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English 3

30 April 2019

Second Nature

It was time for midterms. De Anza student Nikita Klimov was preparing for his math midterm. He felt extremely nervous about how he was going to perform, so a week in advance, he challenged himself by doing more difficult math problems to get ready. After multiple days of doing practice problems, with the addition of intense studying, he felt overwhelmed and kept telling himself that he wasn't good enough. Yet, he knew that he needed this class to be able to transfer out of community college, so he realized that staying in an anxious state was a bad idea. Two days before the test, he set everything aside and went out to bike. After a good two hours of biking, he finally came to his senses and was able to relax. He understood that he had a limited amount time before the test, and cramming wouldn't help at all; simply stuffing more information into his head would overwhelm him more than anything. He went in to take the midterm, and he got a 100% on it, finishing with 5 minutes to spare. Klimov tackled his stress effectively and reaped a tremendous reward. Klimov is an example of the many young Americans trying to conquer the hardships of stress.

America is one of the most highly developed and populated countries in the world, and the expectations that come with living in such a highly developed nation put a lot of weight on our shoulders. Stress is something that affects everyone around us, and it's difficult to ignore the evidence. "Most Americans are suffering from moderate to high stress, with 44 percent reporting

that their stress levels have increased over the past five years” (American Physiological Association). Knowing that, it’s understandable that we have a lot of work to do to fix our issues. It is important to know why you need to deal with your stress, and how you should approach this issue.

Chapter 1: The Relevance

In general, adolescence is one of the most stressful points in life. Teenagers have a lot on their minds, and while most teenagers don’t have to worry about keeping a stable full-time job, they are always pressured by those of higher authority that they need to get themselves to that point in life. Almost everything that stresses teenagers out is school-related, such as homework, getting into college, specific classes, teachers, friends, and more. These points can affect people at any point in their lives, but the teenage years are probably the worst. Adolescence is an extremely important point in the developmental phase of the body, especially the brain.

“Changes in the brain during adolescence include a rapid increase in the connections between the brain cells and making the brain pathways more effective. Nerve cells develop myelin, an insulating layer that helps cells communicate. All these changes are essential for the development of coordinated thought, action, and behavior” (American Academy of Child and Adolescent Psychiatry). Stress is one of the big hurdles you will have to jump over to be set towards a path to a properly developed mind.

Let's take Klimov, for example. While he is in his early 20s, his brain is still at a developmental age, meaning that an extreme amount of stress will have a long term effect on his brain. Currently, he is pursuing a bachelor's degree in computer engineering and studying other classes like Math, Physics, and Circuit Analysis. The premise of computer engineering is enough to scream "stress," but while it has affected him, he found his way of remedying it:

Our brain works best when it is free of distractions and thoughts that are oppressive on the mind. A free mind allows you to work as quickly and as efficiently as possible. That's the time when you learn best, so before a study session and any kind of class, or when you are on your own doing homework, it's important to do something that frees your mind of all things that distract you from what you want to do right now, which is study.

(Klimov)

Knowing that stress would get in the way of his performance, Klimov did something about it.

This is why he passed his test. He spent those extra five minutes he had at the end going through his test, making sure he didn't make any silly mistakes. "Of course I would have some mistakes, you can't go through without mistakes, but you just don't spend as much time as you would if you were tired or just stressed out. So, that was a thing where I could manage my level of stress, and bring it down to a point that I felt confident and felt calm about what was going on"

(Klimov). Getting rid of that pent up pressure and stress helped him perform to the best of his ability, and it paid off.

Chapter 2: The Risks

There are many determinants that come with not dealing with your stress, and while the individual effects seem minor, they really do add up. Stress mainly affects you on the physical and mental level, and the symptoms are often very glaring. On a general level, if you have a chronic amount of stress, the biggest symptoms include: “irritability, anxiety, depression, headaches, and insomnia” (American Institute of Stress), but that’s more of a broad set of effects. Stress can affect nearly every part of your body.

The most noticeable area stress affect you is in the brain. The symptoms include: “Headaches, feelings of despair, lack of energy, sadness, nervousness, anger, irritability, trouble concentrating, memory problems, difficulty sleeping, mental health disorders (Anxiety, panic attacks, depression, etc.)” (MHA). Experiencing one or more of these symptoms frequently can spell out “stress.” This issue is especially important among teens. As I mentioned earlier, the brain of an adolescent is at a very important developmental phase, and having constant memory problems or the possibility of developing anxiety, or even depression, can affect the outcome.

There are many other areas of the body that are at the mercy of stress. For example, your central nervous and endocrine system are what run your fight or flight response. When your body starts to experience stress, your adrenal glands start pumping various hormones, such as adrenaline and cortisol. “These hormones rev up your heartbeat and send blood rushing to the areas that need it most in an emergency, such as your muscles, heart, and other important organs. When the perceived fear is gone, the hypothalamus should tell all systems to go back to normal. If the CNS fails to return to normal, or if the stressor doesn’t go away, the response will

continue” (AIS). An increase in adrenaline, and a constant amount of it can disturb your mental activity, and the increased heartbeat over a long period of time can lead to a heart attack. Another example is with your respiratory and your cardiovascular system. Your body reacts to stress by increasing your breathing rate, in order to get more oxygen into your bloodstream, but not everyone can handle this increase in breathing rate. “If you already have a breathing problem like asthma or emphysema, stress can make it even harder to breathe” (AIS). Stress also causes a faster blood pump, as a means of diverting more oxygen to your muscles, so your body can handle the stress, but this also increases blood pressure. “As a result, frequent or chronic stress will make your heart work too hard for too long. When your blood pressure rises, so do your risks for having a stroke or heart attack” (AIS). In addition, stress stimulates your immune system for the amount of time stress is present. While can help heal the wounds you have at the time, this isn’t something your immune system can handle over a long stretch of time, and the system can cripple because of it, leaving you more vulnerable to illnesses. “People under chronic stress are more susceptible to viral illnesses like the flu and the common cold, as well as other infections. Stress can also increase the time it takes you to recover from an illness or injury” (AIS). Stress can even affect your digestive system. While stressed, your liver produces more glucose, which is used to give you more energy, but your body can only take so much. “If you’re under chronic stress, your body may not be able to keep up with this extra glucose surge. Chronic stress may increase your risk of developing type 2 diabetes” (AIS). Stress also had other side effects, like muscle tension, and back/shoulder pain, which can make your daily life just a bit more unbearable.

A lot of these symptoms sound like something that only adults have, but it very much affects teenagers as well, such as Mountain View High junior Dylan Bartlett. As a teen who balances classes and used to work a part-time job in retail, Bartlett has his own set of issues to worry about. “I had a pretty bad set of grades close to the end of the semester, and I was pretty much working around the clock to fix that, and it was really stressful” (Bartlett). He knew that dealing with his stress would allow him to improve his grades, and indeed it did. He also understood the risks of not dealing with his stress, because that is a big part of why he was struggling in school in the first place. He explains, “If you do not deal with your stress, you are going to have to deal with not being able to work as well, not sleeping, being frustrated all the time, not having an overall good quality of life” (Bartlett). To deal with his issues, Bartlett started taking medications. He was using them to treat his ADHD, which was a result of the stress, and he was using them extensively, taking very strong pills once a day for a long period of time. Did the medication help?

Chapter 3: The Action

Knowing why you are trying to solve an issue is one of the first steps to solving the issue, but just because you know how a car works, it doesn't mean you know how to drive it. Methods of relieving stress are never going to be the same for everybody. You can ask multiple people who have dealt with their stress, how they did it, and you will likely get different answers. People have their own methods of dealing with their issues, and those people have their own reasons as to why it accommodates them.

One of Klimov's methods of stress relief is surfing. He explains, "I would say that surfing is a hobby that I enjoy when I have the time. Your upper body gets a great workout, which is essential to relieving stress from the body, and relieving stress means that you are getting rid of certain toxins that build up in your body, which come out most effectively during physical exercise when you're sweating, and when your muscles are working out for a long time" (Klimov). He uses surfing as a manner of escaping his life at college, and simply to have fun and be healthy. The exercising part isn't the only reason why it relieves his stress, but the relaxing atmosphere of the beach helps as well. Klimov goes on to say,

Usually, when you look at water, at a waterfall, the sight of water and the sound of gurgling just calms you down. Waves are a different phenomenon because the constant crashing on the shores is also a different sound that is physiologically pleasing to many people when they hear it. So, just being there in the water, and enjoying the weather, the views, is really satisfying and relaxing. (Klimov)

He sees the different aspects of the beach to fill different parts of his conscience, and that helped relieve many parts of his body in pretty substantial ways. While you may not see the beach as a valid way to relieve your stress, there are others that think that the beach works just fine.

Meanwhile, Bartlett's methods of stress relief differ in some ways from Klimov, while providing the same effect. As opposed to the abundance amount of ocean noise and massive amounts of movement that Klimov enjoys, Bartlett prefers more quiet methods of stress, which doesn't involve having to cover as much ground. For example, he enjoys fishing. "I go fishing sometimes. It's fun to go out there. You have this thing you can barely see on your fishing line. You can bring in fish up to hundreds of pounds if you try hard enough. It's pretty amazing"

(Bartlett). His reasoning is that the activity he does is rewarding, and that sense of accomplishment is what drives him to keep fishing, and it helps relieve his stress. Bartlett also enjoys chopping wood. “I destroy stuff. I have an ax, and I just go and chop up all the firewood in the side yard...it’s fun to destroy stuff and when you do that, it’s good. It’s a proven way that destroying stuff is a good way to relieve stress, so that’s part of the reason I do it” (Bartlett). You can’t really argue with his reasoning. Destroying things is satisfying. Regardless of what is being destroyed, there is always that sense of wanting it to keep going because it is entertaining and relaxing.

Gaining the insight of stress relief from other teenagers is a very effective way to learn about how you can relieve your own stress, but having the perspective from an adult helps as well, especially one that works with a lot of teenagers, such as Chris Hung. Chris Hung is a 6th dan Taekwondo instructor. He has taught hundreds and hundreds of people throughout his career, from kids around the age of 4, to fully grown adults. With all of the teaching experience he gained, he noticed a trend with how most of the students were feeling. Chris explains:

I think in general, kids are more nervous, because they have more to do, and I think it’s also the area. In this area, in Silicon Valley, I think kids have very high expectations, and the instructors have very high expectations of them. And all the parents, especially in this area, are all really high achievers, so they expect a lot, so I’m not surprised if the students are slightly stressed. I remember, maybe 20 years ago, when I was in high school and in junior high school, I think it was stressful, but it was manageable, but I feel that a lot of the kids have a lot on their plates, and sometimes I still feel that I don’t know how they

do it, because it's almost like they're having that same stress as adulthood really early.

(Hung)

Hung has seen the progression of his students over many years, and the students have found something over those years that helps them cope with their stress, but it's not something that can be taught. As you progress through your life, you will find yourself running into the same issues as those around you, but there is never a single definitive answer to these issues. Many people have unique ways of dealing with stress, which Hung describes:

I think it's different from everybody. Everybody has their favorite things to do to de-stress. If you don't know what really helps you, then maybe try different things, and see what works best for you, because I think it's an individual preference. Some people really like chewing gum, some people like to run to destress, so, like my students, they like to come in and train to destress, we have instructors that will come in and teach to destress. I think it's different for different people, but the end goal is to learn how to cope. (Hung)

In other words, it is up to you to find your way to relieve your stress. The smallest things can be your biggest savior, so finding anything you enjoy can really assist you in the long run.

You should first try to find a stress reliever by yourself, because if you do find something, you know it's going to be something you appreciate. If you need a guide to find something that can relieve your stress, first take a look at what you do on an average day and find something to do that is different from everything that you already do. "If the activity that you do for rest is as different from the rest of your lifestyle as possible, you get the most positive effect out of it. You get rested quite easily because resting basically means changing your

activity, and if you vary activities throughout your day, you alleviate stress because you don't get closed up on one thing" (Klimov). Constantly focusing on, say, your homework isn't the healthiest way to live. You need some sort of distinctive activity to break up your routine, just like how some video games switch up the mechanics or themes of the game to break up the gameplay. For example, Martial Arts can be that distinct activity. "For Martial Arts, it's that combination. It kind of helps you with your physical strength and physical activity, but it's also a mental diversion, that gives you some time to train for yourself and take care of yourself" (Hung). If you can take up just a small amount of time each day to distract you from what you normally do, it allows you to regain yourself, and get yourself ready for the task at hand.

If you can't find a stress reliever by yourself, it never hurts to ask other people for help. You may know people that have dealt with this situation and can give you some pointers. Sometimes, just being surrounded by people is enough to relieve your stress. Hung describes this point very well:

I think you have to have a support group. I think for kids, their support groups are their friends, and then their teachers, and then, of course, their parents. I think in order to have kind of that balance and to be able to handle all the stresses of the day, I think you have to have your support groups. Like I said, your friends, that way, you have something in common, and something that they can work with you, and help you. And if they can't help you, then the teachers are good to help you with something. They maybe can give you more advice, because they are more grown up. Or, if not, then it would be the parents, also, that can be involved. You know the saying 'It takes a village to raise a person'? It does. It takes a lot of different people to make sure that one person succeeds.

Just like Olympians, you know. They have different coaches, they have their parents, they have their friends, all supporting one athlete (Hung).

There are many different people that are able to talk to you, listen to you, comfort you, and just help you in general. But, sometimes your friends and your teachers aren't enough to help you. You may need to seek professional help, and there is no shame in needing professional help. "If you think that you or someone you know may be under more stress than just dealing with a passing difficulty, it may be helpful to talk with your doctor, clergy person, or employee assistance professional. They may suggest you visit with a psychiatrist, psychologist, social worker, or other qualified counselors" (MHA).

Now, as a teenager myself, I have my fair share of stress as well, and I still actively seek the most effective ways of dealing with it. I find myself partaking in many activities to deal with my stress, but there are some things that I stay away from at all costs because I understand that it won't help me in the long run. I can't tell you how you should deal with your stress, but I can tell you what you shouldn't do, and that is using external sources to relieve stress. When I say "external sources," what I mean is things like medicine, alcohol, cigarettes, etc. In the case of medicine, you may need to seek professional help in the form of a doctor, who can prescribe you with medicine to relieve stress. There are quite a few medications out there that help, such as sedatives, which "depress (slow down or inhibit) the activity of the central nervous system (CNS: comprising the brain and spinal cord), causing a sense of relaxation, reduced anxiety and tension, sleepiness, and slowed breathing" (Mills et al.), or antidepressants, which "are used primarily to treat Major Depression and related conditions. However, these medications also have anti-anxiety properties, and in many cases, can also be used to treat symptoms of stress"

(Mills et al.). While I haven't taken medication for stress relief, I have taken it to help fix other issues I had, such as an infected ear, irritated eyes, and various illnesses and viruses. I know that my stress can be affected by taking a lot of medicine, but I know that overdosing is a stupid thing to do. If a doctor does tell you to take these medications, do exactly as (s)he says. Do not start taking any form of medication without first consulting your doctor, and making sure that (s)he tells you that it's a good idea. In the case of alcohol, cigarettes, vapes, and anything else that isn't a clinically prescribed drug, I would say to just stay away from those entirely. I come from an entirely European family, and I come into a surprising amount of alcohol, especially at gatherings or formal parties, but I still refuse to drink any alcohol. "If you are drinking alcohol, and that de-stresses you, it may not be the best idea. It might kinda help you out on the short run and help you forget about the stress, but that's not the long term answer, because it is going to be detrimental to your health, so anything that is not healthy for you, I would stay away" (Hung).

Sometimes, the external sources just don't work. Not everything you take is going to be 100% reliable and guaranteed to work. Let's go back to Bartlett's case with his external source. His journey with his ADHD medication was a particularly short one, as it didn't help much at all. He described the effect of the medicine of having "such a minute change, it wasn't really worth it" (Bartlett). His personal methods, the ones that he adapted and learned to love, are what keeps him at check now, not any kind of drugs. While the effects of his ADHD are a bit noticeable, he has his ways of keeping it under control, and the possibility of it getting worse is more or less gone, now that he can keep his stress out of dangerous amounts.

Conclusion

Life is like one extremely long endurance race. You need a lot of stamina to just keep going, and you have to make sure you make the right moves and make the right choices; otherwise, you will pay for it, and you only have so many chances to make a pit stop. We all are extremely busy, and we think that there isn't time to help ourselves. We think that it isn't worth helping ourselves. No matter how much we tell ourselves that we can't do anything about our issues, we have to make the time to take care of them. We need to just squeeze in a few minutes into our day, dedicating it to improving ourselves. If you have adopted an effective and healthy form of stress relief, stick to it. If you know someone who is struggling with stress, help them out. Maybe your method can also work on someone that you know. While it's not a guarantee that that person will see much benefit or have much interest in your methods, it never hurts to lend a helping hand.

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