

Spring 2021

## How Physical Exercise Impacts Learning abilities and Self Awareness in the Classroom

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How Physical Exercise Impacts Learning abilities  
and Self Awareness in the Classroom

By:

Jason Rosselli

Project submitted in partial fulfillment of the  
Requirement for the Bachelor of Integrated Studies Degree

Murray State University

5/2/2021

## Abstract

For many years ever since the author started elementary school back in 2003-2004 and all the way up to recently being taught in military classes while in the Army, the paper will describe what he has experienced as well as many other problems staying awake in class or fully comprehending the learning material due to lack of energy or lack of sleep from the night before. This paper will talk about how falling asleep in class has been a notorious landmark as to why students will struggle in a class or why that teacher does not enjoy having that student in the class making the learning environment toxic. Having trouble staying awake in class can come from numerous factors such as, having an inconsistent sleep schedule, appetite changes, stress which is the biggest factor and people who just have trouble falling and staying asleep at night. This paper will portray how the author has experienced days having trouble staying awake in class all throughout their student career and this has been supported with many other through research of students in the classroom for many years. However, in the paper, from many different strategies, the author as well as people the author has been around found something that they wanted to do more research on that helped them regain full attention in the classroom and prohibited the author from ever falling asleep again. The topic that will be researched on and discussed as the point of emphasis in the paper is how performing physical activity before school or a certain class can enhance someone's learning ability and helping them stay awake in the classroom and how it can have a positive impact on someone trying to stay awake in the classroom. The author never went for a run or exercised before class in high school and in college and had trouble staying awake but when joining the military, they did physical training early in the morning before classroom time where he found himself staying awake easily throughout the day and comprehend the learning material at such a great level. This paper will be

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using correlation with research from others who also had the same experience to prove the success with this topic and look at those who struggled even more due to doing strenuous exercise before class. The author wants to add in this paper to look at why these individuals struggled and find ways to critique their type of workout or even appetites so they can get the full benefits as he did from this change of pace every day. The author will dig deep into how doing physical training before a class in today's time with going through COVID-19, has an even bigger impact as now people are not even in the classroom setting anymore but instead staring at a computer screen for most of the day. The research the author has found and what will be presented in this research project shows the many positives towards working out before classroom time and wants to find the best way to edit and incorporate every different individual into this mix so they can gain the same positives that the author had.

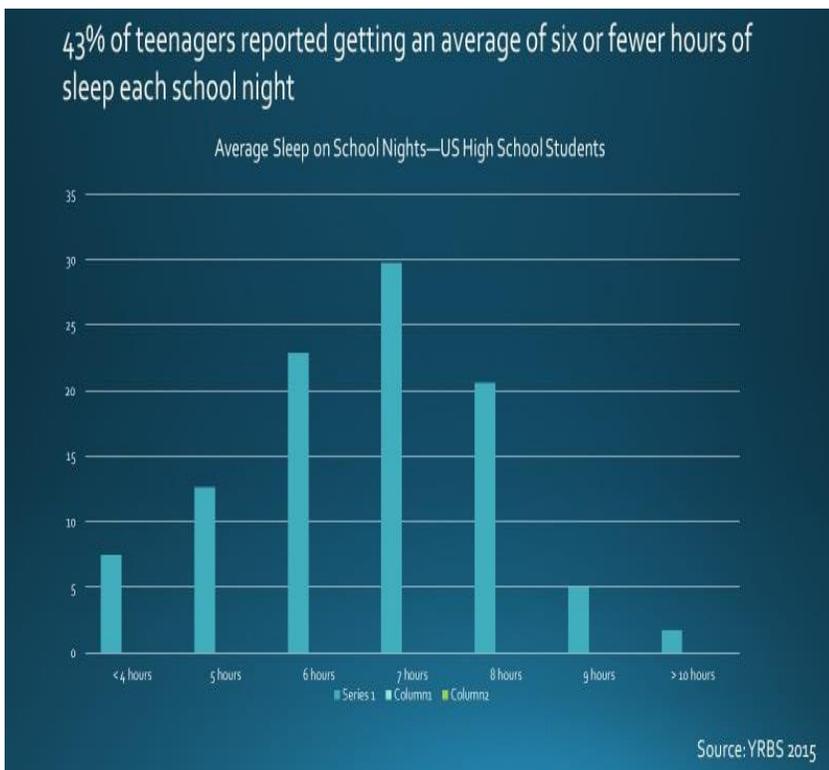
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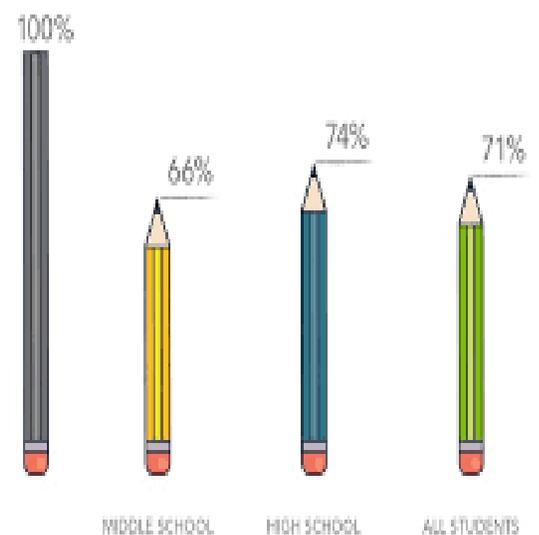
## Introduction

Since the beginning of the age where children and young adults started going elementary education working their way up to higher education and graduate programs, the longtime struggle of staying awake in class has always been a well-known topic. Many children and young adults over the years often do not get an adequate amount sleep due to, sleeping troubles, extracurricular activities going on after school and of course completing the rest of their schoolwork after class that keeps them from getting adequate sleep at night. And of course, the fact that most classes and schooling systems start school anywhere from 6:30-9:00 in the morning which at times is earlier than when most adults even go to work. A study in 2019 found that “20-30% of high school students and 6% of middle school students fall asleep in school each day across the united states” (F With the number of individuals attending schooling, that is a

very large percentage indeed.



PERCENT OF STUDENTS WITH A SLEEP DEFICIT



### **Impacts/adverse Effects.**

Falling asleep in class can impact the student's education career and ability in a negative manner. The student will miss important topic discussed that could be tested later, will miss important due dates of projects or events required of the class and overall give off a bad impression to their professor or teacher who will instead be harder on the student instead of helping them in the course judging from their attitude. And not only that they student will lose motivation to do schoolwork or learn because of their tiredness in the classroom. Not being able to fully engage in classroom activity can also have a negative impact on their growth development and mental status as they start to stress more often and even develop anxiety from not being caught up in the classroom, getting failing grades and getting consequences for simply not being alert and participating in the classroom.

And nowadays where an average adolescent student has access to social media, much more technology and can get a job a lot sooner to pay for valuables and needs, their stressors are being put through the roof and the energy and exerted at such a high level that takes away from exerting energy towards their studies in being successful in the future. Yes, the main culprit of student falling asleep during daytime learning is sleep deprivation and for many reasons getting an adequate amount of sleep is just not ideal. Going to college and getting most of the college experience and graduating and landing that dream job is a goal of many young adults nowadays but with sleepiness in the classroom, those students can compromise those goals in a matter of months to a couple of years and must start right back at the beginning with having to choose a different career track in life and may even be in school debt.

### **Misconceptions**

And what many people like to jump to with falling sleep in class is that they have such sleep disorders such as obstructive sleep apnea. While some individuals to suffer this type of this disorder many are quick to jump the gun just to get medication to sleep when they could be doing many other things to prevent them from falling sleep in class or ways to ways to get a better sleep at night and stay asleep. Some will use caffeine to stay awake during class, chew gum, drink an abundance of water and trying to stick to a consistent sleep schedule. I have found with myself and many other students I have went to school with that, that just becomes too hard to accomplish and at times we become so heavily addicted to these needs that the body just overuses it an becomes adapted to these stimulants and these temporary fixes no longer help keep us awake in the classroom. At one point in my college career, I use to drink two energy drinks before class and two more before my mid-morning or afternoon class. This not only stopped the impact of keeping me awake nut instead made me even more lethargic in the classroom and increased my sugar intake along with gaining weight as well destroying y self-esteem for my body and focusing more on my image rather than what was going on in the classroom. Another big one is nicotine. Kids in my generation, especially in the military rely heavily on dipping, smoking, and vaping to stay awake throughout the day.

### **Myths**

Nicotine is such a hot topic nowadays and is being used in multiple ways by adults and all the way down to children in middle schools! This very additive drug has been trademarked and rumored forever that it is the stimulant to keep you awake no matter what time of the day it

is. While yes it has a temporary change on your ability to stay awake for a longer period or during nighttime hours, that feeling will very quickly wear off as the body becomes tolerated to the drug and instead of it being able to stay awake, it will depend on the nicotine to even keep the body functioning normally when it is already supposed to do that on its own without the help of nicotine.

If anything, nicotine can disrupt your sleep pattern by the body needs that extra craving for a cigarette, pinch of dip or a hit of the vape. Medically speaking, smoking can cause sleep apnea which is a major disruptor of sleep which in turn makes you fall asleep during the day in the classroom. Not to mention that smoking/ vaping and dipping causes major health concerns down the road such as cancers, gum/lung illnesses, and ages the person's body at an alarming rapid rate than expected. Vaping has been clinically studied and proven to cause just as much damages as cigarettes as well so making this change over from cigarettes is not the best idea at all.

### **Experiences and Experiments**

I fell victim to the tobacco world as when I was first starting training in the military for my combat medic job, I started dipping as it kept me awake during classroom time and was able to keep my brain engaged within the instructors teaching and participating desires. I got that buzz that kept me moving throughout the day but soon realized I no longer got it and it was just the fact that my body depended upon it to keep functioning at all throughout the day let alone keep me awake. I knew that this was not helping me stay awake in the classroom and I needed to quit because I was wasting money and getting to a bad addiction point. And when I finally stopped dipping, the withdrawals made it even harder to fall asleep at night and therefore could not stay

awake in the classroom, so from a personally standpoint there is no way nicotine can help keep you awake all the time, and it is not the healthiest option for your busy short term or long term. And not only that but nicotine depletes the body's ability to absorb caffeine. So, when you are doubling down on nicotine and having a coffee in the morning, you are not going to get that burst of energy from the coffee unless you drink an abundance of it which is bad for you, to get that feeling still. So, all in all nicotine is not the answer to staying awake in the classroom.

The thing with my generation now a days is that there are so many things coming out nowadays that gain popularity and are only for pocketing a profit rather than helping a student stay awake using a healthy habit for their bodies. I see new and "improved vapes running through schools all the time and I have even witnessed people get bothered if they don't have them or don't want to take a hit of someone else vape (even during this pandemic I have witnessed that!) yup peer pressuring is still a thing even though even as adults we get lectured about the wrong doings of it all the time and how it negatively impacts a person's behavior. I noticed each year new dip flavors coming out with the companies claiming their product have more nicotine or caffeine in it or it has healthier products and of course people buy into that scam every time. And even those e-cigarettes and patches that strictly only have nicotine in them are claimed to be the best for the human body but still, nicotine is a stimulant that will raise your blood pressure over time and cause long term health effects down the road.

For example, I grew up with my neighbor who was the same age as me and we hung out all the time. We played sports together had classes together and joined the army together. Well, he had a great blood pressure when we both first went to college because he ate well and exercised often, and I was going into the medical field, so I did many medical assessments on him as he helped me practice for my field of study. Well as soon as we joined the army, he fell

into the stereotypical military run that you must consume nicotine in the military to be a functioning soldier. And yes, you gain sleep deprivation rather quickly and consistently in the military, so he started smoking cigarettes. He now smokes at least a pack to a pack and half a day and when taking his blood pressure when we both got home for vacation from our duty stations his was the highest, I have ever seen in someone before, and he is only 22! And, his running abilities has slowed down drastically, and he has such a disgusting cough now all because he wanted to jump on the bandwagon in order “to stay awake during classroom and training time.

### **Conclusion of Tried Remedies**

Now I have talked about many habits that help and quickly disrupt a person’s health and ability to stay awake in the classroom but now I want to discuss some good ways that are healthier for the body that can contribute to helping keep the body functioning and alert in classes. Again, these ideas are always good to include in your daily routine, but they are not the number one way to stay awake in the classroom which will be discussed as the main point later in this paper. They include, chugging water to stimulate your organs a little during the class and activate the brain cells. Take deep breaths to get a higher oxygen intake that will go to the brain and feed the brain more oxygen and thus keep you awake, having good posture so you do not get lazy and comfortable and want to fall asleep and just standing up for a little bit to get the blood flowing before sitting back down and continue engaging in the class. All these tactics used together can help a student and many of them get through the day during school and help them focus even when they get home and must continue that energy to get their work done.

### **Staying awake in class benefits**

Now there has been much explanation as to why falling asleep in class is so negative towards the student and the way the teacher views the student. There has also been reasoning as to why this characteristic I looked so down upon learning in the classroom in the native impact it has on the student. But now I want to dive into why staying awake and alert in class can be beneficial towards the student and show that schooling is not a waste of time and that a student can get something out of the classroom from paying attention and not nodding off. I also understand that everyone is different, and everyone lives a different life so not everyone can have the same alertness and ambition in the class as others so I want to touch on how teachers can follow tactics and helpful ideas to keep the class fully engaged with even a long and tedious subject that requires full attention to not miss any important information. I want to first start off with how staying awake in class can be beneficial. Students who can obtain from falling asleep in class, gain a level of alertness and therefore remain engaged in the class no matter the activity. Students who can control their effective alertness are able to interact in the class without becoming mentally fatigued. This is important especially in a lecture setting class where a student is sitting still for a long period of time or listening to the professor ramble on for long periods of time. They no longer have that feeling of being bored or tired and can pick up on important topics the teacher is talking about to use that information to do well on assignments such as exams and reports. The student will also have a better mental health about their own self where they feel a lot better about a subject taught in the class after going through it and have confidence going into the next lecture or topic and can build their foundation off that to being successful in the course. Even after school the student will have ambition to keep after class assignments for the course because of the materials they learned in that course and not missing any key information

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that would hinder them to complete the assignments, so they are more apt into completing them. The student will see a trend in good grades with this alertness and ambition and use that towards other course and years ahead with finishing a course, then diploma and letter on a degree or other certifications down the road to set them up to be successful in landing a job and being successful in that working environment.

Teachers are always trying new ways to keep their student is engaged in the class and I give them a lot of fog credit. From pat experiences in classes and observing how many peers learned at their peaks and from extensive research I have found these ways to be the most helpful throughout a diverse classroom of students. Some examples are tape recordings or power point videos of the teacher going through the lecture so she can control the pace of it in the classroom and use and focus on key points in that whole recording of r the classroom's found this extremely helpful as I could continue to engage in the class and not get bored or lost in the discussion. Another good one that was used frequently in the military during classroom training as a combat medic was giving the class frequent break throughout the day. Having just a small 10-minute break helps those digest what they were just taught, be able to drink eat a snack or go to the bathroom. Also, they can go up to the teacher and get one on one time with them about any difficulties they are having with the material which is another great way to stay engaged in the classroom. Even if the student needs to shut their eyes for a little bit to rejuvenate that will work just as well, because in the end falling asleep while material is being taught is not beneficial for you or the teacher!

Going off those techniques that teachers/instructors could do, there is something that I talked about in the beginning but also want to Reiter here. Emphasize information that is very important in the class and what they must know for not only exams but for future reference down

the road in the teacher career or even work career. Also giving the students a heads up when they will be quizzed or what they are going to be asked on for questions tomorrow or the next week to start the class will give the students that extra gear to focus in and pay attention to the material without losing site because they know the severity of it. I could go on about what teachers should do for the student and what the students should do for themselves to stay engaged in the classroom and not nod off and fall asleep and risk missing important topics and information and setting themselves up for failure. My last technique I would offer is that teachers should switch up the pattern of the way the classroom seating is often. I am not saying every week or even every other week but maybe everyone month or month and a half in. I have heard this from multiple teachers now who I went to college with and have even experienced this myself with professors and instructors, that switching up a seating pattern, whether it's putting them in groups, staggering them, making the desks into a circle or having a traditionalized grid for a little but reaches out to the students mental imagery in their brain and their brain must adapt to the new seating when they enter the classroom for a certain amount of time. Of course, the brain adapts to the new setting , but in that period that it is still adapting, the brain is already getting jump start on engaging in that classroom setting just from this small change in seating and that alone can contribute to better learning and participating abilities.

When I took my core classes of English at my old college in Massachusetts, it was known to be a very drawn out and boring class. However, with my professor rearranging the setup of where we sat and the order of how the desks were, it encouraged us to focus on the class because it as a unique change and often resulted in us being split into groups to have discussions about our readings from class material that usually is very boring but with this change made the class a little more enjoyable and exciting. I took so much more info away from those sessions some days

than I did in a lab class for a scientific course where we were always moving around and interacting with each other at times. I am not saying moving around is not always the best option to stay focused in the classroom, what I am saying is that some days depending on the information put out they are for each class, sometimes I earn more than others with different strategies put out by that certain professor.

### **Sleep Quality in Military life**

Now earlier in the paper I talked about the possible negative effects and atmosphere people on the civilian side experience with having difficulties falling asleep and some factors they go through that inhibit their sleep and therefore struggle with staying awake in the classroom. And how that correlates with their struggles in keeping pace for good grades and excelling in the class and having struggles with a good academic standing in the teacher/professor's eyes. With the military life, I can confidently say it is just like this but ten times worse. Outside of the military people know about sleep deprivation that comes with the military but what they do not know is the severity it causes with a much larger population of individuals than on the civilian side. I would say that at least 1 in every 3 people within a 30-student size classroom would nod off in the classroom and flat out fall asleep at least 2 times out of the five-day week. And pretty much the entirety of class would fall asleep at least once at some point during the duration of the cycle in that class.

It is a struggle considering we are doing training after classroom time and we must be up early in the morning and often go to bed late due to some bad apple ruining it for the rest of us getting in trouble so we either get help information for a long period of time or get woken up even early for punishment. That is the thing about training in the military. There is often always

punishments and discipline being handed out to entire group rather than just the individual, rather than opposite on the civilian side of life. So, everyone must suffer and that greatly impacts their learning abilities the next day. Also, with that there is this thing called “fireguard” where there is a schedule put out for the middle of the night where two student soldiers wake up and guard the floor for an hour before waking up the next group of student soldiers for their shifts. This greatly impacts the sleeping ability for us students and worsens the sleep disorder that a soldier might already have.

A study in 2019 was done that “surveyed 1,577 soldiers during the 10-week basic combat training at weeks 1, 3, 6, and 9 to see whether they were experiencing sleep problems or any issues with mood disorders, anger, or attention. About 61% of the soldiers in the study never had a sleep problem. Another 13% started out with sleep issues but recovered during training, while 20% developed sleep problems during training and about 7% had chronic sleep issues throughout the study” (Rapaport, 2019). Compared to soldiers who never had sleep problems, those who recovered from initial sleep problems started out with higher psychological distress, anger reactions and attention problems but steadily improved throughout training, the study found. “Those who developed sleep problems during training or had chronic sleep problems had slower improvements in psychological distress and a decline in attention throughout the study. And the group with chronic sleep problems also had increasing anger issues throughout the study” (Rapaport, 2019). And with that Sleep problems have long been linked to poor mental health, emotional regulation, cognitive function, and the researchers note in Sleep Health.

In this study it does state that there is no evidence that this loss of sleep or sleeping disorders results in a decline in job performance or safety of protecting people they oversee.

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However, with characteristics it does affect and how these characteristics are all needed to excel in ac classroom setting. It shows a significance in how this sleep deprivation in the military can result in poor cognitive function in a classroom making it a more difficult journey for a soldier to adapt to this change while still doing well in the classroom. Yes, I did still excel as well as many other. But my mental state and I can imagine as well as others was not at its peak while I was in classroom training in the military in Texas and have basically become adapt to not getting a lot of sleep since then rather than trying to fix my sleep disorders and difficulties. And it is not liked a civilian person is different from a military indicial. We are all human beings where it is recommended for ALL of us to get a minimum of 8 hours of sleep a night for full brain function but in military life where some do not sleep for three days due to training, it just leads to future development of PTSD, depression, and anxiety, in a soldier. And that is why the rate of struggling in the classroom is at a higher amount and level on the military side because of the extensive training and work hours that we are just accustomed to by now.

You even see this with civilian college classes that military members try to sign up for when they get to their actual duty station and get settled down somewhat. These soldiers often have trouble keeping up with the workflow of classes and most of the time are restricted to one or two classes due to their busy schedule in the military. And with that most of the learning occurs online especially now with COVID going through our country still. Some of these students who have been out of the classroom for so long have a hard tie dating back into the atmosphere and often skip assignments and are just too tired to hop on their computer at the end of the day and complete the work. I have struggled a little but with schooling while working in the military. I must plan my assignments far in advance to get done in case of deployment or when we go out to the field for training exercises and I have no computer access out there so yes,

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it is tough for everyone in the military. I only took this one class this semester because of the amount of work and the training we will be doing for the first half of the year, so I did not want to put myself in the hole with grades. And if you fail any of these classes at the end of the semester, you must pay the army back the money it spent for you to take these courses which could add some financial stress. The best advice I can give for that is to utilize as much free time as possible for completing your schooling and set educational goals for yourself, so you have ambition and something to look forward to and keep you driving through that course.

### **Classroom Struggles with COVID-19**

Now that I have talked about the struggles in an actual classroom setting let us talk about the newly profound change that has put a damper on so many college, high school, and middle school kids across the country that has made staying away and fully functioning during class even worse. As if there were already students not able to stay awake in the classroom itself but now with just having to get up in their pajamas open a computer and sit there at the table alone or on the couch with no one around them. With this change in remote learning it has been a big step in adapting to new life schools for many students. Most have never taken online classes before; some may need special help even before the pandemic that now they do not have access to. And of course, for the vast majority it has created an abundance of laziness where students have no ambition to learn that day because of distractions at their own house. It also relates to those who cannot afford proper technology to do some assignments or make doing those assignments a whole lot harder. And it is a struggle for those students who do not have the best living situation and could have family members around all the time to hinder that student's learning abilities.

Talking with my sister who is in high school now she has explained to me how her experiences have been with online assignments and zoom sessions with her teachers. She states that some days the entire class is there (but some cameras are not on) and other days barely half the class attends. She is working towards being a CAN in the medical field so to hear that some students do not even show up for her shop class to learn about their future job information and skills is quite scary to think about. She also explains to me how kids have fallen asleep in class all the time because they are laying in the beds on the computer or couch with their pet in their arms. Other things that happen is that some of the students have Netflix on behind them in the background of the computer and watch the shows and movies when it looks like they are attending and learning in class. It is not surprising that with this attitude in this new remote learning strategy that students are falling behind. About a year ago this time until the start of this school year there has been estimates put out that show diagnostic testing with these students that with about 4.4 million children tested in over 81,000 school systems, they have dropped off in reading and in math.

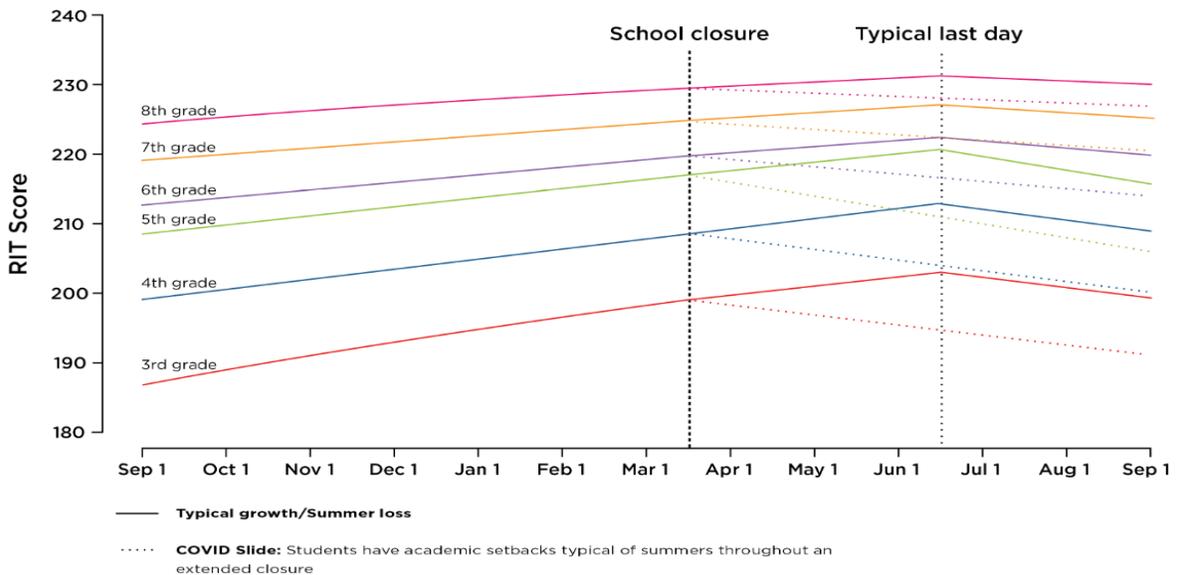
The average student has lost about a 1/3 to a full years' worth of learning in reading and about 3/4 to a full years' worth of learning in Math. And to make it even worse, many parents explain that for the entirety of their year they have zero communication with the student's teacher and has no idea how their progress is in the class. I know it is a little different in college as many students do not have their parents to communicate with the professor, but the idea is presented. Most of these student and professors do not communicate and there has even been a Pass/Fail protocol being put into place where either the students receive a pass for the class and can check that off their prerequisites or a failing grade and either must take the course again or daily with the failed grade on their transcript.

Even with myself and my fellow soldier peers it has been difficult communicating with the education center on post to get set up with classes for our next semester and some of my peers it the first-time taking classes in the army o they need that extra help at the education center to get that started. Not being able to speak with my advisor in person and to make sure I am fink=ancillary squared away has made it stressful and has been an ongoing adjustment since the closing of the education center at fort Campbell.

Below are just some cringing statistics within the earning development and how all the factors above have played a role into the decline of learning in students' studies...

### COVID-19 Learning Loss: Mathematics forecast

Forecasted trajectories for grades 3-8, math RIT scores based on COVID-19 induced school closures.





Teachers in the classroom have gotten more lenient on sleeping in class.

So far, I have talked about defects the student goes through when they fall asleep in class in the civilian world and in the military world. But what has happened overtime is that teachers in laws have taken place where they are not allowed to give certain disciplines to students falling asleep in class. Back in July of 2020 the governor of California passed a law that prohibits teachers from suspending students from the class and suspending students from school time due to falling asleep multiple times in class. With that I believe that there will be no ambition for the student to get back on track to focus on the classroom because they are getting no repercussions to try and focus on the class. Now with that I am all for not suspending the student for a minor misbehave but with that you need to have alternatives to get the student to focus. Another reason I am against this is because the governor passing this bill is sort of like a third person perspective from the actual trenches of inside the class from the article that I read these teachers explained that the governor passing this bill does not give a good alternative for what is going on inside the classroom it should be through the school board itself that comes down with these alternatives in passing of these laws throughout the schooling system in this article I never saw any types of

alternatives at these teachers can bring forth in order to get the students more engaged and sort of get a fire lit underneath them in order not fall asleep in class. D students therefore have no repercussions from their actions in the air for never try to work on themselves and their health to get back into the classroom mentality and focus on the long wrong picture of there in careers. I think maybe if alternatives like starting school later or teachers following same tactics that I explained in the paper earlier then they could get back on track with their students and have them focus on the classroom at a higher level. I also think that it should be mandatory in classrooms to talk about sleep health and how beneficial it can be or how detrimental it can be to the student's health. students were educated on different types of techniques to get a better night's sleep at home no matter the circumstances of their living situation then they can come into the classroom and do better on their studies and focus on their careers.

What I have also noticed in classrooms is that teachers who instead continue to ignore students who are falling asleep in class and not participating that it sends off a message to the other students in the class showing that the professor does not wish to correct the student's actions in there for it they might not pay attention in the classroom as well and lose interest in the course. This goes back to the idea that it is very important for teachers to give off a good role model presentation in front of the students and what they expect in their class. It also students and that student who is asleep in class the potential to fix their actions and portray a better attitude and not only that class but other classes as well. You may not think that a student just sound asleep in class is distracting but it is very distracting as like I explained before it sets off a message from the professor or teacher to the rest of the students and if that student is snoring or slumped over a can be very disrespectful to the professor and the students when they are trying to learn in the class. My view on it is if a professor is more adamant about fixing a student's

mistake rather than ignoring it, they could have a greater impact on only that student but the rest of the students in the class showing that the professor cares about their students and wants them to be success. What I recommend doing and this is a tad bit of what my overall Thesis is and that is that teacher should have students participate in some active movement during the classroom. What I mean by that is maybe halfway through the class if students are not fully engaged or a certain student is falling asleep repeatedly in the class and cannot keep their eyes open that the teacher should have all the students stand up and do some type of light exercise. Nothing that is too strenuous where I will make the students sweat or out of breath but something simple like 10 pushups or 10 jumping jacks 10 overhead arm claps just something simple that will sort of kickstart the student's brains and get them back to focusing on the class for the remainder of the classroom time.

I would also advise giving students the option if they would like to stand up and remain in the back of the classroom or on the sides where they can see better and they could take notes if they will if notes are not needed to be taken then they can just stand and watch the classroom standing will also use more muscles in their body and therefore they have to use more brainpower and the brain that has to be used a lot more rather than sitting stagnant in a chair the entire time. I have seen this be very successful in last room as it increases our participation level and decreases the sleepiness and tiredness level in the classroom and overall, it makes the classroom atmosphere a lot more positive and exciting.

And to piggyback off this effect in the classroom it also has a big effect which student outside of the classroom which starts from the sleep deprivation have a grogginess. Have students who fall asleep in class and are not engaged with the class tend to have a higher rate

with failing in extracurricular activities such as after school sports and programs. This is due to the student falling behind in studies and therefore have added stress onto them along with the added-on tiredness that they go through throughout the day that leads into these activities. Students find themselves not exceling in their respective sports or programs and therefore are put towards the back of the line when wanting to play in big moments or plays etc. Also, students who had difficulty staying awake in class also had difficulty getting to and from school as there is a higher rate of car accidents when leaving school hours in returning to school in the morning. This tiredness has led to deaths or very traumatic effects with family members from these tragedies. And then not only do students rest going through these tragedies they also face consequences at home after class. I have witnessed many of my peers go through very stressful times with their families when they are not exceeding in homework and studies and therefore, they get punished for their lack of ambition in the classroom. This then takes a toll on the student's mental health and puts them in a bad state of mind, risking their wellbeing as people around them in that household. There needs to be an all-hands-on deck approach to this lack of ability to focus and stay awake in the classroom rather than degrading someone's ability to stay awake. It is not that the student is choosing to fall asleep in the class or not follow along with the course it is that they physically and mentally are unable to keep up Because of things like stress sleep deprivation boring classroom studies taught by professors an unprofessional manner.

I believe with a proactive approach to helping students start that foundation of being able to stay awake in the class and Excel and not only their studies but extracurricular activities and homework in projects they can start to focus on themselves a lot more use my techniques that will be discussed later in this paper to be successful in the classroom 24/7 and set them up for success soon.

**The key ingredient to helping individuals stay awake in the classroom.**

I will finally talk about my techniques I have used myself for the past two to three years to stay awake in my college classes as well as my military classes have and have been very successful with those techniques as my grade, GPA, and overall mental health have benefited greatly from these changes. I have talked about the research put into students falling asleep in class and not being able to focus, I have talked about the consequences that students face with themselves and others that fall asleep in class, and I have talked about How military classes differ from civilian classes and the types of procedures that are put in place for students who fall asleep in that class. I have talked about how COVID-19 has impacted student's ability to focus and keep up with their studies in class and I also have touched on sort of tidbits of habits that teachers and students can follow to set that foundation for these individuals for success. but my bread and butter for succeeding in the classroom and having 100% ability to focus is performing physical exercise before and even after classroom time. Now that sounds a lot easier than said but it is very complexed aspect to grasp and there are a lot of trial and errors that I needed to go through to find a type of workout that was able to keep me awake throughout classroom training and right before I completed my homework projects studying etc. while in college and in the military. I learned about this topic when I was in a sports medicine class in my third year of college which was about 2 1/2 years ago, and I got to use this type of physical activity abilities a lot more when I joined the military as we did physical training early in the morning right before we went to the classroom for the rest of the day. Performing strenuous activity is not only good for this type of topic it is also good for an individual's physical health as well as mental health. I

have experienced that working out gives you a boost of energy as well as creating an abundance of cognitive impairment for the rest of the day whether that is in the classroom whether it is going to work whether it is going to be studying the entire day whether it is driving whether it is meeting with people after I was just all around a lot more cognizant and had increased self-awareness with my surroundings.

Now I have done many readings on articles journals and other websites that has backed up my theory and thinking towards this beneficial characteristic to have while in school but a mainstream informational website that I have used is also the one that the country has been using for COVID-19 and that is the CDC website. On the CDC website there is much research in statistics in case studies put into this topic and the numbers they have gotten from schools all around the country are astoundingly different compared to schools that do not require physical activity before during or after school. The CDC states that physical activity before during and after school hours improves mental an emotional wellbeing, physical health such as bone health it improves grades and test scores overall and it increases the ability to identify activities they enjoy and might engage in long-term to create a better healthy lifestyle.

Students who are physically active tend to have better grades school attendance cognitive performance such as memory and have better classroom behaviors. Higher physical activity and physical fitness levels are associated with improved cognitive performance like I said which also adds onto concentration among students which is very important for students at a young age because they seem to get distracted Anne are off guard when learning about subjects and the parents look at that as sort of some mental deficiency where they need to get medical help instead of self-aid and self-correction for their sons and daughters. The CDC recommends three

types of activities that adolescents and young college students should follow to gain that beneficial aspect of not only staying focused in the classroom but also staying on track for a healthier lifestyle. These activities include aerobic exercises , muscle strengthening exercises, and bone strengthening exercises aerobic exercises such as vigorous running or swimming, or biking should be completed for at least 60 minutes or more throughout the day for at least three days a week muscle strengthening exercises such as lifting weights in using resistance bands and resistance machines should be part of their 60 minutes or more of daily physical activity for at least three days a week. And Lastly bone strengthening activities such as walking running climbing stairs or jogging and other weight bearing exercises on the lower body and upper body should be part of their 60 minutes or more of daily physical activity for three days a week.

And the CDC does a great job laying out on how not only they can do these physical activities on their own but how parents , guardians and teachers can get involved with the student's extracurricular activities to keep them engaged and find out what works for them. D's parents could volunteer with the school committees and work on the health and Wellness programs in place and give an opinion on what should be with the before and after school activities the parents could set up a physical activity plan with their kids that fit the students' needs but also are very effective. The parents or teacher could also be active with that student or child such as going on family bike rides going to the gym together in the school or in the town or city somewhere going for a walk with their students or child and also encourage the students or child to maybe get with other students to play physical activities it doesn't have to be all about working out alone or going on a run alone performing physical activities such as soccer or flag football or basketball before or even after school can be just as beneficial in the aerobic, muscle strengthening and bone density categories as regular lifting running etc.

And like I said before that performing physical activity does increase health benefits it does improve concentration significantly in the classroom a study done by Niels England show that students who biked or walked or jogged to school before performing in the classroom showed that they had a heightened concentration for up to 4 hours more than those who were driven to school by bus or car. That is improved concentration for more than 60% of the standard school day. Now what I also found with this study is there was a lot of backlash from it with parents questioning the start times of school saying that they have heard there's been researched on where brains aren't fully functioning until a certain hour of the day but the good rebuttal with this study is at most of these students who are in this case study were generalized an a good portion of them had start school at 7 or 8:00 o'clock in the morning and this is the results that they get so no matter when the brain is fully functioning , with this added physical activity to a child's life they are going to reap the benefits of concentration and performance in the classroom regardless of the start times.

Another study from the school uses middle school children that are taking a math class performed 15 to 20 minutes of light exercises in the school's gymnasium with the program set up temporarily to study these students' experiences in the classroom after performing sizes. This study found that math scores increased significantly along with student surveys saying that they enjoyed their workouts and felt more engaged and confident in the classroom from there on out. The problem from the educators stated that the students were performing 15 to 20 minutes each day of exercises and added on with a math class of about an hour to an hour and a half. the educators also stated that they would want the actual math improvements to be connected more to what the kids learned in the teacher's math class instead of attributing to physical activity also they were very wary with it because of the time and effort put into it and see if it would be

feasible enough to have that opportunity to have activities performed before going into the classroom. the program that set this up temporary fix of activities suggested including physical educators into the conversations that could work with the school committee for constructive use of school time who can develop programs like this one without interrupting other academic subjects, the programs could pursue activities focusing on many of the three topics I talked about from the CDC in certain rooms or even a gymnasium in the school to highlight the importance of timing physical activity before student learning these physical activities could also incorporate academic concepts like math class. So, adding on to that physical activity you are not only performing the activity itself, but you are also using cognitive learning where you could be answering questions and if you get one wrong you might have to perform physical activity which is like a not strenuous so that it is miserable for the students. It is a good way to keep these students physically active and get them a jump start on what they are going to be learning in the class or even our review of what they learned from yesterday's class or even weeks prior to keep their brains going while their body is going.

Now I have talked about a broad reason on how beneficial physical activity is before going into the classroom and now I want to break it down a little bit more scientifically on how the human brain and body benefits specifically from physical activity and the cause and effect it has on learning processes in the classroom as well as mental health and physical health for students. Dr. John J Ratey, who is a clinical professor of psych I tree at Harvard Medical School medical school does a good job explaining the down to earth connection between “exercise and the brain providing strong evidence that aerobic exercise physically remodels the brain for peak performance on all fronts” (Ratey, 2018). Dr. Ratey writes that “exercise improves learning on 3 levels first it optimizes your mind dash set to improve alertness attention and motivation second

it prepares and encourages nerve cells to bind to one another which is the cellular basis for logging in new information and 3rd it Spurs the development of new nerve cells from stem cells in the hippocampus which means that not only does exercise help the brain get ready to learn but it actually makes retaining information easier” (Ratey, 2018).

So with that he is explaining that physical exercise wakes up the brain cells inside the body gets the blood flowing for better circulation throughout the body and therefore oxygenation levels in the body are also decreasing due to physical exercise and therefore the brain has to be working at a faster pace to compensate for that loss of oxygenation and all functions of the brain such as the hypothalamus the medulla oblongata and glands such as the pituitary gland which controls these characteristics of concentration memory and performance capability in the classroom are working faster and therefore gives these students an edge when sitting down in a standard classroom.

Dr. Ratey then explains how physical exercise a great defense against a lot of the common mental health issues which was talked about earlier in this paper that students struggle with. One of the main factors that middle school high school and college students go through is stress , students face stress in their classroom in their everyday lives including peer pressure work overload in high stakes testing exercise can control the emotional and physical feelings of stress and it also works on a cellular level physical activity is a natural way to prevent the negative consequences of stress because it can Ward off the ill effects of chronic stress and reverse them. What Dr. Ratey is trying to say that “physical activity can make the student a lot more confident and socially active mentally active to help establish and maintain social connections and therefore control their stress levels from affecting their schoolwork” (Ratey,

2018). To branch off from this broad topic of stress Dr. Ratey dives deeper into anxiety disorder which is a specific type of stress that students go through where they see a threat to their body and their sympathetic nervous system is in full force when there is no threat to them at all, but they still suffer from this. Dr. Ratey states that “physical activity such as aerobic exercise can rewrite the brain circuits reduce muscle tension and teaches a different outcome to an anxiety provoking situation ultimately setting an age his person free from the worrisome tendencies” (Ratey, 2018).

This report has gone over some of the research that has been put into working out and exercising before classroom time or other schooling activities. Now it will talk about a friend who went through this experience as a subject and what he specifically did and the timeline of changes failures and successes he went through to perfect his workouts to give himself the best ability to gain back his focus in the classroom. The author wants to emphasize right away that it will take a little trial and error to find the workout that works best for you. Yes, being able to do cardio and resistance training as well as using free weights altogether is the most ideal type of activity you should be doing to gain the most benefits for your body as well as your mind focus ability on the classroom. however, everyone is different , everyone's bodies are different, and some people need to start off slow before they can start moving into more advanced workouts like weightlifting and resistance strength training. The author had a friend who used the same method from this research and has allowed the author to use him in this research project. At first the subject started working out before classes in college, the subject would do a lot of running and other cardio exercises such as HIIT workouts and swimming in the gymnasium pool that we had at our school.

These types of cardiovascular exercises tired the authors subject out more for classroom time than before he was even exercising, and he found myself taking naps in the middle of the afternoon which later messed up my sleep schedule even more. So, the subject finally started to train in weightlifting and use the resistance machines before class. He found that doing these workouts were just as strenuous if not more than cardiovascular exercises, but he found myself less exhausted for the classroom and he got that rush of energy he needed for the rest of the day to attend classes with the best mindset. However, he still wanted to get his cardio in for the day, so he tried getting in my runs after classes but found that was very difficult due to my scheduling and homework and projects and work as well. So, he continued to do a little trial and error where he would combine my weightlifting resistance training and cardio as well in the morning. There were days when he was absolutely exhausted, and he found that cutting down on the cardio time to 15 minutes or 30 minutes was the most beneficial for him because he is still getting that cardiovascular exercise in but he is also mixing in strength training and resistance training which is a different type of workload on the body and it gives him a rush of energy still and wakes him up for the rest of the day in the class. The biggest thing he found with his peers that also tried this new tactic to regain their focus in the classroom was at they found themselves skipping workouts or did not see any improvements with focus ability in the classroom, so they stopped doing it. This is a consistent type of regime that you sort of must buy into and believe in it for it to start paying off and working for your body.

Another thing is finding the perfect time before class to work out without working out too early before class that will eventually drain out your added energy from the workout later in the day and make you crash during your classes. what he means by that is if you have a class say at 8 or 8:30 AM then working out at 4:30 or five is most likely not the best option but instead

Jason Rosselli  
BIS 437

working out at around 645 seven o'clock and getting a good 30 to 45 minute workout in whether that strength training or cardio whatever works best for you or a mix between the both then going back home showering changing and eating which is another factor which is that post workout energy almost right before your class and therefore that will last throughout the day because your mindset has that energy you're able to build that block of foundation which will last for the rest of the day. he has found that if he works out two to three hours before his day starts in the classroom that he sorts of lose his ambition after his post workout energy and therefore that leads into his classroom struggles and even later in the day when he is going to work or studying or doing other homework. again, this sort of tactic is all trial and error everyone is different if you find that you can keep that energy or maybe do other activities before the school day starts then by all means go for it and if you can keep that post workout energy throughout the day then use that timeline for yourself. but this is what he has experienced as well as his peers when working out before classes.

And you always want to mix up what your workouts are you can do a mixture of all three like he does or if you like doing cardio in the morning that works the best for you or strength training then you can do that but what I'm saying is the actual workouts like if you're doing sprints one day for cardio then maybe do an endurance run such as a two mile run or a four mile run or get on the elliptical and do that for a little bit or go swimming like change it up so your body doesn't get stuck in that rut and that can actually be detrimental towards getting the most effective workout in for the body and keeping the body alive throughout the day. And then as far as changing up your strength training exercises; he has gotten it down to a science of what he wants to work out each week and he mixes it up a little bit with what workouts he does. if he does chest and arms at least two to three times a week he changes the workouts that go with

those muscle groups especially with compound lifts like bench press a pull-up. He also changed the number of sets and weights he does whether he is lifting light but performing many reps with those workouts or going with less reps but heavier weight and trying to get into that overload principle every week to gain body strength. if you change your workouts almost weekly, then it's sends the body into a good type of shock where it's never seen this workout before and therefore it needs to adapt and it there needs to be a mind to muscle memory reboot and therefore the body is working harder to still perform though those muscle exercises but the brain is going to be working even harder 2 adapt to that type of different workout and that's going to get your mind going even more in the morning before your classes and set you up for success for the rest of the day.

It just to reiterate, working out before school or any classroom time is of course the big piece to the puzzle about staying awake focused and energized throughout the day in classes . However, with this big step towards staying awake and focused on classroom there are many factors that contribute to this tactic that either benefit the tactic even more or worsen it. The report has already talked about the different types of workouts that you need to experiment with to see which one's work for you it has talked about around what times you should work out before heading into school or a class in college now it will talk about dieting. Diet is the number one thing that people often look over when they start exercising. It contributes so much more to the body than working out yes working out is just as important but if you do not have a good diet to go with that workout, you are basically wasting your time exercising. And that goes hand in hand with staying focused in the classroom, I will admit that the subject started off badly with diet because he was not a very good cook in the beginning he didn't have many recipes I didn't know what types of food he needed to look into and also he didn't know how bad energy drinks

and a lot of sugar and cream in your coffee do to your body that could actually make your body worsen throughout the day after a workout and cause dehydration. After working out you should always consume ample amounts of water whether that's 32 ounces or a couple liters or even a full gallon you should be hydrating with water throughout the day sugary drinks like Gatorade Monster Energy drinks iced coffee lattes are horrible for the body after a workout as it causes dehydration and it pumps your body with caffeine which can give you a boost of energy in the beginning of the day but then your body crashes and you just want to take a nap or not focus anymore in the classroom and it could go the opposite way when it's giving you that energy so much to a point that you get jitters and you can't focus in the classroom even though you are wide awake.

What he recommend as someone who does strength training and cardiovascular exercise is consume 5 grams of creatine after your workout, some protein whether it's eggs in the morning or chick in or just a healthy protein shake and of course like I said before water as water actually wakes up your organs in your body it circulates your digestive system and of course with all these organs starting to wake up in the morning along with your workouts your brain is going to be functioning at a higher rate. creatine has been research for years it is one of the most researched supplements out there and it has been proven that creatine helps with brain function which is key for when your brain is working in the classroom and it also helps with muscle growth and can also prevent you from gaining any neurological disorders in the future. the common myths that are associated with creatine such as hair loss added on water weight and bloating and unhealthy all around for the body has been debunked and is recommended for those who are consistently strength training or doing cardio exercises to build their muscles and to prevent protein breakdown.

And with that I do have to reiterate that breakfast is one of the most important things to have before you start your day especially in the classroom you don't need to have a full-on plate of everything from the food group but getting some nutrients in your body is vital especially after a workout, you're breaking down glycogen in glucose cells in the body that yes it is good to breakdown fat but you need to restore those cells with healthy and dense foods. There was a study done in the UK where students who were under nutrition or did not have breakfast seemed to score less on test scores and were less functional in the classroom with participation. From that study it showed that these students who did have breakfast with all three main macronutrient groups of carbohydrates proteins and fats are able to replenish their glucose levels lost overnight and, in the classroom, they are able to breakdown these glucose levels which gives energy to the body and the brain which of course keeps them more alert in the classroom.

### **Exercising and Classes During Covid-19**

Unfortunately, the pandemic of COVID-19 has taken a toll on not only the United states but the whole world itself in the past year. It is taking jobs away from people it has split apart families it is taking a toll on the mental and physical capabilities on many individuals. During the COVID-19 pandemic there were concerns about mental health and substance use which has grown including concerns about suicidal thoughts and actions. From this past January “41% of adults reported symptoms of anxiety and or depressive disorder a share that has been largely stable since last spring in a survey from June of twenty 2013% of adult reported new or increased substance use due to coronavirus related stress and 11% of adults reported thoughts of suicide in the past 30 days suicide raids have long been on the rise and have worsened due to the pandemic” (SAMHSA, 2021). Also, in early 2021 data shows that drug overdose deaths or

particularly pronounced from March to May 2020 coinciding with the start of the pandemic related lockdowns. Young adults and adolescents are taking the brunt of this mental instability from the pandemic because they must deal with the closing of their University and being able to adapt to remote learning online and not only have to deal with that but also the social lockdown between them their friends their classmates and even their professor.

Having this mental instability in the classroom is just another reason why doing physical exercise is so vital to keeping your neurotransmitters and your overall focus on school all balanced and effective. The importance of exercising during the pandemic of COVID-19 has never been greater. As COVID-19 has caused changes to many individuals in their everyday lives . Exercise is important because it can reduce stress prevent weight gain it can also boost the immune system and improve sleep. And although it might be tempting to skip your workout during these challenging times and trying to get an exercise in when it is not in your typical working out environment it is crucial because it is essential to your physical health and your mental health. If you can exercise while during the pandemic, then you can continue to engage and focus on your remote learning classes or limited capacity classrooms depending on where you are in the country . You can safely engage in physical activity by exercising with only your family getting outdoors using online fitness resources taking a virtual class whether it be yoga hot yoga or spin classes you could also set exercise goals and continue doing calorie burning chores.

Research is showing that exercising on a regular basis whether it be regular moderate or intense exercises has an immune boosting benefits that may help your body fight off infections including COVID-19 it can also fight off depression and anxiety motives that a lot of people

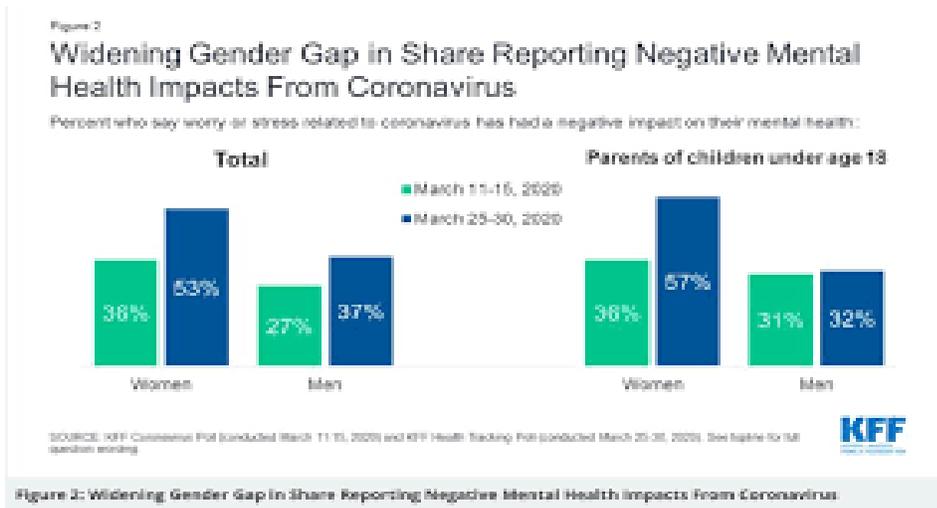
have developed due to their isolation and remote learning in the classroom as well as focusing on the classroom . Exercising can help you burn those extra calories caused by your dietary changes do to skipping fruits and vegetables and sort of binge eating due to your change of environment and staying at home and that helps offsets the effects of sedentary activities exercise is a proven mood booster and can help young adults and adolescents reduce stress levels and build emotional resilience while they're going through this change in the classroom and there is also evidence that you just regular exercise before classes and before homework can not only keep you awake during those classes but also help you fall asleep faster and improve sleep quality and getting a good night's sleep has also been found to boost your immune system.

As you are aware many people are sitting in bed sitting in chairs or laying or sitting on the floor for long periods of time when going through the classroom activities. 4 like explained before there are many types of ways to still exercise before classroom or before studying habits to keep you fully engaged and proactive in the classroom. For exercising with family that is a good opportunity to bond it have family fun like you never have before such as walks bike rides and even backyard sausage soccer games . Getting outdoors you can do activities like walking jogging or even hiking to get some fresh air while staying away from others of course but you do not need to do that for long periods of time a 10-minute session is just as vital right before class as running for or walking for an hour . What is good about many organizations and gyms that sponsor physical activity have also gone remote learning so you could easily access these advanced workouts in fitness trainers from your app or phone or computer. What has also been researched is while you're trying to plan and set up your exercises at home is to of course challenge yourself which means set an exercise goal whether it's doing 5 cardio sessions a week or three cardio sessions in two days of body weights are hit workouts per week or changing it up

every week to keep your body from plateauing from these workouts and keeping your mind and body constantly adapting and benefiting from these types of different workouts and what's good about challenge yourself from the physical aspect of it is not only providing you with a mindset to continue to focus and engage in the classroom but it also can set you towards challenging yourself to make educational Anne classroom goals weather at setting up a schedule now with your remote learning or being able to set up study time or grades that you want to achieve in the classroom in order to keep your mind set high on succeeding in the classroom .

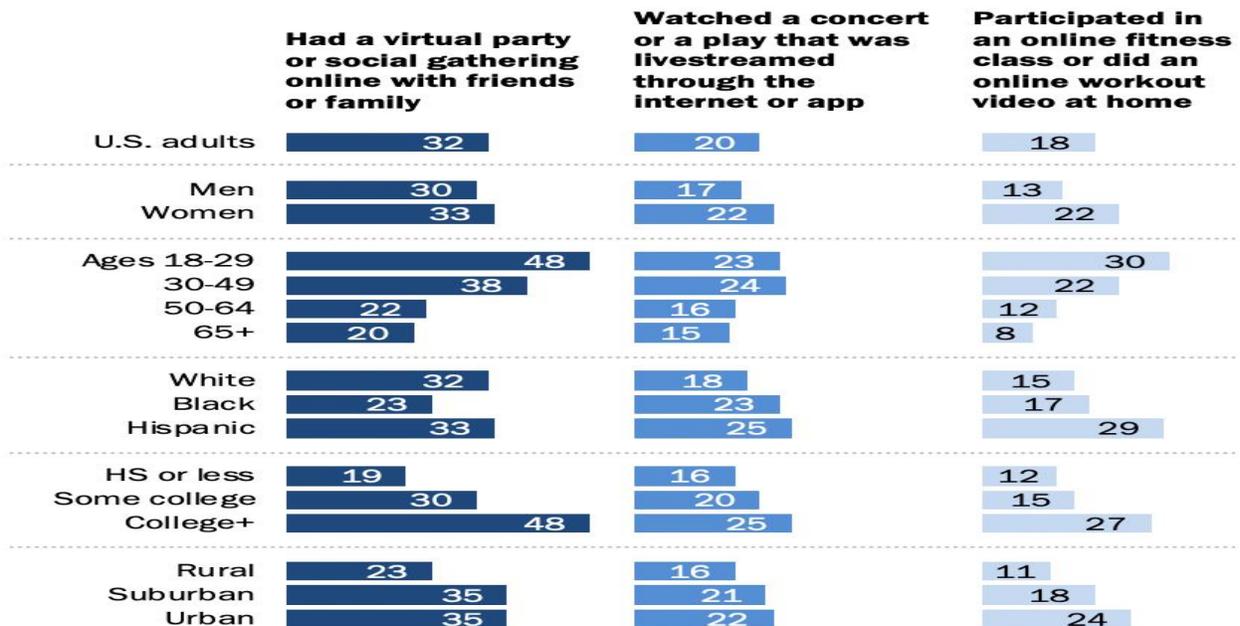
And yes, I will not sugarcoat this, it will take some time and effort to create an adjust the perfect types of workouts that will be most beneficial for you before you start your online learning with your class. But once you get a set schedule and get into a rhythm of with these workouts you will optimize your health during this pandemic while you are going through the isolation Anne remote learning times but also keep your focus and ambitions in the classroom to succeed. And this can also help with the anxiety and depression moods that linger with this pandemic outside the classroom as well. What it means by that is that sports clubs in extracurricular activities being canceled due to this pandemic of course will affect the mental stability of students who look forward to these activities after school and what gets them through the day. But with a workout plan and a workout regime especially with family members the students can still get a good workout in while having fun and filling that gap where they would normally be playing school sports at that time. So overall working out during the covid pandemic

is vital not only to keeps students focused and engaged for their educational career and success but also outside the classroom, participating in activities and sports to keep them from falling into depressive an agitated mood with their family members and their own self.



## Younger adults, college grads more likely to use the internet to socialize, work out during COVID-19

% of U.S. adults who say they have \_\_\_ as a result of the coronavirus outbreak



Note: White and black adults include only non-Hispanics. Hispanics are of any race. Those who did not give an answer are not shown.

Source: Survey of U.S. adults conducted April 7-12, 2020.

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**Remote learning is causing decrease in working out for children and young adults.**

Now with covid effecting schooling `across the country, Ann limiting or even stopping altogether the in-person interactions between a teacher and a student dad has reflected on the physical aspect that a student usually goes through throughout the day. What that means is that due to an elementary middle or high school student not being able to go to school they no longer are having that opportunity to get exercise in whether it is in a health and Wellness class or just regular gym class or recess. For college students an above it would be something as like a gym on campus that is now closed due to the school being closed or limited capacity and has more restrictions on that. From John Hopkins University, researchers have studied the physical activity amongst these students and its impact on the public health and based on their research they believe that the pandemic is exacerbating health and disparities among children and it's having a significant impact on their physical social and cognitive development like the reports has said before it's reiterate children not in school and are going remote don't have that recess or physical education classes they aren't walking to school or going to the bus stop and they're not participating in their school teams or clubs that promote physical activity either although in some school districts team sports may go ahead even while in person education does stop.

Yes it is known that schools have taken away recess and are severely underfunded to support physical education classes however they still give that foundation to build social and physical literacy Within a student's mental state to form bonds and friendships and sustain different types of relationships with their family that correlate's to getting out there an exercising with those certain people whether it's cool or playing a game with friends before during or after school to keep them active. This helps the student find pleasure an moving their bodies and

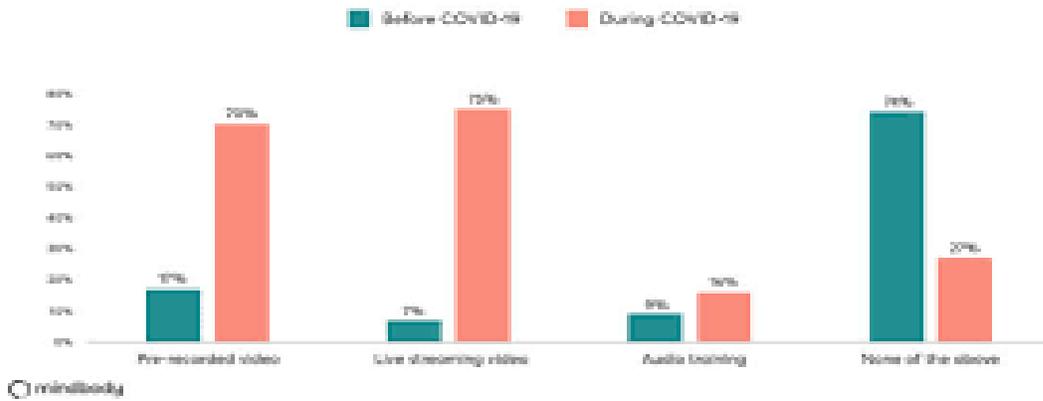
developing their strength and physical traits overtime. That is why earlier in the report I stressed on how important it is during covid for parents to take charge or guardians to set up sort of an exercising plan doesn't have to be such as strength training or cardio based like running but can be fun such as sports or other activities where their child is still moving around when they are learning remotely and that can even be stressed as well even when schools start to allow children to come back to class .

What has also been found in this research of this report is that low income communities are affected the most by this pandemic physicality wise before the pandemic even started children that were in local income communities or communities of color had greater challenges in getting the physical exercise that they needed and other opportunities as well for after school as the CDC urged all physical activities to be moved outdoors to decrease the risk of the spread of the virus the parents of these children in low income communities are essential workers who can't be home to take their children out for physical activity there's usually no private backyards for them to play in and there's usually not a lot of public spaces that are safe and adequate for physical exercise. Weather also plays a role in this barrier as there is less green space in trees and urban community in low-income neighborhoods that make it hotter in the summer sometimes so much then higher income neighborhoods in the same city. It also has poorer air quality and in the winter many families can afford a warm coat which makes outdoor play more difficult . However these are not intractable problems solutions exist to promote a child's active outdoor play some of these strategies work in all settings although urban suburban rural environments will have to vary approaches but in all cases it's essential that children have the clothing and nourishment they need to play outside through all types of weather family should seek resources in the community through the town Hall or City Hall to get these children the physical activities that

they need you can have supervised play or unused schoolyards through policies like the joint use agreements and it doesn't have to be a central location such as schools.

And contacting the city halls many will find that the cities worldwide have increased access to public spaces during this virus have closed streets in driving lanes and replace them with activity areas. And they could even go further with their efforts and expanding focus on children by creating specialized spaces for child friendly games such as neighborhood blocks getting shut down to provoke promote high activity play was becoming popular even before the path pandemic. Remote learning in this pandemic has created an unimaginable challenge for many parents and adolescents and college students across the country but the health and wellbeing of all those individuals particularly for those facing significant barriers must be a priority. And even if you are in an urban community or a high-income community many still have access to the Internet whether they are using a phone or laptop that could use online streamed workouts during COVID-19 this went from 7% in 2019 and increased over 80%. In April, an 85% of consumers reported live streaming on a weekly basis such as yoga and HIIT workouts were the most popular modality workouts. Many companies, due to the virus and closings, started live streams to workouts and made them assessable for many people who normally go to the gym, to use these created workouts for free. Parents and teens should take this opportunity as well as college students to use this to their advantage to continue physical exercise to stay homed in and focused on the classroom in not change up their usual workout routine but instead adapting to a different environment which is also good for their mentality focus as a learning individual.

### Video workout types before and during COVID-19



### Exercising Increases Studying effectiveness

now this report homes in on the importance of exercising before school, the importance of continuing exercise during COVID-19 in the adaptability of still learning while learning remotely at home and different types of workouts that fits for you to get the most out of your exercise an increase your brain/mental ability in the classroom. now being able to gain advantages from exercising to use this in the classroom is very effective to a successful educational Career. but that is not the only thing that makes a successful student yes showing up

to class in remain focused and attentive is very important but that is half the battle. You also need to be able to get out of that classroom go home and can study and comprehend the material that you learned that day.

It is well known from this report that exercise can boost the brain health and generally helps the brain to be able to learn thing can even remember better now while going through research for exercise while in the classroom a lot of research came up about studies where they offer tips in order to time your workouts for just after a study session to better retain the information that you learned earlier in that day from the Scientific American article it states that a variety of studies showed that people who biked, did leg press or even simply squeeze the handgrip shortly after before learning to better on test of recall in the hours days or weeks that followed.

Grocery not research experts think that this physical arousal in being able to comprehend and remember something a lot better than those who do not exercise before and after they study is that exercise excites the body in much the same way as emotional experience does an what is interesting is that emotional memories are well known to be the most long lasting in the brain. But of course, I cannot rely on exercise to automatically remember that information that they are studying but they must study well first and exercising is the advantage to better retain that information. To dive deeper into the matter scientifically a study done at the University of British Columbia researchers found that regular aerobic exercise which is running or walking that gets “the heart rate up and sweat glands pumping appears to boost the size of the hippocampus which is an area in the brain involved in verbal memory and learning” which is key to be able to

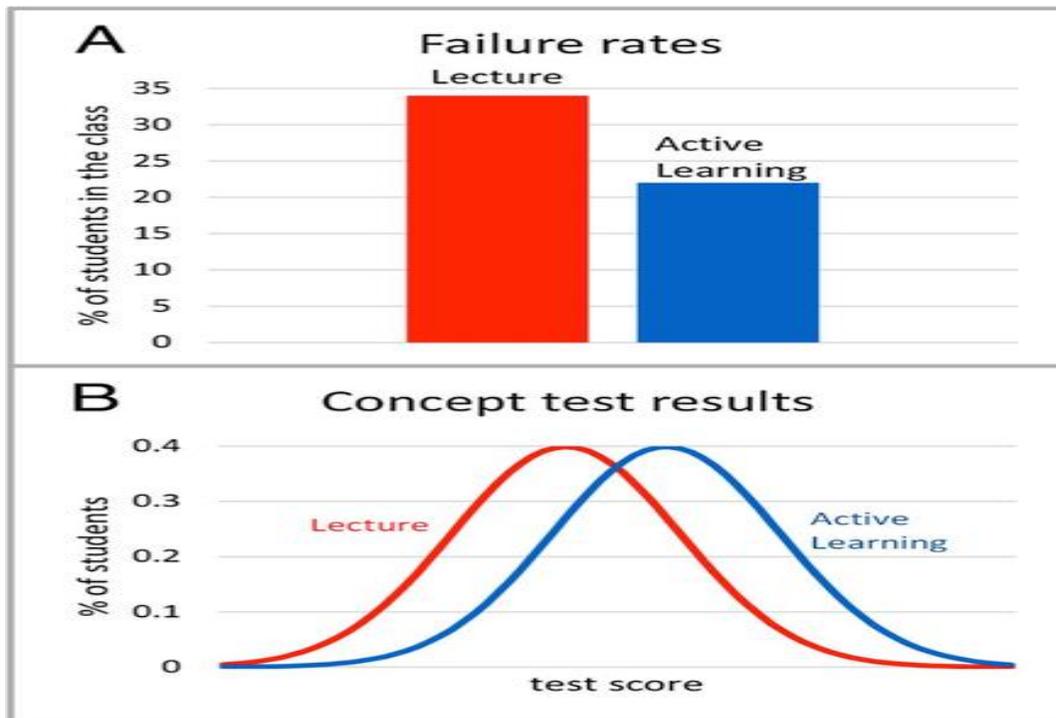
comprehend in remember information of what you learned from that day when you were getting ready for test taking (True Fitness, 2020).

Exercising not only improves your ability to remember information it also gives you energy to be productive after a workout, if you are feeling lethargic or unfocused after class and are not motivated to do a quick workout whether it is 15 minutes or 30 minutes but after studies have shown their students productivity after working out increases greatly and therefore, they get the energy to either begin studying or continue studying. So, you can knockout two birds one stone in getting the brain refocused and energized again to complete the task of studying or completing homework and giving the brain an advantage to better retain that information, so it is not a waste of time just looking over that information and forgetting about it in the coming days or weeks. Studies have also found that performing aerobic exercises increased uh student's problem-solving abilities as well as being to recall information from memory a lot quicker. A study published in brain and cognition found that after just 30 minutes of doing an easy half hour bike ride subjects completed a cognitive test faster than they did before exercising and just as accurately in the brain boosting effect lasted for at least 52 minutes after their ride it also found that people who exercise during their workday were "23 percent more productive on those days than they were when they did not exercise"(Asse,2015). And of course, going back to the memory aspect of it and studying, a study published in "perceptual and motor skills found that women perform 20% better on memory tests after running on a treadmill than they did before exercising" (Asse,2015). And going back to what exercise fits you it was also found that intensity of your workout makes a difference as well a study in "neurobiology of learning in memory found that people learn vocab words 20% faster after intense exercise than after low intensity activities intense exercise", an example of high intense interval training workouts short

sprints and then low intensity activities is something such as a four mile run or four mile bike ride where you're sort of at like a normal pace and not pushing yourself (Asse, 2015). Those who did more demanding exercises had a bigger spike in their “brains level of dopamine epinephrine and BDNF afterwards so the more you challenge your body the more gray matter benefits” (Asse,2015).

And if you find yourself that you do not want to do a 30-minute session before or after studying then the research also states that you can multitask while studying such as taking a break every 10 or 15 minutes going for a quick walk around the house or building or just doing sprints in the hallway for 30 seconds and then getting right back to studying to get that boost and energy for your brain. This method is not seen a lot but is also something you could do to your advantage but if you're doing a stationary aerobic exercise such as on the treadmill or on a stationary bike you could take notes or study material in there and place them on the treadmill or elliptical and make sure that workout is challenging enough for you by increasing the incline level listen to the notes that challenge you and pretend you're running toward or away from them you will likely remember something from your study session and what I mean by listen to your notes is that you can record them as well or if you are better as a visual learner you could look at them on paper. Basically, what you are doing is your doing the most intense workout for the study material that is most challenging for you and performing that physical motor memory capabilities you can get a better grasp on that challenging study material. And I must reiterate that not every workout is the same for every person you need to adjust your workouts based on your studying habits and what you can perform in the weight room or cardio room depending on what you need from studying adjust if you work out is too intense you won't remember much because your body will spend a lot of energy on your heart and other muscles if you need to

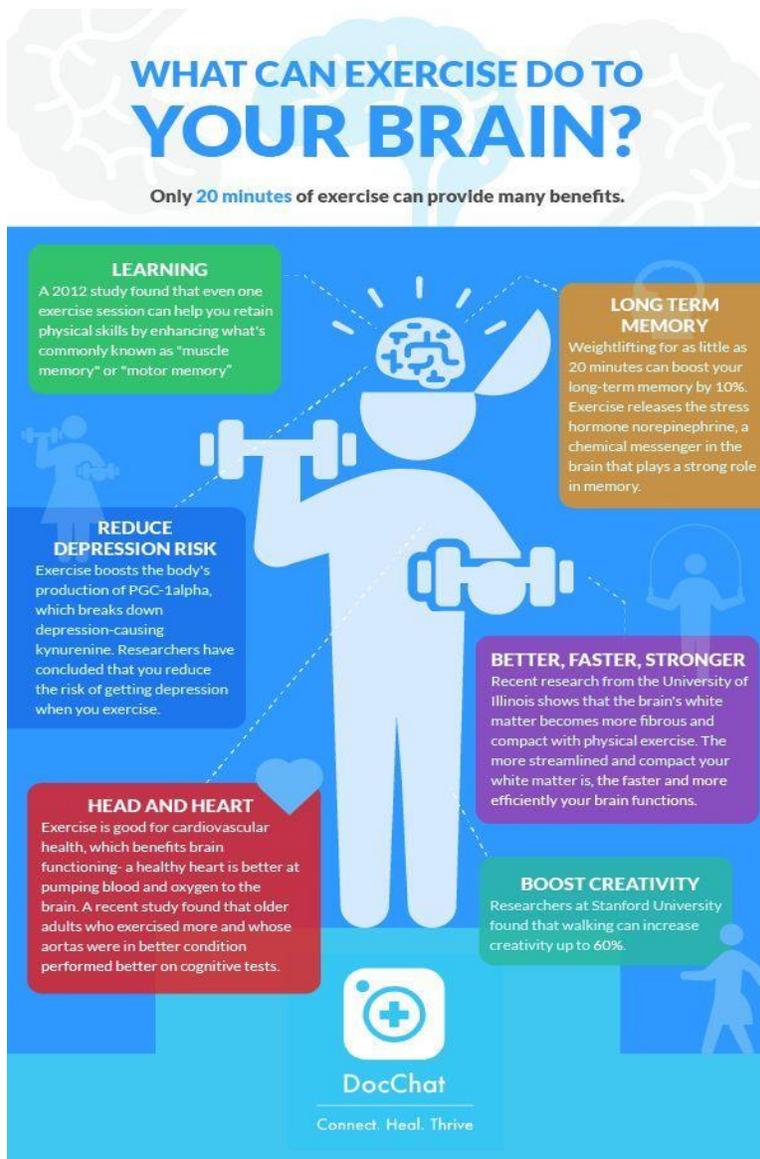
remember something safer and exam then adjust your workouts so your body and mind can work together if you work out is too intense or requires too much of you won't retain what you study and overall just keep practicing you're not going to be able to get the perfect workout the first time you need to see what works for you and do some research on what your body can handle for workouts with certain types of study material.



The graphic above relates to how working out while studying is even more effective than just regular studying and going to bed by explaining that active learning in a classroom correlate to lower failure rates than lectures and power points. Performing active learning is not so much as important in this report but what it does is explain how studying while exercising or finding ways to stay active while going through the cognitive learning techniques in studying is more effective and could help the student's ability to pass a course rather than staying stationary and studying or performing workout that does not get their mind going. And Lastly the graphic below

this paragraph illustrates how exercising benefits so many systems in the human body and if you think about it all these systems relate back to the brain and boosting the brain's effectiveness from the benefits of all these systems from working out just gives you a bigger advantage in learning a remembering material in the classroom.

### Exercising is main Attribute to Successful Educational Career



No matter what type of courses for whether it is military schooling college schooling blower education or even going for a master's or doctorate degree, this report strongly agrees and encourages that exercising regularly or once a week during these classes or studying will be beneficial and can only help increase the students' chances in passing their specific course. Exercising helps increase the productivity of an individual, it gets their mind and focus jumpstarted, it

helps the student from falling asleep in the classroom which of course was the trademark of this

report and it helps the student better retain information while they are studying for their course is well.

It overall creates a better mood in setting for the classroom as students will have lower anxiety and depression levels due to physical exercise and the productivity in the classroom will increase as well. As far as the environment at home if parents are around or guardians and are able to take their kids out for activities before studying or before classroom time that can create a better relationship between the students and their loved ones and also increases the communication factor between the students school life and their home life with their loved ones so they're all on the same page on how the student is performing in the classroom and what resources they need in order to be the most prepared and in the end successful in those classes. for college students the stress has never been higher going through undergrad and graduate programs so utilizing the gym at those colleges or field training equipment such as the track or football field is vital for them because they are on their own now in need to keep their mental focus at its highest as well as staying in good shape to reduce physical illnesses or injuries. exercising before classes in studying in college is also very vital because this is their time to network and get the best grades that they can and get noticed out there to land their dream job that they want after they have gone through college.

The COVID-19 pandemic has introduced an array of obstructions and problems with exercising and schooling all together it has had a big effect on students that they have already been exercising while on a schedule to go to school in maintain good grades. being able to adapt to these obstacles of having the gym shut down and being able to go remotely online for not only schooling but find online exercises and being able to do online exercises at home not only makes

the student become more creative with adapting to obstructions like this but it increases their mind and focus connection at home to retain and learn information while in a different learning environment. And it is also very important to use the resources that you have in order to get that exercise in that you need as well as being able to guide and help others that are trying to hop on this trend is well because as stated earlier in the paper those who live in low income areas and go to low income schools having lesser advantage at trying to go to those after school or before school programs and get their workouts in with little equipment or not safe areas around their community.

And just to reiterate that exercising before class or studying or working out while studying or after studying doesn't always work on some days as you may get hit with many tests in one week you may get bombarded with extra schoolwork or extra studying where some of those exercises that you have refined and practice over and over again it seemed to work for you might not work on those days and that's OK you just have to go back to finding what is beneficial for you during those overloaded test or reports or if you just have an overall busier week than normal where your scheduling might be off. what you could do is create a planner for weeks like that in advance so when the time comes the student is already prepared Ann has a workout that suits them for this and therefore can waste less time on refining a workout and instead getting down to studying and getting those reports done while incorporating a workout as well.

## **Conclusion**

In conclusion exercising has been researched and been claimed to help many individuals with many different things within themselves to better their bodies for many years. It helps the body mentally with many mental illnesses that it can help decrease as the person ages it obviously helps a person's physical ability to stay in shape and to lower the risk of developing physical illnesses as they age too and of course it helps in an individual's ability to sleep and perform everyday activities throughout their lives. any person can get into any type of exercise at any age in their life and they can benefit from whatever they learn and get used to. this report is evidence of that with being able to become a successful person in the classroom and set themselves up for success in their future lives. Exercising can be done and many different variations to accommodate that person's social, work and school's schedule. That is the great thing about exercising is that it can be incorporated in any part of the day and does not take a long time but the impact it has on the person's day weeks in years to come is very positive and very important and every person no matter their restrictions or in capabilities should perform some type of workout to gain the biggest advantage in their everyday lives. once the author incorporated exercising into their everyday lives, they not only gained an advantage in the classroom and studying but gained in vantages in their social lives in their physical fitness an overall increase their mood as well as mental focus and performing their everyday activities.

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