

The Mental and Physical Health of College Students: The Implications of Lifestyle Medicine

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Abstract

This paper discusses the five pillars of lifestyle medicine and how college students can benefit from implementing this lifestyle into their routine. It covers the statistics of students with their eating patterns, sleep cycle, risky substance consumption, stress management, and social connections. It emphasizes the importance of college students making their mental health a priority and ensuring the sustainability of prolonged brain development. The mental health of college students is vital for their academic success, as well as their overall wellbeing. Further discussed in the paper, there will be various statistics of lifestyle patterns of college students that are compared.

Introduction

College is a time of high stress due to the numerous academic pressures, deadlines, and balancing responsibilities that are weighed on students. The Crimson White, a publication group at the University of Alabama studied and reported that young adults and college students in America are the most stressed age group (Leopard). Studies have shown that various factors are contributing to these young adults being stressed such as sleep deprivation, substance dependency, and diet. The overall well-being and mental health of the typical college student is decreasing due to various factors. Mental health refers to the emotional, psychological, and social well-being that people have to endure. It is important, especially to college students whose brains are still developing, because it affects how one thinks, feels, and acts. These students giving precedence to their mental health will help cope with stress, develop a sense of structure and personal confidence, as well as prolonged mental sustainability.

However, the mental health trends of these college students are getting progressively worse. As of 2023, the University of Michigan College of Public Health conducted a study on the depression and anxiety rates of college students. The study surveyed one hundred and thirty-three campuses around the nation, containing the perspectives from nearly one hundred thousand college students. The study showed that forty-four percent of students had depression symptoms, thirty-seven percent with anxiety, and fifteen percent with thoughts of consideration for suicide (Heinze). This is significantly higher than any other age group. A medically reviewed paper from Web MD states that college students tend to be the most depressed and high-anxiety age group because of having to live in a new environment, genetics, and being around other depressed individuals (Robinson).

Some may think that these rates of mental distress come from an overload of school work or social obligation. However, this is not always the case. Although these are two very demanding variables in college, overall health, including mental, come from within. A way to hone in on personal mental and physical well-being is by taking the six pillars of lifestyle medicine into account and imple-

menting them into a daily regimen. These six pillars of lifestyle medicine include diet, physical activity, stress management, avoiding risky substances, sleep, and social connection (Jaqua et. al). This research paper will discuss the importance of lifestyle medicine from a futuristic lens, diving into longevity and future implications; and how lifestyle medicine can improve the overall well being of college students and young adults. It will highlight the importance of mental health for college students and what can be done to achieve optimal physical and mental satisfaction.

What is Lifestyle Medicine?

Lifestyle medicine focuses on using lifestyle changes to prevent and treat diseases. It emphasizes healthy habits like nutrition, exercise, sleep, stress management, and avoiding harmful substances. It stresses the importance of taking care of your body and mind through everyday choices. The American College of Lifestyle Medicine defines lifestyle medicine as, “a medical specialty that uses therapeutic lifestyle interventions as a primary modality to treat chronic conditions including, but not limited to, cardiovascular diseases, type 2 diabetes, and obesity,” (“American College...”). Lifestyle medicine has scientifically proven to reverse and prevent diseases and benefit overall wellness. Within lifestyle medicine, there are six pillars of lifestyle changes that can benefit and improve one's overall health. These six pillars include diet, physical activity, stress management, avoiding risky substances, sleep, and social connections (Jaqua et. al). These six pillars will be further expanded on later in this paper. If these lifestyle changes are all healthily and effectively utilized, research from the National Library of Medicine has shown it to manage and prevent diseases such as, but not limited to, type 2 diabetes, cancer, cardiovascular disease, obesity, high blood pressure, high cholesterol, COPD, osteoporosis, Alzhiemers, depression, liver disease, and kidney disease (Sadiq).

Multi-Importance of Diet

One of the most crucial factors in lifestyle medicine that has been shown to deliver the most drastic changes in overall health is one's diet. A traditional American diet consists of excess sodium, saturated fat, refined grains, and calories from solid fats and added sugars (Walker). The obesity rates in this country are higher than ever. The Harvard T.H Chan School of Public Health shows that two of three adults in America are overweight or obese and one of three are obese (“Adult Obesity...”). This can be due to economic bias towards processed food and distribution of product among grocery stores. When products are more frequently found and are cheaper than produce, it is more appealing for purchase to customers. These grocery stores and advertising can contribute to obesity because they often have aisles filled with processed and unhealthy foods that are high in calories, sugar, and unhealthy fats. These foods are not only cheaper, but also more accessible than healthier options such as produce. Additionally, grocery stores may use marketing tactics that promote unhealthy choices, such as giving an entire aisle dedicated to chips or offering discounts on unhealthy foods. The diet that is strongly encouraged in lifestyle medicine is predominantly whole food and plant-based. This diet consists of eliminating meat, dairy, and all animal derived products from your diet. This diet is recommended by the American College of Lifestyle Medicine and National Library of Medicine because it provides essential micronutrients and fibers which have been shown to decrease and prevent neurodegenerative disease, inflammation, and cardiovascular disease (Jaqua et. al). As of 2022, heart disease has become the leading cause of death in America (“All Leading Causes...”). With a simple diet change, the death statistics in this country would drastically change.

The diet that college students follow has an immense effect on their overall health as well as their mental well-being. The typical diet of an American student consists of frequent snacking, fried/fast food, and more than half of students skip breakfast (Yun et. al). College is a time where students start to live an independent life, managing their money, and choosing what enters their body. Students are short on time and money, which gives them the reason to purchase quick and easy food, which usually is unhealthy, processed food. Those who have access to a dining hall are granted an ‘all you can eat buffet’ style of dining. The portion sizes and quality of food served at these dining halls is what is causing college students to obtain the “freshman fifteen” that is commonly discussed. The food in these dining halls are very heavy in meat, high oil foods, and sodium (Kahkajian). Due to the selection of options offered to college students by the dining halls, there has been a pattern contributing to fast weight gain and decreasing mental health.

In order for college students to reach their optimal health and mental state, a plant-based diet is recommended. Lifestyle medicine emphasizes diet, along with five other pillars. The National Library of Medicine discusses the effects of a vegan diet on neurodegenerative diseases such as Alzheimer's disease. The low levels of saturated fats and cholesterol and richness in phytonutrients present in vegan diets has shown to help prevent cognitive decline (Katonova). Lifestyle medicine emphasizes this type of diet because of its effect not only on the body, but on the mind. College students who follow this type of diet will be acquiring more nutrients and phytonutrients which stimulate brain health. Yes, non-vegan students can get these types of nutrients, but those who have no dietary plan or restriction will find themselves obtaining calories from fast, low nutrient-dense food.

The Impact of Physical Activity on the Body and Brain

Everyone knows that physical activity is good for the body. But not many know how good it is for the mind. When one exercises, the brain releases chemicals called endorphins, which help boost one's mood and reduce the feeling of stress and anxiety. It can also improve sleep patterns, self-esteem, and provide a healthy outlet for managing emotions. Additionally, being active gives a sense of accomplishment and encourages feeling more energized and focused. A study posted in 2021, by the U.S. Department of Health and Human Services states that, "The good news is that even small amounts of physical activity can immediately reduce symptoms of anxiety in adults and older adults. Depression has also shown to be responsive to physical activity. Research suggests that increased physical activity, of any kind, can improve depression symptoms experienced by people across the lifespan. Engaging in regular physical activity has also been shown to reduce the risk of developing depression in children and adults," (ODPHP).

The National Library of Medicine reported that only twenty percent of college students participate in daily moderate physical activity (Calestine). This correlates to a reason why college students have high depression and anxiety rates. As previously mentioned, college students are the most depressed age group and physical activity has shown to reduce depression symptoms. The study also showed that the students who engaged in physical activity tended to do better in their academics when compared to those who were not getting any physical activity.

When one exercises, their heart rate increases, which in turn, improves blood flow throughout the body and brain. This increased blood flow delivers more oxygen and nutrients to the brain, which helps its overall health and function. Additionally, exercise stimulates the release of endorphins, which are the natural chemicals in the brain that help boost mood and reduce stress. These endorphins can also enhance cognitive function, including memory, attention, and overall mental sharpness (Bhandari).

The Importance and Benefits of Sleep

Sleep is one of the most important things for the body. Sleep is not just about resting and recharging, but it plays a crucial role in maintaining one's overall health and well-being. When one sleeps, the body goes into repair mode, allowing muscles, tissues, and organs to heal and restore. It boosts the immune system, improves cognitive function, and enhances one's mood and emotions. Sleep also allows the mind to think more clearly and improve the quality of work put into school ("Office of Disease Prevention..."). In college, sleep is a luxury. College students are not making sleep a priority and it is interfering with their overall health and academics. Whether it being late night partying, or studying for an exam, these students are not getting a sufficient amount of sleep in order to perform at their very best, in all aspects of their lives. College students need anywhere between seven and nine hours of sleep in order to avoid daytime drowsiness and mood alterations throughout the day ("Cornell Health..."). A study from University of Georgia shows that college students, on average, get around six hours of sleep daily. These hours of sleep tend to begin after 1 am. Getting a certain amount of sleep is effective, but the hours that this sleep occurs is also very vital. This is because of circadian rhythm. The circadian rhythm is the brain's way of preparing the body for activities such as eating and sleeping. Circadian rhythm is most effective during the sun's light and dark cycle ("Centers for Disease..."). Meaning, sleeping and rising based off the sun's cycle will result in alertness and light changes in the environment. Circadian rhythm is important for college students because it helps regulate their sleep-wake cycle. When there is consistency in a sleep schedule, it can improve focus, memory, and overall cognitive function.

Stress management

High stress levels are very pervasive in today's society, especially since the covid 19 pandemic. Stress is correlated to poor health outcomes due to physiological and behavioral effects (Baban and Morton). As one of the pillars of lifestyle medicine, being able to manage stress is crucial in overall health and wellness. As a college student, it is important to step aside from the major stressors in life and focus on how to combat them. For those students who are in college, having a minimally stressful mind would allow them to hone in on what is important in school such as their studies. Prolonged exposure to stress can impair cognitive function and negatively impact our mental well-being. It can hinder the ability to concentrate, make decisions, and retain information (Yaribeygi). It is extremely crucial, especially in college, to have clear cognitive function in order to keep one's academic goals on track. Research from the University of North Carolina says that college students tend to be very stressed due to an increase of responsibility, lack of good time management, changes in sleeping and eating habits, and ignoring self-care ("College Stress..."). People, not only students, can manage their stress through various types of healthy, simple solutions. Some common ones include practicing mindfulness and meditation, engaging in regular physical activity, getting enough sleep, and finding healthy ways to cope with stress, such as talking to a friend or engaging in a hobby.

Self-care and stress management is personalized and not general, so it is important for college students to find what best helps them and is convenient for them. Gallop conducted a survey in 2023 depicting the type of emotions felt amongst college students. The study showed that sixty-six percent of college students experience stress as one of their daily emotions (Hrynowski and Marken). High stress does not only have a negative effect on mental health, but it can also cause potential physical complications. Recent research from Columbia University Irving Medical Center shows that stress is also associated with physical health issues such as muscle tension, digestive problems, headaches, fluctuation in weight, heart disease, high blood pressure, and stroke ("Chronic Stress..."). Lifestyle medicine emphasizes its pillars based on the long-term implications. Reducing high stress from a young age will not only ensure well-being for the time being, but also in the future. When the body undergoes any level of stress, cortisol is released, which can disrupt the balance of the body's systems. This can lead to a variety of negative health outcomes, such as weakened immune function, increased risk of cardiovascular disease, and digestive problems.

Avoiding Risky Substances

This pillar of lifestyle medicine highlights the importance of avoiding risky substances. These risky substances can include alcohol, marijuana, nicotine, and other substances risky to one's health. As of 2023, the American Addiction Center found that alcohol is the most used substance among college students. This study showed that college students are not drinking in small quantities, but are 'binge drinking'. Second to alcohol, marijuana is the second most used substance among college students. Following alcohol and marijuana, opioid, stimulant, and sedatives are the next most commonly abused drugs in college campuses (Kaliszewski). This amount of binge drinking can lead to various negative consequences, such as impaired judgment, risky behaviors, and academic difficulties. As for marijuana, some students may use it recreationally, while others may use it as a coping mechanism for stress and anxiety. Similar to alcohol, marijuana can also have negative effects on academic performance, motivation, and mental health. It is getting more common and convenient for college students to obtain these substances. Many liquor stores and shops that sell these types of substances are checking for identification less frequently. Some of these stores are even providing student discounts.

Recent studies have shown how detrimental substance abuse is not only for the physical body, but for academic success. Those students who are abusing substances regularly are shown to have lower GPAs, dedicate less time to studying and class, and be unemployed postgraduate (Wolaver quoted in Welsh et. al). Students who are involved in fraternities and sororities tend to have the highest rates of all kinds of substance abuse. The idea of sister and brotherhood is a well-established mindset of the participants in Greek life. Drinking alcohol and conforming to the various types of substances ingested in greek life settings gives the sense of community and togetherness, which is a very highly valued principle among sororities and fraternities (Park et. al quoted in Welsh et. al).

Avoiding risky substances is a crucial component of lifestyle medicine because it supports prolonged mental and physical health. Research conducted by the Perelman School of Medicine shows that there is a similar pattern in the decreasing brain size due to alcohol as there is to aging. “Based on their modeling, each additional alcohol unit consumed per day was reflected in a greater aging effect in the brain. While going from zero to a daily average of one alcohol unit was associated with the equivalent of a half a year of aging, the difference between zero and four drinks was more than 10 years of aging,” (Baille). This shows that alcohol speeds up the degenerative process of the brain that occurs naturally with age. The start of brain degeneration in college sets up a prolonged effect on the students ability to acquire new skills that are needed in later years of their life, such as the careers being pursued. The human brain is not fully developed until the middle to late twenties (“The Teen Brain...”). So, beginning to ingest a substance that ruins the brain prior to the brain being fully developed can cause neurological damage for the final development stages of the brain. The portion of the brain located behind the forehead is known as the prefrontal cortex. The maturing of this portion of the brain is one of the last. It is the area of the brain that develops important skills such as prioritizing, organization, planning, and decision making. Consuming alcohol and other harmful substances will ruin this part of the brain before it has even begun to develop. Lifestyle medicine stresses eliminating risky substances from the body because the brain is the key to beginning and sustaining one’s life.

Social Connections

As previously mentioned, college students have high rates of depression, stress, and anxiety. A major contribution to these factors is the social environment and stigmas of a college campus. Some social connections that can interfere with the healthy of these college students are relationships with friends, family, or a significant other. Another social stigma that a lot of college students face is the pressure of consuming risky substances. A study conducted by the Jed Foundation states that nine out of ten college student have felt peer pressured (Burch). Not just with risky substances, but with social settings, people feel like they have to conform to what is normal around them. Whether it is having a drink, skipping class, or wearing something they are not typically comfortable with. Being in these types of social settings in college when the mind is easily influenced can cause a lack in confidence and character development.

Being influenced by peers can make the young adolescent mind adapt to a new personal norm. However, being per pressured can be good if the action is beneficial. Burch states, “Giving in to peer pressure may not always be bad. If the other people or group wants you to believe or do something that seems sensible, safe, and enjoyable to you—no problem. That’s the idea behind having a study buddy or workout partner who will keep you accountable,” (Burch).

Conclusion

As a result, lifestyle medicine is all about promoting healthy habits and behaviors to improve overall well-being. The pillars of lifestyle medicine include areas like nutrition, physical activity, stress management, sleep, and social connections. By focusing on these pillars, individuals, especially college students, can enhance their health, prevent chronic diseases, and improve their quality of life. This paper discussed the importance of making these pillars a priority for overall mental and physical health. Diet plays a key role in the types of nutrients one receives, and how it enhances the gut microbiome. A healthy gut means a healthy mind. Regular exercise stimulates the mind and allows endorphins to run through the body, causing an overall improvement of one’s mood and emotions. Consistent, uninterrupted sleep allows the mind to rest and heal from the days’ workload. Avoiding risky substances will allow the brain to fully develop and allow the body to stay healthy and in shape. Keeping social connections free of negative peer pressure and steering away from situations that can lower one’s confidence gives an overall mental wellness. All of these components tie together to improve stress levels. It is important for college students to prioritize their physical and mental health over the typical norm.

Future Implications

When it comes to the future implications of lifestyle medicine for college students, there are many potential outcomes to consider. Lifestyle medicine focuses on promoting healthy habits and behaviors to prevent and manage chronic diseases. A college student who uses the pillars of lifestyle medicine for direction will only benefit and improve their current lifestyle. First, an improved physical

and mental well-being. Embracing lifestyle medicine can help college students prioritize their health by adopting habits like regular exercise, balanced nutrition, and adequate sleep. This can lead to increased energy levels, better stress management, and improved overall well-being. Secondly, an enhanced academic performance level. By adopting a healthy lifestyle, college students can optimize their cognitive function, concentration, and memory. Regular exercise and proper nutrition have been linked to improved academic performance and better focus, which can lead to high grades and academic success. The prevention of chronic diseases is also a future implication. Lifestyle medicine emphasizes preventative measures to reduce the risk of chronic diseases such as obesity, diabetes, and heart disease. College students who embrace healthy habits early on can lower their chances of developing these conditions in the future and enjoy a higher quality of life. Lastly, lifestyle medicine recognizes the connection between physical and mental health. By prioritizing self-care, stress management techniques, and seeking support when needed, college students can proactively address mental health concerns and promote emotional well-being. It is important to remember that everyone's journey is unique, and finding the right balance that works for each individual is key. Lifestyle medicine offers a holistic approach to health and can have a positive impact on college students' lives currently and in the future.

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