

# Careers in Surgery

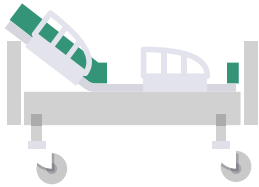


Royal College  
of Surgeons

ADVANCING SURGICAL CARE

# What do surgeons do?

Surgery is a challenging, varied and rewarding career. It combines intellectual challenges with an active, hands-on approach to treating disease. Performing an operation and seeing a patient's life improved almost immediately is incredibly satisfying and a great privilege for many surgeons. Surgery isn't confined to the operating theatre though and surgeons divide their time between several activities.



## Ward Rounds

Daily visits to check on the condition of patients under their care, liaise with nursing staff and colleagues and teach foundation doctors and trainees.



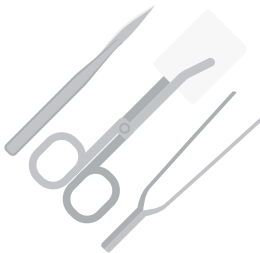
## Outpatient clinics

Meeting with patients, family members and/or carers to discuss treatment options and explain procedures. Surgeons will also undertake tests and arrange x-rays and scans to decide if an operation is needed or prepare a patient for the procedure. Surgeons meet with patients again after an operation, to monitor and support their recovery.



## Administration

Paperwork is necessary and helps to make sure patients get the right treatment at the right time. Surgeons spend some of their time writing to patients, colleagues and GPs, writing up notes and keeping accurate records. They may also be involved in arranging rotas and filling in paperwork to support trainee surgeons.



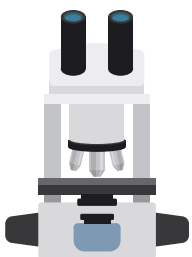
## Operating

Working on pre-booked, elective operations or emergency cases. The operating team includes other surgeons, anaesthetists, technicians, nurses and administrators all working together to ensure the best possible care and outcome for patients.



## Supporting work

Surgeons may take on additional or voluntary roles to support the teaching and development of surgery, for example, teaching at the Royal College of Surgeons, working in admissions or teaching at medical schools.

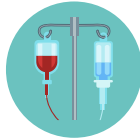


## Research

Surgeons will undertake many forms of research throughout their career; this may either be formal research, such as undertaking a PhD or clinical trials, or more informal such as undertaking departmental audits or individual research to present at a specialist surgical society meeting.

# What kind of surgeon could you be?

## GENERAL SURGERY



This is a wide-ranging specialty that incorporates many sub-specialties. Most emergency general surgery patients suffer from conditions of the abdomen.

## CARDIOTHORACICS



This specialty deals with conditions of the heart and lungs. It can involve complex operations but can be rewarding as you quickly see a patient's life saved.

## NEUROSURGERY



Neurosurgeons focus on the brain, central nervous system and spinal conditions. It is one of the most intricate surgical specialties, often with high stakes.

## OTOLARYNGOLOGY (ENT)



This specialty deals with conditions of the ear, nose and throat. Many ENT patients will not need surgery, and the ENT must assess this need.

## PAEDIATRICS



Paediatric surgeons work with children and their parents and deal with all aspects of surgery from premature babies to teenagers.

## PLASTIC SURGERY



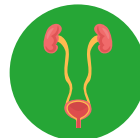
Plastic surgeons have no anatomically defined region and work with other surgical specialties to repair and reconstruct various parts of the body.

## TRAUMA & ORTHOPAEDICS



This specialty is concerned with the bones, joints and their associated soft tissues. There is a high demand for T&O surgeons across the country.

## UROLOGY



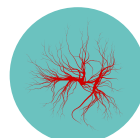
Urologists treat conditions of the urogenital system including the kidneys, bladder and prostate. They also deal with men's sexual and reproductive health.

## ORAL & MAXILLOFACIAL



OMFS surgeons treat conditions in the face and mouth. Surgeons in this specialty are required to have both a medical and dental degree.

## VASCULAR



Vascular surgeons deal with the veins and arteries, working across the whole body and alongside surgeons from various other specialties.

# How to become a surgeon

Medical School	
<b>Duration</b>	4 – 6 years
<b>Content</b>	Basic knowledge required for all medical specialties.
<b>Application</b>	UCAS
<b>Entry requirements</b>	Grade C or above in English and Maths at GCSE. At least three A Levels, normally at grades AAB, including chemistry with at least one other science or maths. UKCAT (UK Clinical Aptitude Test) or BMAT (BioMedical Admissions Test). Graduate Entry is possible at some medical schools.
Foundation training	
<b>Duration</b>	2 years
<b>Content</b>	A paid training job in a hospital or other medical setting. You will cover a range of medical specialties including surgery.
<b>Application</b>	Applications are sent via the Foundation Programme. Medical students are “matched” to places based on their application.
<b>Entry requirements</b>	Successful completion of approved medical degree.
Core training	
<b>Duration</b>	2 years
<b>Content</b>	A paid training job in a hospital setting, covering a range of surgical specialties. It may be themed towards one specific specialty.
<b>Application</b>	Applications go to deaneries via forms and an interview/assessment process.
<b>Entry requirements</b>	Completed foundation training competencies and GMC registration.
Specialty training	
<b>Duration</b>	Approximately 6 years
<b>Content</b>	A paid training job in a hospital setting that is focused solely on the specialty you have chosen.
<b>Application</b>	Applications go to deaneries via forms, interview/assessment process.
<b>Entry requirements</b>	Completed core training competencies, GMC registration and MRCS examination (Member of the Royal College of Surgeons).
Senior medical appointment	
Such as a consultant, SAS doctor or a fellowship for further, more specialised training.	

## Medical student

All surgeons need to obtain a medical degree before they can start their training. In the UK, medical degrees are between four and six years in duration. The standard medical degree takes five years and teaches you the basic knowledge and skills you need to begin a career in any of the medical specialties.

## Foundation trainee

All doctors who want to train or work in the UK need to complete the Foundation Programme. This is a two-year, paid training job made up of a number of different three-month rotations in various areas of medicine and surgery. It is designed to help you learn a bit more about working as a doctor and what kind of doctor you want to be.

## Core surgical trainee

If you want to become a surgeon, then the next step is to complete core surgical training. This is a two-year, paid training post made up of a number of surgical jobs that aim to teach junior doctors the basics of becoming a surgeon. Core surgical trainees work in hospitals in a number of surgical sub-specialties and are taught by specialty trainees and consultant surgeons.

## Speciality trainee

Once you have completed core surgical training, if you wish to become a consultant surgeon you must decide which kind of surgeon you want to be and undertake speciality training. Speciality training is a five to seven-year programme in one surgical speciality. During this time specialty trainees teach core and foundation trainees and are taught by senior surgeons.

## Consultant surgeon

When you have completed your surgical training you become a consultant surgeon. Consultant surgeons are in charge of the surgical team and are responsible for teaching trainees along with a number of colleagues. Consultant surgeons may also teach medical students or undertake research, work for private hospitals or undertake a number of other roles such as examiners or advisors.

## SAS surgeon

If you have entered surgical training from another country or medical field, or have decided to leave the traditional training route, you may consider becoming an SAS surgeon. Responsibilities and training among SAS surgeons vary greatly. Some are engaged in major complex surgery while others provide minor diagnostic procedures and outpatient services. The majority of SAS surgeons carry out elective and routine surgery; their contribution being important to the provision of many surgical services and achieving targets.

# Applying to medical school

## What is a medical degree?

To become a doctor, and then a surgeon, you must complete a medical degree at an approved medical school. There are 33 medical schools in the UK, though not all of these offer medicine at undergraduate level. Some medical degrees are only open to those with an undergraduate degree in a related subject. No two medical schools are identical; each has developed their own curriculum and style of teaching. No matter which medical school you attend, all provide medical degrees that will qualify you upon graduation as a 'doctor'. This qualification will then enable you to continue training in your chosen professional field, whether it be as a surgeon, General Practitioner, psychiatrist, or any other medical specialty.

When you graduate from medical school you will be awarded a Bachelor of Medicine, Bachelor of Surgery degree. There are several abbreviations for this title depending upon which medical school you graduate from - all of these are equivalent. During medical school some students may have completed an 'Intercalated' Bachelor of Sciences degree and will graduate medical school with a BSc MBBS.

## How are medical degrees taught?

There are three main ways that medical degrees are taught in the UK. Which you choose will depend on your own style – there is no best option, merely the one that fits your own learning preferences. All of the courses will teach the same information, just in different ways.

### 1. Traditional courses

Medical schools that teach you the theory of medicine prior to placing you in a clinical setting are referred to as traditional courses. The aim of this style of teaching is to provide you with a basic scientific foundation upon which you will subsequently build your clinical knowledge. You can expect to spend the first two years of your degree in lectures and seminars that will cover lots of different subjects such as anatomy. You will spend the remaining time undertaking clinical placements in areas such as medicine, surgery, obstetrics and paediatrics, being taught by junior doctors, registrars and consultants in small groups at a local teaching hospital.

### 2. Problem based learning

PBL is a much more integrated approach to clinical experience. It may be that you spend the first year studying the basic general principles of preclinical subjects and then go on to spend the next two years studying pre-clinical and clinical subjects. Your final two years will be predominantly clinical teaching aimed at consolidating your knowledge, and this may be when you would take your electives and sit exams. Each medical school using PBL's will use a slightly different model. PBL's provide you with early patient interaction in a clinical setting which should help you to develop better communication skills and strengthen your clinical inference skills. If you are someone who enjoys working independently and doing lots of research a PBL's may be better for you.

### 3. Integrated courses

Integrated or Systems based courses are run at the majority of UK medical schools. They sit as a compromise between a traditional style course and a PBL course. Teaching is based on body systems and supplemented by other lectures on subjects such as pharmacology etc.

## Intercalating

Some medical students spend one or two additional years at medical school (lengthening a five-year course to six or seven years) studying for an intercalated degree. This is an extra degree awarded in addition to a medical degree usually in a related topic, providing an opportunity to gain an extra qualification while improving your research and laboratory skills.

At the end of this intercalated period students are awarded an additional bachelor's degree. Usually students complete an intercalated bachelor's degree the year after completing the second or third year of their medical course. Normally you do not need to decide if you want to do an intercalated BSc until you are at medical school but at a few universities it is compulsory so remember to check directly before applying.

# How to get into medical school

## Grades

Medicine is a popular and competitive subject; places are unlikely to be available through clearing. Most universities require a minimum of three A2s (predicted or obtained) in grades A\*/A.

Chemistry is usually essential along with at least one other science subject or mathematics. Some universities prefer biology and some make it an essential requirement. A handful of medical schools may accept A2 qualifications in subjects such as modern languages or a humanities subject. You should try to find out the exact requirements of your preferred schools when choosing you're A Levels or before making your application. You will also need good AS Level results (usually three AS A\*/A grades) and good GCSE results including A to C grades in Mathematics, English and Sciences (individually or a double science award).

## Work and voluntary experience

Most medical schools will expect that you have some relevant work experience. If you are able to organise a placement at your local hospital or shadow a medical professional, great! If you do not know anyone working in the sector, it may be hard to make contact and get that experience.

The most important thing is to persevere in your attempts to find experience in the field – you may receive lots of refusals (when you even receive responses) but you only need one positive response to get the experience that will help build your personal statement. Start looking early on so that you have time to send out more requests and consider broadening your scope: not just looking to hospitals, but also considering GP surgeries, nursing homes, and hospices.

Another way to demonstrate your enthusiasm for the medical profession would be to get involved with a voluntary organisation such as the Red Cross or St John's Ambulance – they both have schemes aimed at young people and they might have opportunities in your local area.

Work and voluntary experience is not just important for your medical school applications, it can be vital in giving you the chance to make sure you are fully committed to a medical career before even applying to university.

## Admissions tests

An entry requirement for all medical schools is the admissions test. There are four different tests available. Most medical schools use the UK Clinical Aptitude Test (UKCAT) and the BioMedical Admissions Test (BMAT). There is also the Graduate Medical School Admissions Test (GAMSAT) and the Situational Judgement Test for Admission to Clinical Education (SJTace). Your test scores will be sent to the medical schools to which you have applied, alongside your UCAS personal statement. Each school will set a pass mark – if your score is below this, it is highly unlikely you will be invited to interview, unless there are extenuating circumstances. You cannot resit admission tests – you will have to wait until the following year to reapply to medical school and sit the exam again.

It is important to ensure you are fully ready for the test before taking it. You cannot 'revise' for the UKCAT or BMAT as they are testing aptitude rather than knowledge, but you can certainly prepare. Preparation guides may be available from your local library or school/college careers service, or you may be able to find second-hand copies online. There are also online resources containing practice questions and guidance from current medical students on how best to prepare for the tests.

There is a fee for taking either test but bursaries are available. It is most important that you ensure you take the right test for the medical schools you are applying to – this may influence which medical schools you apply to, or you may choose to take both tests. Further details about the tests, fees and what to expect can be found on the UKCAT and BMAT websites.

## Personal statement

You can apply to up to four medical schools through UCAS, listing the schools in order of preference, as well as choosing a fifth 'back-up' place in another related subject.

Along with your test scores, your UCAS personal statement will be what medical schools use to decide whether to invite you to interview. It is your chance to sell yourself to the medical school, make a lasting impression and give yourself a head start over other applicants. You should give the personal statement as much care and attention as possible and aim to include:

- Maximum 4,000 characters
- Why you want to study medicine
- What makes you suitable for a career in medicine
- Your skills, experiences and extra-curricular activities
- What makes you different? e.g. work experience, charity work, sporting achievements

Remember once it has been submitted your statement cannot be amended. Make sure you check several times that your spelling, grammar and punctuation are correct. It may be helpful to ask a relative, friend, careers advisor or teacher to read through your statement as well. Do not to copy someone else's statement and do not lie, you will be caught out if you do! For more information on personal statements, visit [www.ucas.com](http://www.ucas.com)



## The interview

Many medical school interviews will last around 45 minutes, although some might take the form of several short interviews (Multiple Mini Interviews – MMIs). Traditional panel interviews will be conducted by a panel of 2 - 3 people, which might include medical school staff, doctors/associated health professionals or current medical students. MMIs tend to take the format of a number (usually around 8) of short interview/scenario stations, whereby your aptitude for medicine is tested. Similar to the entrance exams, you cannot revise for MMIs, but you can do research about the format, what to expect, and how to prepare.

Some medical schools may expect you just to turn up for interview and then go home; others will invite you to an interview as part of an open day where you will have the opportunity to tour the facilities and speak to current students. Be sure to check the arrangements for the day with the medical school beforehand.

### Prepare for your interview:

- Do your research
- Visit the Medical School in advance if possible or read through their website and/or prospectus
- Use online resources
- Practise your interview technique using your school or college careers service or a family member or friend
- Prepare answers to common interview questions
- Keep on top of current affairs and developments by reading journals and newspapers
- Familiarise yourself with the contents of your UCAS personal statement
- Remember that if you have been offered an interview it means the medical school is already impressed by what they have read about you and this is your opportunity to persuade them that you are committed and suited to studying medicine at their university.

# Good luck!

A career in surgery can be incredibly rewarding. It is open to everyone with the determination, enthusiasm and aptitude to succeed, regardless of background, ethnicity or gender. There isn't one specific kind of person best suited to surgery and the surgeons of tomorrow will probably look very different from the surgeons of today. We hope you're one of them!

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