [www.plasticsurgery.org](http://www.plasticsurgery.org) and the Plastic Surgery Education Network at [www.psenetwork.org](http://www.psenetwork.org). The information in this book has also been converted to an app in the Android Market and the Apple App store under the name Plastic Surgery Essentials for Students.**

## TABLE OF CONTENTS

Preface: A Career in Plastic Surgery.....	i
Chapter 1: Wounds.....	1
Chapter 2: Grafts and Flaps .....	9
Chapter 3: Skin and Subcutaneous Lesions.....	16
Chapter 4: Head and Neck.....	26
Chapter 5: Breast, Trunk and External Genitalia.....	43
Chapter 6: Upper Extremity .....	55
Chapter 7: Lower Extremity .....	68
Chapter 8: Thermal Injuries.....	75
Chapter 9: Aesthetic Surgery.....	92
Chapter 10: Body Contouring .....	99

## **PREFACE**

### **A CAREER IN PLASTIC SURGERY**

Originally derived from the Greek “plastikos” meaning to mold and reshape, plastic surgery is a specialty which adapts surgical principles and thought processes to the unique needs of each individual patient by remolding, reshaping and manipulating bone, cartilage and all soft tissues. Not concerned with a given organ system, region of the body, or age group, it is best described as a specialty devoted to the solution of difficult wound healing and surgical problems, having as its ultimate goal the restoration or creation of the best function, form and structure of the body with a superior aesthetic appearance ultimately enhancing a patient's quality of life.

Plastic surgeons emphasize the importance of treating the patient as a whole. Whether reconstructing patients with injuries, disfigurements or scarring, or performing cosmetic procedures to recontour facial and body features not pleasing to the patient, plastic surgeons are concerned with the effect of the outcome on the entire patient. Not necessarily concerned with a set and limited repertoire of surgical procedures, plastic surgery is more a perspective and set of principles with the ultimate goal of solving problems and thus, exposure to a wide variety of surgical problems and disciplines enhance the ability of the plastic surgeon to care for all patients.

The challenge of plastic surgery then is the combination of the surgeon's judgment and problem solving abilities with surgical technique at any given moment. Because of this approach, the plastic surgeon often acts as a “last resort” surgical consultant to surgeons and physicians in the treatment of many wound problems and is often called “the surgeon's surgeon.”

Plastic surgery not only restores body function, but helps to renew or improve a patient's body image and sense of self-esteem. Along with psychiatrists, plastic surgeons are especially equipped to handle the patient's problem of body image and to help the patient deal with either real or perceived problems.

Consistent with these far reaching goals, the scope of the operations performed by plastic surgeons is broad. As outlined by The American Board of Plastic Surgery,” the specialty of plastic surgery deals with the repair, replacement, and reconstruction of physical defects of form or function involving the skin, musculoskeletal system, craniomaxillofacial structures, hand, extremities, breast and trunk, and external genitalia. It uses aesthetic surgical principles not only to improve undesirable qualities of normal structures, but in all reconstructive procedures as well. Among the problems managed by plastic surgeons are congenital anomalies of the head and neck. Clefts of the lip and palate are the most common, but many other head and neck congenital deformities exist. In addition, the plastic surgeon treats injuries to the face, including fractures of the bone of the jaw and face.

Craniofacial surgery is a discipline developed to reposition and reshape the bones of the face and skull through inconspicuous incisions. Severe deformities of the cranium and face, which previously were uncorrectable or corrected with great difficulty, can now be better reconstructed

employing these new techniques. Such deformities may result from a tumor resection, congenital defect, previous surgery, or previous injury. Treatment of tumors of the head and neck and reconstruction of these regions after the removal of these tumors is also within the scope of plastic surgery.

Another area of expertise for the plastic surgeon is hand surgery, including the management of acute hand injuries, the correction of hand deformities and reconstruction of the hand. Microvascular surgery, a technique that allows the surgeon to connect blood vessels of one millimeter or less in diameter, is a necessary skill in hand surgery for re-implanting amputated parts or in moving large pieces of tissue from one part of the body to another.

Defects of the body surface resulting from burns or from injuries, previous surgical treatment, or congenital deformities may also be treated by the plastic surgeon. One of the most common of such procedures is reconstruction of the breast following mastectomy. Breasts may also be reduced in size, increased in size, or changed in shape to improve the final aesthetic appearance. Operations of this type are sometimes cosmetic in purpose, but in cases where the patient has a significant asymmetry or surgical defect, the procedure serves important therapeutic purposes.

The most highly visible area of plastic surgery is aesthetic or cosmetic surgery. Cosmetic surgery includes facelifts, breast enlargements and enhancement, nasal surgery, body sculpting, and other similar operations to enhance one's appearance.

The results of the plastic surgeon's expertise and ability are highly visible, leading to a high degree of professional and personal satisfaction. Plastic surgery is an innovative specialty .

Advances such as transplantation, microvascular surgery, fat grafting, and various medical devices have been spearheaded and advanced by plastic surgeons. The discipline requires meticulous attention to detail, sound judgment and technical expertise in performing the intricate and complex procedures associated with plastic surgery. In addition, plastic surgeons must possess a flexible approach that will enable them to work on a daily basis with a tremendous variety of surgical problems. Most importantly, the plastic surgeon must have creativity, curiosity, insight, and an understanding of human psychology.

Because of the breadth of the specialty and its ever changing content, opportunities for individuals with varied backgrounds is particularly important. Individuals with undergraduate majors ranging from art to engineering find their skills useful in various areas of plastic surgery. This need for a broad education continues into medical school.

Students should use elective time to acquire the broadest base of medical knowledge. Experience in surgery and psychiatry are of particular value. Clinical rotations in surgical specialties, such as neurosurgery, orthopaedics, otolaryngology, pediatric surgery, transplantation, or urology may prove more valuable than general surgery since most of the early residency experience will be in general surgery.

While there are several approved types of prerequisite surgical education, most candidates for the traditional plastic surgery residency programs have had from three to five years of training in general surgery after graduating from medical school. Applicants may also apply for a plastic

surgery residency after completing a residency in otolaryngology, orthopaedics, neurosurgery, or urology. Plastic surgery residency in the traditional format is generally for three years. In the newer Integrated Residency programs, applicants apply to start immediately following graduation from medical school and will have either six years of training under the leadership of the program director of plastic surgery. Following residency training, some plastic surgeons spend an additional six to twelve months of fellowship training in a particular area of plastic surgery such as craniofacial surgery, aesthetic surgery, hand surgery, or microsurgery.

The American Board of Plastic Surgery (ABPS) issues a Booklet of Information each year which outlines the training and requirements for eligibility to take the examinations offered by the board. You may request information from ABPS at:

**The American Board of Plastic Surgery, Inc.**  
**Seven Penn Center, Suite 400**  
**1635 Market Street**  
**Philadelphia, PA 19103-2204**  
**Phone: 215-587-9322**  
**Fax: 215-587-9622**  
**Email: [info@abplsurg.org](mailto:info@abplsurg.org)**  
**Online: [www.abplsurg.org](http://www.abplsurg.org)**

Traditionally, plastic surgeons have established their practices in large urban settings. However, there is an increasing need for more plastic surgeons in the smaller communities and rural areas of this country - many metropolitan areas with populations of 65,000 to 268,000 have no plastic surgeons, leaving a large number of areas needing plastic surgery expertise. There are approximately 6,000 board certified plastic surgeons in the United States; many of those currently certified by The American Board of Plastic Surgery received certification in the past ten years. Despite this recent rapid growth, there are opportunities for plastic surgeons in community and academic practice.

Plastic surgery is an old specialty with references that date back thousands of years. It has survived and flourished because it is a changing specialty built by imaginative, creative and innovative surgeons with a broad background and education.

The limit of the specialty is bound only by the imagination and expertise of those in its practice. The opportunities for the future are open to those who wish to be challenged.

## **ADDITIONAL RESOURCES ON THE SPECIALTY OF PLASTIC SURGERY**

- I. American Society of Plastic Surgeons  
444 East Algonquin Road  
Arlington Heights, IL 60005-4664  
Phone: 847-228-9900  
Fax: 847-228-9131  
[www.plasticsurgery.org](http://www.plasticsurgery.org)  
[www.facebook.com/PlasticSurgeryASPS](https://www.facebook.com/PlasticSurgeryASPS)
  
- II. Plastic Surgery Research Council  
Suite 304  
45 Lyme Road  
Hanover, NH 03755  
Phone: 603-643-2325  
[www.ps-rc.org](http://www.ps-rc.org)
  
- III. Residency Review Committee for Plastic Surgery  
515 North State Street, Suite 2000  
Chicago, IL 60610  
Phone: 312-464-5586  
Fax: 312-464-4098

