

# Plastic Surgery: A Timeline

by Tom Borak

The practice of plastic surgery is much older than one might expect. It is believed that nose reconstructions were performed in ancient India as early as 2,000 BCE, when amputation of the nose was an accepted form of punishment.<sup>1</sup> Surgical procedures are noted in Sanskrit texts, including *Sushruta-samhita*, which was written in approximately 600 BCE. It describes the reconstruction of the mutilated nose, using tissue from the cheek.<sup>4</sup> However, most of the modern procedures that are used today date back to the 1880s and 1890s.<sup>2</sup>

Aesthetic, or cosmetic surgery became very popular in the 16th century, during the Renaissance. This resurgence in interest paralleled the syphilis epidemic of the time. Syphilis is a sexually-transmitted disease caused by the bacterium *Treponema pallidum*.<sup>3</sup> Advanced cases of syphilis can cause disfigurement and even death. The primary role of aesthetic surgery at the time was to rebuild the noses of syphilitics, so they could become less visible in society.<sup>2</sup>

It was during this time that Italian surgeon Gasparo Tagliacozzi and French surgeon Ambroise Paré

began experimenting with the early Indian ideas, sparking a renewed interest in the use of local and distant tissue to reconstruct complex wounds, giving rise to the modern concept of plastic surgery.<sup>4</sup>

Pierre Joseph Desault, a French anatomist and surgeon, coined the



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term “plastic surgery” in 1798.<sup>2</sup> Derived from the Greek word *plastikos*, which means “fit for molding,” plastic surgery eventually became the dominant label for all featural and reconstructive surgery in the early 19th century.<sup>2</sup> The catalyst that sparked the widespread use of the term was the 1818 publication of *Rhinoplastik*, a monograph on the recon-

struction of the nose by Karl Ferdinand von Gräefe. A superintendent of German military hospitals during the Napoleonic Wars (1800–15), and professor of surgery and director of the surgical clinic at the University of Berlin (1810–40),<sup>5</sup> Gräefe’s work revived Tagliacozzi’s “Italian Method,” which used a graft from the upper arm, rather than the forehead.

Prior to this publication, and in the immediate aftermath, plastic surgery was generally understood to be surgery on the nose. However, after publication, there was a surge in the number of “plasties,” as new procedures were all tagged with the suffix. In an attempt to curtail the number of uniquely-named procedures, Eduard Zeis, who is credited with authoring the first textbook on plastic surgery, disavowed the continuous labeling of specific procedures after the model of “rhinoplasty” He adopted Desault’s term, plastic surgery, to encompass *all* reconstructive procedures to the face and body.<sup>2</sup>

Despite the surgical innovations and writings of these pioneers in plastic surgery, Johann Friedrich Dieffenbach (1792-1847) is widely

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cited as the “father of plastic surgery.”<sup>2</sup> It was Dieffenbach who used the term “beauty surgery” (today referred to as cosmetic surgery) to differentiate purely aesthetic procedures from “real” reconstructive surgery, which led the movement toward a definitive distinction between the two.<sup>2</sup>

Significant growth and innovation in the field took place during and following the first World War, as the need for reconstructions ballooned. Burn and blast victims, along with those who suffered other disfiguring injuries in the line of battle, presented new challenges to surgeons in the emerging field of reconstructive surgery.

One of the premier surgeons during this time was Sir Harold Delf Gillies, a New Zealander who is famous for his innovative work in the practice of skin grafting and facial reconstructions from gunshot, blast and burn wounds during World War I.<sup>6</sup> Nearly 100 years after Dieffenbach’s contributions revolutionized the field, Gillies is credited as being the “father of modern plastic surgery” for his innovative methods. In a groundbreaking procedure, Gillies reconstructed the

face of Walter Yeo, a British sailor, who sustained massive facial burns, as well as the loss of his upper and lower eye lids during the Battle of Jutland in 1916. The relative success of this surgery, and the growing need for similar operations prompted the opening of a new hospital devoted exclusively

qualified and very-well advertised surgeons, who adopted the term, plastic surgery, without any true training in surgery and without any other surgical ability than to remove a few folds of skin or a small hump of the nose.”<sup>2</sup> Because of this, “beauty” surgeons were often deemed quacks by their peers.

While the term quack may not be as prevalent today as it once was, the practice of plastic surgery continues to exist in shades of gray. For example, any physician, whether acknowledged as a specialist by his peers or not, can undertake aesthetic surgery.<sup>2</sup> More and more non-board certified physicians perform aesthetic procedures every day, including dentists performing hair transplants.<sup>2</sup>

As physicians’ ability to eliminate pain and reduce the risk of infection grew, the practice of plastic surgery blossomed. The oldest association for aesthetic surgery in the United States is the American Association of Oral Surgeons, which was founded in 1921. It became the American Association of Plastic Surgeons in 1942, and today is known as the American Society of Plastic and Reconstructive



SIR HAROLD DELF GILLIES

to facial repairs. (Gillies is also credited with pioneering sex reassignment surgery in the mid-1940s.)<sup>6</sup>

As the practice expanded, a rift grew between reconstructive surgeons, who saw aesthetic surgery as an incidental part of their practice,<sup>2</sup> and cosmetic surgeons, who were accused by the establishment, including Gillies himself, of being, “poorly

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WALTER YEO

Surgeons, comprising 97 percent of all plastic surgeons certified by the American Board of Plastic Surgery. The board itself was organized in 1937, and admitted to the American Board of Surgery in 1938.

Plastic surgery is a rapidly-growing practice in the United States. In 1981, there were 296,000 reported procedures performed. By 1984, that number had grown to 477,700.<sup>2</sup> In 1996, the American Academy of Facial Plastic and Reconstructive Surgery developed a survey, which revealed that 825,000 plastic and reconstructive procedures had been performed on the face alone in 1995, a nine percent increase from 1993. According to the survey, 65 percent of the procedures performed in 1994 were done on people with a family income of less

than \$50,000 per year, indicating that financial factors are not a significant deterrent in the decision to aesthetically change one's body.

In 1997, the total number of all surgical and nonsurgical cosmetic procedures performed in the United States totaled 2,099,173. By 2007, that number had morphed to 11,701,031. These numbers represent a 162 percent increase in the total number of cosmetic procedures. Surgical procedures increased by nearly 80 percent, while nonsurgical procedures increased by more than 233 percent. Nearly 92 percent of all procedures were performed on women. In total, Americans spent nearly \$12 billion dollars on cosmetic procedures in 2008.<sup>7</sup>

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