

FOOD AS A WAY TO PREVENT DEPRESSIVE **CONDITIONS AND DISORDERS**

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Abstract

In the modern world, eating food has ceased to be a normal physiological need. This article discusses only the features of the influence of certain foods on the psycho-emotional state of students of the Andijan State Medical Institute, in particular foods rich in tryptophan. According to the results of the survey, there is a tendency for the psycho-emotional state to depend on products containing tryptophan, but it does not depend on its percentage in these products. The choice of products depends on the taste preferences of individuals.

Keywords: products, mood, emotions, depression, serotonin, tryptophan, prevention, health.

Introduction

In the modern world, eating food has ceased to be a common physiological need. In many countries, eating is a separate daily ritual. On the other hand, for a significant part of the population, eating comes down to banal stress relief, lifting the mood or praise for an achievement. Already in ancient times, or rather in the Middle Ages, people noticed a pattern in the choice of food products depending on their mood. The philosopher, physician and healer Hippocrates wrote: "Your food should be medicine, and your medicine should be food." In the XIX - XX centuries. Many discoveries were made in the field of biochemistry, medicine, and nutrition. Today, the knowledge base allows us to draw an indisputable conclusion: food really affects our condition. But it is true to note that the condition also affects the choice of foods consumed. If we talk about depressive conditions, then according to the World Health Organization (hereinafter referred to as WHO), in 2018, 264 million people suffered from depression.

This article will consider only the features of some foods in their ability to influence the psychoemotional state, in particular foods rich in the amino acid tryptophan.

Serotonin is directly related to tryptophan, being its derivative. The sequential action of first 5tryptophan hydroxylase and then 5-tryptophan hydroxylase produces 5-hydroxytryptamine or serotonin, enteramine. In terms of its structure, from a chemical point of view, serotonin is a biogenic amine (tryptamine class). People often call it the "hormone of happiness." Unfortunately, many believe that it is serotonin that is found in certain food products, but as stated above, serotonin is a derivative of the amino acid tryptophan, and the synthesis itself occurs in the enterochromaffin and argentaffin cells of the gastrointestinal tract (about 90% of the total content serotonin in the body), in platelets, in the brain and spinal cord. Serotonin in our body is synthesized from the amino acid tryptophan, which comes from food [4]. Functionally, serotonin is important not only in the regulation of positive emotions, but also such phenomena as nausea, vomiting, diarrhea, and control of the hemostatic system. In a narrower sense, serotonin constricts blood vessels and is used in the synthesis of melatonin. The serotonin system has an influence on the formation of depressive states; in addition, it regulates other mediator systems (GABAergic).

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Serotonin, a neurotransmitter and biogenic amine, takes part in the implementation and regulation of behavioral acts, sleep-wake cycles, concentration, digestion and appetite [1, 2]. It is worth mentioning that the serotonin system is in close relationship with the endocrine system, namely, under stress, hypersecretion of cortisol occurs, which activates tryptophan pyrrolase through intracellular receptors. The consequence is that tryptophan goes to another metabolic pathway (kynurenine pathway) and, accordingly, the biosynthesis of serotonin slows down. Excessive amounts of cortisol inhibit the activity of some other enzymes, in particular, it inhibits the synthesis of norepinephrine in the brain. As a result, a deficiency of serotonin and norepinephrine leads to the dominance of cortisol over enzyme systems [4]. An increase in serotonin levels naturally comes from a diet rich in tryptophan, vitamins, zinc and low in "empty" carbohydrates. And, of course, it is a misconception that serotonin is already found in finished form in foods. Tryptophan, which is used in the synthesis of serotonin, is found in meat, eggs, cheese, bananas, milk, and yogurt. However, without enough vitamins B3, B6, and omega-3 fatty acids, tryptophan can be converted into a different chemical formula and become a substance that has no effect on mood. Therefore, it is important to consume foods that are sources of these essential substances.

Studying the influence of foods rich in serotonin on the emotional state of students of the Andijan State Medical Institute, studying the dependence of emotions and the possibility of preventing the occurrence of depressive conditions from the consumption of this group of foods.

A review of literature sources on the topic of the work was carried out. The method of sociological anonymous survey was used on the Google Forms platform using a developed valeological-hygienic questionnaire. 308 2-4 year students from all faculties of the Andijan State Medical Institute took part in the survey. Statistical processing of the obtained data was carried out on a personal computer using the Microsoft Excel software package. During the survey, students were asked 8 questions regarding their predisposition to depression, their attitude towards foods that, according to various sources, lift their spirits. Section II. Lifestyle of the population and technologies for promoting a healthy lifestyle 278 The following food products were taken for the survey: cheese, other dairy products, chocolate, meat and bananas. The choice is based on: 1) availability of purchase; 2) affordability; 3) everyday life among students.

According to the survey results, it was found that 42.9% of respondents often have a bad mood, and 53.2% of respondents have a bad mood several times a month, and only 3.9% of students indicated no bad mood at all.

Among the answers to the following multivariate question about typical conditions for students, the popular answers were: 1) loss of strength, high fatigue (67.5%); 2) decreased ability to think and concentrate (57.1%); 3) change in appetite (44.2%). 20.8% of respondents often had a desire to "eat" the selected states, and 39% of respondents did not experience such a desire. The remaining 40.3% of respondents only sometimes sought to additionally consume this or that food in this situation.

Among the respondents, the greatest preference was undoubtedly given to chocolate (83.12% of students noted a positive effect on mood). Bananas took second place in terms of influence on the mood of respondents. However, meat, cheese and other dairy products were not as popular among respondents. On the contrary, 70.13% of them believed that cheese did not improve their emotional state. And this is despite the fact that, as mentioned above, cheese is the leader in tryptophan content per 100 g of this food product, and chocolate and bananas are significantly inferior to cheese and meat in this regard.

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Among the total number of respondents (308 people), only two (0.65%) were lactose intolerant. Consequently, they did not consume dairy products. Having analyzed their questionnaires separately, we found that both often have a bad mood, but bananas and chocolate improve their mood, and sleep helps cope with depressive states. Students were asked about their awareness of the production of serotonin in the body. There was an assumption that in this question there would be a clear advantage in choosing the correct answer, and the correct answer ("Synthesized from the amino acid tryptophan") was chosen by 62.3% of respondents. Another 13% indicated that serotonin is synthesized from tyrosine, and 15.6% of respondents decided to refrain from answering, choosing the "Don't know" option.

Respondents were also asked to select processes in the body that they believe are affected by serotonin. Among the options for choice by respondents, the following were the most preferred: 1) serotonin promotes positive emotions; 2) serotonin regulates sleep-wake cycles; 3) serotonin is involved in ensuring concentration.

An open-ended question about how respondents improve their mood received a variety of responses, but most were related to sleeping (18%), eating (18.2%), watching movies (18.2%) and listening to music (16). .7%).

From the survey results it follows that the majority of the surveyed students of the Andijan State Medical Institute experience some difficulties with their psycho-emotional state, in particular, this is manifested by frequent bad mood. It can be assumed that this is justified by the academic load at the university, poor nutrition, non-compliance with the daily routine and low physical activity. Students' choice of food products does not depend on their serotonin content, but rather is based on taste preferences. This explains the greater demand among respondents for chocolate and bananas than for other food products offered for choice. As for the level of knowledge about serotonin, its origin and functions in the body, quite high results were demonstrated here, which indicates a sufficient level of students' assimilation of educational material in the process of studying the relevant disciplines. To prevent the occurrence of bad mood and depressive states, it is recommended to conduct preventive conversations on the importance of balanced nutrition, its regimen, and proper daily routine.

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