

An Introduction to Plastic Surgery

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An Introduction to Plastic Surgery

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Plastic surgery is an enormously varied speciality. Whilst encompassing a wide range of aesthetic surgeries it predominantly deals with reconstructing and restoring function in all areas of the body. The cosmetic potential of the speciality understandably draws attention from and is better publicised by the media. However the pivotal role of a plastic surgeon lies in the former aspect of the speciality, re-establishing function in reconstructive operations.

The many sub-specialities within plastic surgery span a huge range, both anatomically and in terms of skills required. They include breast reconstruction, cleft lip and palate surgery, hand surgery, lower limb trauma, burns, reconstruction following head and neck cancer surgery, laser surgery, cutaneous malignancies and also microsurgery. Specialising in microvascular surgery enables surgeons to repair nerves and tendons following trauma to maintain function. Oncoplastics is yet a further subspeciality, in which breast reconstruction is specifically performed following mastectomy in breast cancer patients. This is just one example of the extensive interaction between plastic surgery and other specialities. Others include general surgery, orthopaedics, dermatology, neurosurgery, maxillofacial surgery and gynaecology. All these specialties rely on plastic surgeons for reconstructive advice in any area of the body. In addition plastic surgeons that specialise in burns liaise with burns anaesthetists in highly specialized intensive therapy units.

Life as a Plastic Surgeon

Plastic surgeons undertake such varied schedules across such a range of different areas that there is usually no typically "average day". However, duties of an average working week will include outpatient clinics, theatre, on-call rota work as well as dealing with on-call referrals. Each week there will be approximately 3-4 operating sessions involving around 30 patients, but this can change depending on the specific caseload for that week. The plastic surgeon will have 1 to 2 four-hour outpatient

clinics each week, and they will also be responsible for monitoring patients on the wards. They will generally speaking work for approximately 10 hours a day but this can vary depending on their stage of training and the operation that is being performed.

Approximately 50% of referrals to plastic surgery come from primary care, 30% from emergency departments and the remaining 20% from other surgical specialties. There is a great deal of on-call demand and subsequently plastic surgeons will frequently find themselves working out-of-hours. This often involves dealing with emergency cases such as burns, facial trauma and so forth. The operation time varies significantly ranging from 20 min in a percutaneous needle fasciotomy for Dupuytren's contracture to 10 hour operations in immediate bilateral DIEP (Deep Inferior Epigastric Perforator) flap in breast reconstruction.

However the role of plastic surgeon may extend far beyond the hospital setting. Due to their expertise in restoring function following trauma and burns their presence is highly valued following disastrous events worldwide. In addition a considerable number of plastic surgeons participate in a charity organisation called "operation smile". During which they voluntarily travel to developing countries and repair cleft lips and palates of children. As a consequence the opportunity to travel abroad and improve and pass on clinical knowledge and skills has become an integral part of the speciality's on-going development.

Plastic surgery can be a demanding career, in which the ability to remain calm in stressful situations must be coupled with a meticulous nature that pays very close attention to aesthetic detail. Equally a high degree of manual dexterity is paramount for success. The majority of plastic surgeons boast impressive achievements in academic research alongside the required motor skills, a fact that reflects both the competitive nature of the speciality and its place at the forefront of cutting edge research.

Outside of the operating theatre a Plastic surgeon's duties continue and involve taking the patient's mental state into consideration. Some patients are addicted to aesthetic surgery and will never be satisfied with their looks. In this case it is the surgeon's responsibility to identify those at risk.

In the UK plastic surgeons can choose to either focus solely on private work, dedicate their time to NHS patients or a balance of the two. The ratio of private to NHS work depends predominantly on the surgeon's preference and the number of hours that they wish to work.

Training

Applying for subspecialty training occurs through a very competitive national selection process held twice a year. In 2011, the competition ratio for ST3 posts in Plastic Surgery was 15:1, which is higher than the average competition ratio for other surgical specialties.

Furthermore, in 2010, there were only 9 posts available at ST3 level. One can expect to do service SHO posts, clinical fellow posts or research prior to applying for an ST3 post. Only few progress directly from CT2 to ST3.

Posts are found throughout the country, with 50 NHS plastic surgery units and centres in the UK. Even though more females are being attracted to plastics, currently 86% of this speciality is dominated by male surgeons.

According to the British Association of Plastic Reconstructive and Aesthetic Surgeons (BAPRAS), for every 100,000 people one consultant plastic surgeon is needed. In 2010, a survey found that the number of consultants for plastic surgery represent only 5% of England's entire consultant surgical workforce. It is expected that the number of posts for Consultant Plastic Surgeons will therefore be on the rise, and there will therefore be a similar rise in training posts.

Facts and figures summary:

Competition ratios	2010	15:1
	2011	8:1
	2012	16.6:1
Available posts 2013 (ST3) ¹	26 NTN posts, 12 LAT posts	
Deanery with most places available (2013)	Scotland (7 NTNS, 1 LAT)	
Number of Plastic surgery units in NHS	50	
Male to female ratio	6:1	
Speciality training duration	6 years	
Mean age to get a full time consultancy job	40	
Salary (NHS)	£74,504 to £100,446	

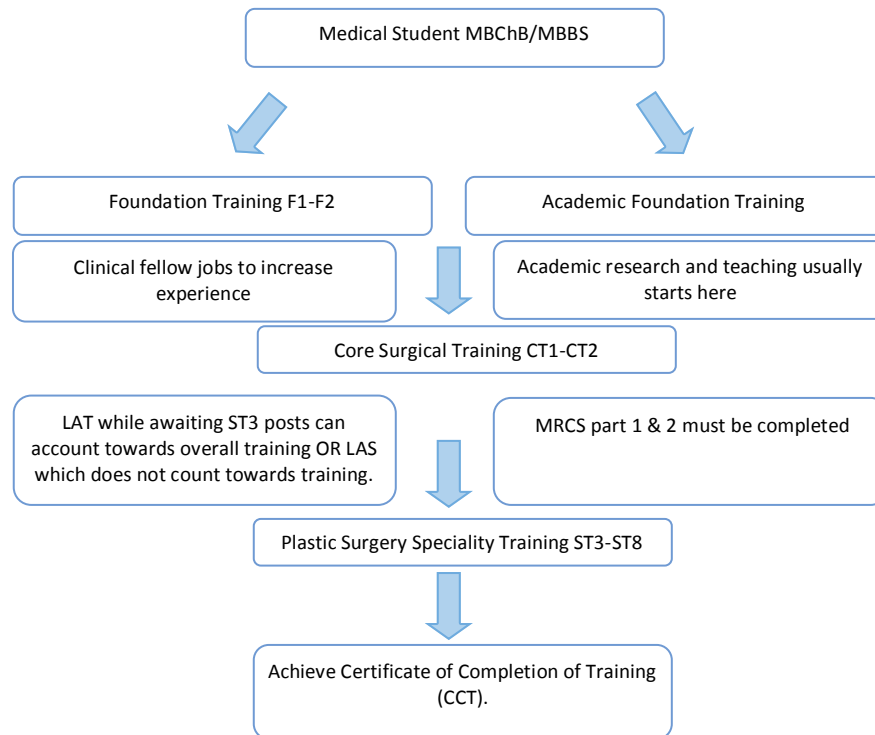
The Future

Current research topics consist of exploring areas which currently pose challenges in achieving the optimal patient outcome. Among the most significant are wound repair, scarring and nerve healing. Other advances which will be implemented in the near future range from gene therapy for treatment of diabetic wounds to the development of synthetic skin for those lacking sufficient skin following major trauma such as burns or diseases.

Furthermore the use of stem cell therapy is being

scrutinised due to its restorative properties. For instance, stem cells derived from adult adipose tissues can be differentiated into bone, cartilage or fat depending on patients' requirements.

Tissue engineering and microsurgery which currently account for a considerable portion of reconstructive surgery are being constantly developed. With the first full face transplantation being completed in Spain in 2010, and numerous successful hand transplantations the future looks promising.



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