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A GLIMPSE AT THE HISTORY of plastic surgery



The current interest in plastic surgery has focused largely on aesthetic procedures. There have been many advances in techniques and technology, as well as a broadening acceptance of aesthetic surgery as an option for "ordinary" people rather than just the rich and famous; considering this, it may seem that plastic surgery is a fairly "young" specialty.

It may be surprising to learn that although the term "plastic surgery" wasn't coined until 1818 by German surgeon Von Graefe in his book, *Rhinoplastik*, the origins of the specialty go back more than 5,000 years. The root of the word "plastic" is "plastikos," a Greek word meaning "to mold" or "give form."

Today, the specialty of plastic surgery is comprised of both reconstructive surgery and aesthetic, or cosmetic, surgery. Reconstructive surgery attempts to restore function and form to parts of the body that are damaged or abnormal — either from injury, disease or congenital defects. The goal of aesthetic surgery, on the other hand, is to improve and enhance essentially normal features to improve patients' overall sense of well-being.

As you might imagine, plastic surgery initially focused on reconstructive rather than aesthetic operations. In his brief but comprehensive 5,000-year review of the history of plastic surgery, History of Rhinoplasty — An Epitome of Plastic Surgery, plastic surgeon Lewis Obi, MD, of Jacksonville, Florida, states, "Egyptian reconstructive efforts are well documented in the Edwin Smith Papyrus, the origins of which are dated approximately 3000 BC. These documents describe surgical management of facial wounds including jaw and nasal fractures. The next significant text was that of Sushruta of India in

approximately 600 BC when his encyclopedic Samhita detailed many complex procedures, including operations to restore amputated noses. Sir Zachary Cope, in his *Short History of Plastic Surgery*, 1964, observed, "The new nose was formed from flaps of skin taken either from the adjacent cheeks or from the forehead." This became known as the "Hindu" or "Indian" method of nasal reconstruction."

Although early surgical interventions were reconstructive in nature, aesthetic enhancements were undertaken by various nonsurgical means. The ancient Egyptians were said to use Fenugreek to try to increase breast size, and mummies of ancient Egyptian courtesans show that their breasts were tattooed.

Little information has been found relating to plastic surgery during the Greco-Roman period, and although Hippocrates and Aristole discuss the treatment of nasal fractures, they do not mention skin-shifting or molding techniques. Roman Aulus Cornelius Celsus in the 1st century AD does mention the Indian technique of nasal reconstruction in his book. *De Re Medica*.

Medical science in general experienced a period of dormancy during the Middle Ages, when a decree by Pope Innocent III in 1215 AD, stated that no priest, deacon, or sub deacon should perform any surgical procedures which involved bloodshed, as it was incompatible with the divine mission. However, with the Islamic conversion of India in the 10th century, ancient Indian techniques made their way through the Middle East into Europe.

The Brancas, father and son, secretly developed the arm-flap technique of nasal reconstruction, which was finally perfected and published by Renaissance surgeon Gaspar Tagliacozzi in Bologna. "What makes Tagliacozzi's book so pivotal," says the historian, Dr. Obi, "is that his treatise of 298 pages including 47 pages of illustrations is the first book dedicated entirely to plastic surgery. Another Renaissance surgeon, Parisian Ambroise Pare, briefly mentions Tagliacozzi's rhinoplasty in his writings."

While various procedures and publications relating to plastic surgery continued to appear sporadically during the ensuing generations, it was not until the development of asepsis by Pasteur and Lister and anesthesia by Crawford Long and Horace Wells that significant advances in plastic surgery occurred. Despite reconstructive surgery's dominance of the specialty, there were also continuous attempts at various means of aesthetic enhancement. German surgeon Robert Gersuny tried to enlarge breasts in 1889 by injecting them with paraffin. The results were disastrous. The first recorded surgical attempt at breast augmentation occurred in 1895 when a doctor attempted to transplant a lipoma from the back of an actress to her breasts.

Yet, it was the advent of modern warfare, with weaponry far more destructive than the world had previously seen, that placed a tremendous demand on the evolving specialty of plastic surgery and helped hone the creative mindset of the modern plastic surgeon.

According to Dr. Obi, "At the onset of World War I in 1914, only a handful of surgeons were performing any significant amount of reconstructive surgery. Among these, Vilray Blair and John Staige Davis pioneered work in this country, whereas Sir Harold Gillies and Archibald McIndoe were the English pioneers of plastic surgery. With better anesthesia and improved management of infection, significant advances in plastic surgery occurred during and after World War I." The American Society of Plastic and Reconstructive Surgeons was established in 1931, and the American Board of Plastic Surgery in 1941; yet, as Obi states, "at the start of World War II there were

only four dedicated plastic surgeons in Britain and approximately 60 in the United States."

Not only was there a relatively small number of plastic surgeons, the advance in weaponry produced injuries so numerous and devastating that traditional doctors were at a loss to treat them. Plastic surgeons, combining traditional medical and surgical techniques with creative problem solving, set about repairing massive injuries that had seemed hopeless. Although their methods were often unorthodox, they achieved positive, often amazing results. When most people hear the word creativity associated with plastic surgery, they think of the artistry involved in fashioning an aesthetically pleasing result. While this form of creativity is essential to the specialty, equally as important, and perhaps an even more unique element of the specialty, is the creative thought process involved. It is plastic surgery's focus on and methods of problem solving that are arguably its most defining feature.

The challenges created by modern weaponry's mutilations certainly accelerated this creative process. Traditional medicine has tried and true methods. When an appendix must be removed, the surgeon follows a rather standard "blueprint" in carrying out the procedure. Many of the injuries encountered during World War I and World War II called for new methods, and techniques had to be developed very quickly. Of course, medical science had evolved far beyond what it was during previous wars. Plastic surgeons weren't necessarily inventing new science, but they certainly were innovating new methods of problem solving. Calling upon their knowledge of medicine and the full spectrum of surgical techniques, they found new and creative solutions to the most difficult problems in restoring function, and secondarily form, to severely damaged bodies and faces.

Since World War II, plastic surgery has been on a continual ascendancy. Dr. Obi recounts in his history, "The first organ transplant was performed in 1954 by plastic surgeon Joseph Murray who later received the Nobel Prize for his great contribution. The introduction of silicone breast implants by Cronin and Gerow in 1962 propelled the field of cosmetic surgery during a decade of increasing social and aesthetic demands. The introduction of microsurgery by Harry Buncke in the 1960s led to many new organ and tissue transplantation techniques sensationalized by the John

Travolta/ Nicholas Cage movie Face/Off, and already a face transplant has been performed successfully by French plastic surgeons."

While the skills of plastic surgeons historically were honed through the performance of complex reconstructive procedures, some surgeons were drawn to the growing field of aesthetic surgery. At first, aesthetic surgery was not considered a "worthy" undertaking for a trained and reputable surgeon, and it was performed largely behind closed doors. Training in aesthetic surgery was obtained primarily through private arrangements to view operations performed by leading surgeons of the day. It wasn't until 1967 that a small group of board-certified plastic surgeons openly professing an interest and dedication to the advancement of aesthetic surgery established their own professional organization, later renamed the American Society for Aesthetic Plastic Surgery (ASAPS). Although at first regarded as a "renegade" society by the rest of organized plastic surgery, ASAPS eventually gained a strong following and has emerged today as the leading organization for the continuing education of plastic surgeons in all aspects of aesthetic surgery.

Parallel to the history of aesthetic surgery's rise to prominence within the specialty of plastic surgery is the evolution of society's changing attitudes toward aesthetic surgery. As advancements in technique have improved surgical results, and as more plastic surgeons have become highly trained in cosmetic procedures, so has society's recognition of the potential benefits of cosmetic plastic surgery deepened and broadened.

"Cosmetic surgery is no longer reserved for the rich and famous," says Fanny dela Cruz, MD, of West Bloomfield, Michigan. "It is not just for the Park Avenue crowd. It's for everybody in the mainstream. More and more people are going under the scalpel to enhance their looks, be it reshaping the nose, enlarging the breasts, removing fat bulges under the eyes, or tightening the skin. What was once considered 'vanity surgery' for the privileged has become common and accepted among the middle class of America."

Plastic surgeons today continue to receive extensive training in reconstructive procedures as part of their accredited plastic surgery residency programs, and this training provides an excellent foundation for their work in cosmetic surgery. By the time they have completed the

minimum of five years of surgical training (which they begin following four years of medical school), they have had extensive clinical experience in the full range of plastic surgery operations. This in-depth training and experience prepares them to provide patients with safe, competent, and high-quality plastic surgical care — whether for reconstructive or cosmetic purposes. Some plastic surgeons choose to specialize in cosmetic surgery, and for the most part these physicians have become members of the American Society for Aesthetic Plastic Surgery. The primary mission of ASAPS is ongoing education in the latest procedures and techniques in this rapidly developing field.

How the subspecialty of aesthetic plastic surgery will evolve in the future remains to be seen. Technology will certainly continue to play an increasingly important role, giving plastic surgeons new and less invasive methods for correcting many kinds of appearance problems. Further discoveries related to aging processes at the cellular level are likely to yield improved therapies for skin rejuvenation. Advances in genetics, stem cell research, and other scientific fields may ultimately teach us how to retard the aging process and stimulate physical regeneration, making many types of surgery obsolete.

Such predictions, for now, remain purely speculative. In the meantime, state-of-the-art aesthetic surgery, performed by qualified, board-certified plastic surgeons, is improving the lives of millions of Americans every year. Looking at how far we've come since the early days of plastic surgery, the results achieved by these modern-day procedures truly can be considered miraculous.

CHOOSING THE SURGEON who is right for you



Information on aesthetic (cosmetic) plastic surgery is readily available from many sources — but not all of these sources are credible, nor is all the available information accurate. Likewise, prospective cosmetic surgery patients have many choices when it comes to selecting a surgeon. Not all physicians who perform cosmetic surgery today have equivalent training and certification. In fact, the differences are significant and can have potentially devastating consequences for patient safety.

"The most important thing for any prospective cosmetic surgery patient to remember is that these operations have an excellent record of safety when performed by a qualified surgeon; but in the wrong hands, there is no question that the risks of cosmetic surgery increase," comments Laurence R. Berkowitz, MD, of Campbell, California.

"Many people approach aesthetic surgery as if they are having a salon or spa treatment," says Zachary E. Gerut, MD, Hewlett, New York. "Patients must be aware that in addition to the wonderful benefits of aesthetic surgery, there are risks involved."

Selecting a qualified surgeon does not constitute a guarantee of risk-free surgery or a perfect result. Complications or less than optimal outcomes can occur even when a procedure is performed by a well-trained surgeon exercising impeccable surgical judgment. That's because an individual patient's response to surgery and anesthesia is not totally predictable. Nevertheless, a trained and board-certified plastic surgeon has the background and experience to potentially minimize the risks associated with surgical procedures and, importantly, to competently handle complications that might occur.

"When it comes to consumers of cosmetic surgery, it truly is a situation of 'buyer beware," says Guy Stofman, MD, of Pittsburgh, Pennsylvania. "People need to understand that all these techniques — from simple, light chemical peels to the most complex surgical procedures — have the potential for complications. Untrained, inexperienced practitioners can cause serious harm to patients. That's why people need to do their 'homework' and find out about the training, certification and experience of any doctor they may choose to perform their cosmetic surgery."

Wearing your seat belt when you ride in a car can reduce your risk of injury; so can obeying the speed limit, driving defensively, and keeping your vehicle well maintained. As obvious as these precautions are, it is surprising how many people do not follow them. Of course, they are not the only ones to have accidents. There are always uncontrollable variables.

While there are factors in aesthetic plastic surgery that you cannot control, there are measures you can take that will decidedly increase your chances for a successful and satisfying outcome. Perhaps the most important of these is choosing the right surgeon.

THE SHOCKING TRUTH

It is surprising that with the seemingly constant media blitz about the astounding increase in the number of people having cosmetic surgery, one disturbing fact is seldom discussed: unqualified doctors are legally allowed to perform these procedures, and they often do so in inadequate, unaccredited facilities.

These are life-threatening realities that too few people understand. The law in most states allows virtually any licensed medical doctor, including those whose training in plastic surgery may consist solely of a weekend seminar or less, to adopt the title "cosmetic surgeon" or "plastic surgeon" and to perform difficult surgical procedures without certification or peer-review of credentials. These so-called cosmetic surgeons are often unprepared to handle emergencies that may arise in the course of a surgical procedure, or complications that can occur in the postsurgical period. They do not have hospital privileges to perform plastic surgery, and so they carry out their operations in unaccredited facilities that may be lacking the necessary equipment and personnel to help ensure safety.

Why have so many untrained and unqualified doctors assumed the title of "cosmetic surgeon" or "plastic surgeon" and undertaken to build practices in cosmetic surgery? The reasons are primarily economic. Changes in our health care system in recent years have drastically reduced insurance reimbursements for physicians providing a wide range of medical and surgical services. Some of these physicians are attracted to cosmetic surgery because they can set their own fees for cosmetic procedures and are paid directly by the patient.

So, even though their formal residency training, certification (if any), and experience are within another specialty, they have decided to become "self-designated" plastic or cosmetic surgeons. They may advertise themselves by these self-designated titles, and potential patients often don't realize that the "surgeon" they have selected is not a board-certified plastic surgeon, perhaps not even a surgeon at all, and has no specialized training in the procedures advertised.

"I like to draw an analogy to archery," says Rafael C. Cabrera, MD, of Boca Raton, Florida. "One can spend so much time researching all the arrows, how many feathers they have, how straight they are, and how long they are,

but the most important part of hitting the bull's eye is who is holding the bow. Probably nothing is more important than choosing the right surgeon. I mean not only a qualified, board-certified plastic surgeon, but also somebody you have confidence in and who will address your needs and concerns."

People often assume that the government regulates the medical profession far more than it actually does. Federal laws do not regulate medical specialties or differentiate between physicians' qualifications. Hence, there are no federal regulations restricting which doctors can perform plastic surgery. Most states have laws governing hospitals but not doctors' private offices. It's a stunning revelation that thousands of so-called cosmetic or plastic surgeons are doctors from various medical specialties who are not trained or certified in plastic surgery — in fact, they may or may not have undergone any type of accredited surgical training. Many have nothing approaching the in-depth training and experience obtained through accredited residency training in plastic surgery, a requirement for every plastic surgeon certified by the American Board of Plastic Surgery (ABPS).

"Unfortunately, many patients are not armed with all the information they need to protect themselves," says James A. Matas, MD, of Orlando, Florida. "They need to know the right questions to ask and where to get the answers. It's usually not enough to select a doctor on the basis of a recommendation alone. You also need to really know what kind of residency training he or she has, what board certification, what hospital privileges, whether the facility in which he or she operates is accredited, and so on. I can count on one hand the number of times I've been asked those important questions."

"Referrals to a surgeon can come from a person's personal or primary care doctor, and from friends, family, and other patients," says Barbara K. Siwy, MD, of Carmel, Indiana, "but patient referrals are most useful when they come from someone who has had the same type of surgery you are considering. And, of course, you must still be diligent in making further inquiries about the doctor's training, certification and experience."

Well-meaning friends, relatives, and even other doctors who recommend a particular surgeon may actually be unaware of the details of the surgeon's education and credentials to perform cosmetic surgery. Likewise, finding a plastic surgeon through advertisements or Internet directories alone is not the best approach. While these resources may provide you with names of physicians in your area, some of whom may be qualified plastic surgeons, you always need to take the next step in researching the training, certification and experience of your doctor — and you should do so, as much as possible, prior to making an appointment for a consultation. Such research may be time consuming, but it is effort well spent.

No one should ever "shop" for a surgeon only on the basis of the lowest price. Taking a purely economic approach to selecting a surgeon ignores the seriousness of this important decision.

"Many times people spend more time and energy getting quotes, recommendations, or opinions about an appliance they want to buy than they do when choosing a plastic surgeon with whom they will have, in many cases, a life-changing surgical procedure," says Dr. Siwy.

While in recent years, more details about plastic surgery credentials have surfaced in the media, there still is a general lack of information as well as a great deal of inaccurate material in the popular press. Reporters will often conduct interviews with physicians, portraying them as plastic surgeons and even naming them as such, without checking to be certain of their training and certification. In addition, unqualified physicians seeking to build cosmetic practices may advertise in the media, sometimes providing consumers with misleading or erroneous information. One of the most blatant is the claim of "board certification."

Savvy consumers know that board certification is an important indicator of a physician's accredited training in a specific medical or surgical specialty. What they may not know, however, is that in addition to the 24 certifying boards recognized by the American Board of Medical Specialties (ABMS), there also are a host of other unrecognized, or "self-designated," boards. Self-designated boards have been created by private individuals or organizations, and there is no affiliation with the American Board of Medical Specialties; as a consequence, certification by one of these boards may signify little and guarantee nothing.

All of this subterfuge can lead the prospective patient into some very dangerous territory. There are, however,

factual guideposts for finding a qualified surgeon that can point you in the right direction from the start.

AMERICAN BOARD OF PLASTIC SURGERY CERTIFICATION

In contrast to the aforementioned self-designated boards, the American Board of Plastic Surgery (ABPS) is recognized by the American Board of Medical Specialties, which serves the public interest by overseeing physician certification in the United States.

Plastic surgeons certified by the ABPS have graduated from an accredited medical school and have completed at least five years of additional surgical training including an accredited plastic surgery residency program. They must satisfy certain requirements for clinical practice prior to applying for, and ultimately completing, their written and oral Board examinations.

ABPS-certified surgeons must also adhere to the Board's ethical and professional standards, including an absence of disciplinary actions by hospitals, licensing agencies, or financing programs. The Board also requires participation in peer review; participation in clinical self-assessment; operation of a safe, patient-centered practice that meets criteria for quality; and participation in measurement of clinical performance and patient care results, including patient satisfaction.

The ABPS is the only board recognized by the American Board of Medical Specialties to certify physicians in the specialty of plastic surgery. There are, however, other recognized boards that certify doctors in dermatology, ophthalmology and otolaryngology, and these specific specialty certifications do qualify doctors to perform some limited types of aesthetic procedures related to specific areas or structures of the face and body.

Some otolaryngologists (ENTs) pursue certification by the American Board of Facial Plastic and Reconstructive Surgery, which although not among the 24 ABMS boards, is recognized in some states as equivalent. In addition, the ABMS recognizes the subspecialty certification of Plastic Surgery Within the Head and Neck for diplomates of both the American Board of Plastic Surgery and the American Board of Otolaryngology.

Surgeons who are certified by the American Board of Plastic Surgery are the only physicians whose formal training and certification is applicable to plastic surgery procedures of the face and the entire body. Although not a guarantee of safety or results, this comprehensive training provides a significant indicator of competence.

HOSPITAL PRIVILEGES

Beyond board certification, doctors must be granted privileges if they wish to operate in a hospital. These privileges are granted only to qualified doctors who have passed muster with the hospitals credentialing committee, which is composed of other doctors who conduct extensive background checks of physicians applying for privileges. Once admitted to the staff of an accredited hospital, physicians continue to undergo peer review, and if they are ever deemed to be delivering substandard care, they can lose their privileges.

"Make sure that the surgeon you select for your plastic surgery has privileges to perform the procedure you want in a hospital, even if you're going to have it done in an office-based facility," says Leo R. McCafferty, MD, of Pittsburgh, Pennsylvania. "If the physician does not have such privileges, this should send up an immediate red flag."

FACILITY ACCREDITATION

Most cosmetic surgical procedures can be safely performed outside the hospital in an accredited ambulatory surgery facility that may be a freestanding surgicenter or an office-based facility. The keyword when it comes to outpatient plastic surgery is "accreditation."

Most people don't realize, however, that the majority of office-based surgical facilities are not accredited. Neither do they meet other acceptable safety standards such as state licensure or Medicare certification. As mentioned earlier, office-based facilities are often the only place where an untrained and unqualified doctor can perform cosmetic surgery without peer review.

"If you are going to have a procedure done in a surgicenter or a doctor's surgical suite," says Dr. McCafferty, "make sure that it's licensed by the state, certified by Medicare and/or accredited by one of the recognized national organizations. This is the best quality assurance that you can have."

Qualified plastic surgeons always perform major surgery in a facility meeting at least one of these important safety criteria — whether it's a hospital, a freestanding

surgicenter or an office-based surgical suite. For more information on how you can be sure the facility in which you plan to have your surgery has met these high standards, read our chapter on The Surgical Facility.

ASPS AND ASAPS MEMBERSHIP

Board certification can be confusing, and patients often may find it daunting to investigate a doctor's hospital credentials or facility accreditation. Fortunately, there is yet another perhaps more direct way to determine whether your surgeon is a board-certified plastic surgeon operating in an accredited facility: find out if the surgeon is a member of the American Society of Plastic Surgeons (ASPS) and or the American Society for Aesthetic Plastic Surgery (ASAPS).

"Just because someone is a good marketer and has good ads, doesn't mean he or she is a good surgeon, or even a qualified surgeon," says Christopher Morea, MD, of Raleigh, North Carolina. "Patients need to be made aware of the stark difference that can exist between those calling themselves 'cosmetic surgeons,' which can be virtually any M.D., and those who are board-certified plastic surgeons and members of the American Society of Plastic Surgeons and the American Society for Aesthetic Plastic Surgery — and therefore among the most highly qualified of all medical professionals."

ASPS and ASAPS are both membership organizations—they are not certifying boards. However, they do have requirements ensuring that all of their members are certified by the American Board of Plastic Surgery (or certified in plastic surgery by the Royal College of Physicians and Surgeons of Canada) and perform all but minor procedures in an accredited, state-licensed or Medicare-certified surgical facility. In addition, members of the American Society for Aesthetic Plastic Surgery have met additional requirements for clinical experience in cosmetic surgery.

It is easy to find out if a particular doctor is a member of either one of these organizations by visiting their websites: www.surgery.org (ASAPS) and www.plasticsurgery.org (ASPS).

ASK QUESTIONS

Deciding to have aesthetic plastic surgery is a big step and one that requires your utmost attention and serious consideration. Once you choose a qualified plastic surgeon with whom you feel comfortable, your safety will be in his or her hands. Before then, the potential for a successful and satisfying surgical outcome rests squarely on your shoulders.

Do not accept claims of expertise or be impressed by important-sounding credentials without finding out the facts. Don't be embarrassed or afraid to ask about the surgeon's training, board certification, hospital privileges, and experience. Verify membership in the American Society of Plastic Surgeons and the American Society for Aesthetic Plastic Surgery. Find out where your procedure will be performed and ask about accreditation, statelicensure or Medicare certification. Your surgeon should always be willing to discuss with you what type of anesthesia will be used and the qualifications of whoever will administer it — either a board-certified/board-eligible anesthesiologist or a certified registered nurse anesthetist (CRNA).

"You should feel comfortable with the surgeon you select," says Linda Leffel, MD, of Bend, Oregon. "Openly discuss any concerns you have at the consultation. Research your surgeon's training, credentials, and experience. When you select an ABPS-certified surgeon who is a member of ASPS and ASAPS, you'll feel assured that your surgeon is well trained and up to date with the advances in cosmetic surgery."

Throughout this book, you will be reminded that every person's sense of aesthetics is different. When selecting a surgeon, you need to be as certain as possible that he or she understands your aesthetic goals and is willing to try and meet your realistic expectations. You may achieve this level of comfort with your surgeon through simply discussing what bothers you about your appearance and his or her suggested solutions. Or you may have the opportunity to further evaluate your surgeon's aesthetic judgment by looking at patient photographs that are typical examples of his or her work, or through other means such as computer imaging used by some surgeons to help patients visualize the possible results of surgery.

People from all racial and ethnic backgrounds elect to undergo plastic surgery. In most cases, their goal is to improve specific features while preserving their ethnic identity. These special considerations require selecting a surgeon who has the appropriate skill, experience, and aesthetic judgment as well as knowledge and sensitivity regarding differences in cultural ideals of attractiveness.

Many potential patients arrange consultations with more than one surgeon to compare surgical approaches, comfort of communication, and fees. Don't be surprised to find that various plastic surgeons may recommend different approaches to what bothers you about your appearance. Often there are multiple techniques that can be applied to the same problem, and surgeons may have a preferred method based on what works best in their hands. In such cases, there may be no single "right" approach. Although being presented with too many options can sometimes be confusing, ultimately you must sort through the information that has been presented to you and choose a surgeon based an evaluation of training, experience and results, as well as your feeling of confidence in his or her judgment.

"Patients need to take responsibility — one of the most important choices they make is choosing a doctor. You may consult with a surgeon who likes to do a procedure only one way, and you may decide his or her approach is not appropriate for you at that time," says Dr. Siwy. "Personal feelings are extremely important. A patient and doctor must be able to 'connect' and communicate. Look for a surgeon who has the three 'As' — ability, affability, and availability. You want someone who listens to you and addresses your goals and concerns."

There are many factors for you to consider as a potential cosmetic surgery patient. You wouldn't get in your car without educating yourself about the rules of the road and driving safety. You buckle your seat belt. Don't let someone operate on you without doing your homework. Learn the rules of the road as they apply to choosing the right surgeon, and the odds are that you'll have a safe and pleasant journey.

THE CONSULTATION



Once you've identified those surgeons who are certified by the American Board of Plastic Surgery and are members of the American Society for Aesthetic Plastic Surgery or the American Society of Plastic Surgeons, you'll want to begin the next phase of your selection process, which is finding the surgeon who you feel can best help achieve your personal goals for surgery.

Two plastic surgeons can have roughly the same training and experience, even use the same techniques, yet achieve very different results. That's because each surgeon's clinical judgment and unique personal aesthetics greatly influence the outcomes they achieve for their patients. These personal qualities that each surgeon brings to his or her work aren't credentialed and can't be evaluated on paper.

"In my view, a plastic surgeon should approach each case by trying to do the simplest thing in the best way," says Archibald S. Miller, MD, of Tulsa, Oklahoma. "Whatever I want to achieve for the patient, I prefer to use tried-and-true techniques, modifying them a little to provide the best result in any individual situation."

Mutaz Habal, MD, of Tampa, Florida, adds, "I use techniques that are reliable and have the least possible downsides. I do not correct one problem by producing another."

Once you have well in mind your goals and expectations for surgery, you are ready to make an appointment with one or more qualified plastic surgeons.

Prospective patients frequently have done a significant amount of research on their own about a particular procedure, often using resources on the Internet, and come to their consultation armed with a fairly comprehensive set of facts, figures and questions. Gathering such information can be very helpful to the patient education process. But even if you feel certain about the type of procedure, or technique, you want, it's best to approach your consultation with an open mind. After all, you are consulting with a plastic surgeon in order to benefit from his or her years of training and experience. Only by letting the surgeon analyze your situation and give you his or her opinion, can you evaluate how much confidence you have in that individual and whether he or she understands your objectives.

It also may be that the procedure you think you want is not the best one to solve your particular problem. For example, patients often assume that they need upper eyelid surgery to treat a "heavy" looking upper lid. In fact, many such patients may benefit more from a brow lift. Likewise, some patients may assume that a nonsurgical procedure such as Botox or Restylane will give them the rejuvenated appearance they desire, when what they really need is a surgical procedure such as a face lift.

A qualified plastic surgeon can help you sort through the various options available to address the particular appearance problems that bother you. In many cases, there may be more than one alternative. It's important for you to give your surgeon an opportunity to explain these options to you and for the two of you to have a dialog that clearly establishes both what you would like to achieve and what is, or is not, possible in your particular case.

As much as your surgeon would like to fulfill every desire that you have for your improved appearance, there are always limitations; these may be a result of your particular anatomy, medical conditions you have that make certain techniques unadvisable, or expectations you have that cosmetic surgery simply cannot address. An important part of your plastic surgery consultation is the discussion that you and your surgeon will have about what you can reasonably expect as a result of plastic surgery. Your surgeon should be open and honest about the benefits, risks, and limitations of any procedures he or she recommends for you.

"In general, plastic surgeons should always remain humble," comments Laurence R. Berkowitz, MD, of Campbell, California. "Plastic surgery can accomplish a lot, but there are many things it cannot accomplish. Sometimes the technology is just not there yet. As plastic surgeons, we are public servants and are here to help and take care of people. We need to be sympathetic with their needs and very straightforward about their expected outcomes from any particular procedure."

Robert Brink, MD, of San Mateo, California, adds, "A surgeon's imagination should never exceed his or her ability — or the compliance of the patient's tissues. We must evaluate both factors realistically when determining what can and cannot be achieved through surgery."

Plastic surgeons generally charge a fee for consultation. This is appropriate, since the surgeon will be spending valuable time and utilizing his or her many years of training and experience to evaluate your situation and advise you on the type of procedure that would best serve your particular needs.

Some patients consult with a surgeon based on a recommendation from a friend, family member, or personal physician and, after verifying credentials and talking with the surgeon about what he or she would recommend, feel comfortable enough to schedule surgery. Other patients feel it is essential to consult with more than one surgeon — either because they do not have complete confidence in the first surgeon with whom they met or they simply want to compare opinions and personal approaches of several doctors. After seeing two or three plastic surgeons

in consultation, you most likely will feel that there is one you trust more than the others, you feel to be more experienced, knowledgeable, and skillful, and importantly, with whom you feel more "in sync." It is essential that you feel rapport with your surgeon and have good two-way communication before making your commitment to surgery.

"The more a patient understands before the operation," says Steven K. White, Sr., MD, of Myrtle Beach, South Carolina, "the smoother the postoperative course. If the plastic surgeon is annoyed or does not want to answer questions during the consultation, then the patient needs to find another plastic surgeon."

Gathering all the information you will need in order to make an informed decision about cosmetic surgery usually means asking a lot of questions. It also means being completely open and honest. Throughout this book, we will remind you of the importance of providing your surgeon with an accurate medical history, including an account of surgeries you have had and medications you have taken or currently take. In addition, you must be straightforward regarding what bothers you about your appearance, your motivation for having surgery, and what results you would be happy with. It is crucial to your ultimate satisfaction with surgery that you and your surgeon are on the same page — that you share an understanding of the perceived problem and the proposed solution.

Patients who are unfocused about what bothers them or what changes they would like to make are not good candidates for plastic surgery. Many of the results of cosmetic surgery are relatively permanent. That's why it is very important for you to think carefully about your goals and expectations before scheduling your first plastic surgery consultation. Some prospective patients find that bringing in photographs illustrating what they find attractive — for example, a particular type of nose or a model with breasts that are of a proportion they feel would be appropriate for them — can be helpful.

When using photographs as examples, however, keep in mind that what looks good on someone else may not be the right look, or even be achievable, for you. Your plastic surgeon may use computer imaging to help you visualize what the results of surgery might look like in your particular case. If your surgeon uses computer

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imaging, he or she will most likely remind you that the computer image is merely a representation of possible surgical results — it is not a guarantee. It is exactly for this reason that many plastic surgeons prefer not to offer computer imaging, believing that patients are better served by other methods of communication about surgical results.

Some plastic surgeons are happy to let patients look at before and after photographs of patients on whom they have operated. This can certainly give a prospective patient some idea of a surgeon's aesthetic judgment and taste. Patients may make their decision about which qualified surgeon to select based, in large part, upon whether they feel a particular surgeon's aesthetic sense is in sync with their own goals and expectations. Photographs can also help patients define and articulate the type of result they prefer. If you have an opportunity to view such photos, be sure to inquire as to whether the results are typical of most patients. While it is human nature to want to show one's best results, it is more appropriate for a surgeon to provide patients with examples of a range of results — from the best results to typical results and even less-than-optimal results that demonstrate the limitations of surgery.

Remember, also, that plastic surgeons have an obligation to protect patient confidentiality. Many surgeons are reluctant to ask former patients for permission to show their photos to prospective patients who are likely to be individuals in the same community and perhaps even acquaintances. If your surgeon has a limited number of patient photos to show you, do not assume that he or she is inexperienced or has only a small number of good results. The reason may simply be that the doctor has not sought permission to show a wide range of patient photographs. Some excellent surgeons elect not to demonstrate their work in this manner. They assume that patients who come to see them already know of their reputation and probably have friends who are former patients.

"Verbal communication has severe limitations," says Edward O. Terino, MD, of Thousand Oaks, California, "so visual communication becomes the most precise exchange between a plastic surgeon and a patient. I have found that facial contouring in particular cannot be

discussed adequately without the use of visuals — computer imaging in particular. An interactive computer consultation allows patients to express to the doctor their own thoughts and feelings about the contours and shapes and overall appearance that they wish to achieve, and it allows the surgeon to decipher whether or not these aspirations are realistic."

All of these communication methods — discussion, viewing of photographs, computer imaging — are means to an end. That "end" is a well-informed patient who understands his or her surgeon's recommendations, abilities and "style." Most important, patients should leave the consultation with an accurate picture of both the potential benefits and the risks of surgery — and whether their expected results are likely to be met. The information gleaned during your consultation, and perhaps in written or video materials provided by your surgeon, will form the basis for your informed consent for surgery.

Guy Stofman, MD, of Pittsburgh, Pennsylvania, adds, "Patients must have realistic expectations. A woman will not look like Angelina Jolie after a simple pulsed light treatment, and if someone is trying to sell you that, be careful. If you've lost 100 pounds and your skin is hanging down, you don't need pulsed light. You need a major surgical procedure. The ethical physician will diagnose and give you the best treatment for your specific problem."

Ethical plastic surgeons do not operate on everyone who walks through their door. They are selective, evaluating patients' chances for success and considering both physical and psychological factors as much as possible.

"I see every patient at least twice before surgery," reports Leo R. McCafferty, MD, of Pittsburgh, Pennsylvania. "We talk about what they want and take pictures of areas that concern them. Then I encourage them to bring someone else with them for the second visit, a friend, relative, or significant other — another pair of ears. We look at the pictures, go over the procedure, and talk about the risks, the possibilities, and both realistic and unrealistic expectations. It helps me get to know the patient and for the patient to know me. What we really want is for the patient to be happy when they leave the office, whether they have surgery or not. Sometimes the best option is no surgery."

"I believe in spending time to help patients arrive at realistic expectations," says Bruce I. White, MD, of St. Louis,

Missouri. "I had one man come to see me who had been to five surgeons for opinions. He had a deeply wrinkled face but didn't want to have a surgical procedure, such as a face lift, or one that required extensive recovery such as dermabrasion. So, I advised him to look in the mirror and say, 'That guy looks like Clint Eastwood — isn't he handsome!' He said, 'Thanks, doc, now I don't have to bother seeing anyone else."

It is not uncommon for people to feel intimidated when talking to a surgeon. They may be afraid or embarrassed to ask their doctor questions, even when encouraged to do so, and quite often leave an appointment not really understanding all that the physician has said. The importance of communication with your plastic surgeon cannot be overstated. Going to see an aesthetic plastic surgeon is not like consulting with many other kinds of specialists, where the doctor tells the patient what's wrong and how he or she is going to fix it. In aesthetic plastic surgery, patients have to express what they perceive as wrong before any discussion of the procedures that are available and how the identified problems can be addressed. If you are bothered by more than one feature of your face or body, you need to be prepared to prioritize your goals. While it may be possible to perform multiple cosmetic procedures at the same time to address more than one concern, this will depend on the specific procedures, the condition of your health, and other factors. In all cases, your plastic surgeon will put your health and safety first.

"When considering facial plastic surgery, remember that when you look at someone you first look at the eyes, then the nose, and then track to the rest of the face," says Gary R. Culbertson, MD, of Sumter, South Carolina. "Write down for your plastic surgeon the top three things you do not like about your face, such as wrinkles or droopy eyes, before your consultation. Prioritize your concerns."

"The keys to successful plastic surgery," adds Paul J. LoVerme, MD, of Verona, New Jersey, "include investigating the procedure, educating yourself, and communicating with your plastic surgeon. Discuss the 'ations': your hesitations, aspirations, and expectations, and ask about recuperation and complications."

Although serious complications from aesthetic surgery are uncommon, they can occur. Never is it more

important that you have a relationship of trust and mutual support with your plastic surgeon than during the recuperative process following an unforeseen complication, which can occur either in the surgical or postsurgical period.

Michael A. Marschall, MD, of Wheaton, Illinois, says, "The goals of aesthetic surgery are to refresh, rejuvenate, enhance and enliven. The maintenance of youth in a physical sense is understood to be an expected outcome. But patient satisfaction requires more than a plastic surgeon's technical skill. It also requires that the surgeon provide appropriate emotional support throughout the entire surgical experience. Only with this synergy can the ideal result be achieved."

Part of your consultation will likely be a discussion of fees. This discussion may take place between you and the surgeon, or you may be advised of fees by a patient coordinator or other member of the surgeon's staff. Your total fee for a surgical procedure may be broken down into several categories of expenses: the surgeon, the surgical facility, and the anesthesiology provider. You should also figure into the cost of surgery any medical tests that may be required, prescriptions, surgical garments, or other miscellaneous costs such as transportation to and from surgery or fees charged by an overnight caregiver if you do not have family or friends to provide these services.

You should also discuss with your surgeon his or her policy regarding revisionary surgery, if such surgery should be needed. In some cases, plastic surgeons will not charge patients for revisions that are necessary to achieve what the doctor considers to be a satisfactory result. However, patients may be asked to pay facility and anesthesia fees for revisionary surgery and, depending on the circumstances, a reduced surgeon's fee may also be necessary.

The consultation process is, above all, an educational process. By preparing for your consultation, keeping an open mind, discussing your concerns and goals openly and honestly, paying close attention to the information your surgeon provides, asking questions, and satisfying yourself that you and your surgeon have established good communication and rapport, your plastic surgery consultation can provide the basis for a safe and successful surgical experience. V

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THE SURGICAL FACILITY



Most people may think of surgical procedures being done in a hospital, but today a great number of cosmetic procedures can be performed in ambulatory surgery facilities — either freestanding surgicenters or office-based facilities. Where your surgery will be performed depends on a number of variables including the extensiveness of your operation, the condition of your health, and other unique risk factors. Additional considerations include your surgeon's preference and your comfort.

"There are many doctors, myself included, who perform a significant portion of surgeries in an office surgical suite rather than a hospital," says Jay Fine, MD, of Pembroke Pines, Florida. "In the office-based setting, as in any environment where surgery is performed, the patient's safety is paramount. Plastic surgeons must use good judgment when deciding which types of procedures to do in the office, which patients are good candidates, how lengthy the surgeries can be, and how to be prepared for handling complications that could arise. These are responsibilities of the surgeon, but it's also important that patients be aware of the factors involved in the safety of office-based cosmetic surgery and to choose a surgeon who adequately addresses these important considerations."

"My office-based surgical facility has a defibrillator, a generator, all of the equipment necessary to handle emergency situations," says James A. Matas, MD, of Orlando, Florida. "I work with the same medical and surgical team, day in and day out. I feel this allows me to give my patients better and more personalized care."

As mentioned in the chapter of this book on choosing a plastic surgeon, it is important that your surgeon has hospital privileges for the procedure you are undergoing —

whether your procedure will be performed in the hospital or an ambulatory surgery setting. Hospital privileges are your assurance that the surgeon's qualifications have been reviewed by a credentialing committee composed of other doctors on staff at the hospital. But who checks on the qualifications of doctors who do not apply for hospital privileges to perform cosmetic surgery and who operate in a non-hospital setting such as a freestanding surgicenter or office-based surgery facility? Unfortunately, too often the answer to this question is: nobody.

As discussed in an earlier chapter, the vast majority of ambulatory surgery facilities remain uninspected, unlicensed and unaccredited. The personnel, including physicians, who operate these facilities may not have the qualifications required to perform cosmetic procedures in a hospital or in an accredited facility. Likewise, the facility's layout, equipment and other safety features may be substandard, putting patients' welfare at risk.

Board-certified plastic surgeons were among the very first specialists to embrace the concept of accreditation for ambulatory surgery facilities. While still in the minority, today there are a growing number of freestanding and office-based surgical facilities that are accredited and meet the highest safety standards. It is important for prospective patients to make sure that any facility in which they will undergo a surgical procedure (other than a procedure requiring only minor local anesthesia, or minimal oral or intramuscular tranquilization) meets at least one of the following criteria:

- Accredited by a nationally or state-recognized accrediting organization
- State-licensed
- Medicare-certified under Title XVIII

Accreditation means that the facility has passed stringent safety requirements for the layout, emergency and monitoring equipment, staff, and physicians. In addition, only physicians who have hospital privileges for the procedure they wish to perform at the accredited facility are allowed to do so. Anesthesia is provided only by a board-certified (or board-eligible) anesthesiologist or by a certified registered nurse anesthetist (CRNA). Accredited facilities have met all local, state and national regulations applicable to sanitation and safety of the facility and its daily operations.

"Patients should ask a number of questions regarding where their surgery is going to be performed," says Otis Allen, MD, of Bloomington, Illinois. "For example, who owns and operates the facility? Is it accredited, and by whom? Are the doctors who work in the facility appropriately trained and certified? Who will provide my anesthesia, and what is their training? Have all of the facility and anesthesia fees been explained? How many bills will I receive, and from whom?"

Some of the groups that accredit facilities, and whose accreditation certificate should be prominently displayed in the facility, are the following:

- The American Association for Accreditation of Ambulatory Surgery Facilities, Inc. (AAAASF); www.aaaasf.org
- The Joint Commission on Accreditation of Healthcare Organizations (JCAHO); www.jcaho.org
- The Accreditation Association for Ambulatory Health Care, Inc. (AAAHC); www.aaahc.org

These organizations grant accreditation to qualifying facilities, maintain updated safety data and criteria, and conduct regular inspections to ensure compliance.

As mentioned earlier, in lieu of accreditation by one of the above agencies, state licensure or Medicare certification (Title XVIII) is also evidence that a facility has met satisfactory safety requirements. Not all states require licensing, but in some cases state licensing may be necessary even if a facility is accredited by another agency.

Is it better to undergo surgery as an outpatient rather than in the hospital? There is no single answer to this question, since each patient's circumstances are different. Besides the factors discussed earlier that might make hospital surgery a better choice for some patients, some individuals simply feel more comfortable in a hospital setting. Likewise, many patients appreciate the privacy, convenience, personal attention, and sometimes lower cost of surgery performed in an accredited outpatient setting. Accredited ambulatory facilities are well equipped for patient safety and in the unlikely event that emergency hospitalization is necessary, procedures are in place for rapid transport of patients to a hospital facility. So, for many patients, an ambulatory surgery facility can be the right choice.

"I do most of my surgeries as outpatient procedures in a surgery center right across the street from the hospital," says David V. Poole, MD, of Altamonte Springs, Florida. "I feel that the environment provided by the surgery center is preferable, and the care I can provide is enhanced. I check on my patients by phone the night following their surgery and every morning until we see them back in the office, usually about three to five days after the surgery."

The organizations that provide accreditation of ambulatory surgery facilities are dedicated to monitoring and maintaining high standards of competence and safety upon which patients can rely. It is up to you, the prospective patient, however, to do the research necessary to find surgeons and facilities that meet these approved criteria.

One thing to keep in mind is that all members of the American Society for Aesthetic Plastic Surgery (ASAPS) and the American Society of Plastic Surgeons (ASPS) are required to operate only in accredited, state-licensed or Medicare-certified facilities (except for procedures requiring only minor local anesthesia, or minimal oral or intramuscular tranquilization). This means that when you select a surgeon who is a member of either or both of these organizations, you should have assurance that the facility in which your surgery is performed will meet high standards for safety. V

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ANESTHESIA



Many patients have questions about anesthesia, and it is important to understand the facts. Your plastic surgeon will explain his or her recommendation, or that of the anesthesiologist, for the type of anesthesia to be used in conjunction with your procedure. In some cases, your preference may be considered, while in other instances there may be little choice due to the type of procedure you are undergoing or other factors including the condition of your health and your reaction to certain medications. However, it is important for you to take an active role in the discussion about anesthesia, particularly with regard to who will administer anesthesia during your procedure.

For all types of anesthesia (other than minor local anesthesia, or minimal oral or intramuscular tranquilization), your anesthesia provider should be either a board-certified or board eligible anesthesiologist or a certified registered nurse anesthetist (CRNA). This individual will be responsible for administering the correct type and amount of anesthetic and for monitoring every important body function throughout the operation and in the immediate postoperative period.

"Not only do I use an anesthesiologist for all procedures," says **John Burnett**, **MD**, of Fresno, California, "but for more complex procedures, I always select an anesthesiologist who has particular experience with those specific types of operations and understands the special considerations involved."

It is not unusual for patients to have some feelings of apprehension regarding anesthesia. The best remedy for these anxieties is to discuss any concerns you may have with your plastic surgeon who will explain the particular technique recommended for you and can provide you with specific information on risks.

Anesthesia administered by a qualified professional is safe, and it allows you to undergo even lengthy surgical procedures without experiencing pain or discomfort. However, serious complications from anesthesia are possible, so it is important for you to be thoroughly informed of the risks.

BEFORE ANESTHESIA

As mentioned in our chapter on Safety in Aesthetic Surgery, it is extremely important that you provide your surgeon with a complete and accurate medical history, including any allergies to drugs and a list of medications and or vitamin and herbal supplements you currently take, so these factors can be considered when planning your surgery and anesthesia. Interactions of even common medications, foods, and beverages with anesthesia are possible, so your surgeon may advise you to discontinue certain drugs and abstain from certain types of food and drinks (especially alcohol) for a period before and after surgery. He or she may want to consult with your personal physician, or other specialists,

however, before removing you from any drug therapy that is under medical supervision.

Even if your procedure does not require an overnight stay, you will need to arrange in advance for someone to drive you home from your procedure and to stay with you until you are back to feeling like yourself.

TYPES OF ANESTHESIA

The types of anesthesia most commonly used for each of the various aesthetic procedures discussed in this book are indicated in the sections pertaining to those procedures. Oral or topical medications may be used for certain minor aesthetic procedures, but the types of anesthesia that generally are used in aesthetic surgery are general anesthesia, sedation anesthesia (often called twilight anesthesia), and regional or local anesthesia.

GENERAL ANESTHESIA

General anesthesia, administered intravenously or inhaled through a mask, causes a deep sleep with loss of consciousness. To help you breathe while under general anesthesia, the anesthesiologist may insert a tube into your trachea. You will be unaware of your surroundings and unable to feel any pain or discomfort. As the anesthesia wears off, the tube will be removed, and you will awaken after the surgery.

Upon awakening, you will generally have no memory of the procedure having taken place. Some patients may experience postsurgical nausea following general anesthesia, but this usually can be controlled with medication. If you have experienced nausea or any other side effects from anesthesia in the past, be sure to tell your surgeon and anesthesia provider. It is normal for you to feel somewhat dazed or tired for the rest of the day.

General anesthesia is usually required for, but not limited to, the more involved and complicated surgeries, such as lower body lifts, abdominoplasties and large-volume liposuction. General anesthesia is also the choice of many plastic surgeons for other operations, such as face lifts and rhinoplasties, particularly when performed in conjunction with other procedures.

SEDATION ANESTHESIA

Sedation anesthesia, which is also commonly known as twilight sleep, combines the use of an intravenous

medication that sedates the patient, inducing drowsiness and relaxation, with a local anesthetic that prevents the patient from feeling any pain in the area to be operated on. Sometimes the same drugs that are used for general anesthesia can be used in lower doses to produce sedation anesthesia.

Once the patient is sedated, the surgeon injects the treatment area with a local anesthetic, such as lidocaine. Patients rarely even feel the injections.

Depending upon the dosage, or the depth of the sedation, patients may have periods of wakefulness, or they may sleep through the entire procedure. If patients do awaken, they will not feel any pain and will remain extremely relaxed and oblivious to what is taking place around them, even if they should have the faint realization that they are in an operating room.

With sedation anesthesia, patients continue to breathe on their own; breathing tubes and mechanical assistance are unnecessary.

Eyelid surgery, face lifts, rhinoplasty and many other procedures are often performed using this type of anesthesia. The recovery period for sedation anesthesia is usually shorter, with fewer potential side effects, than with general anesthesia.

REGIONAL AND LOCAL ANESTHESIA

Regional anesthesia has an effect on a targeted group of nerves to anesthetize a specific region of the body, such as an epidural that causes a loss of sensation in the legs and lower abdomen.

Local anesthesia is similar to the novocaine you may have when your dentist works on your teeth. A local anesthetic is injected under the skin at appropriate points and numbs the treatment area so that the patient doesn't feel any pain. It is generally used for a variety of minor procedures.

Local anesthetics take effect rather quickly and also wear off more quickly than other types of anesthesia. Side effects are minimal and relatively rare.

AFTER ANESTHESIA

Most patients find their recovery from anesthesia to be uneventful, but it is important to follow your surgeon's instructions carefully. These instructions will likely include such restrictions as not driving, operating

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complicated machinery, making important decisions, or signing legal documents for at least 24 hours after your procedure. As mentioned earlier, you also may be instructed to avoid certain medications, supplements, foods, and beverages. You may be advised to drink fluids for a while before progressing to light food.

With open and thorough communication between you, your surgeon, and your anesthesia provider, you should find your experience with anesthesia to be much easier and more comfortable than you may have imagined. **

Editor's Viewpoint

Selection of an anesthesia provider (which should be either a board-certified anesthesiologist or a certified registered nurse anesthetist, or CRNA) as well as selection of the type of anesthesia to be administered for your procedure is the job of your plastic surgeon. It is your responsibility, however, to discuss these important decisions with your surgeon in advance of your procedure and to be sure that you are comfortable with the plan for your surgery. Plastic surgeons performing cosmetic surgery prefer working with anesthesiologists or CRNAs who have a keen interest and significant experience in providing services for cosmetic surgical patients.

These anesthesia providers go out of their way to ensure that patients have a complete understanding of what their anesthesia care will entail, often going so far as to call the patient the night before surgery to make sure that preoperative instructions are followed and to answer any final questions. In addition, their primary role of providing and monitoring anesthesia in the operating room, these highly trained medical professionals contribute to the safety of every aspect of your surgical experience. After your surgery, the anesthesia provider is right by your side as you are transported to the recovery room, ensuring seamless transfer of care to the recovery room staff.

Close communication and teamwork between the well-trained anesthesia provider and surgeon is an essential component of safety and quality care for the aesthetic surgery patient.

- Peter B. Fodor

SAFETY in aesthetic plastic surgery



Aesthetic plastic surgery is elective, and patients choose to undergo procedures to better their lives. In the overwhelming majority of cases in which patients select a qualified surgeon, cosmetic surgery produces the expected benefits, and patients are happy. The complications that sometimes occur are generally temporary and relatively minor. This should not lead one to be complacent, however, about the many issues involved in cosmetic surgery patient safety.

The risks of cosmetic surgery have much in common with other types of surgery. And while there is no such thing as "risk-free" surgery, many risks can be controlled.

It all begins with education. The well-informed patient has a much better chance of not only having a safe surgery, but also enjoying a more successful surgical outcome.

Before you choose to undergo any cosmetic surgical procedure, your surgeon will explain the risks to you. General risks associated with many types of surgery include bleeding, infection, and complications from anesthesia. Another significant complication, though infrequent, is blood clots that can lead to venous thromboembolism (VTE), including deep vein thrombosis (DVT) and pulmonary embolism (PE), both of which are serious or even fatal events.

Your board-certified plastic surgeon is trained in techniques to decrease and manage the risks associated with surgery and specific cosmetic procedures. Your surgeon will evaluate you carefully regarding your risk for DVT or PE, including your personal medical history, family health history and lifestyle factors. Compression devices will be used as a precaution to

help prevent blood clots, especially if your surgery will be lengthy. For some patients at higher risk, drugs such as heparin or other anticoagulants can be administered.

Once you have selected a qualified surgeon you trust, you can certainly begin to rest easier about all aspects of your cosmetic surgery. But it is important to understand that throughout the surgical process, you also have responsibilities that significantly impact your safety.

MEDICAL HISTORY AND MEDICATIONS

One of the most important parts of your consultation with a plastic surgeon involves your disclosure of any medical conditions (past or current) and any previous surgeries that you have had. Your doctor also needs to know about drugs, of any kind, that you are taking or have taken recently.

Certain drugs — including aspirin, ibuprofen and other nonprescription medications such as certain cold, flu or allergy medicines — increase the risk of excessive bleeding. It is always best to check with your plastic surgeon about which drugs are safe to use in the few

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weeks leading up to surgery and during your recovery period. Other factors may also affect bleeding; your surgeon will want to be certain that your blood pressure is normal or under control, and your blood clotting abilities are not impaired.

In addition to prescription and nonprescription drugs, some vitamins and other over-the-counter substances can also have a damaging effect in combination with surgical procedures and anesthesia. For example, vitamin E supplements taken in certain dosages can contribute to bleeding during and after surgery. Your surgeon will advise you as to when and for how long you should discontinue vitamin supplements.

Herbal medications and supplements may seem harmless and in fact may be taken for their assumed benefits of boosting the immune system, providing more energy and improving general health, yet they could prove deleterious to surgery. Doctors have for some time suspected that these medications, such as St. John's Wort, may increase bleeding and cause other complications. Your surgeon may ask you to discontinue all herbal medications and supplements prior to surgery.

A February 2006 study published in *Plastic and Reconstructive Surgery*, the journal of the American Society of Plastic Surgeons, found that approximately 55 percent of plastic surgery patients take herbal supplements but, perhaps thinking it unimportant since the supplements are "harmless," often do not tell their surgeons. It is extremely important to your own safety that you tell your plastic surgeon about all medications, prescription and nonprescription, and any vitamins or herbal medications or supplements you are taking.

Use of illegal drugs is a serious matter, both in terms of your general health and possible effects on your surgery. While this may be a difficult subject to discuss with your doctor, not doing so could jeopardize your safety.

"Patients should be very truthful as to what medications they are taking, or medical conditions that they may have, for these can not only interfere with the anesthesia and recovery but also can jeopardize the final results of surgery," says Edward J. Domanskis, MD, of Newport Beach, California. "I recently had a patient who was scheduled for surgery and was truthful enough to admit to having used cocaine. Her surgery was

rescheduled and she did very well. If we had not known about her recent drug use, she could have suffered grave consequences due to the drug's interaction with anesthetics."

LIFESTYLE FACTORS

Various lifestyle factors can also influence your readiness for surgery as well as the safety and outcome of your procedure. These include weight, nutrition, sleep, smoking, alcohol consumption, and sun exposure.

Obesity elevates the risks associated with many types of surgery. If you are obese, you may be advised to lose weight before undergoing elective cosmetic surgery, or special measures (such as overnight hospitalization) may be recommended to help ensure your safety. Weight control and stabilization is an important factor in determining patients' readiness for such procedures as liposuction or abdominoplasty and their chances for long-term positive results.

As vital aspects of maintaining optimum health, nutrition and sleep also play a role in a patient's surgical outcome. Both have an impact on your immune system and, therefore, your ability to heal and fight infection.

Tobacco has numerous negative effects on the body, including constriction of blood vessels and binding of oxygen, reducing its availability to the body's cells. When cells have insufficient oxygen following surgery, tissues may not heal as well and scarring may be more significant. In association with certain procedures, smokers have an increased risk and higher rate of infection, skin death (necrosis), wound separation, and anesthesia complications.

"Any patient who smokes runs the risk of a poorer outcome," advises Steven K. White, Sr., MD, of Myrtle Beach, South Carolina. "In addition to greater safety risks for smokers, depending on the operation, many patients will simply have a less favorable outcome because of the deleterious effect smoking has on the tissues."

The risk to smokers is so grave that for some procedures — such as face lifts, abdominoplasties, breast reductions and/or lifts — most plastic surgeons insist that their patients stop smoking at least two weeks prior to surgery and for a period following the operation as well. Some surgeons will not perform these procedures on smokers at all.

Alcohol consumption may increase bleeding and reduce your ability to form clots. This can heighten the risk of a hematoma (collection of blood underneath the skin). It would be prudent to minimize these risks by abstaining from drinking alcohol for three or four days prior to surgery.

You will be advised, particularly before and after various skin treatments, to avoid tanning and direct exposure to the sun for a certain period of time. Exposure to direct sunlight can cause darkening and thickening of scars for up to a year following virtually any surgery. You should discuss this with your plastic surgeon and follow his or her recommendations to keep wounds covered, using an effective sunblock. When facial surgery is involved, you can further protect your skin with a wide-brimmed hat.

POSTSURGICAL INSTRUCTIONS

Each section of this book dealing with a specific procedure talks about the recovery period and gives general guidelines. It is very important to pay strict attention to the instructions your plastic surgeon gives you following your procedure. Failure to follow his or her guidelines may result in complications or unsatisfactory results. Your plastic surgeon will tell you when you can undertake various activities — ranging from when you can first get out of bed to when you can resume a full course of vigorous exercise.

The amount of activity that is advisable following surgery differs with various procedures. With some procedures, including major operations such as abdominoplasties or lower body lifts, it is very important that patients become ambulatory shortly following surgery. This is crucial, in addition to other measures, in the prevention of blood clots that can lead to deep vein thrombosis (DVT) and pulmonary embolism (PE).

"It is never indicated in any type of aesthetic surgery to lie around the day after the procedure," says Steven K. White, Sr., MD, of Myrtle Beach, South Carolina. "Early ambulation and hydration are the most significant positive factors in reducing lethal blood clots."

Too much activity following a surgical procedure — including lifting, bending, straining or anything that

raises blood pressure — can also be harmful. It can result in bleeding and fluid accumulation (hematoma or seroma), reopening of incisions, as well as other serious complications.

It is your surgeon's job to make sure you are well informed about all aspects of your surgery, including the course of action that will lead to the most successful recovery. It is essential, however, that you pay close attention, ask questions about anything you don't understand or that is not clear, and precisely follow the instructions you are given.

MULTIPLE PROCEDURES

While so-called "reality" television shows that promote cosmetic surgery serve the purpose of letting people know that improving themselves with aesthetic surgery is an available option, these shows also may distort the surgical process in ways that can prove damaging.

"On many of the television shows, for example," says Karl O. Wustrack, MD, of West Linn, Oregon, "subjects are specially selected who will achieve the desired results — results that may not be typical. Procedures requiring the work of several surgeons and dentists, long periods of recovery, and results that take several months to fully materialize are condensed into a one-hour show. The results are misleading and can often lead to people forming unrealistic expectations."

John Bruno, MD, of Evanswood Park, Florida, adds, "People read and see a plethora of publicity surrounding aesthetic plastic surgery, and not all of what you see is safe, prudent, or effective. Television shows implying that multiple procedures can be done in one 12-hour operation can be misleading and dangerous."

On the other hand, certain combinations of procedures are frequently and safely performed together during a single surgical session. Other combinations are more often performed in separate or "staged" operations. Whether or not multiple procedures performed together are advisable in any particular case may be determined by patient health factors and surgeon preference. Multiple procedures performed during the same surgical session can increase the risks of surgery, and these risks should be thoroughly discussed with your surgeon.

TRAVEL BEFORE OR AFTER SURGERY

Patients may sometimes select a surgeon who practices in another state or even another country. While there are many advantages to choosing a surgeon who practices in your own geographic area, and there can be significant uncertainties in evaluating the qualifications of surgeons outside the United States and Canada, there are many instances in which patients make the decision to travel for their surgery. Likewise, patients sometimes inquire of their surgeons whether they may travel for business or pleasure soon after a surgical procedure.

Prolonged travel is well known to be a cause of DVT and PE. Lengthy travel by car, train, and especially by air, can significantly increase the risk of these dangerous conditions. If you are traveling a few hours or more to undergo surgery, and your procedure will last longer than one hour, you should not schedule your surgery for the morning after your arrival or plan to return home soon after the procedure. You should plan on a minimum of one or two days of ambulation time before and after your surgery. For extensive surgeries, this time (especially after surgery) is likely to be longer.

Traveling to a foreign country for plastic surgery may sound exciting, but it can be fraught with difficulties. First and foremost are the concerns about safety. Even if the surgeon is certified according to the standards of his or her country, there usually is little guarantee of the quality and safety of the surgical facility. If there should be any complications associated with your surgery, it is essential that you have access to comprehensive medical care — something that may not be readily available in many foreign countries. Late complications or poor outcomes of surgery can occur once you have returned home, and under those circumstances, your options for revisionary surgery with a surgeon in your own community may be limited.

Wherever you decide to undergo plastic surgery, you should be sure that you consider all aspects of your safety, including physician qualifications, facility standards and the risks of extended travel in association with surgical procedures.

"NEW" DOESN'T MEAN "SAFE"

"It's not that there isn't a lot of information out there," says James D. McMahan, MD, of Columbus, Ohio, "but rather that much of it is incorrect or misleading. Advertisements, magazine articles, and television shows are repeatedly touting the latest 'miracle treatment' just to make headlines. In actuality, some of these products are unproven, often ineffective, and potentially hazardous."

"I find that there is an absence of accurate and understandable information for the public regarding plastic surgery procedures," says William G. Armiger, MD, of Annapolis, Maryland. "Cosmetic procedures are often unrealistically portrayed on television. The real facts of procedures, the seriousness of the decisions being made, and the safety issues need to be clearly understood by the patient."

The desire to cash in on aesthetic surgery's popularity and profitability often motivates individuals and companies to promote materials and devices that are not yet proven effective and, in some instances, may not be safe. The media, always hungry for a story on a popular subject, helps push these products via free publicity on television shows and in magazines. This helps create a demand for them among the public, often before prudent surgeons have even begun to incorporate these techniques into their practices.

No one wants to be a "guinea pig," but that's exactly what some patients become when they subject themselves to new and unproven treatments at the hands of unqualified and untrained practitioners. When considering a "new" type of cosmetic treatment, patients should always find out how long the product or technique has been used, whether results have been reported in a peer-reviewed journal, what complications have occurred and how they were resolved, and how much experience the doctor has had with the treatment. It is wise to find out whether the procedure has been widely adopted by qualified, board-certified plastic surgeons before proceeding.

Plastic surgeons sometimes participate in clinical trials, approved by the U.S. Food and Drug Administration (FDA), for new products and devices. If you consider participation in a clinical trial, you should be provided with all the information you need to make an informed choice

INFORMED CONSENT

For any type of cosmetic surgery, whether a new technique or a tried-and-true procedure, you may be asked to sign a document of informed consent. The purpose of this document is to confirm that you completely understand the treatment that will be provided by your surgeon. You should also be informed of and consent to the use of any specific brand of injectable or implantable material. This is to help protect you from unknowingly receiving treatment with a material that is not FDA-approved. You should also be informed if the use of a material is "off label," meaning that the material is FDA-approved but not for specific uses that will be part of your treatment.

YOUR SAFETY, YOUR CHOICE

The chapter in this book, "Choosing the Surgeon Who Is Right for You," explains the importance of choosing a qualified, board-certified plastic surgeon for your cosmetic surgery.

Knowing where your procedure will be performed, if the facility is accredited, and if so, by whom, goes handin-hand with choosing a qualified surgeon. In the chapter in this book titled "The Surgical Facility," we explain the details of facility accreditation and hospital privileges.

"It is very important that cosmetic plastic surgery be performed in an accredited facility, by board-certified surgeons, and that qualified personnel are administering the anesthesia," says Stephen Goldstein, MD, of Englewood, Colorado. "In cosmetic surgery, as in all surgery, patient safety comes first."

"The doctor selection process is paramount to patient safety," says Barbara K. Siwy, MD, of Carmel, Indiana. "Patients should be diligent in researching their prospective physicians and find out as much as they can about their options and potential outcomes, so they can make the wisest and safest choice."

Aesthetic plastic surgery has an excellent record of safety. Asking the right questions can help you make the right choices — and, ultimately, have the best possible outcome from your cosmetic surgery.

Editor's Viewpoint

Needless to say, patient safety with any type of surgery is of paramount importance. Because aesthetic surgery is totally elective, it is essential that the normal risks of surgery be reduced to the lowest level possible, and that the safety and effectiveness of selected treatments be well established. Likewise, medical professionals providing cosmetic surgery services must be well trained in the prevention and handling of complications.

The residency programs that prepare a physician for board certification in plastic surgery are among the most extensive of any medical or surgical professional. Plastic surgeons study all major systems of the body, and many plastic surgeons are also fully trained and certified as general surgeons. The course of training for any plastic surgeon includes ample exposure to the prevention of surgical complications, how to promptly recognize them when they occur, and how to most effectively treat them.

Throughout the years, plastic surgery has maintained an impressive patient safety record. Part of the reason is the commitment of our professional societies, such as the American Society for Aesthetic Plastic Surgery (ASAPS) and the American Society of Plastic Surgeons (ASPS), to the continuing medical education of their members, with an appropriate emphasis on patient safety. As ASAPS President, in 2005, I created the ASAPS Patient Safety Steering Committee to further focus attention on developing a "culture of safety" at every level of aesthetic surgery practice. Since then, a number of additional patient safety initiatives have been developed, including revised guidelines on prevention of venous thromboembolism (VTE) and new studies focusing on proper patient selection to help minimize surgical risks. The work of this committee is expected to be ongoing. As a result of these and other educational efforts, patients can feel more confident of their safety when undergoing elective cosmetic surgery.

— Peter B. Fodor