

Study Method Part I: What it takes to be an Excellent Student

In a very basic sense, we all learn the same. We must understand the material and then see it over and over again. In undergraduate, because of the low volume of learning, a person can get away with all sorts of weaknesses. However, the best students will often not have to alter their study methods at all for medical school.

To be a good student, the intangibles are required: work-ethic, dedication, and self-confidence. However, in medical school, you will discover that almost everyone has that. The filtering process of undergraduate has removed most of those that lacked these intangibles.

At this point it comes down to study method. The students who have the best methods are called geniuses. The students who have the worst methods flunk out or barely pass.

Get this in your mind and keep it there: It is the study method that makes the good student!!!

Now, one last important point, it is most important that one realizes that every good study method comes down to just a few things. You must understand the material by translating it in your own language. You must then review the material over and over again. You need to see the material at least 4 times with an optimum of at least 6 times. And finally, you need to review over several days. That is the best way to do it. When methods have these simple points in them, they are good methods.

Study Method Part II: 3 Most Common Mistakes by Medical Students:

Please note: premed students make many of the same mistakes...

1st NO NO: Don't oversimplify the material...

I've now had the chance to watch many students flunk out. Every single one of them gave the same response. "Well, the material was easy to understand. It's just the volume of information." Wrong, Wrong, Wrong... The few times that I spoke to a student about this, I would ask them questions about the material that they understood. Again and again, I would notice a superficial memorization process in their answers. This is why they were overwhelmed on the questions. Medical school and USMLE test questions are conceptual. You don't get that many memorization gimmies. You need to understand the material and manipulate it in your mind. Understanding the material is not easy. It takes effort, but it is a rewarding endeavor.

2nd NO NO: Don't just read and reread the material. You must take your own notes...

I've seen this countless times. In almost every case the student who did this was failing. A good student takes their own notes and transcribes things into their own words. This is critical because you are translating the notes into a language that you understand. Students who don't do this will end up failing. This is basic study strategy and it must be done.

3rd NO NO: Don't start to review the material on the day before the test.

Students who are doing poorly are often as tired as they can be. They stay up all night before the test slaving. They put in incredible 18 and 19 hour study days on the day before a test, yet they still do badly. You have to understand that the mind is a muscle in many ways. You can't work it for 18 hours straight. Review needs to start well-before the day before the test. Give those concepts time to become entrenched within your mind. In undergraduate, you can get away with not doing this. In medical school, it's a very bad idea. Remember, medical school is like the pros. You need to be better. A good method has review built into it, such as the method that I will present.

Finally, here is an overview of one study method that will work in medical school. Enjoy. Let's begin. This method will address every deficiency that medical students make.

1st: You must preview a lecture. You can count this as the first time that you see the material. Go here for how to preview a lecture:

Before every lecture, I preview the material. Now, I should explain where most medical students go wrong -- where I went wrong. Previewing the material SHOULD not involve reading it for 2 hours! That is LEARNING the material.

Previewing involves creating a roadmap in your head. You need to develop a feel for where the lecture is going. This will remarkably increase comprehension. There are two methods for doing this:

How to Preview a Method

Method 1: 8 Sentence Process-Oriented Method

Look over the lecture. Write 8 general sentences explaining the lecture. The 8 sentences need to relate as a process. Make sure that you leave plenty of space between each point. The goal is to come back and fill in the details under those 8 points. Always be aware that the main point of this is to create a roadmap in your head. You need to have a feel for where the lecture is going. Within time, you will be able to do this in a few minutes. Please remember that you don't need to learn the lecture during the preview phase! You just need to develop a feel for where it is going.

Adapted from SASS at University of
Tennessee Health Sciences Center

Method 2: 8 Sentence Question-Oriented Method

Look over the lecture. Write 8 general questions that you have about the lecture. The 8 questions need to cover multiple aspects of the lecture. Make sure that you leave plenty of space between each question. The goal is to come back and fill in the answers under those questions. Again, be aware that the main point of this is to create a roadmap in your head. You need to have a feel for where the lecture is going. Within time, you will be able to preview within a few minutes. Please remember that you don't need to learn the lecture during the preview phase! You just need to develop a feel for where it is going.

Now, let's do a brief tab. So far, you have seen the material one time for preview. You only went over it for a few minutes, but those were an essential few minutes as you will now come to see.

Getting Something Out of Lecture: the Actual Lecture Itself:

This part is relatively simple if you engaged in the previewing method.

You need to bring your 8 or 10 sentence list to class. As the professor lectures, check each point that you feel the professor has covered as the professor lectures over it. You may still take notes on another sheet of paper. But use the "checklist." It takes two seconds to check a sentence. Whenever the professor has not touched something, put a question mark by it.

Use the question mark if you don't understand something also. Write it down and then put a question mark by it.

IMPORTANT: it is extremely important that you put a question mark by anything that you don't understand and **IMMEDIATELY** see the professor about it!

Now, after class is over or during class, ask questions about everything that you don't understand. Don't be embarrassed. Just tell the professor that you didn't understand it.

Derivation 2: Write down each point that you don't understand on a separate sheet of paper. Go see the Professor about it.

Now, there is a Part II to getting something out of lecture. If the professor initially explains something and you still don't understand it go to the professor's office hours. Ask the professor to explain it again while politely telling him or her that you didn't get it. If you still don't understand it, ask the professor again -- but this time try to be more specific in determining what aspect of the professor's explanation is causing problems.

If you don't understand it for a third time, go home... pull out a book. Read it. Come back the next day and ask the professor to explain it again. You will most likely get it.

It is important to understand that you can still do well in medical school without going to lecture. It's just that you will have to study a lot longer and harder than if you learn how to retain information from lecture. It's advantageous to use a proven method, such as this one, that will help you utilize things like lectures.

IMPORTANT OPTIONAL DERIVATION: Many learning psychologists maintain that you should do an additional step. You should take 10-15 minutes immediately after the lecture to re-read the material. I will personally do this, but it is optional. Supposedly, studies have shown that it greatly increases comprehension.

Time for a Tally. You have seen the material one time for Preview. You have also seen the information 1 time in lecture. That is two times. If you do the Optional Derivation, then you have seen the material 3 times! But let's assume that you don't do the optional derivation. You're at two times right now. It's time to learn how to cover a lecture...

Covering the Material:

Now, we enter the next stage of learning.

This should be the third time that you see the material within 24 hours (possibly fourth)! When you finish covering the lecture, you should have everything entered into memory, save a concept or two that you will need to ask the professor about for clarification.

You must learn to become a transcriber. This means that you must get used to transcribing the notes or books that you have been reading into your own, concise words.

This needs to be in an organized format. Something that naturally flows within your own mental construct. What's important is that you learn to word your notes in a clear, concise fashion.

Second, and this is extremely, extremely, extremely important, you must diagram. Now, you might find yourself copying diagrams and pathways. That's okay. You need to do that. But challenge yourself to try and create your own diagrams and drawings also.

The process of learning and memory works like this. Learning something is a skill. That is, you understand something as a process and you are able to master the process within your mind.

Afterwards, you form logical representations within your mind of various relationships. This is what enters the information into long-term memory.

You're a thinker suddenly. Your thinking through your information as you study it. You're finding relationships, and it enters memory. That is the whole key to learning! You have to form relationships.

Think about this: What is a mnemonic...? A mnemonic is simply a relationship that links words to a simple concept. In essence, you are forming a primitive relationship of the scientific material so that it enters memory. Now, imagine the power of forming your own relationships. You will remember things longer and faster.

Train yourself how to think through material. Many medical students never master that and they pass. But they never become excellent at mastering the scientific material. You can, but you have to work hard to learn how to do this.

Now, I can explain why the diagram and drawing is so important. The diagram that you make represents interconnecting relationships that you have made yourself. At least that is the case when you make your own diagrams. Use drawings, use boxes, use learning tree's etc. Try to understand the process.

Challenge yourself to make at least 5 diagrams per a lecture at the beginning. After that, you will naturally find how many you need for the information to enter memory.

Finally, make sure that you understand everything. If there is a word that you don't know, look it up! If there is something that you don't understand, ask for help. You need to understand these concepts to form relationships.

IMPORTANT!!! There is a common question that should be addressed. People often ask how to diagram and how they should ask their questions. That is a very good question, and it is easy to answer. The best way to learn how to word your own notes is to look at the professor's lectures. Take a look. You will notice plenty of diagrams along with concise, interconnecting points.

When you get done with covering the material, your information should look like a lecture that you prepared. Imagine yourself getting ready to present it in front of the class. Imagine having to answer questions about the material. That's the key to covering this stuff.

After you finish going through all the trouble to make your own notes, make sure that you organize them in a folder. You will use these for the review process.

It is time to take a Tally. You have now seen the material 3 times (4 times if you do the optional way). You know it (mostly).

Now, it is essential that you review like a madman or madwoman. This is where the difference between a high-pass and honors student takes place.

The Review Phase

If you don't remember anything else, remember this: The Review Phase Must Happen **Over** Time!!!!!!!!!! Let me say it again. The Review Phase Must Happen Over Time!!!! The best method of review is to do it over time, not all in one day.

Review 1: This occurs the day after lecture. Spend no more than 10-15 minutes reviewing a particular subject each day. But there is an art to reviewing also. Most students make the often repeated mistake that I used to make. They simply scan over the material and call it review. Hell NO!!!!!!!!!!!!!!!!!!!!

This is how you review. Read over your previous notes – the ones you made the day before. You'll be able to do this in about 5 to 10 minutes after you get a little bit of practice.

However, while doing this, you will need to do something else. You will need to do something that I haven't seen mentioned anywhere else on the web. You need to challenge yourself to add at least 5 sentences to your notes.

Now, in these 5 sentences, you should be able to link concepts to something else. Write down the relationship in a brief sentence. You will become so good at this that you will be able to do this in 10 minutes. It is essential that you link your notes to existing concepts within your mind. This is how things stay in long-term memory.

It's time for the second review.

2nd Review... Now, you need to see the material a 5th time. This time spend 5 minutes skimming over the lecture – mainly looking at the major points of your concise, diagrammed, lecture notes. Try to add at least 2 sentences to it. It should take no more than 5 minutes.

At this point, you are done with the material for one day... So, let's recap really quickly.

In review, you spent 10-15 minutes going over the previous days lecture. You added 5 sentences to your previous notes linking them to existing concepts within your mind. During the other 5 minutes (you need to spend 20 minutes reviewing), you went over the material that you reviewed before – adding 2 sentences to it. Once again, you are linking it to an existing concept within your mind. Concept building is the key to learning.

Okay, so by now... You've seen the material 5 times in 72 hours!! You're probably saying enough already, but it is not over yet.

6th... During the weekend, you must do a master review. You need to re-read over all the material that you were given. You can skim through it, but you need to go over it for around 2 and a half hours. And guess what... You need to add more sentences. Try to add 5 to 10 sentences over the entire week of information. This will be the 6th time that you see the information.

In fact, spend every weekend reviewing the material for that entire unit!! So, that you never forget it.

7th... Finally, let's fast-forward. The day before the test. Spend 4 or 5 hours reading through all of your concise notes and sentences that you added. You're ready to make close to a 100% on the test. Reread through the original lecture notes also.

One special note... You will realize that you will see the material multiple, multiple, multiple times. But each time that you see it, you add something to it. In essence, you never get behind.

Now, I once had a question that you may have right now. I realized that you would see the material several times for older information. But what about the new information. Remember, that by the third time that you see the material, you should know everything. So, it will be fresh in your mind by test time. Plus, you do a master review on the day before the test. So, you will see everything at least 4 times. Most things, however, you will see at least 7 times!

Think about it... By 7 times, you will probably be sick of the material!!!

In Summary,

Oh, what I would have given for someone to have given this to me before medical school. Please remember that there are a variety of different methods that will work in medical school, but the best methods are the same. They all involve understanding the material and reviewing it like crazy. Seeing the information multiple times is the key.

As an after note, I am including two other methods that I have seen successful students use. I want to emphasize that the method that I gave is very good. It's turned many poor students into top students. It's turned good students into better students. But, it's good to see other methods. Notice one common thing. All of the good methods involve the same basic principle. You must understand the material and then see it over and over again.