

# So you want to be a Surgeon?



An Introduction to  
Medical School and a  
Surgical Career for  
A-Level Students



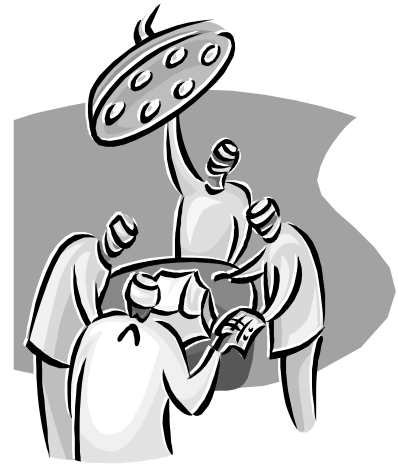
Registered Charity Number: 212808  
The Royal College of Surgeons of England

## What's surgery really like?

When you hear about surgery do you think of 'Greys Anatomy'? 'Holby City'? In reality surgery is not always so glamorous or so dramatic (but is definitely as exciting!) A surgeon will divide their time between several key functions:

### Ward rounds

A daily visit to check on the state and progress of each of the patients in their care, liaising with nursing staff and junior doctors.



### The operating theatre

Working on pre-booked elected operations and/or emergency cases as part of a team which will include other surgeons, anaesthetists, technicians, nurses, administrators all working together to ensure the best possible outcome for the patient.

### Out-patient clinics

Meeting the patient (and possibly their family) before the operation, to decide the best course of action for their condition, explain procedures and risks, take tests, arrange X-rays etc, and then meeting them again after the operation, to monitor their recovery.

### Completing administrative work

As with every job, there's paperwork to be done.



## Surgical specialties

**General Surgery** – is wide ranging and incorporates many different sub-specialties such as , breast surgery, vascular surgery, laparoscopic and gastro-intestinal surgery.

**Cardiothoracic Surgery** – mainly involves working with adult heart disease and a range of lung problems.

**Neurosurgery** – You will work on all aspects of brain surgery, from pre-operative imaging to removal of tumours. This specialty also encompasses the central nervous system and the spinal cord.

**Otorhinolaryngology**—(ear, nose and throat surgery) the surgery ranges from major resections to microsurgery, and incorporates anything from sleep disorders to cancer.

**Paediatric Surgery** – working with children and their parents, this specialty is wide ranging, from minor surgery such as correction of congenital abnormalities, bowel resections and operations for cancer.

**Plastic Surgery** – this is one of the few specialties with no anatomically defined region. Plastic surgeons work with burns and trauma victims, it is much more than just cosmetic surgery.

**Trauma and Orthopaedic Surgery** – Orthopaedic surgeons fix fractures, replace joints and manage degenerative disorders.

**Urology** – treating conditions in the genitourinary system, it encompasses incontinence, impotence and infertility and the management of diseases of the kidneys, bladder and prostate.

**Oral and Maxillofacial Surgery** – the majority of operating time is spent rebuilding the faces and jaws of severely injured patients. It is unique in demanding basic qualifications in both dentistry and medicine.

## **Are you cut out for it?**

When thinking about whether surgery is for you, ask yourself honestly: what am I good at?

Surgery requires a mix of:

- Specialist knowledge for accurate diagnosis of a patient's condition.
- Good communication skills – for speaking to your medical team, your patients and their families; for listening to and understanding the concerns of a wide range of people and earning their trust.
- Extensive experience of pre-operative and post-operative care.
- A bright, eager mind, manual dexterity and physical skills for performing an operation.

### **The learning never stops**

As a surgeon, you will have a career where you can constantly increase and update your knowledge, improve your skills and learn - maybe even develop new techniques.

### **The rewards**

Surgery is challenging, exciting, varied and hard work and very rewarding. Many surgeons say they enjoy the intellectual challenges of their job and its positive, active approach to the treatment of disease. They say that to perform an operation and to see a worthwhile result almost immediately, is so satisfying.

## General entry requirements

To become a surgeon in any specialty, you must first qualify as a medical doctor. This is usually through a five-year degree course in medicine. A lot of the universities, offer a 6 year medical course with the intercalated BSc (Bachelor of Science) .

The usual entry requirements for a degree course in medicine are:

3 A levels usually at grades AAB. Chemistry is normally essential, with at least one other science subject or maths. Of these, many universities prefer biology and some make it an essential requirement. Many universities accept a humanities subject or a modern European language as the third A level. In fact, some universities like to see diversity in A Level subject choices. If you are unsure if you are choosing the right a-level contact the medical school direct and check.

GCSEs at grade C and above in the subjects you have chosen to continue for A levels. The Double Science award is accepted in place of separate science subjects. A further 2/3 GCSEs (A-C), including English and Maths.

Some universities will require you to complete the UKCAT (UK Clinical Aptitude Test) which universities use to select students. There is a fee attached to this exam. For further information check the website [www.ukcat.ac.uk](http://www.ukcat.ac.uk). The BMAT (BioMedical Admissions Test) is another popular test that takes place once a year and carries a small fee. Details of this can be found at [www.bmat.org.uk/index.html](http://www.bmat.org.uk/index.html).

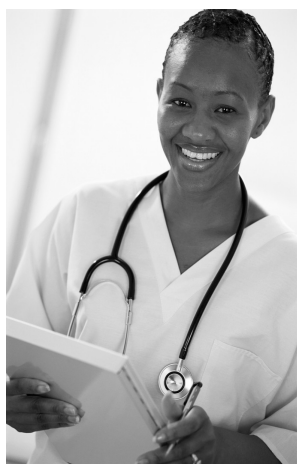
Some medical schools accept alternative qualifications. You should check prospectuses carefully and speak to universities if you have queries that are not answered by the prospectus.

## Getting into medical school

Have a look at the 'becoming a doctor' section of the BMA (British Medical Association ) website ([www.bma.org.uk](http://www.bma.org.uk)) – it's got lots of useful information on getting into medical school, including details of all the schools and their entry grade requirements, links to UCAS and other helpful contacts, as well as plenty of general information to help you plan what to do.

### Work observation

This will help you decide whether the medical profession is really for you. You'll be able to observe the daily work of doctors, though you won't be able to assist in any clinical work.



(more details on page 8)

### Healthcare experience

You will need to be at least 16, possibly older, to find a work placement in a hospital. If you find it difficult to find a placement shadowing a GP or hospital doctor try to gain some work experience in a healthcare setting such as a local nursing home, doing paid or voluntary work.

### Interviews

Try to be yourself! Prepare well, make sure you re-read your personal statement and be prepared to talk! Remember it's a good chance for you to find out whether it's the medical school you'd like to go to and the place (the town or city) where you'd like to spend at least the next 5yrs

### Talk to as many medics as you can...

...and listen to what they have to say, especially about topical areas and ones which may come up in the interview (such as NHS bureaucracy, paperwork, rationed care, current and proposed changes, the impact of EEC regulations, etc).

## Finding work experience

It can be hard to find clinical work experience but it will be a useful addition to your UCAS application.

Ideally you should try and get work experience in an area of Medicine that you are interested in but if you can't you can try other departments in hospitals or clinics.

### How do I get work experience?

The first thing to do is find out where your nearest hospitals are and if they accept work experience students.

If you search the internet you will be able to find individual hospitals websites.

From there if you do not have a contact at the Trust to write to directly and you can't find any information about existing schemes or a **work placement coordinator**, then the best people to write to are the **medical staffing** department (also known as **human resources**).

If there is a scheme or a coordinator write or email them and ask for more information.

You can also try and get work experience through your GP surgery or at a rehabilitation clinic or similar (sometimes this might be easier than approaching a hospital)

### When should I do work experience?

The simple answer is whenever somewhere can take you!

You will need to be flexible – it is worth talking to your school and seeing if they mind you taking time off. A good time is after your AS Levels as you may have some free time during the week before the summer holidays start.

## **What shall I write?**

It is best to write a polite letter to the hospital asking if they take students and if you would be able to come and do work experience. Make sure that you explain that you are interested in going to medical school and include a little bit about why you want to go to that particular hospital. It is also important that you include your age (there are laws that prevent under 16's doing work experience in hospitals and some trusts will only take students who are 17 or over)

## **What can I do if I can't get anywhere to take me?**

If at first you don't find a placement there are a couple of things worth trying. Try volunteering at the hospital after school or at the weekend for non clinical activities; you can try writing to different hospitals nearby, find out if there are any private clinics or day care centres who can take you.

## **What happens if they agree to take me – what do I need to do?**

If you get offered a placement you will need to speak to the administrator and they will tell you what they need you to do. In hospitals you will certainly need to complete a health questionnaire, this is for your benefit and it needs to be filled in prior to your placement. It would be useful if you could find out when you had your vaccinations and you may be asked about your family's medical history.

## **Key Resources**

Hospital Websites – Search for a work experience coordinator or work experience projects.

Ask your school – they might have contacts.

<http://www.nhs.uk/> to search for GP Surgeries and Clinics.

## What's medical school like?

Every medical school and every curriculum is different. At some schools you'll be taught the theory of medicine prior to going into a clinical setting this is referred to as a traditional course. Other courses involve more personal research and problem-based learning through a mix of study and experience.

During a traditional course you'll spend the first two years in lectures on anatomy, physiology, pharmacology etc - and have seminars on everything from ethics to computer skills.



After that, you'll spend time in clinical placements, being taught by junior doctors, registrars and consultants in small groups at a local hospital. These will prepare you for your first job once you've graduated; you'll be part of a hospital team in a

department such as general surgery, obstetrics or cardiology – expanding your knowledge and learning about the impact illness has on patients and their families.



Problem based learning courses have a more integrated approach to clinical experience from the start of the course.

You can also do an elective – spending several months overseas or in the UK studying medicine. Sound exciting?

Many medical schools offer an Intercalated BSc as part of a 6 year course (don't worry, you don't have to decide what or if you want to do this until you are at university - although in some universities it is compulsory!). This basically means that at some point during your medical degree you complete an additional, normally related, honours degree. It is a good chance to explore a topic which interests you and helps develop your research and laboratory skills

## After medical school

After you've completed your degree at medical school, you'll move into postgraduate training which is organised into stages:

### Foundation Years

These two years will be made up of rotations in various different specialties like surgery, accident and emergency, general practice and more besides. During this time, if you haven't already done so you need to decide what type of surgeon you want to be. At the end of the first year, you will have full registration with the GMC (General Medical Council).

### Core Training 1 and 2

You'll spend two years clinically training as an Core Surgical Trainee (previously known as Senior House Officer). During your core specialty training, you'll take an exam, which you have to pass before you can move on to the next stage of training.

### Specialist Training

Now you'll take on increasing responsibilities and develop a special interest. During this time you would be referred to as an STR (specialty training registrar). Towards the end of your specialist training you can take the intercollegiate specialty exam leading to the FRCS (Fellow of the Royal College of Surgeons) diploma and shortly afterwards (making a total of six—ten years at STR level), you'll be qualified to become a consultant surgeon.

## Frequently asked questions

### How long does medical school take?

You will spend five/six years studying, after which time you will gain your provisional registration with the General Medical Council (GMC) and be able to call yourself “Dr” for the first time. After a further year you will gain full registration with the GMC.



### How long is the training after medical school?

It is possible to be a consultant by your early thirties. This is considerably shorter than it used to be, but it can still seem like a long time. Don't forget that you are working and earning a salary throughout your training.

### Do I need chemistry A2 to get into medical school?

Most medical school requires an A2 in Chemistry, but some will accept Maths, Biology or Physics. The British Medical Association (BMA) publish a leaflet called 'becoming a doctor' which lists the requirements of UK medical school, or you can contact the individual medical school for details or check their prospectus. Many medical schools accept one arts subject in place of a science.

It is possible to do a pre-medical course for a year if you have chosen all arts A2's but this can be quite a burden financially and competition for places is fierce. Another alternative entry to medical school is through graduate entry, if you take a different (normally science based) degree and decide afterwards that you would like to study medicine there are special degree courses for Graduates.

## **How do I know if surgery is the right career for me?**

Think about what you are good at and what you are looking for in your career:

Making decisions – Can you think on your feet and learn from mistakes?

Life long learning – Would you like to have a career where you need to constantly update your knowledge?

Building up trust – Could you explain things clearly to patients and other doctors in your team?

If you prefer working alone, don't like learning new things or working under pressure, surgery may not be for you. However, it is worth remembering that surgery is an extremely enjoyable, intellectually demanding and satisfying career.

## **Which is the best university for me to study medicine at?**

The best university for someone else may not necessarily be the best university for you. When you choose a course you should take into account:

The location; do you want to spend the next five years there? And possibly longer?

The competition for entry; will you get the grades?

The course itself; what is the style of teaching and assessment?

What is the layout of the university? Is it a campus or is the university scattered? Which would suit you best?

Every year the Times publish a book listing the top universities in the country for every subject so it's worth looking at the ranking of the medical schools.

It also important to consider whether or not you wish to do the intercalated BSc and whether you think it will benefit your medical training/education.

## Student Finances (Based on 2008/2009 Tuition Fees)

Maximum Fee of £3,145 per year (most Medical Schools charge the maximum)

Medical Students qualify for a bursary to cover fees in the 5<sup>th</sup> and if applicable 6<sup>th</sup> Year. It is worth bearing in mind that although medical school loans seem large you pay them back automatically from your salary when you start earning £15K and junior doctors start salary is circa £20K. If after 25 years you have any loan left to pay this is automatically written off by the government.

### Grants:

If your household income is less than £25,000 per annum you qualify for a grant of £2,835.

If your household income is between £25,000 and £60,005 you will qualify for a partial grant. If your household income is more than £60,005 you will receive no grant. If you qualify for a grant you can only apply for the non-income assessed loan.

### Loans

Everyone can apply for a loan to fully cover tuition fees. On top of loans to cover fees students can apply for a maintenance loan to cover living costs.

	Living at home	Living away from home (outside London)	Living away from home (London)
<b>Maximum student loan for maintenance</b>	£3,495	£4,510	£6,315
<b>75% not income assessed</b>	£2,620	£3,385	£4,735
<b>25% income assessed</b>	£875	£1,125	£1,580

## Case Study 1

Clare comes from Bristol and is studying medicine in Manchester. Her parents earn a moderate combined income of £65,000 so she doesn't qualify for any grant to help. She does qualify for the full maintenance loan.

4 years fees = £12,580

5 years Maintenance = £23,125

**Total Loan over 5 years = £35,705**

## Case Study 2

Rashid lives in Cardiff, his parents joint income is £90K he doesn't qualify for any income assessed loan. He decides to go to university in London and to take a loan to cover his fees so that he can have more money to live on.

4 years fees = £12,580

5 years Maintenance = £24,281.25

**Total Loan over 5 years = £36,861.25**

## Case Study 3

Dave comes from Leeds, he lives with his dad whose income is £17K, he decides to study in Nottingham. He qualifies for a grant of £14,175 and the non assessed loan.

4 years fees = £12,580

5 years Maintenance = £17,343.75

**Total Loan over 5 years = £29,923.75**

**For more information on Finances visit  
[www.aimhigher.ac.uk/finance](http://www.aimhigher.ac.uk/finance)**

## Practice interview questions

This is a list of example Interview questions – it is by no means exhaustive but it will give you a good idea of the style of the questions asked.

### Why do you want to be a doctor?

Practically every medical school interview includes this question—give it some real thought! Be honest in your response but you might want to consider the following points:

- It's important to be enthusiastic.
- You want to study medicine for yourself rather than for someone else.
- Talk about your attributes which would make you a good doctor.

### 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 and include practical examples to illustrate your point.

### Do you read any medical publications?

You are not expected to be reading high end medical journals we suggest that you look at things like student BMJ which is excellent for getting acquainted with current medical issues. ([www.studentbmj.com](http://www.studentbmj.com)). Or simply use the internet to read articles and look up information relating to medicine. A useful website is [www.brightjournals.com](http://www.brightjournals.com)

When asked this in an interview never say I don't have time as this is a clear indication that you are not genuinely interested in studying medicine.

## **Tell me about any medical advances and issues you have read about recently.**

Some advances/theories you should already be familiar with for example the keyhole surgery, robotics etc...

This question can be quite daunting so good preparation is essential, you could keep a little book where you write about any medical advances you've read about.

## **What makes a good doctor? (See page 21)**

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 be 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?**

There really is no right or wrong answer but you must justify your opinion for example:

Adapting knowledge because quite often you'll have to find a solution to a patient's problem quite quickly so as not to prolong suffering.

## **Where is your first choice?**

They will not know where you have applied—you can probably say that where ever you are at the time would be your first choice

## **How many hours do you think a junior doctor works?**

They work a maximum of 56 hours a week and can be on call for about 72 hours at a time. In the future junior doctors will only work 48 hours a week. This is called the European working time directive.

## **What is the difference between primary care and hospital care?**

Primary care is a health care provider who acts as a first point of consultation for all patients i.e. GPs. Hospital care is health care provided in a hospital

## **What is the postcode lottery?**

The service you receive in your area is decided by the Trust which will regulate the services available to you. The Trust will also decide how much money is spent on a specific area or treatment. The term postcode lottery refers to the idea that quality or availability of care is based on geographic location rather than merit or need. Try to have a view on the problems and issues this can cause. Think of a recent example that has made the news.

## **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. For example:

### **Yes**

If her parent/guardian is notified  
It would reduce risk of pregnancy

### **No**

She may be pressurised by her boyfriend to get the pill  
She may not be mature mentally even if she is sexually

## **How do you see Britain's healthcare system in 20 years time?**

Try to be optimistic, if not, then state your reasons why and 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. For example; advertisements against smoking.

Research into illness which claims most lives. For example heart disease and cancer.

## **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**

It's very stressful and it takes a long time to train  
On calls mean that you have to wake up a lot in the middle of the night

### **Good points**

Job satisfaction is high because you know what you're doing is worthwhile and that you are making a difference to people's lives.

You never stop learning and developing your 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. For example;

- Finding a cure for cancer
- Ban Smoking
- Vaccination for HIV/AIDS

## **What do you think about abortion/euthanasia etc? NB: this could be any prominent ethical debate from the news**

In an interview it is vital to show awareness of views for and against the argument presented.

For example; abortion is murder verses the opposed view that abortion is an individuals right. 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.

Example: Debating has helped me broaden my horizons and made me more aware of other people's views. In relation to medicine it has also helped me understand the ethical issues involved in practicing medicine.

## **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. (Give examples of rewards—e.g. trips to the cinema when you can recite the periodic table!)

Never say that you don't have any bad qualities! It is unlikely to be true.

## **What did you do in your year out? (Obviously you won't be asked if you didn't take one!)**

If you are taking a gap year it's probably best spent on something which relates to medicine. Examples include working with a charity abroad, working as a health assistant in a hospital, volunteering in general etc.

## **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, e.g. sports captain, team leader

## **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 the time of your course like independent working or financial independence and think about 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.

**REMEMBER – The panel is not trying to trick you – they want to find out about you, it is okay to be nervous!**

As you can see the questions cover a variety of areas. Some will be elaborations on the information in your personal statement. Others will require you to articulate an opinion, others will need you to be up to date on current affairs (see useful resources page 22). All of these questions are designed to make you communicate with the panel; remember that if you need time to think – that is okay. It is better that you ask for a moment to gather your thoughts rather than launching into a badly thought out argument (this especially applies to any question relating to your views or opinion)

## Useful Resources

*The Royal College of Surgeons of England:*

<http://www.rcseng.ac.uk/career/pathway/school.html>

*The British Medical Association:* 'becoming a doctor' is a useful resource, the medical A-Z is also a good source of information.

<http://www.bma.org.uk/ap.nsf/Content/Hubcareersandeducation>

*The Bright Journals:* A fantastic resource for all areas from application, keeping up to date with latest stories, profiles of medical students etc. Key area is the Library.

<https://www.brightjournals.com>

*Student BMJ:* Useful to keep up to date with 'Medical' stories

<http://www.studentbmj.com/>

*UCAS:* for information relating to specific courses, and online application.

[www.ucas.co.uk](http://www.ucas.co.uk)

*Aimhigher:* For information on funding, grants/loans etc

<http://www.aimhigher.ac.uk/home/index.cfm>

*BBC:* For current affairs

<http://news.bbc.co.uk>

All Information is correct at the time of print (March 2008)

With special thanks to:

The Advice Clinic  LONDON  
WIDENING PARTICIPATION IN HEALTH PROFESSIONS EDUCATION

AimHigher Central London Health  
Thematic

If you have any further questions regarding a career in surgery or entry to medicine please contact the Opportunities in Surgery office.



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