So you want to be a surgeon?

What does a surgeon do?

When you hear about surgery and surgeons do you think of TV dramas like Holby City?

In reality surgery is not always so glamorous or dramatic – but is definitely as exciting. Surgery is challenging, varied, and rewarding but also entails hard work and dedication. Many surgeons say they enjoy the intellectual challenges of their job and its positive, active approach to the treatment of disease, which is almost unique in medicine. They say that to perform an operation and see a patient’s life improve almost immediately is a privilege and enormously satisfying.

But a surgeon’s life isn’t confined to the operating theatre. Surgeons divide their time between several activities, including:

- Ward rounds: daily visits to check on the condition patients under their care, liaise with nursing staff and colleagues and teach junior doctors.
- 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.
- Outpatient clinics: meeting with patients and 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: as with every job, there’s paperwork to be done. 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.
- Supporting work: surgeons may take on 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 I be?

As you would expect, surgery is diverse and there may be several specialities which appeal to you at various stages of your Medical training. After completing basic surgical training, you will choose to specialise in one of the ten surgical specialities. Once you have completed your training you will qualify as a Consultant Surgeon specialising in one of the following:

1. **General surgery**
   This is a wide-ranging speciality and incorporates many different sub-specialties such as breast surgery, laparoscopic (keyhole), colorectal and upper and lower gastrointestinal surgery (surgery of the abdomen).

2. **Cardiothoracic surgery**
   This speciality deals with conditions of the heart and lungs.

3. **Neurosurgery**
   This focuses on the brain, central nervous system and spinal conditions.

4. **Otorhinolaryngology (also known as ‘ENT’ – ear, nose and throat surgery)**
   A varied specialty focusing on conditions of the ear, nose and throat.

5. **Paediatric surgery**
   Paediatric surgery involves working with children and their parents.

6. **Plastic surgery**
   One of the few specialties with no anatomically defined region; Plastic surgeons work closely with other surgical specialities repairing large wounds or reconstructing parts of the body. It is much more than just cosmetic surgery.

7. **Trauma and orthopaedic surgery**
   This speciality is concerned with bones and joints.

8. **Urology**
   Urology involves treating conditions in the genitourinary system; including the kidneys, bladder and prostate.

9. **Oral and maxillofacial surgery**
   This specialty focuses on the face and mouth.

10. **Vascular surgery**
    Vascular surgeons deal with veins and arteries.

In addition to these 10 specialties you can also choose to follow a career in academic surgery. This involves qualifying and working in a surgical specialty but also undertaking surgical research and teaching at a medical school.
Training Pathway: How do I become a surgeon?

Training to become a surgeon takes time and is competitive - not everyone who starts the process will finish. Although there are set exams that need to be passed, there are alternative paths you can consider at different stages in your career. This table shows the most common training route. There are a lot of alternative paths you can consider at different stages in your career, but this is the standard training route.

<table>
<thead>
<tr>
<th>Medical School</th>
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<tbody>
<tr>
<td><strong>Duration</strong></td>
<td>5 - 6 years</td>
</tr>
<tr>
<td><strong>Content</strong></td>
<td>Basic knowledge required for all medical specialties.</td>
</tr>
<tr>
<td><strong>Application method</strong></td>
<td>UCAS</td>
</tr>
<tr>
<td><strong>Normal entry requirements</strong></td>
<td>GCSEs at grade C+ in your A level subjects, English and Maths. At least three A Levels: normally at grades AAB, normally including chemistry with at least one other science or maths. UKCAT (UK Clinical Aptitude Test) or BMAT (BioMedical Admissions Test)</td>
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<tr>
<th>Foundation Training</th>
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<tbody>
<tr>
<td><strong>Duration</strong></td>
<td>2 years</td>
</tr>
<tr>
<td><strong>Content</strong></td>
<td>A paid training job in a hospital (or other medical) setting Covers arrange of medical specialties, including surgery.</td>
</tr>
<tr>
<td><strong>Application method</strong></td>
<td>Applications via the Foundation Programme. Medical students are “matched” to places based on application form.</td>
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<tr>
<td><strong>Normal entry requirements</strong></td>
<td>Successful completion of approved medical degree</td>
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<tr>
<th>Core Surgical Training</th>
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<tbody>
<tr>
<td><strong>Duration</strong></td>
<td>2 years</td>
</tr>
<tr>
<td><strong>Content</strong></td>
<td>A paid training job in a hospital setting A range of surgical specialties. May be “themed” towards one particular specialty.</td>
</tr>
<tr>
<td><strong>Application method</strong></td>
<td>Applications to deaneries, via forms and interview /assessment etc.</td>
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<tr>
<td><strong>Normal entry requirements</strong></td>
<td>Complete foundation competencies GMC registration</td>
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<tr>
<th>Specialty Training</th>
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<tbody>
<tr>
<td><strong>Duration</strong></td>
<td>Approximately 6 years</td>
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<tr>
<td><strong>Content</strong></td>
<td>A paid training job in a hospital setting Training on one surgical specialty at the end of which you can apply for a senior appointment</td>
</tr>
<tr>
<td><strong>Application method</strong></td>
<td>Applications to deaneries, via forms and interview /assessment etc.</td>
</tr>
<tr>
<td><strong>Normal entry requirements</strong></td>
<td>Complete core competencies GMC registration MRCS examination</td>
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<tr>
<th>Senior medical appointment</th>
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<tr>
<td><strong>Such as a consultant or a fellowship for further, more specialised training.</strong></td>
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Medical student: all surgeons need to obtain a medical degree before they can train to be a surgeon. 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 start to train in a number of different medical specialities.

Foundation trainee: all doctors who want to train or work in the UK need to complete the Foundation Programme. The Foundation Programme is a training job—a two-year programme made up of a number of different three-month jobs (rotations) in different 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 the first step is to complete core surgical training. Core surgical training is a two-year programme made up of a number of surgical jobs that aims 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 speciality 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 speciality trainees teach core and foundation trainees and are taught by senior surgeons.

Consultant surgeon: once you have completed surgical training you become a consultant surgeon. Consultant surgeons are in charge of the surgical team and with a number of colleagues are responsible for teaching trainees. 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.
What is a medical degree?

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, GP or psychiatrist.

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. These include: MB ChB, MB BS, MB BCh, BM BS, BM, MB BChir and MB BCh BAO. All of these titles 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 3 main ways that medical degrees are taught in the UK:

» Traditional courses
» Problem-based learning
» Integrated courses

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 subjects such as anatomy, physiology, ethics, psychology and biochemistry. This may take the form of distinct modules focusing on specific areas of the body such as the heart and lungs. 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.

Problem-based learning courses (PBL’s)

PBLs is a much more integrated approach to clinical experience from the beginning. For example, it may be that you spend the first year studying the basic general principles of pre-clinical subjects and then go on to spend the next two years studying pre-clinical and clinical subjects. For example, you might spend six weeks studying anatomy and physiology of the heart followed by six weeks studying clinical cardiology. 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 PBLC’s will use a slightly different model. PBLC’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 PBLC may be better for you.
**Integrated courses**
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 year/two year period students are awarded a degree, which is variously styled as BSc, BA, MSc, BMSc (Hons), BMedSci(Hons), MA, MPH, or MClinEd depending on the university, level of award and subject studied. 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.

**Electives**
Most medical schools in the UK will offer their students the opportunity to undertake an elective. An elective is a set period of time, typically between six and twelve weeks in length, where a medical student can study away from their home medical school – this can be somewhere else in the UK or overseas. The elective is an opportunity for developing your skills, exploring a particular area of medicine or understanding how healthcare systems outside the NHS operate. It is also a good opportunity for you to do some travelling and to sample other cultures as it may be difficult to take time out once you have entered into the foundation training programme.
**How do I get into medical school?**

**Grades:** Medicine remains one of the most popular and competitive degree subjects. Before even considering applying to study medicine you will need to be on track with your studies and to have/be predicted the required grades – places for medicine 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. Some subjects such as general studies or arts will not be accepted. You should try to find out the exact requirements of your preferred schools when choosing your 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).

**Admissions tests:** Anyone applying to study at a medical school in the UK will have to take an admissions test. At present, most medical schools use the UK Clinical Aptitude Test (UKCAT) and the BioMedical Admissions Test (BMAT). Your test scores will be sent to those medical schools to which you have applied alongside your UCAS personal statement. Each school will calculate the average score of their applicants and use this score as a benchmark – if your score is below average it is highly unlikely you will be invited to interview, unless there are extenuating circumstances. You cannot re-sit 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 cheap 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.

**UKCAT:** UKCAT is part of the selection procedure for the majority of the medical schools in the UK. The UKCAT test assesses a range of mental abilities, attitudes and professional behaviours that medical schools consider important for healthcare professionals. These include verbal reasoning, quantitative reasoning, abstract reasoning, decision analysis and situational judgement. There is no curriculum content as the test examines innate skills. Each test is multiple-choice and timed. Tests take place in local centres (these are where driving theory tests take place) and there is a window – usually from July to October each year – during which you can choose to sit the test at any time.
There is a fee for taking the test but bursaries are available. Further details about the test, fees and what to expect can be found on the UKCAT website [http://www.ukcat.ac.uk/](http://www.ukcat.ac.uk/).

**BMAT**: The BMAT is a subject-specific admissions test, currently used at four medical schools: the University of Cambridge, the University of Oxford, University College London and Imperial College London. The test takes place on the same day nationwide, usually during the first week of November, and has to be sat at an authorised exam centre.

The BMAT is a two-hour pen-and-paper test divided into three sections:

1. **Aptitude and skills** - tests your generic skills in problem solving, understanding arguments, data analysis and inference.
2. **Scientific knowledge and applications** - tests your ability to apply scientific knowledge from school science and maths up to and including the level of National Curriculum Key Stage 4.
3. **Writing task** - tests your ability to select, develop and organise ideas and to communicate them in writing.

There is a fee for taking the test but bursaries are available. Further details can be found at the BMAT website [http://www.admissiontestingservice.org/our-services/medicine-and-healthcare/bmat/about-bmat/](http://www.admissiontestingservice.org/our-services/medicine-and-healthcare/bmat/about-bmat/).

**UCAS 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.

The UCAS form is designed to provide a comprehensive summary of your achievements and ambitions. The statement it is limited to a maximum of 4,000 characters or 47 lines of text (whichever you reach first) so it is important to make the content as concise as possible. Your statement should include your reasons for wanting to study medicine and what makes you suitable for a career in medicine, drawing upon your skills, experiences and extracurricular activities. It would be sensible to draft your statement in a separate Word document and then upload it when you are happy with the content. 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.

It is important to ensure your statement reflects your individuality. Make sure there is a good balance between academic achievement and extracurricular activities. Think about what makes you
different from other candidates, e.g. work experience, travel, charity work, sporting achievements, musicality, prizes or hobbies, and be sure to expand upon these in the statement. Do not to copy someone else’s statement and do not lie, you will be caught out if you do! Further information about how to draft your personal statement can be found on the UCAS website http://www.ucas.com/

The Interview: Most medical school interviews will last around 45 minutes, although some might take the form of several short interviews. Usually the interview will be conducted by a panel of 2 - 3 people, which might include medical school staff, doctors/associated health professionals or current medical students. 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.

Be sure to prepare yourself for the 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 and 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.

Practice questions

There are some types of interview question that are frequently used by medical schools. This is not an exhaustive list but has been designed to give you an idea of common themes. It is important to think about how you would answer these questions, but you should not write answers and learn them off by heart! At the end of the interview you may be asked if you have any. This is a great opportunity to ask about anything that hasn’t been covered and focus on areas where you would like more information or clarity. Prepare questions in advance; this will show your enthusiasm and that you are genuinely interested in that medical school.

Why do you want to be a doctor?

You are very likely to be asked this. Be honest in your response and consider the following points: You want to study medicine for yourself rather than for someone else, talk about your attributes that would make you a good doctor, and if you want to “help people” explain why you want to do this in medicine particularly.

What do you think makes a good team?

Think about successful teams you have been a member of and how they differ from unsuccessful teams. Try to include practical examples to illustrate your point.
**Do you read any medical publications?**
You are not expected to be reading high end medical journals. Look at things like student BMJ.

**Tell me about any medical advances and issues you have heard about recently.**
This question can be quite daunting so good preparation is essential; read a lot!

**What makes a good doctor?**
Your answer should be specific in relation to your own characteristics as well as general characteristics associated with being a good doctor in general. You might wish to consider the following points:

- Good communication skills
- Compassion
- Flexible and being able to work under pressure
- Ability to adapt knowledge to find a solution to a problem

**Which quality do you think is the most important in a doctor?**
There really is no right or wrong answer but you must justify your opinion for example: Adapting my application of knowledge because no two patients are exactly the same.

**What is the difference between primary care and secondary care?**
Primary care is healthcare advice and treatment provided close to home by a doctors who acts as a first point of consultation for all patients - this service is supplied by General Practitioners (GPs) who make up the overwhelming majority of doctors in the UK.
Secondary care is health care provided in a hospital for life-threatening emergencies and specialist treatment. Almost all surgeons work in secondary care.

**What is the "postcode lottery"?**
Despite the name, the NHS isn’t one organisation. It is broken down into local services (called NHS Trusts). The Trust decide how money is spent on a specific area or treatment and not all decide to spend this in the same way. As a result quality or availability of care can vary across the country. This can be controversial and the term ‘postcode lottery’ refers to this idea that healthcare can be based on geographic location rather than merit or need. Try to have a view on the problems and issues this can cause, preferably with an example.

**Would you prescribe the oral contraceptive pill to a 14 year old girl that is sleeping with her boyfriend?**
Remember there is no right or wrong answer but give different point of views as well as your own. Remember that you may be working in a place with official guidelines or policies around issues such as this.

**How do you see Britain’s healthcare system in 20 year’s time?**
Try to be optimistic or state reasons why you are not. Suggest how the situation can be improved in 20 years time.
If you had £1 billion to spend on one element of healthcare, what would you spend it on and why?
Try and be imaginative, some examples may be; prevention of diseases such as obesity and lung cancer by promoting ways of keeping healthy.

What do you feel are the good and bad points about being a doctor?
Be balanced in your answer, don’t focus on things like money or power—these are not good reasons to become a doctor.
Bad points could include: It’s can be stressful and takes a long time to train and on calls mean that you have to wake up a lot in the middle of the night. Good points might include: Job satisfaction as you know you are making a difference to people’s lives, challenging work environment or constant development of skills.

How would you balance your outside interests with studying a degree?
It is important that you have an outlet for stress and a life outside medicine—doctors need to be people too.

What single healthcare intervention could change the health of the population the most?
Justify your answer with a reason or an example. You could also include statistics as a justification.

What do you think about abortion/euthanasia etc.?
(This could be asked of any prominent ethical debate)
In an interview it is vital to show awareness of views for and against the argument presented. Remember as a doctor your personal beliefs and views are often overridden by the patients’ choice. Be sure to present a balanced argument.

What have you gained from your work experience/hobbies/community work?
Talk about how the skills you have gained will help you succeed in your future career in medicine or have just helped you develop as an individual.

What qualities do you have that mean that you will be a good doctor?
Be as specific as possible and show them how you are different to other people in terms of what you can offer.

How do you cope with stress?
Be honest—think about what has got you through GCSE’s.

What are your best and worst qualities?
Again be honest but think about your answer in the context of being a doctor—it is also worth saying what you are doing to combat your worst qualities. For example: I have found it difficult to concentrate on revision in the past. I have made efforts to create a timetable and have given myself fun rewards during my breaks as an incentive to work during my revision slots. Never say that you don’t have any bad qualities! It is unlikely to be true.

What did you do in your year out? (if you had one)
Whatever you did, explain how it has helped you develop.
What responsibility do you have?
Think about what you do in your free time and any areas of responsibility that you may hold or have held at school, such as sports captain, team leader or prefect.

What do you think will be your greatest challenge in completing medical school or learning how to be a doctor?
Again be honest. Everyone is challenged by different things. Consider what challenges you will face over your course, such as independent working or financial independence, and how you may overcome them.

What will you do if you aren't accepted to medical school?
Give this genuine thought, most medical schools receive at least 10 applications per place. Other options include taking a medically related for example biomedicine, audiology other science degrees and trying for graduate entry or taking a year out to improve your application. Entry via clearing is not an option for medical school.

And finally....
Becoming a surgeon is a huge investment and requires a genuine passion for surgery plus the drive and determination to succeed. If you have the right skills, ability, aptitude and enthusiasm you will be able to succeed in surgery regardless of your background. Good luck in your future surgical career!

Contact details

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