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THE RELATIONSHIP BETWEEN SEASONAL VITAMIN DEFICIENCY AND MEDICAL STUDENT PERFORMANCE

With the beginning of spring, many students talk more and more about vitamin deficiency and find its symptoms in themselves. Fatigue, irritability, skin problems – this is due to a lack of vitamins.

Avitaminosis can be considered as a deficiency of one or several vitamins, accompanied by some kind of clinical or subclinical manifestations. In other words, something must go wrong in the body due to a lack of vitamins. Medical students who feel weak and notice hair loss, first of all, think about vitamin deficiency.

If a person's nutrition is wrong, vitamins won't help. The most balanced Mediterranean diet is based on vegetables, fish, fruit, whole grains, nuts, olive oil, a little chocolate, and with eating less red meat and fast carbohydrates. If a student eats properly, he or she does not need vitamins [1].

The success of medical students in educational activities directly depends on their well-being. Seasonal changes have a great impact on students of different courses, some of them adapt, and others are affected. The survey demonstrates, a lack of vitamins, sleep disorders, and improper nutrition reduce the success of studies and worsen the health of medical students.

In the research of the study, it was found that 42% of first-year students have a depressed psychological state, 26% have headaches, 23% have fatigue, and 9% have mild ailments. At the same time, 58% of third-year students put fatigue first, 21% light ailments, 13% headaches, and 8% depressed psychological state. 79% of students by the third year of study in Zhytomyr medical institute adapt to the study load. The majority of the participants were aware of the importance of vitamin D and vitamin deficiency; however, the awareness of relating it to chronic diseases was poor. It turns out that many medical students are also deficient in these micronutrients without realizing it.

Some may have different deficiencies, while others may have none. Only a doctor or certified medical professional can reliably diagnosis a nutritional deficiency.

The recommendation for vitamin checklists was created. The list will give students a better understanding of nutrients that might be missing from their diet, and how diet tracking can help make these discoveries.

The sun is the most abundant source of vitamin D. However, for students who spend their days locked away in a campus library or shelter (due to the war situation in Ukraine), vitamin D can also be derived from fatty fish, fortified orange juice, mushrooms, and egg yolks [6].

Treatment of vitamin D deficiency should be directed towards correction of the underlying cause when possible, with an increase in vitamin D intake and sunlight exposure [4].

Students with a B12 deficiency often show signs of fatigue, weakness, or confusion. Deficiencies are most common for medical students who avoid animal

products, such as vegetarians and vegans, and for those who eat a limited diet – but fortification can help prevent them [5].

Another micronutrient commonly found in meat, fish, and poultry is zinc. It can also be obtained from non-animal sources, such as beans, nuts, and whole grains. However, zinc from these sources is not as easily absorbed by the body. Students with a zinc deficiency often show signs of decreased sense of taste or smell, loss of appetite, lowered immunity, and slower wound healing. [6]

Iron-deficiency anaemia is a common health problem in young children and students. It is categorized as one of the 10 most serious health problems by the World Health Organization [7]. Iron-deficiency anaemia is the most common type of nutritional anaemia which results from long-term negative iron balance and is responsible for approximately 50% of all anaemia. The institute students usually take food from residential halls, and the food value of their diets is not always balanced. The detrimental effects of anaemia on the work productivity of students is a major concern. Possible reasons might be poor dietary habit, lack of awareness of iron-deficiency and nutritional status.

It may be especially handy to combine these iron-rich foods with vitamin-C-rich fruits and vegetables, as these can help increase iron absorption. Using cast-iron pots and pans and avoiding tea or coffee at meals can also help boost iron absorption [2]. Skipping breakfast is a known practice among medical institute students due to late awaking, not being hungry in the morning, or disliking the food served. A nutritious breakfast that includes sugar, starch, protein, fat, fibre, vitamins and minerals, especially iron and vitamin C, is necessary to ensure the sustained release of energy [7].

Findings of other studies indicated that, vitamin deficiencies remain common globally. Unless severe, they are often clinically unrecognized, yet even mild deficiency may have significant adverse consequences. Vitamin deficiencies affect all ages and frequently co-exist with mineral (zinc, iron, iodine) deficiencies. According to our findings, only proper nutritious food and awareness can prevent vitamin deficiency.

The findings may be helpful in conducting more such research among the students of other universities to improve the awareness of taking balanced diets, the benefits of nutritious food, especially vitamin-rich food, and a healthy lifestyle to prevent seasonal vitamin deficiency.

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