TheDoctorJourney

Content

Previously TDJ was a blogging website bringing help to hundreds of future doctors

Here we would like to give credit to those Authors

Swimming through the Pre-Med Years

Introduction

"Just keep swimming. Just keep swimming, swimming, swimming. What do we do? We swim, swim, swim." – Dory

As a pre-med student, there will likely be many challenges and obstacles to overcome on the path to becoming a doctor. These may include difficult coursework, long hours of studying, and intense competition for medical school admissions. In the face of these challenges, it can be easy to feel overwhelmed and discouraged. However, Dory's quote serves as a reminder to keep moving forwards despite the obstacles we face. Premed students can cultivate this sense of resilience and faith in their future to develop a positive attitude toward their goals.

All of us aspiring physicians have all hit our low points in our path to medicine, whether it is receiving an unsatisfactory MCAT score, failing a class, or just having to fill out numerous secondary applications only to be rejected. It can feel like there are little potholes all along the way on this bumpy, winding road to achieving that med-school acceptance.

I personally have struggled with keeping the vision of becoming a physician close to my heart every time I come across a "failure", or what feels like it, in my time as an undergrad student. Having to accept that I failed a class or didn't achieve what I set out for myself feels extremely disappointing, but with small mindset shifts and collecting experiences, I have learned to be able to tap into embracing the discomfort and to just keep swimming.

Resilience and The Power of Hope

Hope is one of the most well-researched cognitive models that is made of three main components: goal agency and pathway thinking, as defined by the *Hope Theory*. Higher hope has been shown to consistently be related to better outcomes in academics, athletics, and physical health. The *Hope Theory* breaks down agency as the motivation to pursue one's goals, pathway thinking as the ability to find new ways to achieve one's goals, and goals as the final outcome.

According to the National Library of Medicine, findings on hope from various studies show that it can be leveraged as a resilience factor to not only help your grades and keep you motivated but also for your overall wellness in times of turmoil. Hope is a superpower that can be tapped into at all times of struggle to help you hold on till you hit that milestone along your pre-med journey.

Perseverance and Smelling the Roses along the Journey

Oftentimes, we adopt the mentality of putting our heads down and just getting through the hardship. It's tempting to give into hustle culture and take no breaks, simply because it markets this idea of constant efficiency and productivity. However, on the flip side of the coin, it can also make individuals more vulnerable to feelings of burnout and seeing the journey to medicine as long and suffering.

I'm not saying productivity is bad, but we should find time to embrace the difficulty of the journey and recognize that exhaustion is too real when we don't take a small break to validate our small achievements. There are many small wins along the way that might not directly show the number of your GPA or MCAT, but are still worth giving yourself a pat on the back for so that you can continue to "just keep swimming".

Setting small goals and working through them is a method that I found much more encouraging and mentally satisfying for myself as I keep pioneering forward. It is easy to see the large goal of needing to get published, achieving an MCAT score, or needing 200 volunteer hours before applying to medical school, etc. Another perspective of approaching a large goal is setting smaller goals that are consistent and achievable. For example, set yourself to do 2-3 hours of service work or shadowing with a physician a week. Over time it should hopefully be a fulfilling and enjoyable experience that you can take inspiration from instead of being a "requirement" for your resume. It may take some effort to break down your larger goal into smaller steps, but it allows you to take your time and smell the roses along your journey.

Being adaptable

Feeling shame and self-doubt after not receiving the results you wanted or when you feel like you are at a low point is normal, but using this opportunity to recollect and reattempt is extremely valuable. Instead of viewing it as an opportunity you did not achieve to its fullest potential, shift your perspective to seeing these feelings of disappointment and negative emotions as an opportunity in itself to change your behaviors and thoughts.

It's crucial to see that poor performance or wasted time is not a true reflection of you as a student or person, but rather it sets you up with the right set of circumstances to adapt and practice resilience.

Sometimes things just don't go as we had planned because not everything is in our control. All the things that being a human bring like break-ups, bad grades, rejections, getting fired, and more life events all hold us back sometimes from achieving our goal in the linear planned path. The best thing to do at the moment is to make the decision which is going to be the most productive for you at the moment, whether that is rest or returning to the desk to study more.

We as pre-meds are not only students, but have a life outside of school. We are incredibly driven go-getters, but we must have the space to show ourselves

compassion. I would label this being a “compassionate self-critic”, being someone who can push themself to be an improved self when needed but also being able to slow down and practice self-empathy.

Conclusion

The path to becoming a doctor is full of challenges and obstacles that can be overwhelming and discouraging. From studying for the MCAT to completing clinical experience hours, pre-medical students must be willing to put in the effort required to reach their goals. However, it is essential to cultivate resilience and hope to develop a positive attitude towards achieving goals. That may mean giving yourself grace or pushing yourself to your best, but regardless showing yourself compassion and a positive attitude throughout. Higher hope is related to better outcomes, setting small achievable goals, being adaptable, and practicing self-compassion are critical elements in persevering through the journey to becoming a physician. Ultimately, it is essential to remember Dory’s quote and “just keep swimming” despite the difficulties encountered.
by Muskaan Dhillion

Lost on how to Job-Shadow a Physician?

Hey there, so you’re probably reading this at some point in your job-shadowing track. Either you may be at the beginning where you are attempting to find someone to allow you to shadow them, or you are at the point where you’re trying to figure out what things are going on in the job-shadowing at this moment. Whatever it is, this article’s goal is to have things that will assist you and give you pointers on things you should keep in mind to make sure your shadowing experience was enjoyable.

How to Approach

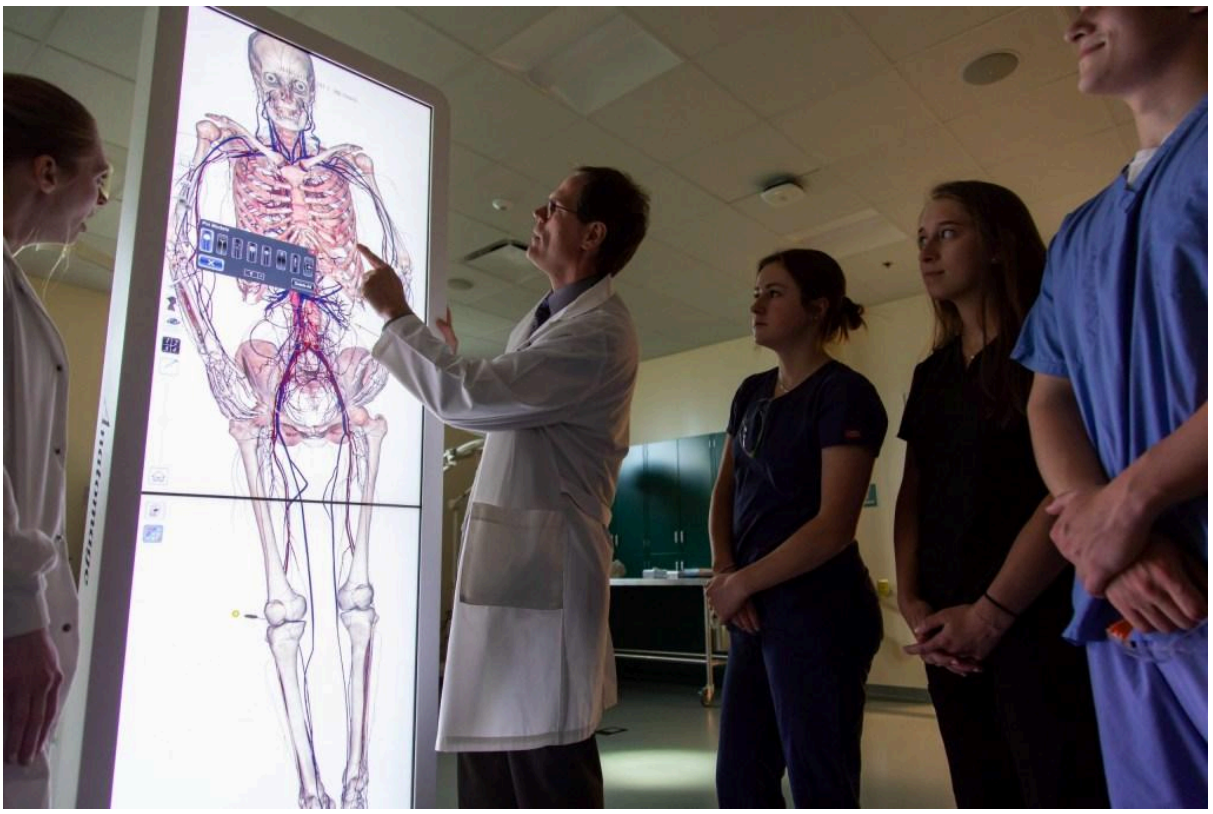
One of the beginning stages is finding a physician to shadow. This can be hard with specific circumstances around the world, but this is what we recommend you to do. Reach out to your primary care physician, any family or friends who are physicians, local hospitals, and clinics. Introduce yourself to them and what stage of your education you are at. Explain to them your goal of becoming a physician and how this shadowing experience right now would be a crucial determinant of your future. Tell them that you would love to work within the best of their schedule and would be

pretty appreciative of the experience. Not all physicians will email back or agree to the shadowing due to many factors, but we believe that being honest with your goal behind shadowing can be pretty crucial in obtaining one. Do not forget to be as polite and professional as possible when requesting this opportunity. You do not want to turn away any doors to your future profession.

What to do once they agree

Let's say you scored that opportunity; now what? Get the important details and information that are pertinent for shadowing. This is not just for your knowledge but also great information in case you want to put in your medical school applications and answer for specific interviews! Some of the crucial information you'll want to know is the full name and credentials of the physician you are working with. The field of medicine that the physician is practicing in as well as the establishment's name. Make sure to clarify the date, time, and dress code for this shadowing experience. Ask if any pertinent blood work, immunizations, or paperwork is required before shadowing.

Make sure to be at least 5-10 minutes early at the site. Try to meet with the physician early on site and talk to them. This would be the ideal time to get to meet the physician and learn more about them. This way, you have the opportunity to understand the background of the physician and get potentially create a professional relationship. Make sure to ask if there are any specific rules that the physician wants you to follow. Try to ask pertinent questions when the physician seems freer, so maybe after seeing a patient and try to observe and see some of the simple and complex aspects that make up a physician. Be mindful of the environment, you may see things that you may have never expected in the medical field. Keep your composure and follow the lead of the physician you are shadowing. Be mindful of the rules around the workplace environment, such as HIPAA compliance and specific rules in that area.



How to End the Experience

Towards the end of the shadowing experience, thank the physician for the opportunity and ask if it is okay for you to keep in touch about potentially shadowing some time in the future and to ask for advice about their specific field. Ask for their contact information if it varies from what you were previously contacting them with. We hope your shadowing experience goes well and you have a positive experience with the tips we provided you! If you have any questions, please reach out to us as we would be happy to help and give you our advice!
By Joel Varughese

What to do When You Have Free time as a Premed

My friends used to tell me “don’t go into medicine, you won’t ever have time to do the things you enjoy.” Although this statement may seem somewhat true with the incredibly high standard expected for pre-med students to get into medical school,

with difficult classes such as Organic Chemistry to constantly study for, as well as the comprehensive MCAT, it is definitely possible to make time for the things that you enjoy and still use that time to effectively improve yourself and improve your chances to get into medical school. If you would like to learn more about what extracurriculars you should do for medical school check out our other article.
So you are probably wondering, “how can I get free time when my life is so busy.” Fair question. The secret is boosting your productivity as described here (article coming soon). Productivity does not mean doing more, but rather being efficient and intentional with your time so that you can finish your tasks more quickly and have more time to yourself. So when you do create some free time for yourself, how should you spend it?

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Enjoyment

The most important thing is to enjoy this time. Studies have shown that spending time doing what you enjoy has correlated with more efficiency when you get back to work and also decreased burnout rates in the future.
Medical school expects applicants to be smart with top-notch MCAT scores and GPAs, but there are thousands of applicants that have competitive scores. How do medical schools distinguish between these amazing candidates? Things like research and volunteering (which we will discuss later in this article), as well as letters of recommendation and essay responses, come into play, but intangibles such as your personality during the interview are also a major component when it comes to selection processes. One of the most common questions during medical school interviews is “tell me about yourself” and it can be beneficial to humanize yourself by talking about your interests and passions outside of academics.
Exploring your hobbies and interests during your free time can definitely be helpful in this situation so you can connect with others over things like playing music or sports, reading a book or watching a movie, or sharing your best recipes.

Turning Hobbies into Extracirriculars

You can also channel your enjoyment for certain things into extracurricular activities. This is probably the most important takeaway from this article: DO WHAT YOU LOVE.

Find activities that you genuinely enjoy doing and you will automatically be committed to them and grow in them. This will lead you to take more initiative in the activity and impress the people around you, leading to a great story to tell in essays and interviews and great letters of recommendation. If you do an activity that you do not actually enjoy just because you think it'll make you look good for medical school, there is a high probability you will not be as engaged in the activity and will not get as much out of the activity as you would have if you genuinely enjoyed it.
For example, if you love being with little kids then you can volunteer in after-school programs and mentor the kids. Or if you enjoy playing basketball or reading you can start a basketball training camp or a book club with grade school children to inspire them to love reading. The important thing is to use your passion for something to make a positive impact on others and learn about yourself and grow throughout the process. The possibilities are endless! Do what you think would be best for you!

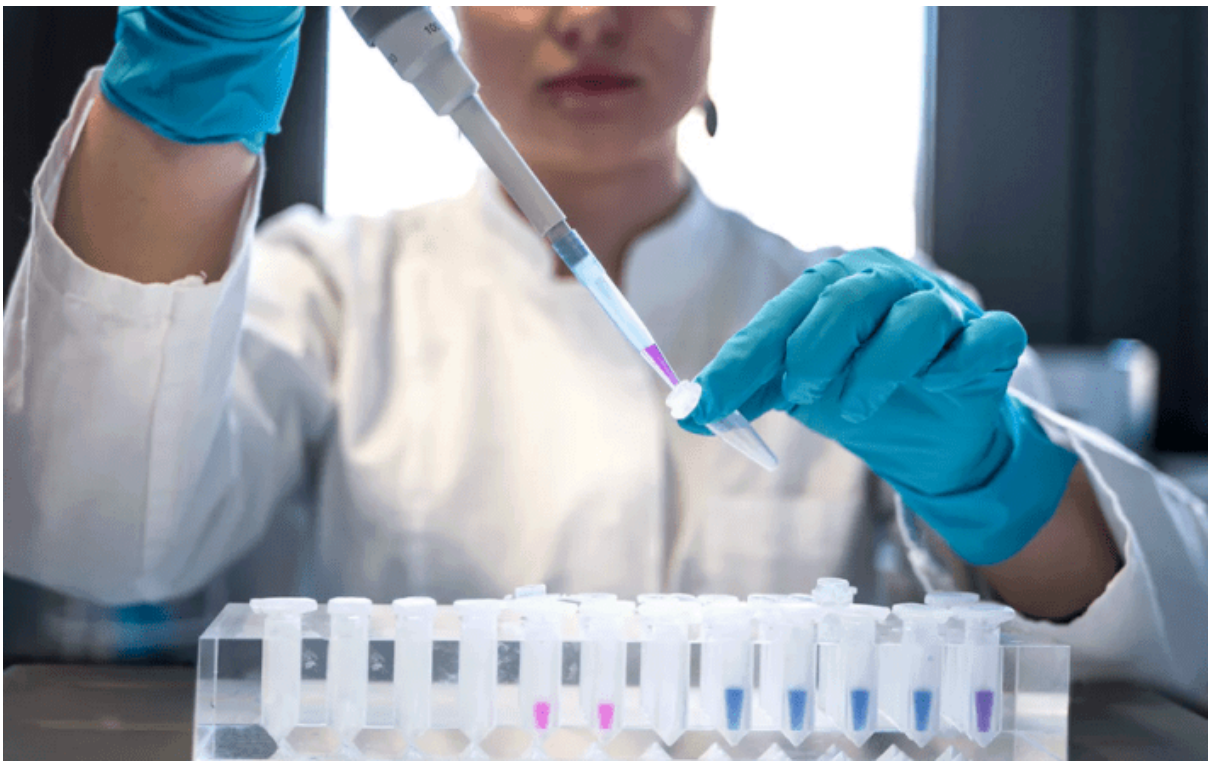
Research

Participating in research is a great way to pursue academic interests outside of the classroom during your free time. It is an engaging way to bring to life the things we learn in lectures and advance the current state of science. Many students join different types of research activities, most commonly a structured summer course or working with a research group over a long period of time.
Structured summer courses are often ideal for those who have a dedicated time during the summer to pursue research and prefer a structured environment. These

programs are offered at many institutions throughout the nation including undergraduate campuses and medical schools.
The AAMC has a list of many different summer undergraduate research programs that you can check out here. Oftentimes, these programs will compensate you for your time and sometimes even pay for travel and accommodations. This is a great way to explore a different institution and immerse yourself in their culture. There are a variety of fields that these research programs focus on, so apply to those that you are most interested in and want to learn more about.
One of the best features of these programs is that they structure your experience to ensure you get to meet lots of other colleagues and faculty researchers and also complete a tangible project before the end of the summer. If you really enjoyed this experience, you can also ask to continue working with the research team once the summer is over.

Long-Term Research

Another option for research is working with a research team directly and participating in the research actively for a longer period of time. This would usually be in the institution that you attend and you would reach out to a researcher who is doing something that you are interested in. In this type of research opportunity, there may not be a structured schedule for you to follow, so a lot of your experience depends on your passion and initiative. It is crucial to pursue research in something you are genuinely curious about so that you are motivated to ask lots of questions and get more involved in the research. By doing so, you will start to incorporate yourself into multiple different projects and get a much more pleasant and fruitful research experience!



Volunteering

Volunteering is another great activity to do when you have some free time. As mentioned above, there is no “right” thing to volunteer in. The important factor is volunteering in something you love doing so that you can go above and beyond to make a greater impact on the community. The joy of volunteering knows no bounds and the mere fact of knowing that something you did brought a smile to someone else’s face is priceless.

Not only does volunteering serve as a great break from the regular grind of studying, but it is also a great opportunity to make your medical school application more unique and demonstrate your passion to help the community in your own way. If you would like help planning for medical school applications or would like tips on how to make your application more unique by bringing out your personality, feel free to reach out to TDJ tutors! We are here to help

By Bhagvat Maheta

How to choose YOUR Major for Medicine

For high school seniors and college students, choosing one’s major might be the most daunting task when entering higher education. One’s choice of major is

correlated with the possible career they'll pursue as specific programs funnel their students into internships that could grant them a job right out of college.

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So, what is the best major for medical school?

Fun fact: there is none.

Allow me to explain, yes, being a biology, chemistry, or biochemistry major will allow your medical school prereqs to also fulfill your major requirements by lessening the load of courses one needs to take. Being a science major might seem “easier” in this regard, but the courses one needs to take for medical school are primarily intro-level sciences, with a few exceptions. Sacrificing your sGPA taking advanced upper-division science courses for the sake of convenience may not be such a convenience when your o-chem lab is graded on percent yield instead of the presence of the product. Unless chemistry is your forte, there is no need to be a STEM major in college to pursue medicine. Furthermore, no one cares if you are a STEM major applying to medical school. It is you, along with the other nearly 75% of applicants.

When medical schools review secondaries to determine who gets an interview invite or not, it helps to be unique. Having a non-STEM major makes you unique and sets up softball questions for your interviews. For example: Who is your favorite philosopher? René Descartes because his formulation of the mind-body problem is essential for understanding Dualism.

What college major should I pursue then?

The answer is whatever you’re interested in! Higher education is not a race but a marathon and pursuing a major which does not feel like work is indispensable for not experiencing undergraduate burnout. Sometimes it is nice to step away from the equations and biochem pathways to write a paper on whether your housemate is blameworthy for eating the cookies you accidentally left on the kitchen table.

Why I chose philosophy

I chose to study philosophy nearly off a whim, but I can thank *The Little Book of Bathroom Philosophy* for influencing my decision. I was always fascinated by understanding alternative perspectives, ethics and debating with friends about the right solution for the trolley problem.

Studying philosophy was the best decision I made to prepare myself for medical school interviews, as I took two classes studying biomedical ethics. The topics we discussed in biomedical ethics appeared in nearly every interview I had. With the background knowledge I already had on complex topics like healthcare inequalities or patient autonomy, I was able to have thoughtful and productive conversations with my interviewers. To quote Socrates, “I know that I know nothing,” but what I do know is that you do not need to be a STEM major to get into medical school.

Stats

[AAMC table A-17 MCAT and GPA for matriculants by Primary Undergraduate Major 2021-2022]

Major	MCAT	GPA (total)	Applicants	Matriculants
Biological Sciences	511.7	3.74	36,520	13,158
Humanities	513	3.71	1,927	849
Math & Stats	514.9	3.72	399	161
Physical Sciences	513.5	3.74	5,201	2,208
Social Sciences	511.7	3.69	5,652	1,974
Health Sciences	510.7	3.75	2,674	942
Other	511.3	3.75	10,070	3,374
All applicants	511.9	3.74	62,443	22,666

Breakdown of the majors and stats:

Biological Sciences:

The biological sciences consist of majors like biology, genetics, biochemistry, cell bio, and physiology. The average Bio Sci major matriculant into medical school achieved a 511 – 512 on their MCAT and a 3.74 GPA. To answer the age-old question, why is everyone and their best friend a bio major applying to medical school? For starters, biology is, well, important. A strong foundation in the fundamental biological principles is imperative for translating dense conceptual material into patient care. If research is your forte, being a bio major puts you in contact with numerous professors who are usually willing to take on an extra premed undergrad lab assistant so they can get research experience.

Humanities:

Examples of humanities majors are English, philosophy, and history. Those who matriculate in aggregate have a 513 MCAT and a 3.71 GPA. Despite the typical response of confusion from the masses when humanities majors proudly proclaim their field of study and intent on pursuing medical school, the 'soft' skills one learns are arguably just as essential as the 'hard' skills learned from the sciences. Humanities majors traditionally have excellent bedside manners helping their patients feel more comfortable while fostering meaningful patient-provider relationships. The ability to tactfully communicate will take humanities majors far during rotations. Lastly, remember that physicians treat people with a disease, not just a disease.

Math and Statistics:

The true brainiacs of the Premed world, examples of math and stats majors are Biostats and applied mathematics. Those who get into medical school as a math or stats major average a 514.9 on the MCAT and have a 3.72 GPA. As a math or stats major, the skills you will learn will allow you to be a sought-after asset in medical research labs. Furthermore, the ability to confidently understand statistical methods and trends in research papers will put these majors scores ahead when studying for the MCAT.

Physical Sciences:

Physics, chemistry, organic chemistry, and astronomy fall under the umbrella of the physical sciences. As common knowledge dictates, physics is applied math; chemistry is applied physics, and biology is applied chemistry. Physical science majors have the second-highest average MCAT scores with a 513.5 and average a 3.74 GPA. Biological concepts will inevitably be tougher to comprehend without a strong foundation in the physical sciences. Those who major in the physical sciences typically excel in the dreaded 'filter' courses like general chem and organic

chemistry. They can seamlessly integrate their knowledge into biochemistry in undergrad and medical school.

Social Sciences:

Examples of the social sciences are psychology, sociology, political science, and economics. Social science majors who get into medical school have between a 511 and a 512 MCAT with a 3.69 GPA. The social sciences give future physicians the upper hand when identifying social determinants of health and finding innovative ways to bring about equitable healthcare for all. Additionally, studying psychology allows many undergraduates to enter paid healthcare related jobs during college as caregivers with a pathway to becoming a med tech in assisted living and memory care facilities.

Health Sciences:

Although not exhaustive, the health sciences consist of public health, nutrition, and kinesiology majors. These majors can give future physicians additional skills they may not have had the opportunity to learn about in medical school, like nutrition. Health science majors typically earn between a 510 and a 511 on the MCAT and have a 3.75 GPA. Furthermore, many undergraduate institutions which offer health sciences majors have partnerships with local healthcare providers allowing ample internship opportunities and a chance to get a glimpse of the inner workings of healthcare prior to medical school and embarking on a career as a physician.

Others:

Those whose majors fall under ‘other’ would be our engineers, computer science, and business majors. The ‘other’ matriculants average a 511.3 MCAT and a 3.75 GPA. They are the true pariahs of the Premed world and offer a wealth of knowledge and new perspectives. Medicine is a perpetually evolving field; with the introduction of nanomedicine, robotics, and artificial intelligence in the operating room, we have much to learn from our peers in the ‘other’ majors. Furthermore, irrespective of politics, medicine is also a business. Many physicians will enter partnerships or open their own offices. A background in business will help keep your office afloat so you can continue to treat patients and make healthcare more equitable.
If you would like to see our other article on prereqs for med school that may help you pick a major for your undergraduate career.

Recap

All majors have an opportunity to share their unique skillsets with the field of medicine to help it grow and evolve. Ultimately, your college major does not matter; what matters is what you learn from your studies and what you do with it.
Best of luck, friends!
By Kevin Gines

What Extracurriculars do you need for Med School?

Trust me when I say this, every medical student has been in your shoes.
Figuring out what extracurriculars to participate in can be frustrating and at times overwhelming. I'm sure we all know a student that is involved in everything from research and leadership to volunteering in the community and playing sports. We see what they are involved in and begin to panic because we feel behind. We may ask ourselves, "how can I even compare to them" or "I am so behind".
Well, before we continue and give you the answers you've been waiting for, remember that comparing yourself with another pre-med student is doing you a disservice. Every pre-med student walks their own path and makes it their own. So if

you are passionate about going into medicine, these tips will help establish a basic foundation of what extracurriculars you should participate in.
In this guide, we will talk about the various activities that are available, the recommended hours for said activities, how to choose an extracurricular, and answer some commonly asked questions.

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What Extracurriculars are there?

Volunteering

This is one of the most important activities pre-med students can involve themselves in. I loved volunteering in the community and around the school. The great thing about volunteering is that companies, organizations, and schools are always looking to recruit new volunteers.
There are many different ways to find volunteering, some examples include: volunteering at a soup kitchen, Mental Health Orgs (E.g. Suicide Hotlines, Animal awareness), through student organizations at your school. Remember to make it your own experience, don't follow someone, and just volunteer because you see it as a box you have to check. Volunteer in an area you are passionate about or have an interest in. Personally, I volunteered in soup kitchens and areas where I could devote my time to working with unhorsed members of my community.

1. Recommended Hours: I recommend you get a minimum of 40 hours under your belt. If you want to be more competitive if you can aim for +100 hours that is great.

Patient Exposure

The forefront of medicine is interacting with patients through compassionate and empathetic care. On the road to becoming a physician, gaining patient exposure helps one become more confident with patient interactions. As an undergraduate

student, gaining patient exposure can be hard but is doable. Most of these can apply to those working in undergrad or taking gap years. Patient exposure consists of hands-on experience. The following list is not exhaustive but it will give you an idea of what patient experiences you can gain. Some examples consist of scribing, medical assistant, emergency medical technician (EMT), clinical volunteer, and phlebotomy.

2. Recommended Hours: We recommend about 50 hours for these experiences. But many people that go into these areas end up gaining many more hours.

Research

Research is something you will always find yourself being involved in, whether it is reading research, writing about others' research, or conducting your own. It is easy to find depending on what you want to do. Some examples of research include, clinical research, benchwork (wet-lab and dry-lab research), and case reports. For those that like working with cell counters, making measurements, and working in a lab, benchwork might be for you. If you want research that is patient-centered, clinical research might be right up your alley. Lastly, case reports are always great because physicians and professors always have interesting cases to be written about and published.

3. Recommendation: If you partake in research, we recommend you stick with one lab for a minimum of 50 hours. To be more competitive, +150 works well.

Physician Shadowing

When you are applying to medical school, admissions officers want to see that you have an idea of what to expect as you delve into the medical field. Physician shadowing is a prime opportunity to show that you have seen what a physician does. Now, I understand that since the COVID-19 pandemic began, shadowing has been even more difficult than it used to be. Medical admissions officers are aware of this and they understand if you aren't able to shadow.
Fortunately, due to the pandemic, there have been places that have started virtual shadowing, one of which I participated in. Another one is here. You can find the links below. If you are able to shadow in person, there are different contexts you can shadow, for example, in-patient, out-patient, private practice, and community hospital. By familiarizing yourself with these different forms of practicing, you can display your depth of knowledge about clinical practice.

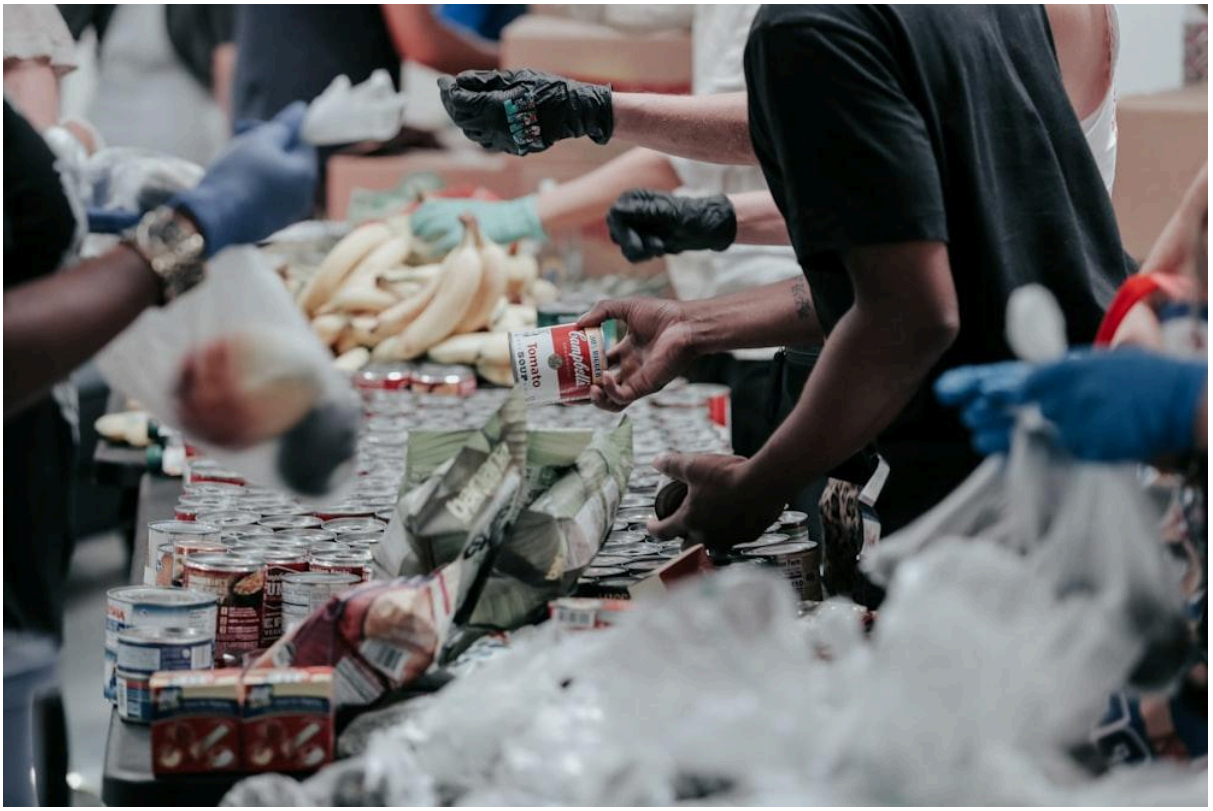
4. Recommended: Try to shadow at least 1 physician. With virtual shadowing, you should be able to shadow more specialties because the more exposure you get, the more medical schools will see your interest. For those interested in DO, it is highly recommended to shadow a D.O. physician but not required.

Leadership

5. Being a physician and being a leader go hand in hand. As a future physician, it is important to be confident being a leader. Through your leadership activities, you can portray that you are innovative, competent in directing others, and being in charge of a team. Leadership also is not only limited to club positions. If you're volunteering, spearheading a new event for local community members. You can find leadership by taking charge of your research project, tutoring others, or even taking a leadership role on a sports team. You have an infinite amount of possibilities when it comes to leadership opportunities.
6. Recommended Leadership Positions: If you are focused on officer roles, at minimum one or two roles are great.

Hobbies

7. Hobbies are by far the most relaxing extracurricular activity for premeds. Your passion for the hobbies you are involved in can help you stand out in your medical school application and interviews. Hobbies are a great way to showcase your uniqueness. But more than that, hobbies are a great way to promote mental health, meet like-minded individuals, and add enjoyment to your busy schedule.



What Extracurriculars Should I Choose?

1. Devote more time to fewer things

The problem I had as an undergraduate student was spreading myself too thin. I wanted to be involved in everything because I had a lot of interests and wanted to find what I liked. While you learn a lot, sometimes your grades, free time, or health are put on the back burner. To avoid the same mistakes I made, try and devote your time to fewer things that you are passionate about. There is no problem in joining several opportunities, in the beginning, to see where your interest lies. But do not be afraid to say “no” and discontinue the activity if you are not interested.
Here’s an example to solidify what I am trying to say. It is more impactful to be in a leadership position of two different clubs for a year and in one research lab compared to being in every single club that you think might be interesting and not having enough time to fully participate and fully invest your time in the clubs. In this case, the quality of your activities is far more important than the number of activities.

2. Should you specialize or diversify your experiences?

This is a follow-up to what is above regarding devoting more time to fewer things. In undergrad, I diversified my experiences. That is not to say those who specialized in certain areas are doing it wrong, but being more diverse in my experiences fits more with my personality and my various interests. If you do not know whether to have your activities relate to a certain area or diversify your activities, take a step back and ask yourself some questions. What are my interests? Do I have a lot of interests? Do I only like participating in certain activities (e.g. research)? When you figure out what you enjoy that is when you can decide what you want to do.
To give you an example, I was involved in soccer, a medicine & art club, a mental health club, volunteered in a sports medicine clinic, and participated in clinical research and benchwork. You may have an interest in cancer and focus your activities around that. On the other hand, you may decide to have an eclectic mix of activities because you have various interests. No matter what you decide to choose, make sure you can find meaning in it.

3. Make sure there is the meaning behind what you’re doing

Understand this, admissions committees are not impressed if you have participated in every single club on campus and are involved in ten other research labs. These same admissions committees know some people see these activities as boxes that need to be checked off. When you apply for medical school, you will have to write about these experiences and possibly talk about them in your interview, if admissions committees see you just saw it as a checkbox and you were not interested in it, they might look towards other candidates to fill their incoming seats. That being said, join clubs, and volunteering opportunities, and participate in research that you are passionate about or at least have an interest in. It is very easy to tell when someone does not have an interest in an activity compared to when they

do. Make sure to stay true to yourself in each experience and when the time comes you might find it easier to talk about your experiences.

Conclusion

I hope this guideline helped you understand the various areas you can become involved in. If you take anything away from this, remember these three things: stay true to yourself, follow your interests, and quality over quantity. When you get to the medical school application process, there is a section where you will write about a max of 15 different activities you were involved in. This is where you reflect on your experiences and talk about what you did and how it helped you grow as a student. All that being said, don't forget that GPA and MCAT are important too but they aren't the only factors medical schools take into consideration. Being a well-rounded applicant can help your application and help you stand out.
Lastly, try not to compare yourself to other pre-med candidates. Your experiences and journey are unique to you and can help you get to where you want to go. Remember to run your own race.
by Teza Harrison

How to Succeed at Medical School

How is Medical School Structured?

You smile from ear to ear as your white coat is being put on you during the esteemed White Coat Ceremony. You finally did it! Getting accepted into medical school is arguably one of the most difficult steps to pursuing a career in medicine, but what now? How do you navigate the next 4 years of medical school to get into the residency of your choice so that you can spend the rest of your life doing what you love?
It is a common misconception that the 4 years of medical school will teach you all of the medicine you will ever need to know. Some people assume that once you graduate and are honored with the title of "doctor," you will have the ability to treat all patients that come your way. In reality, medical school is just the first step of solidifying your knowledge of medicine and practicing patient interactions.
Medicine is truly a field where life-long learning is a necessity and much of the information you learn during medical school will be outdated once you start practicing medicine due to the continuous research going on.
As an overview of how the medical education system is set up in the United States, students complete 4 years of medical school and then apply to residencies. These residencies allow the training doctor to specialize in a specific department such as family practice, emergency medicine, dermatology, surgery, etc… The residencies can vary from 3-7 years depending on the type of specialty.
Once the residency training is complete, the doctor has the choice to become an attending physician or pursue a fellowship to train in a more specific subspecialty.

The entire process of becoming a doctor can be long and difficult, which is why TDJ is here to offer support throughout each stage of this journey!
The structure of most medical schools in the US tends to be split into 2 main phases. The first 2 years involve all of the textbook knowledge relating to biochemistry, anatomy, physiology, pharmacology, and pathology. During these 2 years, students are spending a majority of their time learning how the human body is normally supposed to function, what are the different things that can go wrong, and how we can treat patients when they come with different pathologies. The USMLE Step 1 exam, which is now pass/fail (more on that later), marks the end of the first phase of medical school and is a cumulative exam of all the knowledge learned during the first 2 years of medical school.
During the last 2 years of medical school, students start "rotations." This is where students will spend time in the hospital applying the knowledge from the first 2 years of their medical education in a practical setting. Students rotate through different specialties and gain more experience with actually treating patients under the guidance of residents and attending physicians. During this time period, students take the USMLE Step 2 exam and also apply for residencies. All of this culminates to a very special day called "Match Day," where 4th-year medical students open an envelope that contains the name of the program that they will complete their residencies in!

What can I do NOW?

So, you are probably wondering what you can do as someone who has just dawned the white coat to get yourself ready to match into your dream residency. The answer is multifactorial and consists of a variety of different milestones throughout all 4 years of medical school. At the end of the day, residency programs are looking for medical students who are passionate about their preferred specialties and who are good fits for the particular program. In the first 2 years of medical school, however, students have not started rotations. So what should students do to prepare for residency?
A mentor once told me that medical school is my protected time for learning. My responsibility as a medical student is to learn and experience all of the things medicine has to offer without fear of being judged or making mistakes. As a student, you have the opportunity to learn about the entire human body, so it is crucial to make the most of it and enjoy the learning process.
If you are dead set on a specific specialty coming into medical school, that's great! You can tailor your experiences to get more involved with this specialty, but still keep an open mind just in case another specialty also captivates your interest. On the other hand, if you have absolutely no idea what you want to specialize in, that is also great! Learn everything and get involved in different research and volunteer

experiences so that you can truly find out what you want to do for the rest of your life.
It can be overwhelming attempting to balance and prioritize what to dedicate your precious time to in medical school. My biggest advice would be to involve yourself in things that you are passionate about and care about. Whether that be doing research, volunteering at clinics, or advocating for the homeless population, it is important to stay true to yourself and engage in meaningful activities that you genuinely enjoy. Your passion for these activities will ensure that you make a real impact in the time that you dedicate and thus maximize your return on investment.

Phase A

Step 1 is now pass/fail, so what is the point of studying hard in the first 2 years of medical school when rotations and other metrics are going to determine the residency I will get? It is still equally important to study the material well and challenge yourself to not only memorize but also understand the information. Though it is true that Step 1 scores will no longer influence your residency prospects (it is still imperative you pass), the knowledge that you are expected to know for Step 1 most certainly will. This information will help you contribute to conversations with

attendings and residents during rotations, perform well in your exams during the 3rd and 4th year of medical school, and most importantly, better treat the patients.
The knowledge accumulated during these years of classroom-based learning serves as the foundation for the rest of your medical education and future medical practice. Properly understanding the concepts associated with the pathogenesis of certain diseases and the mechanism of action of different drugs will create a strong framework in your mind to continue to expand during the 3rd and 4th years of medical school when you are actually on rotations serving patients. This framework will also be beneficial well beyond residency as it will provide a foundation to understand all the new medical research you will be reading as a practicing physician.
Unfortunately, just knowing the material isn't enough to be a great doctor in the future. It is also important to get practical experience of what you are learning in class through volunteering at clinics, doing research, joining clubs, etc…
It can be overwhelming deciding which activities you want to spend time in and it might feel like you need to participate in everything in order to get "enough" experience for the future. Once again, it is crucial to select things that you are genuinely interested in and have a desire to get more involved with. This pertains to research, volunteering, or any other extra-curricular activity you chose to pursue. Always remember that enjoying the journey is just as important as achieving the end goal of becoming a physician.

How can I Study?

How do you expect me to learn all the material in medical school while doing research and volunteering, while also having time for personal care such as sleeping, eating, and hanging out with friends? The answer to this is efficiency.
When it comes to studying, everything that you do has to be done with 100% percent effort. If you try compromising the quality of your studying, then you will actually spend more time studying because you will have to keep re-doing a specific chapter because you did not truly understand it the first time. By studying effectively, you will be able to free up more time to do the things you enjoy such as conducting research, volunteering, and hanging out with friends.
But how can I study efficiently? This is a trial and error process because each person learns differently. One way that many medical students supplement their class lectures is through 3rd party resources which have proven to make the material more digestible and easier to comprehend while still giving the pertinent information that

is essential for understanding the material effectively. The 4 best resources to learn material are: First Aid, Boards and Beyond, Pathoma, and Sketchy.
First Aid is a comprehensive set of notes that covers a majority of the topics that will be covered in the first 2 years of medical school. This is great to supplement the material from school lectures and really helps you focus on the most important things.
Boards and Beyond is a resource that prioritizes understanding concepts in medicine to make the information more meaningful than just memorizing random bits of information without connecting them.
Pathoma is another resource that has a similar style to Boards and Beyond, however, it focuses on the pathology concepts. Both of these are great resources to really understand the material at a deep level.
Finally, Sketchy is a resource that utilizes the method of loci to make it easier for students to memorize information. They draw different sketches in which each detail represents a piece of information you need to know, whether it be symptoms of a disease or infection or side effects of different drugs. Using these resources will help make the material more digestible and will hopefully allow you to have more time away from studying during your medical school years.
Another great resource to help embed information into your long-term memory is a spaced repetition software called Anki. This tool is useful in taking the material that you have already studied and helping you put it into your long-term memory in an efficient way. This is important because you do not want to only learn the material in medical school for a specific test. The sheer volume of information in medical school is so large that it is easy to forget once the test is over. The material is important for the entire duration of your medical practice, thus having software like Anki that helps embed information into your long-term memory will help you succeed in medical school as well into the future. Hopefully, all these tips help you achieve your Doctor Journey!
By Bhagvat Maheta

Deciding to become a Doctor? We Got You Covered

Becoming a doctor is a deeply personal decision and this post is for those considering the field and why they should pursue it. For those of you already committed to the pathway please feel free to drop down anything you think would be helpful for our younger counterparts. Before I get started I would like to mention a line from Jeff Bezos that in my opinion is very related to becoming a physician. In one of his interviews, he says that people have jobs, they have dreams, and they have

callings. He goes on to say that a calling is the most important thing that a person can follow if they can find it [1]. And I agree with this, especially for medicine as it is a huge commitment.

This career is a big step in one's life as it is a long and hard journey. But with a clear picture of the goal in mind, the journey is enjoyable. We all start with a dream but making it a reality is something that takes time, and sadly a lot of people drop out of medicine due to hardships. But do keep in mind that becoming a physician is one of the most rewarding careers. Yes, I personally am not one yet, but from shadowing multiple physicians and talking to many it is very prominent that doctors do what they do because they love what they do. I mean who would willingly go to school for a greater part of a decade if they did not have that true passion for medicine. And that true passion includes a variety of different positives the physicians provide to the world.

Physicians are able to provide their services to a multitude of different people. They have the ability to not just one or two people, but tons of patients a day! Primary care physicians average serving around 2,000 patients per year. Just imagine that! You're able to affect so many people's lives in such a positive way, something that would be hard to do otherwise.

By serving others out of their free will, physicians are sacrificing their life for serving humanity, for doing the greater good. I mean how much nobler can a profession get? Physicians spend a greater part of the decade in school and training after college just so they can go out in the world and implement a change upon their fellow humans. The only way to go through all that school is with a very strong desire to serve. That is why those who make it out are the best of the best. Just imagine yourself going through all the hard work and serving those of your community or other communities. Imagine the happiness you'd feel from knowing you did your best to help improve someone's life for the better. You could be a surgeon bringing back someone from their deathbed, or a pediatrician who is helping a child recover from the common cold. It doesn't matter at the end of the day YOU are the one improving others' lives!

This brings me to my other point which is that within the field of medicine there is so much flexibility as to what you can do. There are so many specialties or subspecialties that one can find a passion for. Let's say you have always been intrigued by how the heart works and functions, you can become an expert at it while helping serve those who need YOUR expertise. How great would that feel? There is just so much versatility in medicine, for example, you could work in a 9-5 office relaxed and helping patients in a calm manner, or feel the adrenaline of working in the hospital with a different case of patient rushing in every so often.

On top of being an expert, there is no end to the continuous knowledge that is being poured into the medical field day by day. This makes the medical field so interesting, as it is a never-ending journey of curiosity and knowledge that can be used to do good in humanity. Sure physicians may have to take boards every so often to keep

practicing medicine, but if you have a passion for a specific specialty I presume it would be easy to learn about something you love.
Another thing about becoming a physician is that the older you become as a physician the more experienced and respected you are. This is because the more patients you see the more experience you gain on how to treat them and what works best. This means that you do not have to worry about finding a new job, getting laid off for new physicians to enter, and most importantly you can keep doing what you dreamed of! On top of this if you stick with the same practice you can build long-term relationships with your patients and see them grow as you help them stay healthy throughout the years. These bonds formed will be like nothing else! You will get to see the service you provide first hand and see a patient heal or improve.

Quick Facts

Some quick facts about the career are that it has some of the best satisfaction ratings in comparison with other careers [2]. This is due to the fact that these selfless people are helping other people which as mentioned above can be one of the most rewarding things. Another fact about physicians is that they have some of the lowest divorce rates which could be due to the exercising of trusting and communicating abilities that physicians have to do all the time when they are treating patients [3]. This may be a random fact, but hey a positive is a positive.
Now I know money should not be the motivating factor for becoming a physician, but it sure is a good extrinsic factor. The average physician makes a good $294,000 in America [4]. Furthermore, doctors can have a lot of versatility in how they work, for

example, internists in suburban areas can work one week on and one week off and still make almost the average salary for physicians.
As with all things in life, there are pros and cons. And it would be unfair for me to list only the positives without touching on the negatives of being a physician. Doctors on average work around 1.5 times more per week compared to the average 9-5 American job [5]. This overworking leads to burnout to occur within physicians. In 2020. 42% of physicians reported burnout due to overworking [6]. Now, these numbers may be heavily inflated due to the stress that was imposed upon doctors when the pandemic arose. But at the same time, these physicians were the ones saving people in the battle with this novel virus, which is one amazing sacrifice these people made!
At the end of the day, the decision is yours. Take some time to consider all things before deciding one way or the other. But I would like to emphasize if you believe your calling is serving humanity, becoming a physician is one of the best ways to fulfill that! Good luck to you all in whatever you choose but we hope we can help you on your Doctor Journey!
by Kartik Goswami

The Definitive Guide: What Prereqs you need for Med School

Introduction

Before heading to medical school, there are some prereqs that need to be completed before the entire process of applying towards medical school. Many of the courses that are required from most medical schools are science-oriented. This is why many individuals who attend college focus on science-oriented majors so they are able to fulfill the majority of the science classes as part of their curriculum. In terms of the science courses that are prerequisites to most medical schools, these include Inorganic (General) Chemistry, Organic Chemistry, Biology, Physics, and Biochemistry. Behavioral Sciences is also required (psychology). In addition, English, Calculus, and Statistics are generally required at most if not all medical schools. As you can see, the courses mentioned here are key staples of the MCAT and that is why the MCAT focuses upon these topics. This is why it is crucially important as to why students need to do really well learning these courses and doing well on the courses, as not only is it affecting your GPA, it also affects your future MCAT score.

Mandatory Classes for (Most) Med Schools[1]

Biology: One of the core required prereqs every premed must take if one wants to apply and attend medical school. Biology as we all know it is the study of the building blocks of life and quite imperative to understand if one wants to treat patients in the future. Understanding biology will allow students to understand the basics of the body and how it functions. This knowledge will become the foundation for medical school to build upon. In addition, the basic concepts learned in this class will be brought up again in biology-based classes that you take (Physiology, Anatomy, Genetics, etc).

Physics: Another required class by most medical schools. Physics allows one to calculate velocity, acceleration, rotation, among many other real-world attributes. A lot of premeds might think that physics is useless to becoming a physician, but if you apply physics to the human body there can be a lot of applications. For example, the speed and pressure of blood can be measured through physics, a necessity for high blood pressure patients. Physics also allows determining how certain organs like the heart and lungs are functioning properly. Not only this, but physics is on the MCAT as well, so taking this class will allow you to excel on the infamous exam.

General Chemistry (Inorganic): Also a core prereq required for medical school applications. Here one learns how molecules are made, and how certain reactions

take place. The reactions that occur allow one to understand how specific reactions take place in the body and in the broader universe. Through taking general chemistry you will develop a foundation for learning how drugs will function in the body and how organic molecules work to create organic reactions.

Organic Chemistry (Ochem): A core class needed for medical school. Ochem is the study of organic molecules which end up being the building blocks of all life. Life is centered around carbon and hydrogen bonds, and that is the backbone of Ochem. By learning Ochem, you will be able to understand how drugs, proteins, and other nature-based substances are created.

Biochemistry: A major prereq that is required for medical school admissions. Biochemistry is the study of how biological processes within the bodywork in a chemical-like fashion. Through biochem, you will be able to learn many important facts such as the Krebs cycle, electron chain transport, and many other things necessary for your medical foundation. The knowledge learned from this class will be key to understanding how more complex diseases and drugs affect the body.

Psychology: An additional requirement for pre-meds. Psychology consists of studying how humans think, interact, speak, and a whole lot of other interesting facts. This may seem useless to some people, but with psychology under your belt, you will be able to understand why certain people act differently in certain situations. For example, as a physician, you need to know the stages of grief and how to help your patient and their family when they are diagnosed with a big disease. On top of this psychology will help you learn how to build trust with patients, which is crucial in healthcare if you want to help someone.

Genetics: Another class required by most medical schools. The class teaches how certain traits are passed onto prodigies and how multiple traits combining together could create different traits or even disable some traits. The study of genetics is important to future physicians as it can help students learn how their future patients contract certain diseases or pass them on. For example, a lot of cancers tend to have genetic patterns that should be identified to properly treat the disease at hand.

Calculus: This is a further prereq needed to be taken by most premeds. Calculus allows one to learn how to solve complex equations and determine how to solve certain questions. It may be one of the most questioned classes that is required for pre-meds but is essential to understanding how medicine works as a whole. It can be used as a way to measure and understand the chemical reactions occurring in the blood, blood flow, tumor growth, and many other things. Even though this class may not seem that necessary, knowing the knowledge from here will help you become a better doctor.

English: English is a requisite in nearly all majors and for the medical field is an important class as well. English is not just about reading and writing but also involves communication. Being clear and cohesive in one's reading, writing, and communication in the real world and medical field is quite essential to be successful

in the outside world! With that being said, it is important to develop these skills when the opportunities are presented.

Statistics: The final class required by most medical schools in the states is statistics. Statistics is the study of how probable something is and how significant something may be. This class is critical to understand and calculate risk factors, morbidity, mortality, survival rate, etc. All of these measurements would not be possible without statistics and are used by doctors regularly to give their patients the best outcome that is statistically possible.

Recommended Classes to take (may be required for some schools)[2]

Medical Terminology: This class is quite helpful to many students as they in a way get a small precursor to many of the classes students take in medical school and anatomy. Learning these basic terms as well as prefixes, roots, and suffixes enable you to be more prepared and knowledgeable in medical-related environments. This class teaches a variety of diseases and relations in the body and in our personal opinion is a great class that you should take if you have the time!

Physiology: This is a prereq in which concepts are not only in the MCAT, but are also involved with other classes. This class goes hand in hand with many topics you learned and will learn. Physiology enables you to see another perspective and connect with classes such as anatomy to gain a greater understanding of how the body works.

Anatomy: This class may be a no-brainer, but it still must be mentioned as one of our recommended classes. Anatomy is studied in medical school and so it is recommended that you have taken the course and have some idea of the concepts and things that you are learning in medical school, so that way you are not going in blind into medical school. You get to learn about many basic concepts that are also mentioned in the MCAT. Knowing your anatomy allows you to be ahead of the game when it comes to medical school, so that way when you see things that you already knew, you can recollect on it and remember quicker.

Philosophy: This prereq is an interesting pick for recommended classes, however, let us explain why it may be a valuable pick. Philosophy tends to dive into the variety of things and ways people talk, and with that being said it can be very eye-opening to future healthcare professionals. It is one of those classes that make you think from multiple perspectives and makes you support your decision. These skills are very important as a future healthcare professional!

Service-Oriented/Leadership Classes: These classes are focused on enabling you to develop core skills that you will be able to utilize in the medical field and your day-to-day life. With that being said, these classes tend to provide you opportunities

that enrich your curriculum vitae and make you a more well-rounded person. You learn more about yourself and the variety of issues as well as biases that exist in the world. Remember enriching yourself and developing a variety of perspectives puts you at the best of your game and lets you succeed wherever the world takes you!

Tips

Intro Classes

Courses that can help, but are not mandatory are Introduction to Inorganic Chemistry and Organic Chemistry. These courses can help build foundations for the actual lecture classes. They can be very helpful, especially for those not strong in the chemical sciences. But be wise when taking these classes. By this we mean look at reviews from previous students. This is because there are certain people we know that have taken introductory courses that have been worthless and timewasters. If this is the case for the introductory course at your school, you may be better off doing some self-studying. Again look at the reviews, and know what suits you better. Regardless of what path you choose, try to build your foundation to these classes in a way that suits you best, it will pay off!!

Professors

Getting to know the professors that teach your classes, especially your core classes, is essential! To do this go to office hours, attend all lectures, and do a majority of what the professor asks of you. Not only will this build a great relationship with the professor, but your grades should increase as well. Through this you may be able to gain an insight into upcoming assignments/exams and may be on the lenient side of the professor's grading. On top of this, building this connection will allow you to request and receive a great letter of recommendation (LOR). LORs are needed for all medical schools and depending on what school a variety may be needed. A good LOR goes a long way as it shows what type of person you are within and outside the classroom. Professors can pave many opportunities for you as well! Professors have the ability to recommend you for tutoring positions, research positions, or other positions around your university and these can play a huge role in your application process!

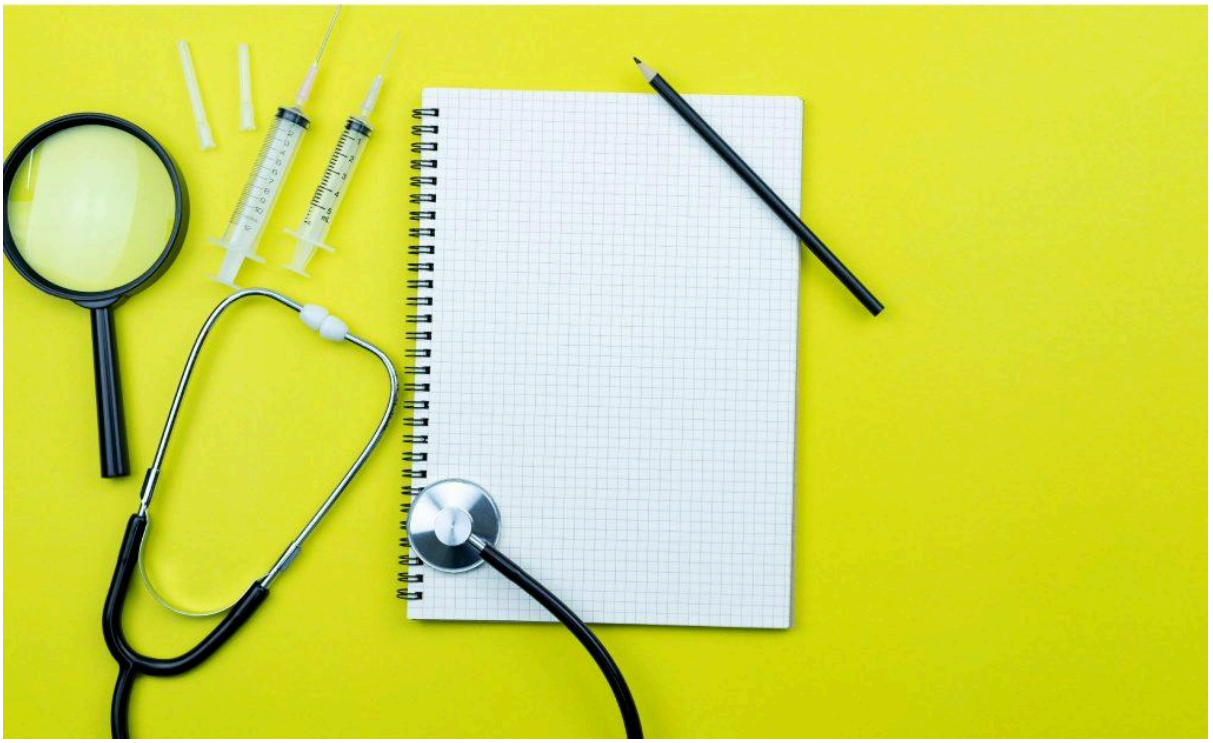
Classmates

Becoming friends with one or multiple classmates for each class is CRUCIAL!! These are the people who will be going through the journey with you in that specific class. There is no one better than these classmates who you can rely on to study with and work with for class projects/exams. Studying and working together is beneficial for both or all of you. You guys can feed off each other, quiz each other, and even teach each other. Personally, we loved to study all the material by ourselves first and then

have group discussions with others to see where we have gaps in knowledge. You guys can also use Anki together and see if you remember the overall terms/concepts. Remembering deadlines is something that we sometimes struggle with; even if one of us writes it down, we still forget. This is why having someone reliable in the class can be very useful in keeping you in check. Having classmates who are in pursuit of their own doctor's journey can be beneficial as well! When your classmates see opportunities, they can share with you and you can share with them your opportunities and together become successful physicians someday in the future!

Websites

Utilize ratemyprofessor.com to see which professor's teaching styles may be a better fit for your education! Also use online resources such as YouTube, Reddit, and other sources to search for help and sometimes there can be full-on guides that can lead you to victory!
A great website for those of you struggling in Ochem is: masteringorganicchemistry. They provide a good through explanation about almost all organic reactions and help give a good grasp on the concept.



The Basic Spiel

D.O., M.D., or both?

Most D.O. and M.D. schools require about the same amount of mandatory courses, but it doesn't hurt to see what each school requires on their website. To get more information about the differences between MD and DO check out our other article[3].

MCAT

Put a lot of time into preparation. Purchase books that are best for you, each set of books varies depending on your content knowledge. Also, doing well in your primary courses can play a big role in how much you would have to prepare/study for the MCAT. Remember the MCAT will still play a huge role in placing you into the medical program/school that you want to be able to go to.

GPA

Put a great emphasis on all of your courses and always aim for a high GPA. Especially when working on science courses make sure to get the highest grades and understanding you can as it leads to your very own science GPA as well as future MCAT score. Also, your great work ethic for studying in your courses will pay dividends when you enter the MCAT studying phase!

Major during Undergrad

A specific major is not needed for medical school acceptance, although most premed students end up choosing biology majors. It is recommended to choose a major that interests you and allows you to excel in your classes. If you want more details on specific majors for medical school acceptance check out our other article[4].

Application

For the applications, make sure to always start early! Inputting courses, getting transcripts, and working on your personal statement take quite a bit of time, so make sure to get it started early and not procrastinate. Have someone you trust to go through your personal statements and improve it! This can even be one of your professors with who you have made a close bond with. In addition, make sure to ask for your letters of recommendation (LOR) early. Not only does this show responsibility, but it allows the writers to have adequate time to give you a great LOR. Even though many medical schools do say something along the lines of people are evaluated holistically, in our personal opinion timing of submission plays a great role in acceptance rates as well!

TL;DR

The basic gist of this article is that most medical schools require the same required prereqs. These prereqs are general chemistry, organic chemistry, biology, physics, biochem, genetics, calculus, statistics, and English. Some of these classes may not be mandatory for some schools but make sure to check the school you're applying to. In addition to these classes, there are a few other science and community-based classes one should try to take. These classes are: medical terminology, physiology, anatomy, philosophy, and service-learning.
Not only are these prereqs required by medical school, they are also important for excelling on the MCAT! So try your best to learn as much as possible from these courses. We also put a few tips about how to succeed such as studying effectively with others, getting to know the professors better, and using online resources to supplement your studying.
By Kartik Goswami and Joel Varughese

The Definitive Guide: D.O. vs M.D. 2022

When choosing between D.O. and M.D., many premed students get flustered. They don't have enough information about what's better for them. There's a lot of confusion on what the difference is between these two degrees especially with the current changes, but I will address these and hopefully leave you more informed on what medical school philosophy fits you on your "Doctor Journey".

Table of Contents

BACKGROUND

History of M.D.

The practice of medicine was started around colonial times when physicians were trained in university to practice medicine. During this time there was no official organization that garnered the rights and rules of practicing physicians.
In 1766, the first medical professional organization was made, New Jersey Medical Society. As time went on more schools and organizations were opened that regulated the practice of medicine and by the very early 1800s the Medical Doctor (M.D.) degree was made to certify physicians to practice on patients.

History of D.O.

Doctor of Osteopathic Medicine (D.O.) was developed by Dr. Andrew Taylor Still, MD in 1874. He wanted to focus his medical career on a whole-body approach to treat the patients in a holistic, whole-body way.
His main goal was to create a philosophy of medicine where self-healing is promoted within the patient. He decided to go on this path because of his research that he conducted on the human musculoskeletal system where he concluded that all parts of the body must work together in perfect harmony in order for the patient to have proper health.
In order to continue his philosophy, he started using techniques on patients to treat them in a holistic fashion (known as OMM today). Dr. Still continued to follow his philosophy and opened the first osteopathic medical school in 1892 where the Doctor of Osteopathic Medicine was created.

APPLICATION

During my application cycle, I had applied to both M.D. and D.O. schools. The applications were quite similar with very few differences. There are over 152 accredited M.D. schools, while there are 35 accredited D.O. schools. M.D. schools use the AMCAS service while D.O. schools use AACOMAS as their service.
AMCAS usually has a window of applying starting in June and ends in January. AACOMAS also starts in June but continues until April of the next year.
These are the basic timelines for the application service, but make sure to check individual school deadlines before applying! Both types of schools are starting to require CASPer, which is a character-based test. I would suggest utilizing BeMo tips to prepare for the CASPer.
Both types of schools strongly advise shadowing a physician before applying to medical school. This shows that you have a decent understanding of the career you are going into. D.O. schools strongly recommend shadowing a D.O. physician before applying to the school which shows that you really get to understand the osteopathic philosophy in real life. Make sure to start communicating with local D.O. or M.D. physicians as soon as possible if you need to get shadowing experience!
On top of shadowing, to improve your chances of medical school for both D.O. and M.D. schools it is highly recommended to do some type of community work. Examples include but are not limited to volunteering at local hospitals and clinics.

SCORES

Average scores between D.O. and M.D. students vary quite a bit. Regardless, it is still highly competitive to get into either type of medical school.
The average MCAT score for *osteopathic schools is* ***503.83***, while the average MCAT for *allopathic schools is* ***511.5***.
The average GPA also differs where *D.O. students accepted have an average GPA of* ***3.56***, while *M.D. students have an average of GPA* ***3.73***.
A great way to get tips on how to improve your score on the MCAT is through MCAT Mastery. This website has tons of free materials and stories of students who have improved their MCAT scores dramatically. Some of their material costs some money, but I would recommend buying the MCAT handbook that they offer. It has lots of little tips and tricks that can slowly but surely boost your overall score!

THE DOCTOR JOURNEY

Medical School Differences

D.O. VS M.D.

APPLICATION

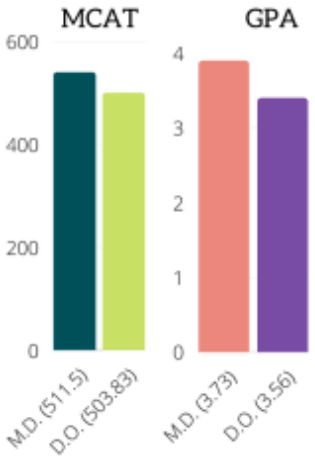
D.O. -AACOMAS

- Personal statement- 4500 characters
- Activities- Unlimited, 600 characters per activity
- Fees: $195 for first school, $45 for each additional school
- Tests: add MCAT score manually

M.D.- AMCAS

- Personal statement- 5300 characters
- Activities- 15 entries, 700 characters per activity
- Fees: $170 for first school, $40 for each additional school
- Tests: MCAT is added automatically

THE STATISTICS



PHILOSOPHY

Osteopathic

- Osteopathic Physicians (D.O.) tend to focus on a total body approach.
- A person is treated as a trinity of body, mind, and spirit

Allopathic

- Allopathic Physicians (M.D.) tend to focus on curing the disease as the most important task

CURRICULUM

Osteopathic and allopathic schools comprise of very similar curriculum structures. They both require students to have a generous amount of knowledge for the whole body.

OMM

The difference lies in that *D.O. schools add Osteopathic Manipulative Medicine (OMM)* in addition to what allopathic schools teach.
OMM helps to teach a more holistic and alternative approach to taking care of patients. This is done through extensive training and practice is the system of the musculoskeletal system by practicing with OMM partners weekly for usually the first two years (approximately 200 hours of course work). These techniques are used to promote the body to self heal during times of injury or disease.

Class Size

Class sizes are different as D.O. schools tend to have bigger classes ranging in the 100s to sometimes even 400s, while M.D. schools tend to have a maximum class size of around mid 100s.

Clinicals

Minimal clinical differences exist between M.D. and D.O. Both types of schools offer many opportunities to rotate with physicians of various types of specialties like internal medicine, pediatrics, surgery, OBGYN, cardiology, and so much more. Here the difference lies in that D.O. schools may put an emphasis on primary care and underserved area community work on their students more than M.D. schools. Although here there lies no major difference between the two different philosophies of medical schooling.

TUITION

There is very minimal difference in tuition between M.D. and D.O. and it matters more depending on the circumstances like state, in-state, or out-of-state student status, and whether the school is private or public. The average tuition for *public medical schools is around* ***$37,566*** while *private schools come in around* ***$60,655*** *per year*.
Most of these medical schools offer scholarships or funds in order to drive down the overall tuition price that students have to pay. Another great way to pay for these medical schools is by committing to a branch of the military in

the U.S. By doing this, you are able to get your medical school paid off and get a monthly stipend. The catch is that you must serve at the minimum the same amount of years you had the military pay off for you.

RESIDENCY

Since 2020 the residency matching program now works the same way for both D.O. and M.D. students. This means that it is *much easier for D.O. students to receive a residency spot than it was before*.
According to 2022 The Match data, over *92.8% of M.D. students get matched* to their specialty of choice, while *89.1% of D.O. students get matched to their*

specialty of choice. Lots of D.O. schools have a 95+% match rate in residency and some like Touro Nevada have a 100% match rate! Now there are some differences in residency match rate between the two philosophies of medicine and these are listed below for the ***2022 Match.***

Specialty	***M.D. Senior Match Rate***	***D.O. Senior Match Rate***
Anesthesiology	69.8%	17.4%
Child Neurology	61.4%	9%
Dermatology	80%	10%
Emergency Med	54.5%	25.8%
Emergency Med-Anesthesiology	50%	50%
Emergency Med-Family Med	57.1%	14.3%
Family Medicine	31.3%	30.4%
Family Med-Preventive Med	0%	50%
Internal Medicine (categorical)	37.2%	17.1%
Medicine Anesthesiology	66.7%	0%
Medicine Dermatology	87.5%	12.5%
Medicine Emergency Med	71	29%
Medicine Medical Genetics	60%	0%
Medicine Pediatrics	84.7%	9.9%
Medicine Preliminary (PGY-1 only)	71.1%	8.5%
Medicine Preventive Med	62.5%	0%
Medicine Primary	57.8%	7.7%
Medicine Psychiatry	83.3%	12.5%
Interventional Radiology	82.2%	6.7%

Neurodevelopment Disabilities	60%	40%
Neurological Surgery	84.2%	3.8%
Neurology	50.9%	17.1%
Obstetrics-Gynecology	73.6%	16.1%
OB/GYN-Preliminary (PGY-1 only)	22.2%	5.6%
Orthopedic Surgery	80.6%	12.7%
Osteopathic Neuromusculoskeletal Med	0 applicants	62.5%
Otolaryngology	87.5%	5.8%
Pathology	36.6%	12%
Pediatrics (categorical)	56.5%	19.7%
Pediatrics Anesthesiology	100%	0%
Pediatrics Emergency Med	66.7%	33%
Pediatrics Medical Genetics	60%	3.3%
Pediatrics P, M, and R	100%	0%
Pediatrics Preliminary	69.6%	13%
Pediatrics Primary	41.9%	12.2%
Peds/Psych/Child Psych	95.2%	4.8%
Physical Medicine and Rehab	57.8%	30.6%
Plastic Surgery (integrated)	89.2%	0%
Psychiatry	61.2%	18.9%
Psychiatry Family Med	100%	0%
Psychiatry Neurology	50%	25%
Radiation Oncology	70%	10%

Radiology Diagnostic	55.3%	31.1%
Surgery (categorical)	65.3%	13.1%
Surgery Preliminary (PGY-1 only)	26.4%	4.9%
Thoracic Surgery	87.2%	2.1%
Transitional (PGY- 1 only)	56.9%	20.9%
Vascular Surgery	85.7%	1.2%
TOTAL PGY-1	51%	18.4%
Anesthesiology	67.1%	15.3%
Child Neurology	28.6%	42.9%
Dermatology	82.9%	7.7%
Interventional Radiology (integreated)	80.5%	14.6%
Neurodevelopment Disabilities	100%	0%
Neurology	70.8%	9.9%
Nuclear Medicine	0 applicants	0%
Osteo Neuromusculokeletal Med	0 applicants	100%
Physical Medicine and Rehab	50.9%	37.6%
Radiation Oncology	58.4%	4.2%
Radiology Diagnostic	71.5%	13.2%
Radiology Nuclear Med	66.7%	33.3%
TOTAL PGY-2	69.8%	14.9%
TOTAL PHYSICAN R POSTITIONS	0 applicants	0 applicants

This table shows the differences that D.O. and M.D. students have when going into the match for residency. Some of the specialty matches repeat after PGY-1 because they are part of the PGY-2 match. Speaking of which PGY

stands for “Post Graduate Year”. This signifies what year of residency students have applied for. Usually speaking those specialties that offer a PGY-2 position from match means that they also require a preliminary or transitional year before being able to join their residency program.
The Physician R positions stand for reserved physician spot that is reserved for previous medical training to undergo residency again. Here in the 2022 match, there was no data due to no applicants for Physician R positions.
With the 2022 match data and previous match data, M.D.s tend to end up in more specialties than D.O.s. This is shown by the data above as D.O.s are at a significant disadvantage for specialties such as vascular surgery. D.O. students tend to get into primary care for their field of work. Keep this in mind when deciding between which medical schools to apply to.

BOARDS

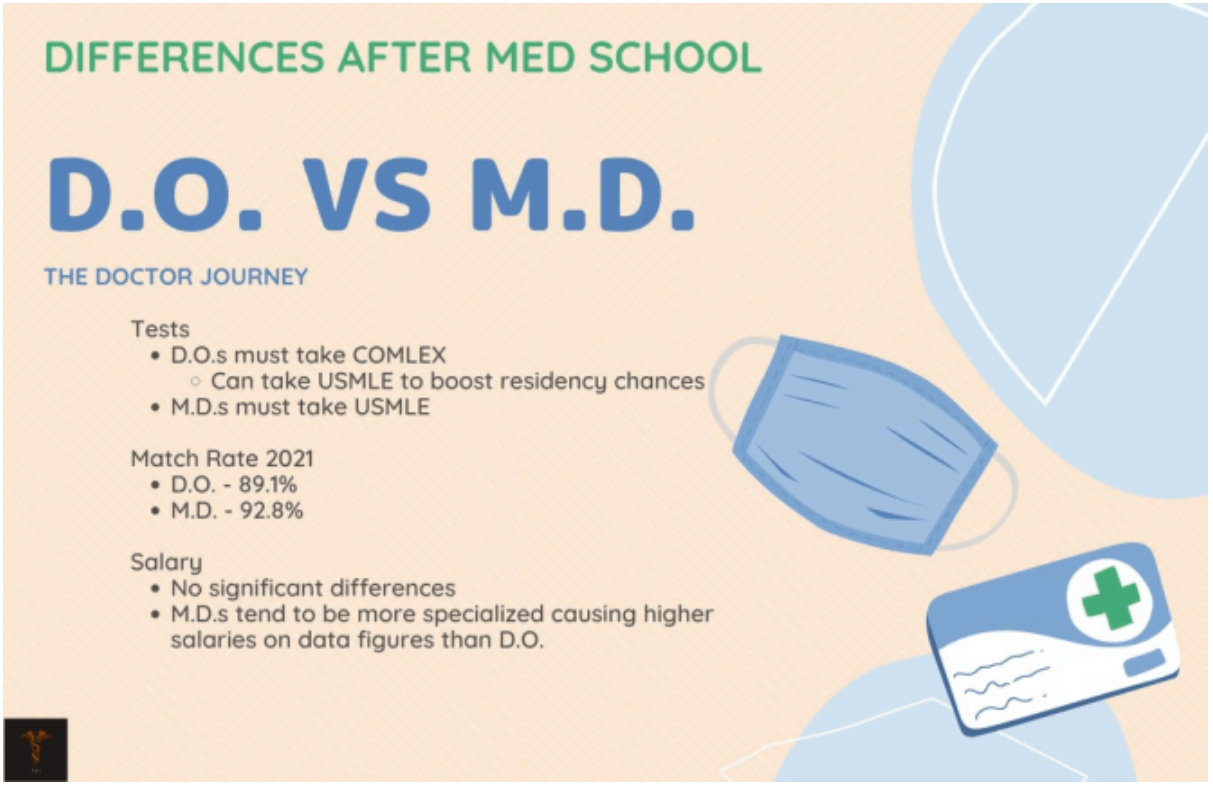
Both D.O and M.D students have to take licensing exams in order to graduate and move on in their careers. Although the tests required are different for both schooling philosophies.

USMLE

*M.D students are required to take the **USMLE*** to receive their license. The USMLE exam comprises of three different steps. The first two steps are required before residency and the third step is usually done during the first year of residency.

COMLEX

*D.O students must take the **COMLEX** exam*. The COMLEX exam is split up into three different parts with two mandatory parts to graduate, and the third part being done after graduation. The COMLEX is accepted by many residency places. It is highly recommended for D.O students to also take the USMLE as it would broaden their horizons for acceptance by medical schools since all residencies accept the USMLE.



PRACTICING

Both D.O.s and M.D.s can practice as any type of physicians within the U.S. In regards to salary, there is a lot of variables that come into play. Some of these variables are dependent on the specialty a person is in, the state they are in, how much in demand their service is, and multiple other factors.
In accordance with these factors, there is a slight difference in salary between both M.D. and D.O. physicians. This difference is due to the *average M.D. being more specialized and working in more urban environments* than the average D.O. physician. M.D.s tend to be more specialized because of the higher acceptance rate of M.D.s in specialized residences over D.O.s as shown in the match data.
Perhaps this trend will change because of the same match system that has been implemented recently. Overall there is not a significant difference in salary between the two degrees, it mostly depends on what you are doing.
When practicing there is a difference of respect shown between the two degrees. As of recent history and ever since the creation of osteopathic medicine, allopathic has been regarded as the more respected and better-known type of physician in comparison to an osteopathic physician. Although as hopefully understood by this blog, there is not much of a difference in training between both of the types of schooling, except the fact

that osteopathic schools tend to teach OMM on top of what the allopathic curriculum teaches.
But as time goes on the D.O. stigma is becoming less and less especially with the merging of residency matches for both D.O. and M.D. This has made it easier for D.O. students to match for residency. On top of this, the current and past President of the United States has had a D.O. physician as their personal physicians during office.
Yes, the stigma is still there between D.O. and M.D., but it is decreasing over time. I believe in the next few decades it may reverse with D.O. physicians being more highly regarded due to their extra training on holistic healing techniques on top of traditional western medicine. What do you think?

CONCLUSION

Let's recap the differences and similarities between a D.O. and M.D.

Similarities

The similarities for both D.O. and M.D. start with both being able to work full time as a physician within the U.S. and a lot of the western world. They both are matched for residency within the same program. Salary is very similar for both degrees. Tuition also does not vary much for the different types of medical schools.

Differences

The differences in the two philosophies of schooling start with the acceptance of applicants. For D.O. schools you are highly recommended to shadow a D.O. physician. D.O. medical schools also tend to accept lower average GPA and MCAT scores than their M.D. counterparts. The application differs for both as osteopathic schools use AACOMAS, and allopathic schools use AMCAS. In terms of curriculum, D.O. students have to learn OMM on top of the normal allopathic curriculum. In order to get your license, D.O. students must take the COMLEX, while M.D. students need to take the USMLE. For residencies, M.D. students have a higher match rate into specialties of their choice over D.O. students.

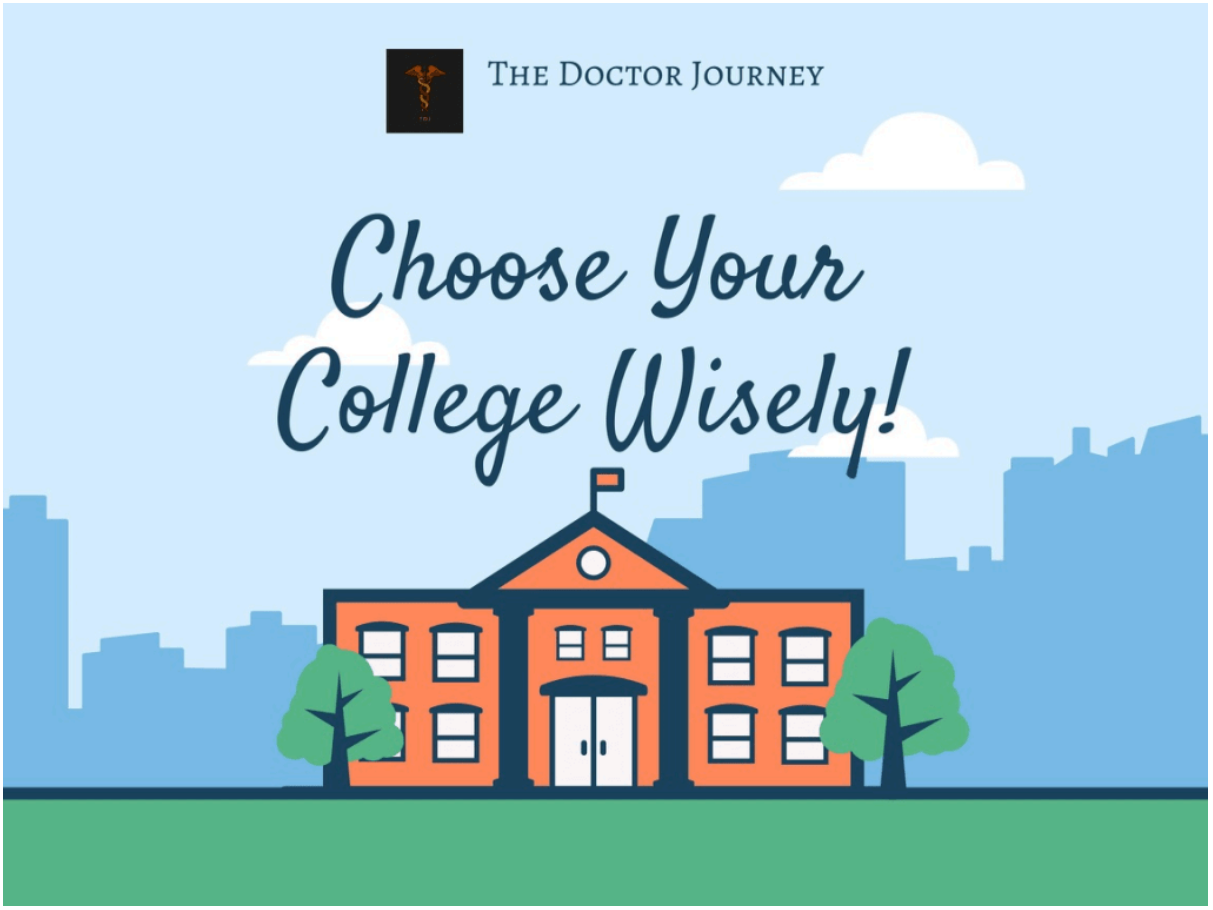
Final Regards

Hopefully, by now you have gotten the gist of the difference between osteopathic and allopathic medicine. And to be honest there is no answer to

the question of whether D.O or M.D. is better than one another. It is a deeply personal decision on which philosophy you want to choose for your path to becoming a physician. If you do not care about the difference and want to simply pursue your dream career of being a physician then I would advise you to apply to both M.D. and D.O. schools. You can then decide what individual schools that you get accepted to suits you better. All in all, I hope this was helpful in informing you of the differences and similarities between the two medical school philosophies. Good luck on your “Doctor Journey” and please feel free to comment your thoughts below!
By Kartik Goswami

The Definitive Guide: A High Schoolers start on “The Doctor Journey”

“The Doctor Journey” is very long and for some, it starts when they are high schoolers. It also varies quite a bit for everyone. We all have our own obstacles as well as advantages when we head towards this route. This is written not to give you a definitive step-by-step pathway. However, this article is here to give you tips on how to utilize the opportunities and experiences that come your way. We will be highlighting important things to be looking out for and things to do starting from the high school level onwards.



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High School

***In high school*,** we are bombarded with so many things may it be education or personal life. Although committing to the field of medicine at this young age is a great advantage for all pursuing the field. Always better to start sooner than later. There are many opportunities that can arise for you to take to help solidify your plan towards medical school. We will try to list out many of the important things that you should or could keep in consideration.

Interest

Having an interest in medicine during high school is great, but don't worry you still have plenty of time to decide on a career path during college as well. But before deciding on medicine as your career, take some time to research if the career is for you.

Becoming a physician is a long process and requires lots of dedication, and getting started early during high school would be a big advantage. To get some quick facts and insight about what a physician's life looks like check out AAMC's Aspiring Docs page and AAMC info for high schoolers. They list out some good testimonials and videos from physicians themselves.

Education

First and foremost, your education should be a priority in high school. High school is a time for development for us and we build and have many memories from this place. We would like to emphasize that one of the memories you have of high school should not be a regret in terms of your educational statistics.

Make sure you emphasize your education quite a bit and to work as hard as you can to maintain the highest level of academic grades. Learning many concepts in high school as well as study patterns may tend to help you out for college, but sometimes it may not. You should really emphasize upon working hard on the classes you take. There are two things you want to emphasize in these classes: your grades and your education. These two things will be quite important in the future. The higher your GPA the more competitive you are compared to your counterparts and this will allow you to have an easier time getting an acceptance from a variety of colleges.

Extracurriculars

This right here is an important section for any college application as well as medical school application. We would definitely recommend you to do a variety of extracurriculars may it be volunteering or actual job experience. One thing we recommend is that if you are sure about going towards the medical field, attempt to find experiences related to the medical field.

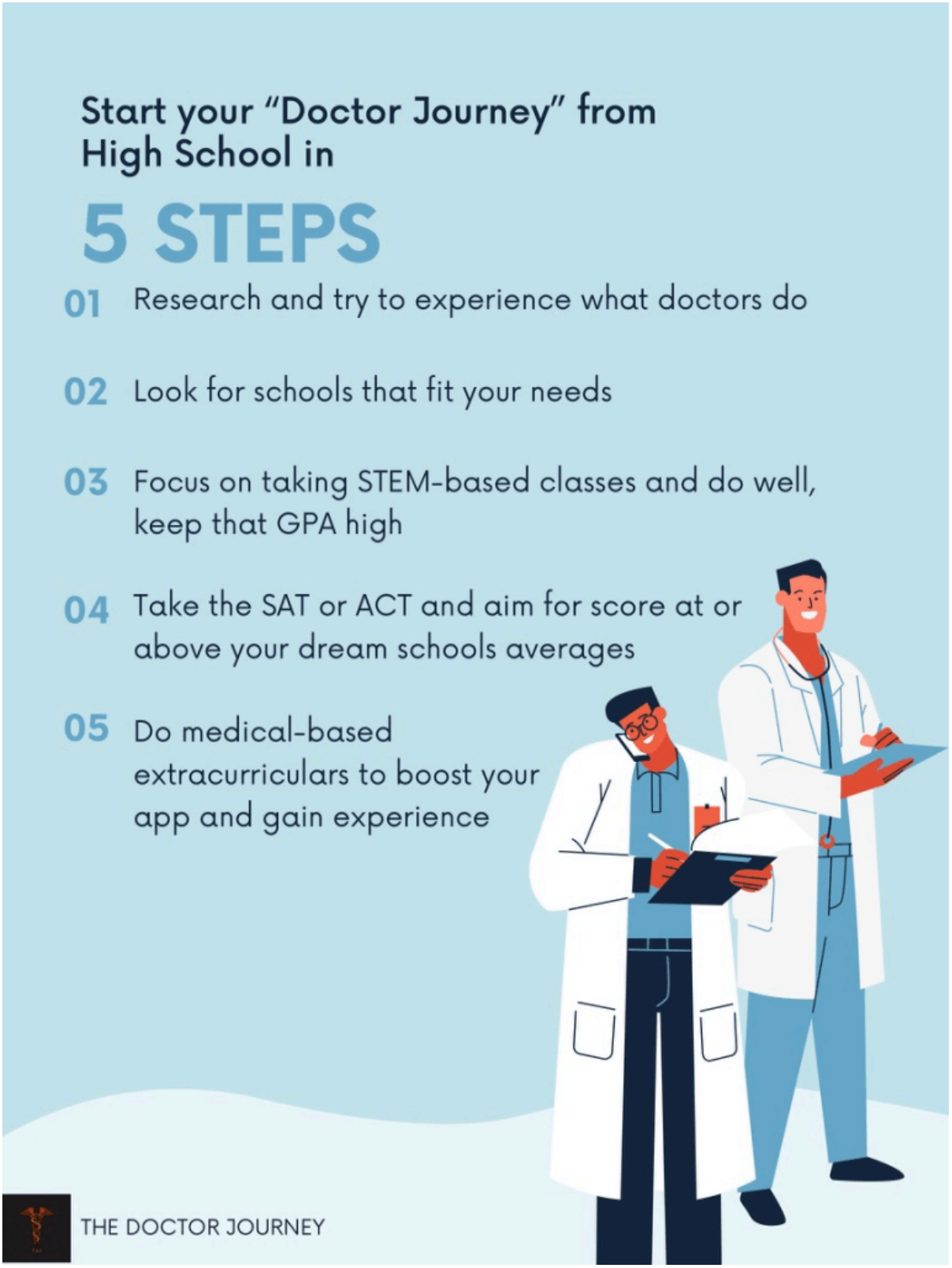
One of the first and foremost things that many premeds do is volunteering at a hospital or clinic. It can get tricky sometimes with age restrictions and HIPAA restrictions, but you should start by looking online and contacting the local hospitals and clinics to see what kind of volunteering experiences are offered.
Longevity can be an advantage on your application as you show dedication to your service, so try to pick something that you would be able to incorporate into your schedule, potentially over the weekend! Volunteering can include things like a gift shop or front desk, as well as a variety of other opportunities that are offered depending on the location you have chosen. If possible try to open new opportunities from volunteering.
Also, try to apply to various summer programs that are offered for students interested in medicine if available. These will not only tell you if you have a passion for this career, but also will look good on applications! Showing colleges that you already have a career in mind will make you look more confident and stellar compared to the applicant pool.

Tip!!!
Try to shadow an M.D. or D.O., because you will get more of an idea of what each kind of physician does and it will be beneficial especially in the application towards medical school! This right here will help you become quite more competitive compared to many of your counterparts. You are not only learning firsthand what physicians of varying specialties do, but you are also able to open your network of individuals who can play a major role in your applications in the future. If you are able to shadow a doctor, make sure to develop a great relationship with the physician, so that they may be able to provide you a letter of recommendation!

Dual Enrollment

Attempt Dual Enrollment!!! If able to, apply to your local community college and take online or in-person courses at the community college. This is a key head-starter for many and can save you time in college to allow you to have a more open schedule later in your future and save potential semesters.
How do you go about this? First, see if there are any dual enrollment programs in your area and apply! Contact your high school counselor and see if there is any possible way for you to do dual enrollment with the school. If you are able to do this with the school, it would be ideal as the school would take on some of the paperwork that you would have to deal with. Say you are on your own, then you should express your wish to take college courses with your counselor and principal and obtain their support in this endeavor.
Look into your local community colleges and see what these colleges require from you in order to allow you to take courses at the campus. Usually, you will have to apply to the college as well as obtain permission from the counselor, principal, and your parents. Colleges tend to limit your amount of credits you can take especially at

the high school level. It is highly recommended to take no higher than 6 credits, especially in the first year. Utilize websites such as ratemyprofessor.com, it can make a night and day difference with your class experience!



Applying

Choose your school

Make sure to do thorough research of the school that meets your needs. Look at their extracurricular and educational opportunities to see if they match what you want. Also, look into the matriculation rate of their students to the path of your choice, in this case, medical school.
If possible, after deciding on a few schools, go check the school out and see if you can envision yourself living there. This is very important, especially if you choose a premed route since good mental health will go a long way on this long journey! Keep in mind, choose something that is best for you, not your social life! We are not saying to sacrifice everything, but remember to put yourself in the driver's seat as this is your life.

Majors

There are a variety of majors that one can go into to get into medical school. The majority of majors tend to be science-oriented as the sciences are the emphasis of MCAT and so getting into the sciences will already give you a headstart for the MCAT.
There is a multitude of majors out there that make it to medical school, but the most popular majors are listed below according to the 2020-2021 AMCAS data:

Major	Applicants Applied	Applicants Matriculated	Percentage Matriculated
Biological Sciences	30,921	12,845	41.54%
Humanities	1,738	832	47.87%
Math and Statistics	342	156	45.61%
Physical Sciences	4,680	2,240	47.86%
Social Sciences	4,810	1,991	41.39%
Specialized Health Sciences	2,014	784	38.93%
Other Majors	8,525	3,391	39.78%
All Matriculants	53,030	22,239	41.94%

This chart right here shows the top majors that apply and get into medical school. It is very important to remember that the AAMC says they take into account GPA,

MCAT, extracurriculars, and passion for medicine. Now the highest percentage of acceptances come from the Humanities majors which could be for a variety of reasons. These reasons could range from more free time to understand the CARS section the best of all majors (the worst section for premeds). This chart here is provided to show you the average stats for the major you're interested in. Do NOT make your major decisions based on stats only. Make sure to take into account everything before deciding on the premed education you apply to.

MCAT Averages by Major

Major	Mean MCAT of Applicants	Mean MCAT of Matriculants
Biological Sciences	506.3	511.3
Humanities	508.4	512.8
Math and Statistics	510.5	514.3
Physical Sciences	509.2	513.3
Social Sciences	505.8	511.6
Specialized Health Sciences	503.5	510.3
Other Majors	505.5	511.1
All Matriculants	506.4	511.5

Take what you want from this, this is only averages. Although, it is interesting to see that those who major in math and statistics majors score higher than most other majors. The reason for this could be the way these majors push students to study and learn. Again, do NOT base your major off of averages, it is just for your information.

Special Programs

Consider enrolling in B.S./M.D. and B.S./D.O. programs as an accelerated pathway to get yourself into medical school. These programs tend to supplement you with a variety of resources to become a competitive applicant for many medical schools.
B.S./M.D. programs allow one to go from college to a M.D. medical school in a simple manner. Some schools require a certain MCAT score and GPA, while others do not have any such requirements.
B.S./D.O. programs are similar as they too allow students to go from college to a D.O. medical school in an expedient manner. Some of these schools have requirements,

while others do not. If there are requirements, B.S./D.O. schools tend to have lower threshold scores than their B.S./M.D. program counterparts.
If you would like to learn more about the difference between D.O. and M.D. schools check out our other article.

Standardized tests

Standardized testing is another key point that needs to be considered. Keep in mind that if you are heading towards medical school, the SAT and the ACT are only the first of many standardized tests that are coming. It is important to spend some time and get a high score on a test of your choosing.
Each exam is a bit different; one test may be better suited for certain people. Do your research and study a bit for each one and see which one you want to take/put a lot of the emphasis on. Remember the SAT score and ACT score can help you to be a competitive applicant in college applications. Keep in mind that there is no easier test between the SAT and ACT, just whichever test you have a better feel for and decide to put more emphasis upon.
They take approximately about the same amount of time as well. For the SAT there is a Reading, Math, Writing & Language, and an optional essay section. For ACT there is an English, Math, Reading, Science, and optional essay section. The choice is up to you, and we recommend that you put your efforts in one test and score high!
Try to keep in mind that you do not want to do too many of these standardized tests, because some colleges want all of your scores. Our personal recommendation is to set some time apart and sacrifice a bit of your free time for this! We think it's best that you bunker down and give it your all the first time around so that way in the future you have free time to do as you please, instead of preparing to take the test once again.

Personal Statement

When writing your personal statement, focus it on your medical interests to show college admission officers where you want to go in life. It shows your confidence and aspirations to them, which is exactly what you want to point out in the personal statement.
All they want to see is if you are the right fit at their college. If the college is known for good premed education, then they will love when you show them that medical interest. There are a variety of ways of going about your personal statement, but choose the way that best fits you as a person, because it will definitely be reviewed and reflected upon when you get your interview! We highly recommend that you take your drafts to individuals who are willing to read through them and give you great recommendations to highly improve the quality of your personal statement.

Final Words

Don’t overstress over things during high school! This is your last time as a kid. Enjoy it! But do keep that medicine goal in mind and do activities to achieve that goal.
Just a summary: find if medicine is the right path for you, do good in school, study for the SAT/ACT, participate in extracurriculars, and apply to places that fit your “Doctor Journey”.
If there are any questions please feel free to comment down below or contact us personally through the about page. We both have been accepted to medical schools, and come from different backgrounds. I’m sure we can help in whatever way you need!
by Joel Varughese and Kartik Goswami

Self Care in the Medical World

We all hear the phrase tossed around. Self-care. For many years, I discarded the ideas surrounding the concept of *self-care* as being phony or a scam. I remember wondering to myself why all of these people thought that a candle or a bubble bath would solve their problems.
It would not. Sure, I enjoyed the stereotypical things that others labeled as self-care, but I did not hold the belief that they were changing my life in any positive way. These thoughts were based on my own limited belief in what self-care was. In this article, I will discuss my own evolving relationship with self-care, and how it has influenced my mindset as a medical student.

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Introduction

It is a well-known reality that medical school is one of the most demanding academic pursuits. A study of 4287 medical students spanning seven U.S. medical schools revealed that 49.6% of students reported feelings of burnout at some point since beginning medical school with 11.2% of participants reporting suicidal thoughts at some point since beginning medical school.
Another 2020 study aimed to assess burnout symptoms in medical students preparing for the USMLE Step 1 exam. The study reported that among the second-year U.S. medical students surveyed, 43% experienced moderate burnout and 16% experienced significant burnout. Only 3% of participants reported no feelings of burnout.

While these statistics are alarming, there has been more awareness brought to the issue in recent years as medical students and medical school systems work together to provide a more enriching approach to medical education. Many professionals have been realizing that to better care for patients, we must first care for ourselves.

Hustle Culture

As I began studying for the MCAT in the fall of my senior year of college, I had a gradual realization that I believe most of my peers will agree with. The medical school application cycle is toxic. From forum after forum I saw people comparing how much they studied, how many practice tests they took, and how many nights they did not sleep… all to prepare themselves for this defining exam.

This so-called hustle culture was the notion that those who were most passionate about medicine, or getting into medical school, would spend the highest number of hours working towards this goal. I was overwhelmed, had no intention of taking 16 practice exams and staying up all night reading about glycolysis.

I am confident about my mindset now, but at the time I had a nagging thought that if I did not want to grind and work throughout the day and night studying for this exam, it must mean that I did not want to go to medical school all that bad.

Dr. Ginsburg, an emergency medicine physician, states that taking frequent breaks is essential in preventing burnout and can even improve results. As he puts it, “Falling asleep while reading the same paragraph over and over is not an effective study strategy, and drinking another cup of coffee in the evening when you are already tired is sure to make the following day worse and accelerate burnout”. This statement in its nature is the opposite of what hustle culture promotes.

My distaste towards hustle culture stems from the fact that it eliminates the person and focuses on reward and praise based on the results when oftentimes these results are based on external circumstances.

Placing one's self-worth on external circumstances creates an environment where self-worth is in danger of fluctuating. Adapting the mindset that you are intrinsically worthy simply by being human and having a goal fosters the act of valuing effort as opposed to outcome.

Looking back at my pre-MCAT self I wish I could tell her that her method would be successful and to stop comparing herself to others. This overall experience led to an addition to my personal definition of self-care: I will listen to my own intuition and body while working towards a goal rather than comparing myself to others.

As you can see, not only does hustle culture promote placing self-worth on results, but it is counterproductive in pursuit of these results. Studies consistently show that taking breaks and working shorter hours improve productivity.

Taking short breaks helps maintain focus for a longer period of time, versus working until you are exhausted. Ideally, the break should be something that gets you moving and takes you away from the screen. Taking a short walk or standing up to stretch for a few minutes prevents eye strain and fatigue.

So go ahead, take that break!

Taking care of yourself and valuing your mental health is the best thing you can do for your future patients. By working during your most efficient hours, and taking a break when you feel your focus and attention declining, you can listen to your body while also using your time wisely.

Mental Fatigue, and How to Avoid It

Steve Jobs wears the same outfit every day to reduce the number of decisions he has to make. He is not an indecisive man, but he does this to reduce decision fatigue. This is based on the idea that our brains are only capable of making so many decisions in one day. After this limit is reached, our capacity to think clearly and critically takes a steep dive.

I remember my dad always advising me to make important decisions in the morning because it is when the best thinking happens. Similarly, we have all heard the saying "Sleep on it, and decide in the morning".

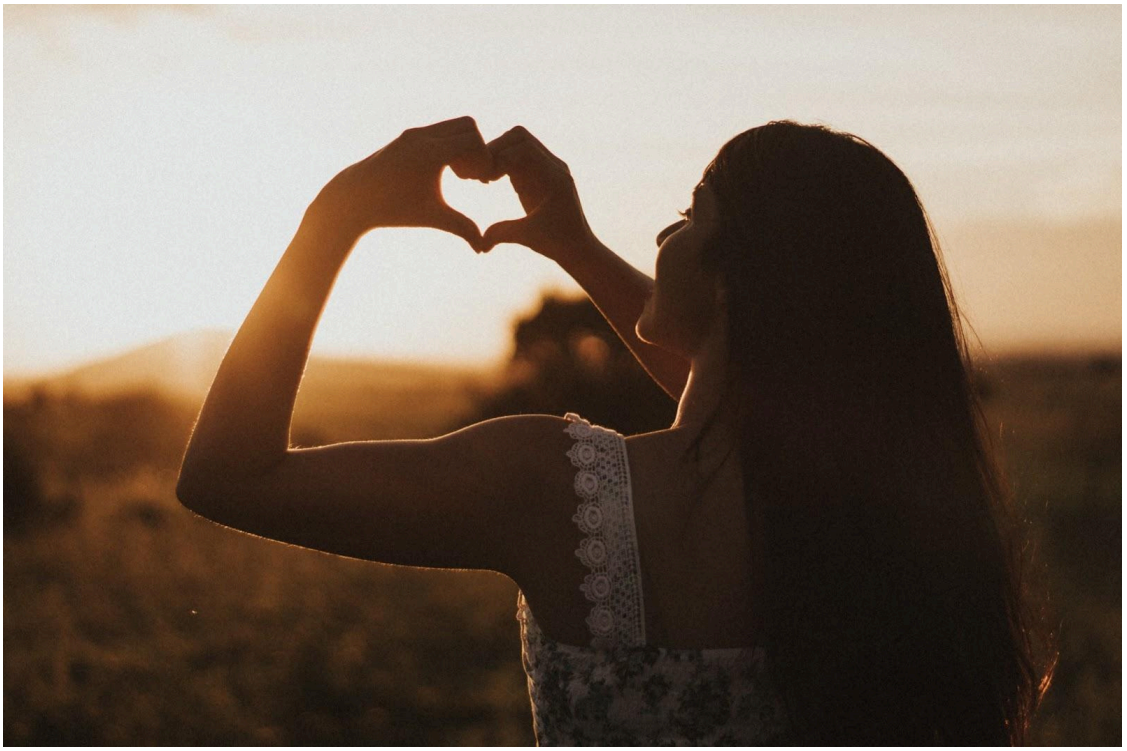
Decision fatigue is an intriguing notion because it leads to the concept of a more broad mental fatigue. I began to think about ways I could prevent mental fatigue in my own life. While wearing the same outfit every day is a good idea to reduce the choices you need to make every day, I do not see it working for myself.

Mental fatigue can be caused by a number of cognitive processes that we do without realizing it, such as procrastination and catastrophic thinking. Procrastination can lead to spending more emotional energy avoiding a task than the energy it would take to complete the task itself. I am guilty of this myself.

Spending all day thinking about that email you have to write uses up mental energy that you could use more effectively elsewhere. Similarly, catastrophic thinking can not only cause mental fatigue but can actually prevent us from taking actionable steps towards a goal. Catastrophic thinking is the act of thinking about the worst-case scenario again and again.

Shockingly, our mind convinces us that we are doing this to protect ourselves by thinking of everything that could go wrong and making backup plans. However, this type of thinking can actually use up the brain juice, so to speak, that you could be using to work towards something positive or beneficial.

Ruminating all day about the possibility of failing your exam could lead you to become too emotionally exhausted to actually study for the said exam. Learning this, I have expanded my personal definition of self-care even further: I will preserve my mental capacity for things that I can control, and not overthink things that are out of my control.



Conclusion

My own experiences have led me to the working definition of self-care that I hold today. In order to best care for myself, I will listen to my own intuition and body while working towards a goal rather than comparing myself to others and I will preserve my mental capacity for things that I can control, rather than overthinking things that are out of my control.

I am sure that this definition will change as I continue through medical school and have more experience. Self-care is not something that can be defined for you, but you must define it for yourself though realizing what helps you love yourself more.

When do you feel that you are taking care of yourself the most?

What are things that you do, consciously or unconsciously, that end up feeling like a betrayal of who you are?

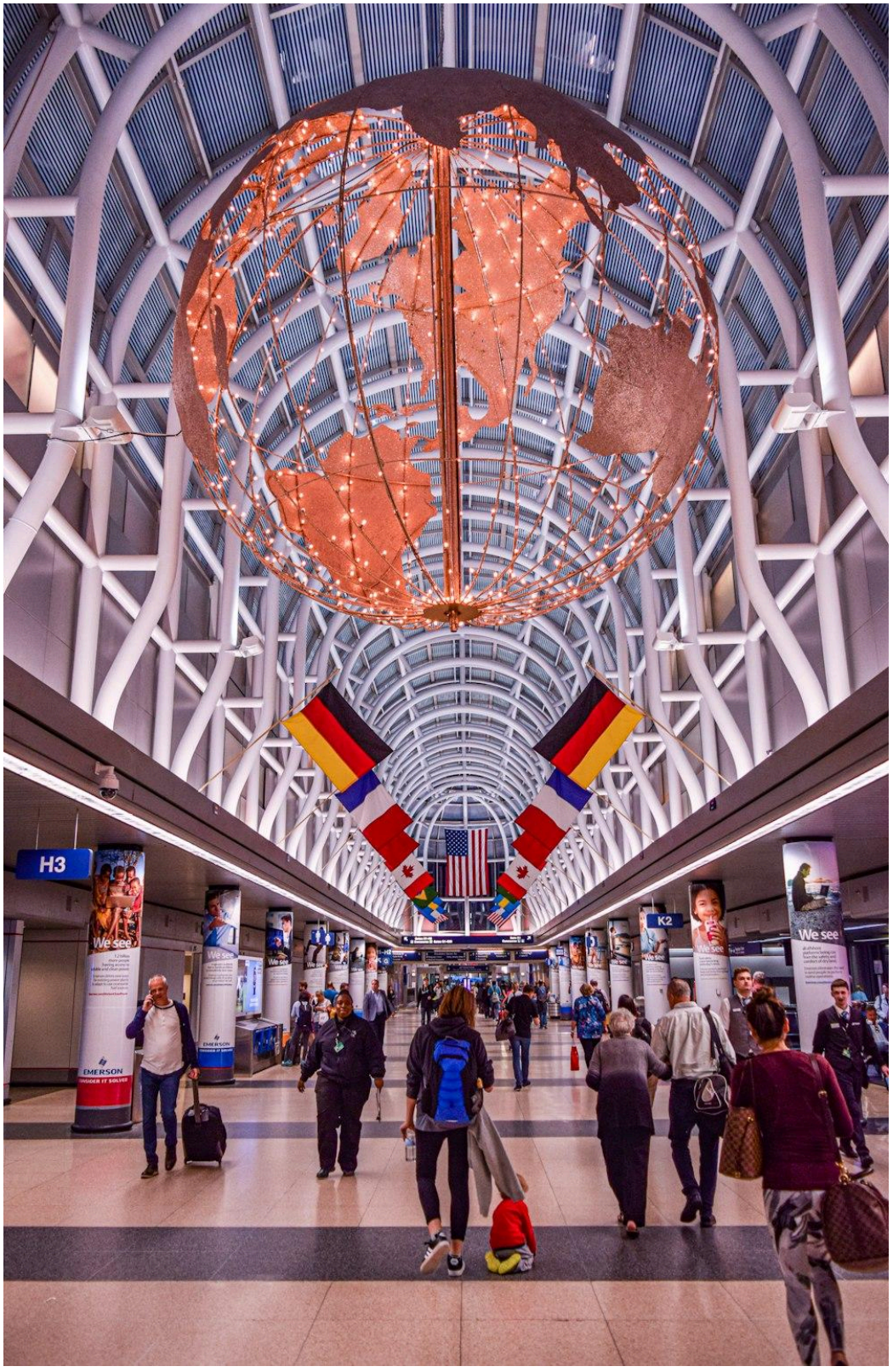
These are some guiding questions that I hope will lead you to define the term for yourself. It is not all candles and bubble baths, but they definitely can help you on your way to discovering what self-care means to you.

By Maria Sandhu

How to Work as an International Doc

Have you ever thought about going internationally to help those in need? Well as someone going into the medical field, we have a lot of opportunities! You may have heard of Doctors

Without Borders and other similar programs, but have no clue what they do. Well, we are here to tell you what you need to know.



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Médecins Sans Frontières

Doctors Without Borders aka Médecins Sans Frontières was founded in the pursuit of providing assistance to populations in turmoil due to natural or man-made disasters or victims of conflicts. Médecins Sans Frontières (MSF) which has been providing to the world since 1971, serves over 70 different countries as an international medical non-governmental organization. They serve regardless of race, religion, culture, politics, or any other labels in hopes to provide humanitarian assistance to all. Back in 2020, MSF contributed over 540,000,000.

Commitment

In order to first apply to the program, one must have completed at least residency to start. This is due to the fact that MSF is very intense in usually located in major crisis areas where there is little time to train new medical physicians.
The typical assignment for MSF lasts for around 2 years of time commitment with 2 to 4 field assignments during those years. Each of those assignments may last 6 to 12 months depending on how critical the situation is.
The length of these assignments is on the longer side compared to other programs because they allow the field workers to get used to the environment before jumping in all the way. On top of this, the patients get continuous care from the workers which can lead to better overall outcomes.
Surgeons, OB-GYNs, and anesthesiologists are exempt from getting used to the period since their work usually deals with time-sensitive problems.
At the moment of writing this article, the Ukraine War is going on and MSF has sent doctors from all over the world to help provide lifesaving care to those affected by the devastation. The current situation in Ukraine is so bad that there is not enough food and water for more than one week. The ongoing bombings and missiles have led to many injuries requiring a current shortage of MSF physicians needed for aid.
If you know any physicians who would be interested in helping the civilians in Ukraine or other crises please contact MSF.

Benefits

MSF pays all of their field workers due to the long duration of the projects with a hectic schedule. The salary that MSF posts on their public page is $2,426.67 per month. They also provide 25 days of paid vacation per year. All vaccinations and medical fees needed for the assignment are reimbursed.

Pre-departure training is also included in joining the organization. Although it is required that individuals get their own permits and visas to travel where they are serving. Medical, disability, dental, vision, and life insurance are all covered by the MSF.

Projects Abroad

Now I know many of you reading this are probably not done with residency and want to help internationally. Worry not we got you covered!
Projects Abroad is an international program that allows people interested in serving to participate without any previous experience. From High-Schoolers to professionals can work through them to gain the vital experience that is learned from helping those in need abroad. Projects Abroad don't usually operate in areas of crisis or emergencies making it much easier for inexperienced people to join. Medicine is only one of the various areas that one can volunteer in. The projects last for 2 to 8 weeks which is good for those in school as they can go during their breaks.
Another great thing about these guys is the schedule is super flexible as you pick the dates you want to attend and usually they will accommodate you to those dates.

Applying

These programs offered by Projects Abroad are payment-based, sort of like an internship. The cost of each of these programs vary, but ranges in the few thousand dollar range. Prices increase as you add more weeks to your trip.

Similar Programs

There are plenty of other programs that allow you to work abroad besides the main ones above. Another popular one is Global Medical Staffing who started in the 1990s to provide Australia and New Zealand with doctors during their shortage. Now, they serve globally at many different countries. They boast that their smaller size compared to other programs allows them to be efficient and productive. But they are a branch of CHG Healthcare allowing them to get plenty of resources.

Another great program is Head Medical which connects you with international job offers. This is more of a job offering than a international outreach program. This program may be more suited to those of you who have a dream of living abroad like Paris or something. It's a great offering for those looking to explore the world while working a normal job as a physician.

Some things to consider

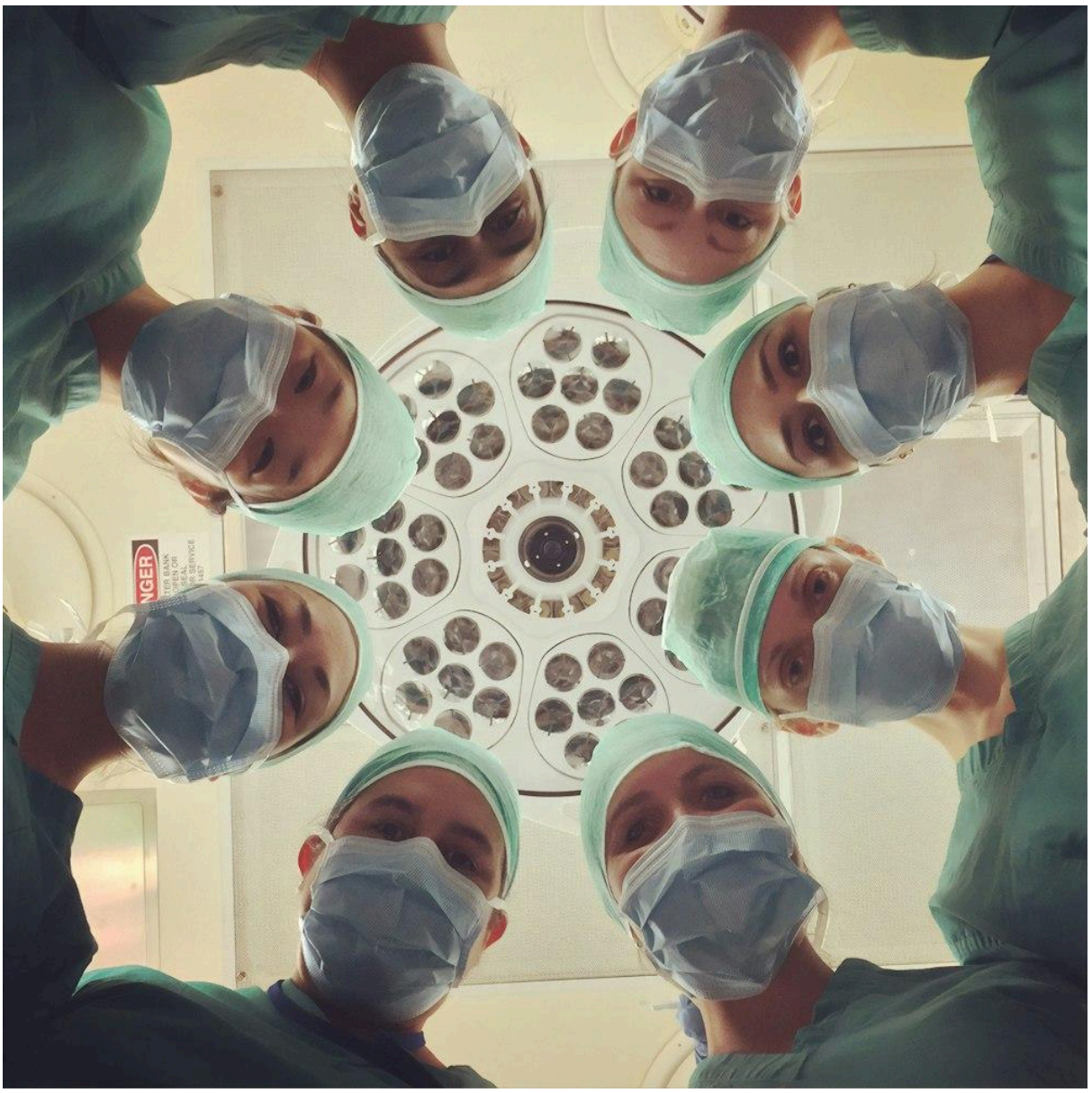
There are many other programs out there that allow you to work internationally besides these main two. But regardless of which one you choose you should keep the following in mind.

If you want to work as an international doctor you should expect **significantly lower pay**. This is especially true if you are used to the salaries in the U.S. So make sure to double-check that all finances are set before you set out on your life-changing adventure. Also if you are from the U.S. you still have to pay taxes on the income as well as in the country you are residing most likely.

Another thing to consider is that you may not have a stable internet connection. This can be a big thing for many as this is how they stay close to their loved ones. Try to inform all those close to you that sometimes you may not be able to contact them due to the area you are stationed in.

Scheduling is something else that one should be wary of as usually, these types of jobs are high-paced and very demanding. Most of the time the physicians have very little control over how many patients you are seeing in one day. This could be a big thing, especially for those coming from private practice.

One more thing to consider is to take adequate time to apply to a program. This is because the visas, passports, background tests, and medical tests can take a few months to complete. As stated above MSF helps cover the costs for these, but some other programs may not so be prepared for that.



Overall Picture

As future medical personnel, we all have that passion to take of people. Some of us want to go beyond and help those in underserved areas across the world. If you have dreamed of that hopefully this article answered your questions.

If you want to work as a full-fledged doctor and help those in the most need then Doctors Without Borders (MSF) is the place for you after residency. This organization makes sure to create a professional work environment for you to work efficiently and effectively with their various benefits. It's a great place for those with no obligations back home to go explore the world while making a real impact in places that desperately need it.

For those of you that prefer to work with a smaller scale organization Global Medical Staffing is a great program to join. These guys offer international programs to help needed communities but at a smaller scale than MSF does.

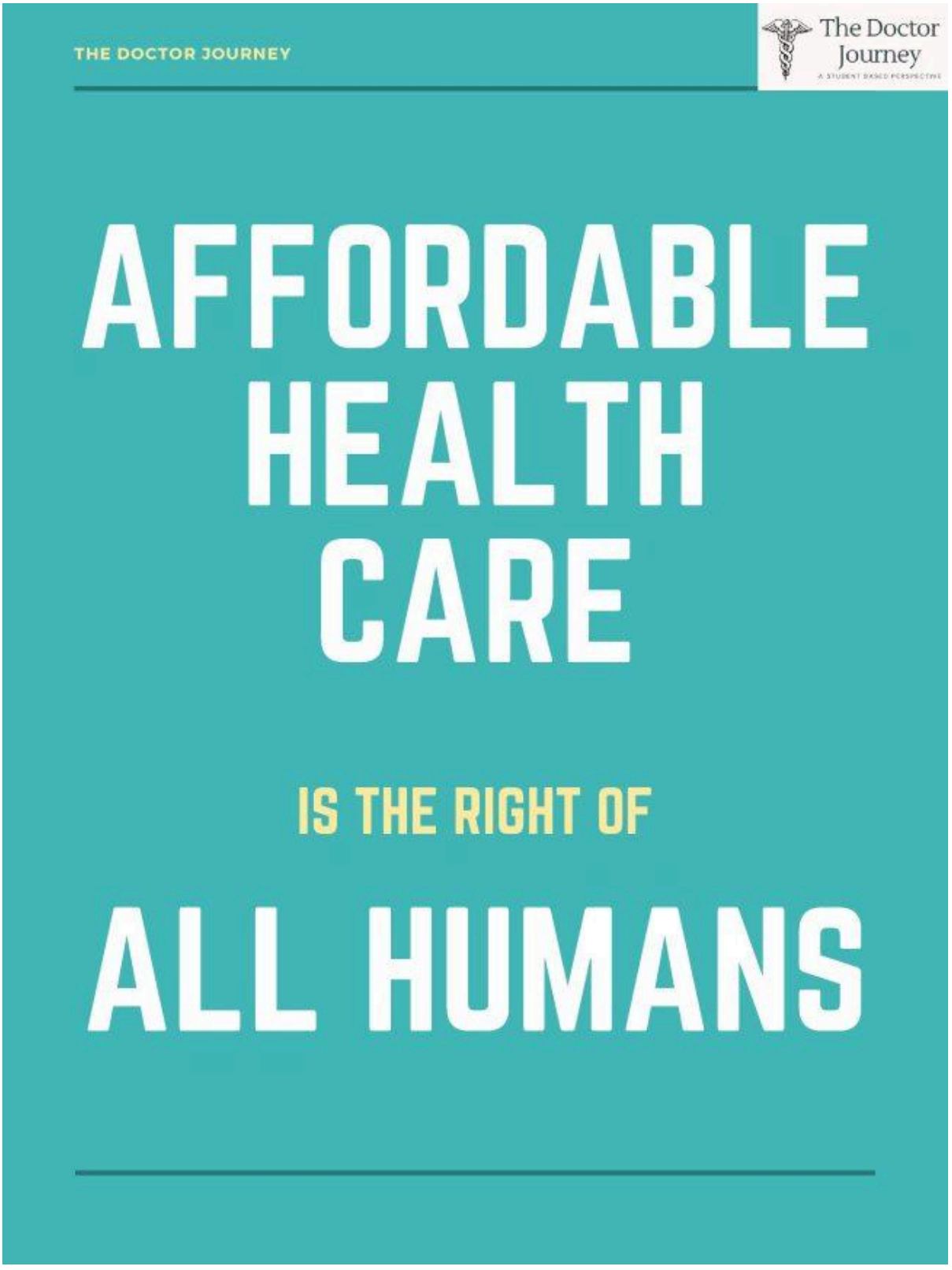
But if you are a student who is eager to help and gain experience during your school years, Projects Abroad is not a bad option. The only downside is Projects Abroad is pretty costly,

but the experience would be like no other. Another potential upside to Projects Abroad is that you can put it on your resume for future schools or applications as it would show your dedication to serving people around the world.
If you would like to travel abroad, but continue to live more of a normal life Head Medical is a great place to head to for international job offerings.
Regardless of how you choose to work overseas make sure to consider the pros and cons. Hopefully, this article covered everything you need to know about working internationally.
Best of luck on your Doctor Journey!
By Kartik Goswami

Why is there an Ongoing Healthcare Crisis in America?

What is Healthcare, Health Care, Health-care?

Healthcare. Health care. Or is it health-care? The term “health care” is amongst the top 20% of all web searches on Merriam-Webster [1]. What does it really mean? what does it constitute? and why is healthcare so important to the well-being of a society? Let’s first start with the basics. Webster’s defines healthcare as the field that is concerned with the “maintenance or restoration of the health of the body or mind.” The reason that most look up the term “health care” is not because they lack knowledge on what the meaning of the word is, as most have a general idea. Rather, it is due to some level of confusion due to the spelling [2]. This is something that most people can relate to when it comes to figuring out how to spell those seemingly simple, yet tricky words found in the English language.
The word Health care is a noun. Health care is intended to be used when the subject is a person. Also, it can be used and when the term is used as an action. For example, “Steve needs to develop a proper health care plan for himself.”
Health-care the term is used as an adjectival form. For example, “the health-care resources provided by the hospital are adequate but costly.”
The term “Healthcare” is used as a noun or adjective. It is defined to be the industry, field, or system which works to provide medical care for the people. Emphasis on the system component.
So why is it so important to be able to distinguish between these various terms? Well, it’s certainly to avoid any confusion in discussing the main topic of this article. However, it is also to distinguish between the terms for our own understanding.



Brief Overview of Health Care in the U.S.

The U.S has a predominantly private healthcare system with a mix of public healthcare funded by both the federal and state governments [3]. Individuals are able to receive access to healthcare through private insurance, which is offered primarily by employers for the individual and can be extended for the family. The benefits, extent of coverage, and monthly insurance costs vary depending on how much both the employer and individual contributions towards a particular health policy or plan. As for the public programs, Medicare and Medicaid are national healthcare programs. Medicare provides funding for coverage for those above the age of 65, whereas Medicaid serves to provide coverage for low-income individuals. There is no universal healthcare program in the U.S.; however, the Affordable Care Act (ACA), passed in 2010, served to increase the accessibility of healthcare resources to those who may not have been covered under existing public and private systems. As of 2018, 8.5% of the population still does not have access to health insurance (27.5 million people), which is lower than the 16% figure measured in 2010.

So What's the Problem

Although healthcare costs have been rising for a while, there has been a rapid increase in costs in just the last few decades [4]. In 1970, the health expenditure of the country constituted about 7% of the GDP, while in 2018, the figure is closer to 18%. There was a roughly $1 trillion dollar increase in spending towards healthcare when comparing total spending in 2009 to 2019 when adjusted for inflation. Based on current projections, spending will continue to increase from the $3.8 trillion spent in 2019 to an estimated 6.2 trillion in 2028. This corresponds to around a jump from around $11,000 spent per person to $18,000 spent per person [5].
Now, there is nothing wrong with spending more on healthcare services, especially if it is for the benefit of the larger society. However, it is imperative to examine whether such spending is being used in the most efficient manner to achieve the best results for the population, as an existing system can always continue to be improved.

Health Outcomes

A relatively recent analysis demonstrated that the U.S. was spending nearly twice as much per capita as comparably developed countries. At the same time achieving the worst health outcomes in many important areas of measure. In particular, the life expectancy was ranked to be the lowest, chronic disease burden and obesity rates were measured to be the highest, and the number of visits to the doctor per capita per year were amongst the lowest.
However, there were many areas in which the U.S also excelled, as the country was measured to do great in prevention measures (such as flu vaccinations and breast cancer screenings) and has the highest average five-year breast cancer survival rate. Since the populations that compose the U.S. are diverse, a more in-depth analysis

may be required to find what is the root cause of the health outcomes seen. As for the figure on the lowest number of visits to the physician, a potential explanation for the relatively lower number of annual visits to the physician could be due to the general physician shortage.
Although the explanations for such outcomes could be complex, it is projected that costs will continue to rise. To better utilize such resources for the best outcomes for the population, it is important to figure out how the system can be made more efficient.

COVID-19

A more recent, indirect effect is due to the COVID-19 pandemic. It is estimated that over 50% of the public delayed getting medical help in fear of the pandemic [5]. The delay in treatment is a massive issue as the problems of the patient may increase over time. This can result in more care being required later on. This in turn could lead to higher health care costs for patients as a whole.

Increase in Prices in Healthcare

There is no single reason as to why costs and expenditures in healthcare are increasing. However, there are some which are becoming more apparent and need to be examined more carefully.
One prominent factor is increasing pharmaceutical drug prices [5]. The price of pharmaceutical drug have been on the rise due to the lack of governmental policy or restriction that limits how much companies can charge in the U.S.. Other industrialized nations have limits on the maximum prices of drugs, keeping prices in check. Some studies have found that U.S. prescription drugs cost over 256% more than other industrialized countries. These excessive costs deter patients from out-of-pocket spending and force them to resort to insurance. This results in individuals to have to pay more for health insurance coverage or pay out of pocket.

Services as Populations Age

As a community grows to prosper, the general standard of living increases. Increases in quality of life also causes an increase in the number of people that live to an older age. Thus as cost for providing such services would therefore also increase as the population which requires such services is another reason why costs are increasing. The costs associated with chronic illnesses, ambulatory services, and insurance premiums have also increased due to a greater demand for the use of such services. Due to the scale of such services, it can be difficult to track and manage expenditures for healthcare services. This can result in inefficiencies in utilization of such resources. Legislation such as the No Surprise Act hopes to combat such issues (effective on January 1st, 2022). This bill hopes to safeguard individuals against surprise medical bills and calls for an increase in transparency regarding the deductibles and cost of services received. The Act also mandates for dispute resolution and a price comparison tool to be maintained for the care of the patient. The price comparison tool will allow patients to choose what healthcare plan will suit their needs at a price that fits their budget.
Revamping and improving the current healthcare system to reduce costs while maintaining the quality and standard of care received by patients will help the both the individual and larger community by opening up the accessibility of healthcare resources and services to a larger population. Cost reduction through efficient spending is a route that can and must be pursued for the benefit of all.

Table Showing U.S. Average Costs vs Other Industrialized Nations [8].

Countries	Administrative Costs per Capita (Dollars)	Long-term care per Capita (Dollars)

Average of Countries	$173	$928
Australia	$159	$101
Belgium	$179	$1,154
Canada	$167	$961
France	$289	$802
Germany	$293	$1,157
Italy	$64	$388
Japan	$76	$807
Netherlands	$213	$1,578
Sweden	$95	$1,443
Switzerland	$284	$1,456
United Kingdom	$80	$769
United States	**$937**	**$516**

The table shows the vast difference between the U.S. and other industrialized countries in terms of healthcare spending. They spend more where it's not efficient and spend less where more is needed. These are the problems that need to be addressed within the coming years in order to give its citizens the healthcare they deserve.

Solutions

This problem is something that can't be fixed overnight and by one soul. It will take changes in multiple areas and a big push from lawmakers to make rules moderating drug prices, figuring out health plans that can cover those in need without waste with greater accessibility to healthcare for all Americans.

A solution for private citizens is to seek care regularly and immediately upon the onset of illness or malaise. Reluctance in accessing proper care for one's condition may lead to worsening effects over time which may necessitate more attention needed to the problem. For example, if a patient is having problems with their knee and they just ignore it for months or years it could get so damaged to the point where not only surgery is needed, but a replacement knee may be required. While if

the patient seeked care immediately after pain started, he or she may have been able to avoid the surgery and undergone physical therapy.
Some current solutions to the healthcare crisis are being worked on currently by the Biden administration. President Biden has recently signed the American Rescue Plan (ARP) in March of 2021. This expands the ACA in terms that more families are allowed to qualify for coverage, and provides subsidies for insurance premiums to families laid off until Sep. 2021.

Technology

Advancements in technology have allowed for humanity to progress in unprecedented ways and transform the world. Breakthroughs in research have allowed for improvements to be made regarding the delivery of care. Technological advancements, medical research, and clinical knowledge and experience can be used to further develop and streamline healthcare resources. In doing so,it is hoped that a greater amount of tools, techniques, tests, and methodologies can be developed through collaboration amongst healthcare practitioners such as physicians, scientists, and researchers to drive further innovation for the benefit of all.
A possible way to improve the efficiency of the healthcare system is to incorporate the use of information technology [6]. Information technology is where all the patient's data is stored and is updated in real-time. This allows other healthcare providers to see what's happening and can work together on a patient. Also, it allows every treatment, operation, and even patient satisfaction to be measured in real-time. Patients are able to choose what type of care they want and who they want their provider to be. This is only achievable through information technology since patients are able to see their records and able to choose tele-health (virtual healthcare check-ups instead of in-person) if they wish. These options allow the patient to have lower costs since they get to choose providers that fit their needs. On top of this, patients have more access to resources which they believe will provide them with better care since they know at all times what their medical records are. This is unlike the current system where patients have no access to their medical records and what's on them.

Why it Matters

Everyone needs access to healthcare for a better quality of life. If an issue ever arises regarding one's health, or if a problem needs to be diagnosed and treated before it has a chance to become serious, then one would need to have access to medical resources.
As the world has progressed, life expectancy has increased globally due to medical advancements, improving the quality of life. If a society is not able to obtain access

to essential medical resources due to increasing costs, then it may decrease the overall well-being and health of the community. Also, if individuals aren't able to get their medical concerns addressed due to barriers in accessibility, then it can deteriorate the overall well-being of that society.
As physicians, it will be our duty to provide care to all who need it. And, we cannot do that if the system is not working in conjunction with us to help patients. This pertains to the healthcare ethic of justice where all patients deserve fair and equal treatment. And with the current problems in the healthcare system, not everyone is able to. This is a significant challenge which needs to be addressed.
The problem of ballooning costs in healthcare is something that will continue to get worse until it is resolved [7]. This is why it is important for the current generation of future physicians on their "doctor journey" to be prepared by becoming more informed and and open to discussing new ideas and solutions to address such challenges.

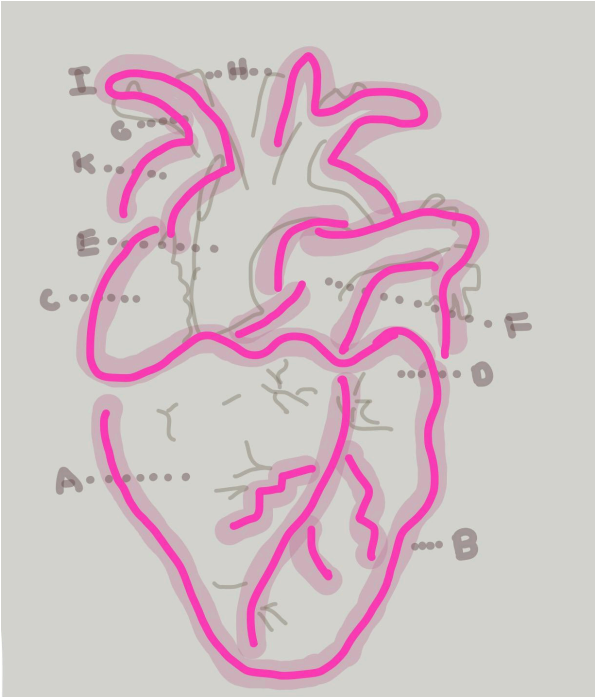
Too Long; Didn't read

Healthcare is defined to be the system or service which provides medical care to the people. In recent years, expenditures in healthcare have risen dramatically. Spending in healthcare has constituted 18% of the GDP in 2019 as compared to 7% in the 1970s.
The U.S spends more than twice as much per capita than comparable developed nations, although the measured health outcomes in key areas are amongst the worse. To address such increases in expenditure increases in efficiencies and transparency have been called for through legislation. Technological advancements and medical research can and should be used to reduce cost expenditures. This will hopefully increase the accessibility of essential resources. A technological advancement that can be used is information technology where all data of the patient is gathered in real-time.
Furthermore, current lawmakers are proposing and passing regulations that will help the healthcare crisis we are dealing with, but more needs to be done to alleviate the issue. As future doctors, it is important for us to understand the challenges we face, and to be able to better serve the community and allow more equal, accessible care to be received by patients.
by Jashandeep Bajaj and Kartik Goswami

What is the truth behind the resident salary?

TLDR

A crucial step in becoming a practicing physician is residency, a challenging yet insightful experience. It is the ultimate exam: one where a mistake no longer means a lower score but may cost a life. Naturally, anyone with such an onerous job would be expected to be quite highly paid, but much to our surprise, residents are paid as much as high school teachers or librarians. This article will delve into the background behind the deep-rooted resident stipend issue and how our nation has dealt with it.



What is residency? A brief overiew

Residency is a term every prospective medical student should get a comfortable hearing as they venture further into their careers. The journey does not simply end with a medical degree adorned with your name. *Applying* all that you've learned thus far is just as important, if not more. A resident has a medical degree and can deliver direct patient care (supervised, of course). They work in their respective department under the mentorship of the attending physician. Their responsibilities include but are not limited to ordering and interpreting tests, running examinations, scribing, and assisting with medical procedures [1]. The duration of one's residency can last anywhere from three to seven years, depending on the specialty the student has matched for [1].

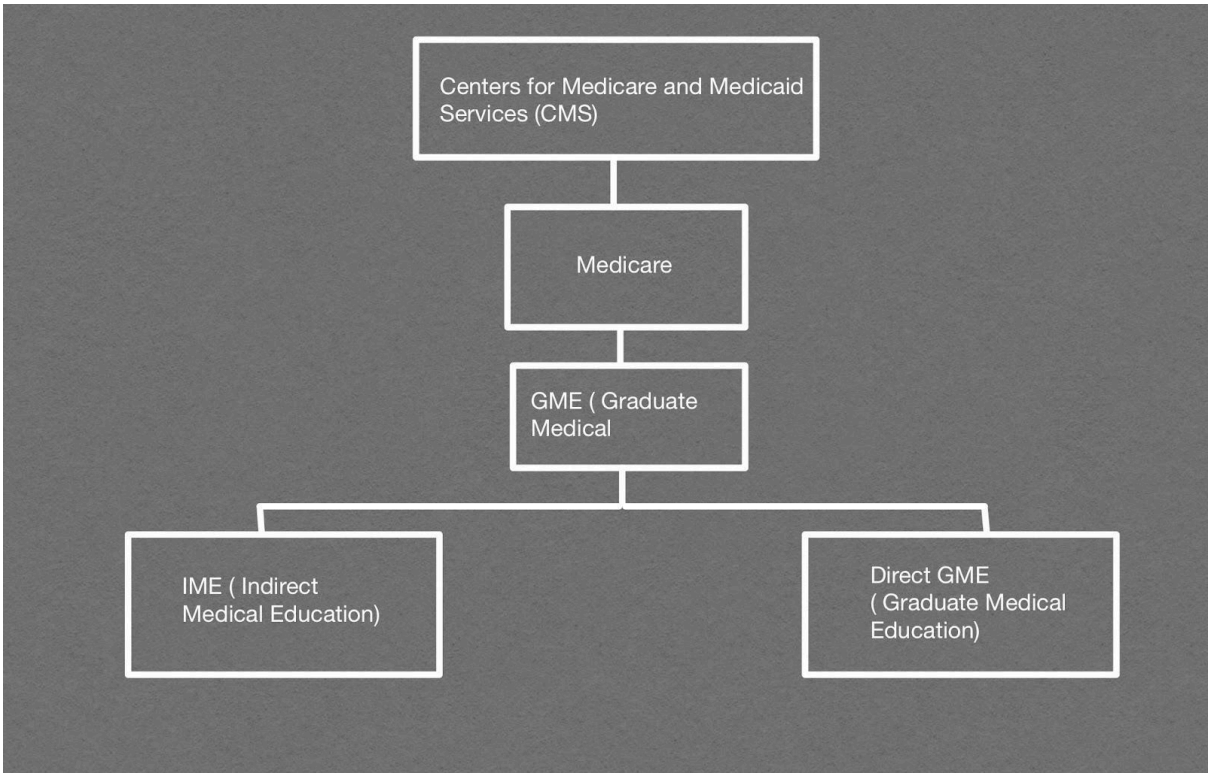
A Medical Resident's Salary

Apart from the overbearing workload, the student debt, the long hours, and the fear of making a mistake, a common concern is the salary of medical residents [2]. While

residency wages are relatively consistent regardless of the specialty, the overall compensation is low compared to other professionals that have not dedicated as much time and money to get to where they are [3]. The number of residents that feel adequately compensated decreases each year [4].
According to the "AAMC Survey of Resident/Fellow Stipends and Benefits," the average annual stipend for first-year medical residents nationwide (as of July 1, 2020) was $58,921 [5]. This survey was administered to around 359 institutions, out of which 190 were deemed usable [5]. Out of the 190 verified responses, 58 were medical schools, and 132 were non-VA Council of Teaching Hospitals and Health Systems (COTH) [5]. The data consisted of a total of 105,753 resident stipends [5]. The average mean value that was reported weighed each institution equally, regardless of the number of residents and fellows [5]. This data calls to investigate healthcare funding and government-implemented health relief acts that have attempted to appease the low salary dilemma. Although these have surprisingly resulted in a loss of working physicians instead.

The Source of the Problem: Residency Funding

Physicians are a necessity for the well-being of our society. With the recent COVID-19 pandemic, the current physician shortage has been unveiled. A significant reason for the lack of physicians in the workforce is the shortage of residency training spots due to a lack of funding. Funding for residency positions mostly comes from federal funding. GME (Graduate medical education) encompasses training received by medical students post-graduation to become a physician (including residency & fellowship) [6]. GME's most significant funding comes from federal funding; however, it also has smaller funds from state and private entities.[6] Federal funds for GME come in through DGME (Direct GME) and IME (Indirect Medical Education). These programs are both controlled by Medicare [6]. Medicare is managed by the Centers for Medicare and Medicaid Services (CMS).



This flowchart shows the pathway that federal funds for graduate medical education come through.

Previously in the 1900s, hospitals used their own money to train residents [6]. In 1965, Congress created Medicare and realized that an increase in health coverage would increase the number of physicians [6]. Congress knew that private hospitals could not fund the increasing number of physicians by themselves, so they used Medicare funds to help pay for GME until a better model could be implemented. CMS continued to fund residency without any limitations [6]. Then, in 1997, the Balanced Budget Act was passed. This caused the number of residents that could be paid for through DGME to be capped [6].

Solutions

With the recent COVID-19 pandemic highlighting the need for a larger physician workforce, at the end of 2020, bipartisan congressional leaders added 1,000 new Medicare-supported GME positions that targeted rural and teaching hospitals [7]. On March 18, 2021, Sens. Robert Menendez (D-N.J.) and John Boozman (R-Ark.) and Majority Leader Charles Schumer (D-N.Y.) introduced the Resident Physician Shortage Reduction Act of 2021, which will provide 14,000 new residency seats over the next seven years [7]. These two advances were the first steps that ended the 25-year freeze on Medicare support for GME [7]. However, there is a shortage of 122,000 physicians expected by 2032 [6]. Therefore, various avenues should be employed to combat the lack of physicians that our country is currently facing. Increasing our healthcare workforce (including nurses, PAs, medical assistants, etc.)

can ensure we are better prepared to tackle another pandemic and our nation's other health concerns [7].

In a commentary published in the *Journal of the American Board of Family Medicine*, Dr. Edwards-Johnson states, "There are not enough of us, we are underpaid, and suffer from burnout, but every day we find creative solutions to complex problems" [8]. She emphasizes that family physicians are the crux of the healthcare system; they must first and foremost be invested in offering the best care to the "most vulnerable patients" before anything else [8].

She further delineates that the decline of physicians in this specialty is worrisome because of how preoccupied they are in matching with a specialty that will help pay off their loans [8]. However, it is essential to acknowledge the residents that are not primarily invested in the economic gain or loss. Call it privilege or selflessness; they are more interested in the satisfaction that comes with the job. Knowing that they make just as much as someone like an entry-level accountant who has not undergone four extra years of rigorous schooling does not hold as much weight to them. This is especially true when you consider that patient gratification was one of the primary reasons they chose this career. And besides, they know they are still in training as a resident. It may just balance out once they earn the salary of a doctor in a few years.

Final Words

The matter of residency stipend has been a controversy for quite some time now. Increased federal funding for residency positions could alleviate the ongoing physician shortage and lead to a higher resident salary. However, some feel that federal funding could be used differently. While other residents simply do not sense the same urgency to increase resident wages.

By Amreen Karim and Ifrah Ahmed

How the Food you eat affects your Mental Cognition

Introduction

The food we eat has a profound effect on how we function cognitively. Think of your brain as a very expensive car. Like a high maintenance car, the brain needs proper fuel, maintenance, and use to have peak cognitive function.

Proper cognitive function is the foundation of everything we do whether that be school, work, making decisions, exercising, etc. Every conscious and unconscious thing we do requires proper cognitive function, so why should we neglect foods that affect its function? Wouldn't we want to be at our peak performance and give our all to the world we live in?

Recent studies have found that low glycemic (sugar) foods tend to increase attention span and improve memory. On the other hand, foods with a high glycemic index tend to decrease attention and concentration for the participants in the study [1]. And if you think about it, this is obvious, remember when you were kids and ate a bunch of candy at one time? After that, do you remember how jittery you got and how difficult it was to pay attention to anything your teachers or parents said? This is why we see these trends on television and in real life, when little kids consume candy and jump around everywhere.

Now you may be wondering how sugar has anything to do with brain function? Well for those of you that haven't learned glycolysis, krebs cycle, ETC and those fancy cycles just yet, we'll lay it out here for you. (*Keep in mind this is just a bare summary of what is happening!*) When glucose first enters the body after you eat that Tootsie Roll, it goes directly to the bloodstream, where it is broken down or stored. If it is stored, it gets converted into fat for later use. If the body decides to use the glucose, it will break it down in the cytosol (outer layer) of the cell. From there it will move to the mitochondria (powerhouse of the cell) to be further broken down. After that the glucose derivatives are converted into ATP (energy source of all life) to be used. Now this is a very simplified version of what happens so don't study off of this lol.

Once this ATP is converted it goes to various parts, but over 20% goes to the brain![2] That's insane considering there are around 78 organs in the human body and 1 organ takes up that much energy![3]

So now you're probably wondering how the amount of sugar affects brain function? Well don't worry we got you covered, we'll explain below.

Effect of Healthy Food

Healthy food is always said to be better for our brain but why? Well, certain studies have found that diets high in vegetables and fruits such as the Mediterraneanand Japanese diet have a reduction of depression in people over the course of a lifetime than those who eat a Western diet by almost 30%[4]. The possible reason for this according to researchers is the serotonin that is produced in your gastrointestinal tract. Serotonin is a neurotransmitter that is used to control emotions, help sleep, fluctuate appetite, and many other important functions. And over 95% of your body's serotonin is produced in your gastrointestinal tract! So when you eat food that is "healthy" for you it provides your gut with good bacteria that line the walls of the intestine. This allows the proper production of serotonin to occur within the body. Foods that are considered healthy for the brain include: fruits, vegetables, nuts, and whole grains. These foods provide minerals, vitamins, complex carbs, fiber, and protein for the body to function properly. Plants also contain phytochemicals which help give them their different colors. These phytochemicals provide the body with antioxidants and anti-inflammatories which can lower the chance of decline due to mental diseases. Not only this, but these foods contain lots of fiber within them which feeds the microbiome in the gut and as described above can help with serotonin release[5].

Not only is eating healthy important, but eating regularly is also vital for brain function. This happens because blood sugar must be maintained at a regular level in order for the brain to function. With consistent blood sugar, the brain is able to stay energized. I mean if the brain consumes 20% of the body's total sugar it better have a good supply! And what better to provide consistent blood sugar than whole grains, oats, and nuts which provide slow-releasing sugar in the body[6].

Effect of Unhealthy Food

Eating unhealthy food can be quite easy, because of how "great" the food tastes sometimes. One of the major sources of "great" taste is sugar. If our body gets a taste of sugar, our body craves for more and it turns into a sort of addiction[7]. We know that addiction sometimes can be very difficult to overcome and if we continue to eat in an unhealthy manner our body and mind would desire more[8]. Initially, it would seem like a harmless desire and our innate response would be to quench the thirst for sugar. However, one needs to be careful to not continue feeding the addiction and to maintain ourselves to eat in a healthy way.

At a young age, we are shown sweets and we learn how it tastes. Then we desire to consume more of it even though we might not necessarily need it to keep functioning normally. The reward system that we have tends to require more and this leads to unhealthy consumption issues if not controlled properly[9].

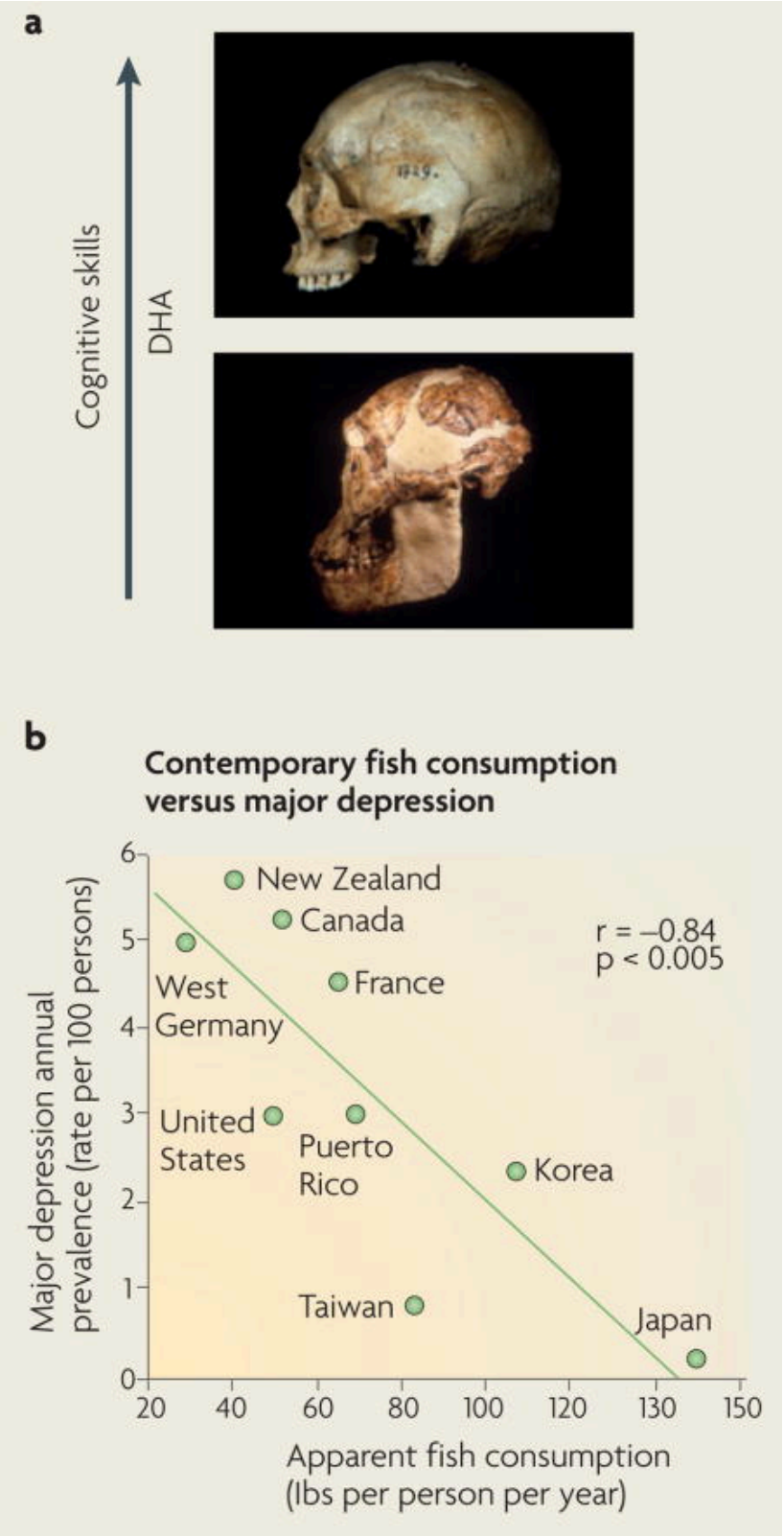
Studies show that younger children, as well as young adults, may have trouble controlling their desires for junk foods! The reason being is that the prefrontal cortex is still being developed in children and teenagers. The prefrontal cortex plays a huge role in our body, which involves many functions such as controlling emotions, restricting oneself, and maintaining awareness. Eating unhealthy foods that taste "good" tends to make this age range susceptible to developing an addiction. This is due to the fact that the brain believes that these foods are rewards and will work

towards always obtaining these rewards. Research also indicates that sugar can impact one's brain by damaging vessels in the brain and decreasing memory capacity[10].

As briefly talked about above, diets high in sugar lead to higher levels of depression. Now this is because processed foods contain simple carbs and lots of sugar which tends to be broken down and put into the bloodstream very fast. This causes inflammation to occur within the linings of organs in contact with the sugar. (how)This inflammation is caused by excess AGEs (advanced glycation end-products) and insulin is released into the bloodstream. These both can lead to oxidative stress and overall inflammation increase once in the bloodstream, affecting vital organs[11]. Once inflammation has occurred proper serotonin cannot be produced, affecting your emotions, mood, sleep, memory, and other aspects of your body[12].

Of course, unhealthy consumption of sugar also leads to other issues such as heart disease, diabetes, obesity, dental issues, and etcetera. Keep in mind that it is not only sugar, but other aspects of foods such as fats and calories need to be heavily considered as well to maintain a proper diet. This is why it is important to learn how to properly take care of your dietary needs and to not always give in to temptations. Not giving in to temptations in terms of diet might allow you to teach yourself how to better avoid other addictions that are harmful to your health. Try to avoid or limit consumption of sweetened beverages, fast/processed foods, refined grains, and etcetera[13].

Studies on the Effects from Food



(source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2805706/)

This chart above is sourced by the study… shows that an increased amount of DHA could have led to the evolution of humans as we know it today. DHA is Docosahexaenoic acid which is a type of Omega-3 found in various foods. It is hypothesized that early hominids ate a lot of seafood which led to cognitive function

increases over time. And this is proven with evidence from archaeologists who have found evidence of early hominids residing in shore-line habits where their primary nutrients would be fish.

On top of this, in recent history, specifically in western diets, the consumption of omega-3 has decreased and saturated fats have increased. This may be related to the increase in depression seen in western countries. As seen in the lower graph in the chart above, it shows the Asian countries that rely heavily on seafood have much lower levels of recorded depression than countries not as big on seafood. Not to say that everything we eat is bad, but maybe adding more seafood and lowering red meats, oils, and cheese may be beneficial to your overall health. I mean a nice baked salmon with some good seasoning is delicious, who would say no unless of course, you're allergic which is a totally different story.

Within this study it was also found that rodents with low levels of omega-3 tended to have impaired memory and learning skills. This also translated over to humans as people low in omega-3 were found to have higher chances of severe mental disorders such as: ADHD, dyslexia, dementia, depression, bipolarism, and schizophrenia[14].

To test this the researchers did a double-blind study on children where half received omega-3 supplementation and the other half did not. After 6-12 months the researchers tested the children's coordination and cognitive function (through concentration and academic ability). It was found that the group taking omega-3 supplements performed higher than those who did not. There were a few other studies that tested the same thing in different ways with similar results that the omega-3 supplement group performed better. Now these studies aren't set in stone as there could be many outside factors that could've influenced the results, but there seems to be some type of correlation.

This article also takes about previously done research that shows excessive caloric intake is also negative to cognitive health, even with healthy diets. It is even said that excessive food consumption in more modern countries is just as bad as lack of consumption in third world countries. The excess calories are released as sugar and stored as fat within the body which can cause inflammation and increased insulin production within the body. All of this will lead to problems in cognitive function as touched at above.

It is important to add that this research indicates that future studies may be able to further indicate ways to protect the brain from damage as well as improve overall cognitive function via diet. Never underestimate the small changes that you may make to your diet as it can have either favorable or detrimental effects to your body in the long term.

As we discussed, there are multiple factors that can affect the cognitive function within each of us. But the main takeaway is that excess sugar and fats such as saturated and trans fats can deteriorate the body and overall brain function. Try to

change up your diet with more wholesome and nutrient-dense food if you want to be closer to the true potential of your brain!

Diets

There are a variety of tried and tested diets out in the world, and varying results for many! Key aspects that we think should be in your diets are the following. Attempt to consume a variety of vegetables and fruits as they provide a multitude of nutrients that help you stay healthy! Consume whole-grain foods over processed/refined types of foods, but do not overconsume these foods! Limit yourself to perhaps 1/4th of your meals with whole-grain foods. Have protein foods in your diet! Protein plays an essential role in developing our body, especially in the physical domain.
It is important to consume healthy protein foods, so try to avoid protein foods with many negative additives! Water is a key element in many diets, so attempt to mainly consume water as it is best in terms of hydration for your body and brain! And as stated above the Mediterranean and Japanese diets tend to be very good to lower depression and improve memory, so try those out if you can

Conclusion

Overall the key point is the food we put in our body affects the way we function, and the most important organ: the brain! So we should take it seriously how to properly nourish the brain and how to prevent preventable diseases from occurring. We hope this article gives a little glimmer on how the food you eat affects your cognitive performance, and hope you can take a bit of this to your daily lives!
By Kartik Goswami and Joel Varughese

Videos

Go watch our videos at https://www.youtube.com/channel/UC1OOTOzFH0bpxkZBxyDZdiA. We post content that will help you with your Doctor Journey!

Season 1

Episode 1: An Insight on Medical School with Dr. Assadi-Rad https://youtu.be/Cq3otRdBFS0
Episode 2: Interview with Dr. Graneto, Dean of CHSU COM
https://youtu.be/9wX1-Maoy1E
Zoom MEDICAL SCHOOL Interview with Dr. Ramsamooj
https://youtu.be/qJWGbj5n7mE
Episode 3: Should you get an MBA as a Physician with Dr. Pantangco
https://youtu.be/El5F75NFjMQ
Episode 4: Top 5 Ways how to Study Effectively
https://youtu.be/FCWuSq839-c
Episode 5: How a 3.2 PHILOSOPHY Major Student got into Multiple MDs and even more DOs
https://youtu.be/B9QYnMYw1jc

Tutoring

Through our experiences with other companies, we got tired of being taught by people who weren't even in the medical field let alone took the MCAT themselves. That's why we decided to start a tutoring service since we have ACTUALLY gone through the process because this is the help that we would have wanted!
We at The Doctor Journey are now offering personalized tutoring services for MCAT and Interview prep!
Our **Interview Prep** is personalized to each student's needs. For example, if you want to prepare for a certain school we will make sure to make a mock interview that emulates that school's exact format and the type of questions they ask. This will ensure you get the best practice for your school you can possibly get!
The Doctor Journey helped me so much during my medical school application process! I found the interview preparation to be particularly beneficial. I had the opportunity to get one-on-one help and get tips from current medical school students. I also had the chance to practice a mock interview and get constructive feedback. This definitely allowed me to feel more confident and succeed in my actual medical school interviews!

– Mai-Linh Nguyen

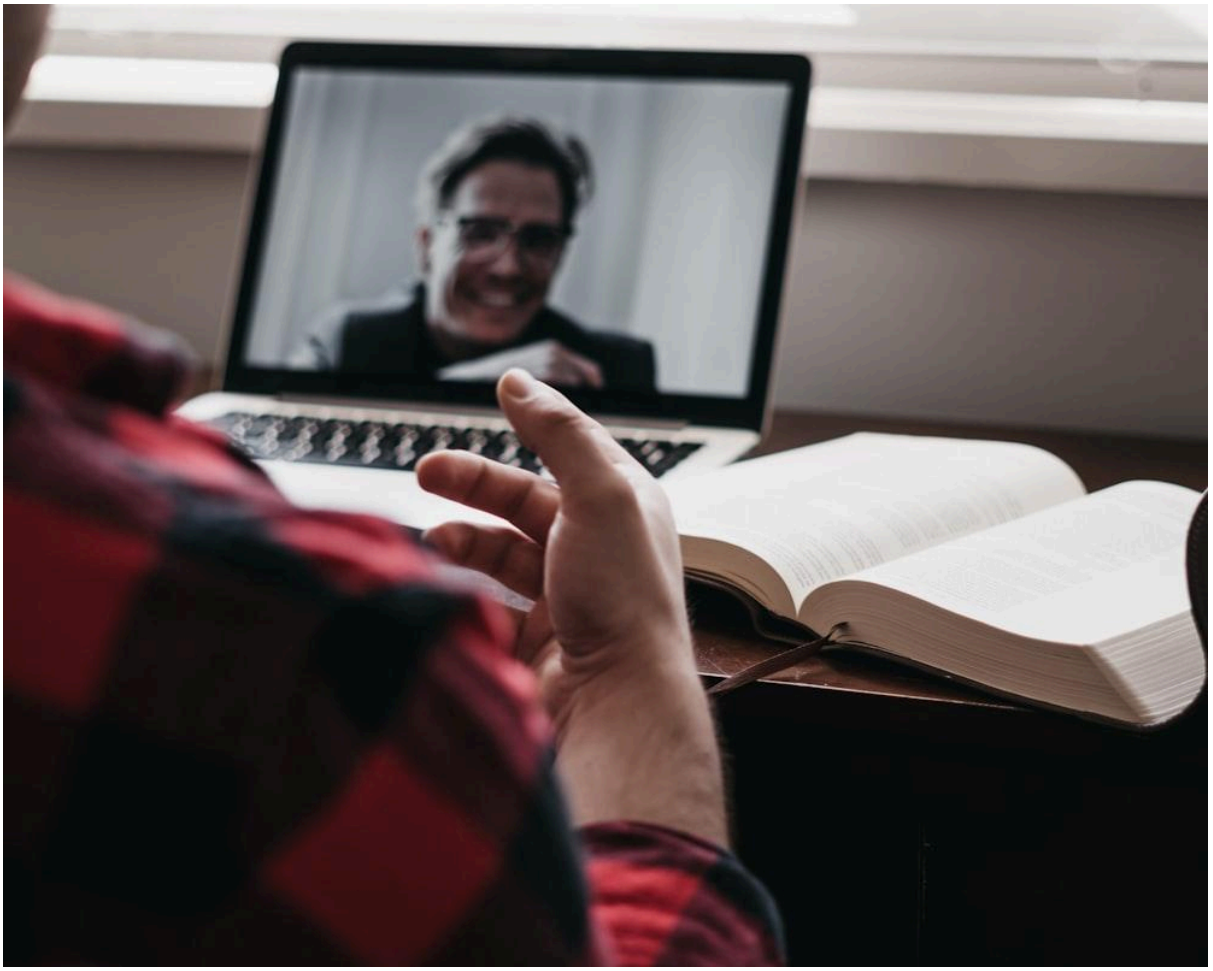
For **MCAT Tutoring**, we will provide you with personalized study tips, content, and practice on the topics you want! We require you to have taken at least one practice test and share results with us so we can analyze what you need to improve on. We strive to ensure that YOU understand how to improve upon your weaknesses on the MCAT!
Jaipreet from TDJ is currently tutoring me in organic chemistry. He always comes prepared with a plan and always looks over material before our session. During our session, he makes sure I am understanding the material by giving me practice examples and by constantly asking me questions. He asks me what I am struggling with and we focus on those topics throughout the session. He makes sure I UNDERSTAND the material before the session ends. Great guy!

– **Milin Midha**

Many tutoring services in our experience focus more on the financial aspects and don't provide the support most students want. So we decided to start our own tutoring service designed to be flexible in troubles for your needs! We will offer study plans, test-taking strategies, content preparation, and more!
Keeping pricing in mind, we offer the lowest prices available, but with outstanding quality as mentioned by our students!

- MCAT tutoring – $50 per hour
    - First session has 30 minutes of free trial
- Specific Interview Prep- $50 per hour

We have a variety of tutors on tap for you guys. All of our tutors are in medical school currently! They range from experience with 99% MCAT scores to helping serve on previous medical school interview panels. We know the process is hard, but don't worry we are here to help you on your Doctor Journey!
If interested please email TheDoctorJourney21@gmail.com or call/text 209-565-0636.
Our main priority is you, and we will do whatever we can to help you on your Doctor Journey!



About Us

We would like to introduce ourselves briefly, we are medical students at various schools across the nation with a passion to help the next generation of those pursuing medicine. Our goal is to make it easier on you with our collective knowledge from our experiences!

With the Covid-19 pandemic, applying to medical school has been very tough and rigorous. Medical schools are now preferring higher MCAT scores, higher GPAs, and more extracurriculars. Regardless of the increased competition, if you have a passion for becoming a Doctor, then there are plenty of routes to becoming one. We know plenty of people firsthand who have below-average statistics but have been accepted to many medical schools.

With this page, we will be offering tutoring and posting regularly about topics/issues that are important to know on your “Doctor Journey”.

The “Doctor Journey” is a long and gruesome one, and we would like to be there to support you! If there is any questions or concerns always feel free to contact us at thedoctorjourney21@gmail.com
Keep grinding we will all make it! We are the future physicians of this world! Stay tuned to “The Doctor Journey”, many things coming in the future!

Meet the Team

Kartik Goswami

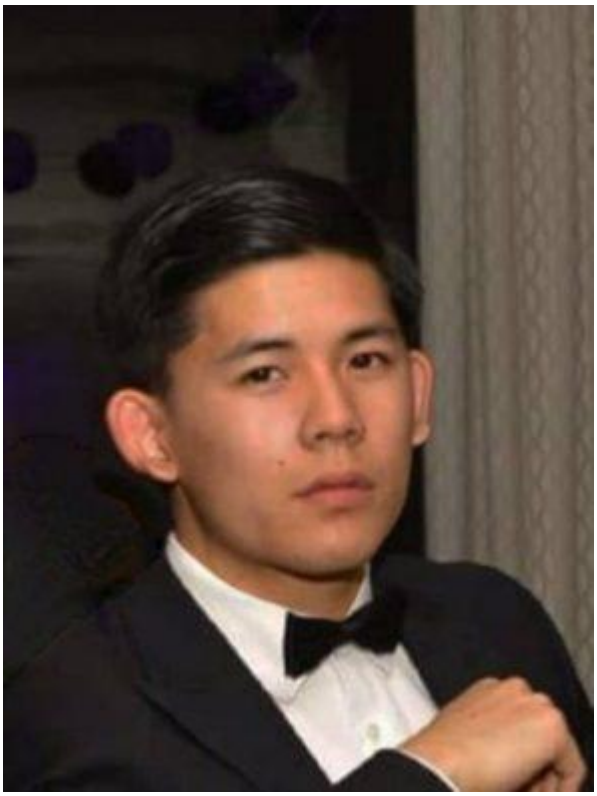
Hello everyone, I am Kartik Goswami a current first-year medical student. My “Doctor Journey” began in 2018 when I applied for a BS/MD school, and throughout my three years of undergrad, I have learned a lot of tips and tricks about the journey and want to help all of you out there! I have applied to both DO and MD schools, which has allowed me to experience the differences and similarities of both application styles. I have shadowed over 4 different doctors with different specialties and subspecialties. During my journey, I have taken the MCAT multiple times and have created and participated in many clubs during my undergraduate years. Through all of my experiences, I hope to provide insight and help to all of you on your “Doctor Journey”.

I will be posting different topics in the coming weeks! Please feel free to contact me or comment below, I would love to be of any help!

Joel Varughese

Hello everyone, I am Joel Varughese and I have had what you would say an interesting academic history that makes me a little unique from my fellow editors. Having the opportunity to job-shadow and volunteer in the medical field has broadened my knowledge of what is expected of a future physician. My goal is to be able to give you the assistance and advice I wish I had in the beginning of my college education, and to be able to inform you the most we can about topics that you will encounter, so you enter the journey prepared. I have experience applying to MD and DO programs and have somewhat of an understanding of both being able to speak with MD and DO students and physicians. We hope to be able to provide you guys with informative and interesting information so you would be able to best utilize the information and be successful in your doctor journey!

Derick Quach



Hi everyone, my name is Derick! I am currently a medical student in the CNUCOM graduating class of 2025. My goal to become a physician is rooted in my experiences with sickness and death in my own personal life and family. My journey really began after high school when I enrolled in a BSMD program in 2018, really committing myself to the path of becoming a Doctor of Medicine. Since then, I have gained a greater understanding of what it takes to become a doctor as well as enriching experiences that have served to further prepare and motivate me for this goal. I believe that becoming a doctor is more than educational and academic

proficiency but also includes nuanced experiences that serve to mold individuals into competent physicians. To that end, that is what I hope to bring to The Doctor Journey: advice on how to excel in academics as well as a sharing of my unique experiences with others beside me on the journey to become a doctor as well as guide others following after us.

I like to swim, take naps, work out, and take long walks on the beach.

Bhagvat Maheta

My name is Bhagvat Maheta and I am a first year medical student at California Northstate University College of Medicine (C/O 2025). My doctor's journey began at the end of high school when I decided to attend a 2+4 (6 year) BSMD program. My journey has been enjoyable and fulfilling thus far and I hope to share my experiences to inspire future healthcare professionals to pursue this rewarding field!

When I am not studying for medical school, I enjoy doing research and volunteering in the community. My current research interests include further exploring the best techniques for different procedures in plastic surgery and improving the quality of care for patients undergoing high-risk surgery. I also spend time volunteering at a

medical clinic and at an elementary school mentoring younger students. In my free time, I enjoy watching and playing sports!

Maria Sandhu

Hello! My name is Maria Sandhu and I am currently a first-year medical student at California Northstate University College of Medicine. My doctor journey began sometime during my sophomore year of college at Sacramento State University, when I realized I may be interested in medicine. In order to prepare myself for the very competitive AMCAS application, I became interested in premedical clubs on campus and learned a lot about the process. My medicine-adjacent interests include identifying and eliminating barriers to healthcare, and providing equal educational opportunities to all regardless of background. I look forward to pursuing these passions in medical school and hope to learn a lot on my journey! Through The Doctor Journey, I hope to share some parts of my journey with you.

Teza Harrison

Hello everyone, I am Teza Harrison, and I am a current first-year medical student at California Northstate University College of Medicine. My Doctor Journey began as a freshman in college when I decided I wanted to pursue medicine. My journey has had its ups and downs, but there is nothing I would do to change my journey. During

undergrad, I was active in premed clubs and research, community service, and played club soccer; through those various experiences, what helped me most was finding mentors who could guide me during this arduous process.

I want to provide the same guidance I received as a premed student. I hope sharing my experiences can assist and motivate others who want to pursue this beautiful field of medicine.

Lastly, I love photography, playing sports, guitar, and traveling.

Kevin Gines

Hi friends, my name is Kevin Gines, and I studied philosophy at the University of California, Davis. I am currently in the ’21-‘22 medical school cycle, where I applied to both MD and DO medical schools. I received 12 interview invites and 5 acceptances and was waitlisted at 3 other programs. During my time as an undergrad, I engaged

in research at Shriners Hospital for Children, I was a residential advisor, participated in various campus clubs, and was an overnight caregiver at a group home for the intellectually and developmentally disabled. My diverse background and life experiences have made me acutely aware of the need for physicians who can understand their patients as people beyond their ailment, and I can't wait to share this with you. Please reach out if you need help developing a four-year plan for your college education or application prep with an emphasis on the personal statement and relevant experiences.

Jashandeep Bajaj

Hello everyone! I am currently a first-year medical student. I have participated in various extracurricular activities which have allowed me to gain more perspective on the field of medicine and learn what it means to be a part of a community. I hope to use this platform to express my thoughts and ideas with those who share common goals so that we can all learn what we can be doing to better ourselves and our

community. Some of my personal hobbies include running, reading, and being in the great outdoors.

I look forward to seeing what we can achieve!

Upraj Singh

Hi! I am a medical student with a knack for understanding information frameworks deeper and I especially joy helping others on the same track as me. Through my limited time interacting with health care professionals, I have gained a little bit of insight into the field and I am looking to broaden my understanding within the

domains of academia, legislation, and politics. At my core I am a philosopher and an inquisitive individual; I am looking forward to bringing both of those traits to “The Doctor Journey”. This project is a chance for us to get to know the healthcare system and the myriad of issues that plague it, the tips and tricks to make it through each step of the journey on the route to becoming a full-fledged doctor, and most importantly bringing all this information to you.

Feel free to reach out and let us know about any topics you would like us to cover!

Muskaan Dhillon

My name is Muskaan Dhillon and I am currently a senior at California Northstate University College of Health Sciences, pursuing a pre-med track. My passion for medicine was sparked during my sophomore year of high school while volunteering at a hospital over the weekends. Coming in each week and witnessing the power of healthcare providers to heal and comfort those in need motivated me to pursue

medicine. As someone who has seen a loved one face health issues, I strive to become a physician who provides compassionate and competent care. As I navigate this challenging road to becoming a physician, I am inspired by the resilience and determination of others who share the same dream. I strive to encourage and support fellow pre-med students, as I understand the difficulties that come with this journey.

In addition to my medicine-related interests, I am also passionate about improving the healthcare infrastructure to better serve underserved communities. Outside of medicine, I enjoy pursuing my hobbies, such as creating art, practicing taekwondo, playing tennis, and playing the piano.

Arnav Wadhawan

Hi everyone! My name is Arnav and I currently attend California Northstate university in the 4+4 BS/MD pathway. I am an international student that applied to medical schools in the US and Canada so can relate to your experiences. I have helped tutor

organic chemistry for The Doctor Journey with great success! Please feel free to reach out if you need any assitance.