

**CAREERS IN MEDICINE****Plastic Surgery: More Than Just Cosmetics**

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What comes to mind when you think of plastic surgery? For many, plastic surgery, or ‘plastics,’ as it is colloquially known, is often associated with images of excessive and often superfluous luxuries such as silicone implants, face lifts, and tummy tucks. The economically-minded may even consider plastic surgeons to be frivolous sculptors taking away valuable operating room (OR) time.

And why is it called ‘plastics’ anyway?

Although the term ‘plastics’ comes from the Greek *plastikos*, which means to create, form, or reconstruct, the true origins of plastic and reconstructive surgery have been dated as far back as early Egypt and ancient India.<sup>1, 2</sup> The “Edwin Smith Papyrus,” dated at approximately 3000 BC, contains the first descriptions of the surgical management of facial trauma, including the treatment and management of mandible and nasal fractures. There also exist ancient Indian texts dated several thousand years old, which are filled with vivid descriptions of nose, ear, and lip reconstructions. Some of these procedures

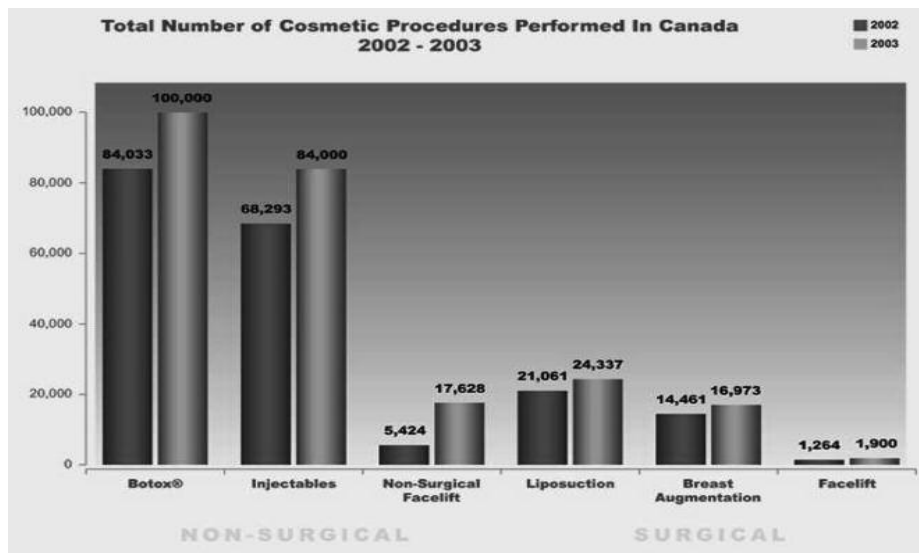
were performed using remarkable surgical techniques for the time including pedicle flaps and free autogenous skin grafts.<sup>2</sup>

In the 19th century, as the foundation of the modern specialty was forming, important changes were taking place that affected the entire nature of plastic surgery. The concept of performing surgery for reasons other than the reconstruction of damaged or altered structures gradually became more recognized. John Roe, an American otorhinolaryngologist, is credited as the first to develop an aesthetic approach to rhinoplasty, a significant step in the formation and advancement of aesthetic surgery.<sup>2</sup> World War II burn victims and their specialized care were the major factor driving the subspecialty separation from general surgery in Canada and the United States.

Today, the popularity of cosmetic and aesthetic surgery is undoubtedly growing (See Figure 1).<sup>3</sup> In fact, in 2003 there were over 302,000 surgical and non-surgical cosmetic enhancements performed in Canada, a significant rise from 2002.<sup>3</sup> Although many of these procedures are performed by plastic surgeons, cosmetic procedures are also performed by many



Polydactyly: a common congenital anomaly that plastic surgeons revise. Source: Leigh Jansen



**Figure 1.** Surgical and non-surgical cosmetic procedures performed in Canada. Data collected here is the first and only national analysis obtained within the Canadian market historically; no accurate data had been collected prior to 2002. Figure reproduced with permission from Mediacard Finance Inc.

other physicians including dermatologists, family physicians, and others with appropriate training in cosmetic procedures.<sup>4</sup> However, while almost everyone may know that plastic surgeons perform cosmetic and aesthetic procedures, many do not know that such surgery makes up only a small fraction of what plastic surgery has to offer.

Plastic surgery has evolved into an extremely broad and exciting specialty concerned with the repair, restoration, and improvement of lost, injured, defective, or misshapen body parts.<sup>1-3</sup> A very important aspect of plastic surgery entails rebuilding bones and soft tissue after devastating accidents or diseases, including burn and trauma victims, cancer patients, and those born with congenital abnormalities. In Canada, plastic surgeons perform almost 75% of all hand surgery, which includes injuries caused by accidents and diseases of the hand such as carpal tunnel syndrome, rheumatoid arthritis, Dupuytren's contracture, and a variety of congenital deformities.<sup>1</sup> Facial defects such as cleft palate/lip and craniofacial abnormalities, and various operations on the breast such as reconstruction after breast cancer and breast reduction also fall in their domain. The reconstructive aspects of plastic surgery help patients of all ages to restore both normal form and function.<sup>1</sup>

Dr. Mansour Bendago, currently the chief of the Division of Plastic Surgery at the Rouge Valley Health System, Centenary Hospital in Toronto, says that the majority of the work of a plastic surgeon is in reconstructive surgery; it involves reconstruction following work-related and domestic accidents (including dog bites, accidents with tools, etc.), replanting and rebuilding digits and hands, facial trauma and soft tissue injuries, cancers and tissue reconstruction, vascular surgery, acute and long term burn management, and much more.

"I was first attracted to plastic surgery because of the

immense diversity of procedures," recalls Dr. Bendago. After graduating from medical school with honours in the Middle East, Dr. Bendago pursued further training in plastic surgery at the University of Saskatchewan and the University of Toronto. Within plastic surgery, he has trained in burn and reconstructive surgery, hand surgery, vascular surgery, cosmetic and aesthetic surgery, and pediatric plastic surgery. "Unlike many other specialties, there is significant room for creativity in plastic surgery; although the principles of dealing with problems may be the same, the actual management and approach differs greatly, even from surgeon to surgeon," he states.

He describes his primary motivation as a plastic surgeon is to deliver immediate patient satisfaction and results that the patient can not only feel, but also see: "the patient is the judge of my work," he states.

"I've always enjoyed meticulous work and detail – essential qualities for plastic surgery," he explains. Finally, he states that plastic surgery is an extremely interdisciplinary specialty, and plastic surgeons often work closely with general surgeons, orthopedic surgeons, and otolaryngologists, among many others.

Contrary to the "Californian" lifestyle that many believe plastic surgeons have, Dr. Bendago describes the lifestyle of a plastic surgeon to be quite demanding. Since reconstructive surgery constitutes the majority of the work of most plastic surgeons, emergencies and midnight calls are not uncommon; as such, the lifestyle is not any easier – and perhaps maybe even more demanding – than many other surgical specialties. Naturally, this varies from practice to practice, and surgeons who choose to perform more cosmetic and aesthetic procedures may have a more controllable lifestyle. Although the majority of his work involves reconstructive procedures, Dr. Bendago's current practice is roughly 20%-25% cosmetic.

Many surgeons who elect to go down the cosmetic route attend supplementary conferences and workshops to attain certification. "The amount of cosmetic surgery performed by a plastic surgeon really depends from surgeon to surgeon and is quite variable," he adds. However, he emphasizes that cosmetic procedures are definitely not all that plastic surgery involves.

The educational path of a plastic surgeon involves the completion of a minimum of five years of study and training in plastic surgery and related fields after medical school. Many may then further specialize in hand surgery, maxillofacial reconstruction, burns, microvascular surgery, cancer reconstruction, pediatric surgery, and others. A Canadian plastic surgeon is a highly-trained, qualified specialist who has passed the Royal College of Physicians and Surgeons examinations and is certified to practice plastic surgery. Although the training may be long and the lifestyle demanding, according to Dr. Bendago, it is an immensely rewarding, challenging, and gratifying field of medicine.

Plastic surgery today has evolved into an extremely broad and diverse specialty providing a combination of medical and surgical management and a highly interdisciplinary approach to problems. Additionally, it involves unifying technical skill and artistry, making it one of the most challenging, yet rewarding fields of medicine; it is for these reasons, perhaps, that it continues to be one of the most competitive residency programs for admission. So the next time you think that plastic surgeons are catering to the rich and famous or wasting valuable OR time, you may want to think again. †

#### REFERENCE LIST

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#### Author Biography

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