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INFLUENCE OF THE ENVIRONMENTAL FACTORS ON THE HUMAN DIABETES

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ABSTRACT

In this article, problems related to the influence of environmental factors on biorhythms, physiological processes and students' ability to work are considered. Presented types of biological rhythms and their changes in the background of the associated environmental impact. The review is based on literary and personal data on the organization of biorhythms in the body, which demonstrates their role in the processes of self-regulation. The basic biorhythms of a person and mechanisms of their functioning are considered. The methods of determination, frequency of detection and complex characterization of different chronotypes are presented. Horn-Ostberg tests (to determine human biorhythm) and METEO-Q (to identify physical and psychological symptoms associated with climatic variations) were performed. The results of the research indicate that most of the changes in the functional activity of medical students are in a certain degree dependent on natural environmental factors. Inconsistency of rhythms negatively affects many vital functions, the nature of emotional response, and the behavioral stereotype.

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Introduction. In the twenty-first century, the topic of determining the impact of environmental factors on the daily human biorhythm is relevant. Today, our daily routine is governed by biological rhythms. They determine the maximum functional activity of a person at a certain time of day. Any living system, including a person, is constantly in a state of exchange of information, energy and substance with the environment. The intensity of most physiological processes overnight tends to increase in the morning and fall at night. If, for any reason, this exchange (at any level - informational, energy and material) is violated, then it negatively affects the development and life of the organism. To modern man it is very important to know his daily biorhythm, since according to him will be built further human activity and its maximum activity in a certain period of time.

Research results. Biorhythms are periodic changes in biological processes that can change, adapting to external influences such as time of day, illumination of a room. The daily biorhythm is one of the basic for the human body. It is characterized by a natural change in such functional states of man, such as sleep and wakefulness, physical activity and calm. Also, all functions of the body (respiration, digestion, circulation) in accordance with these functional states are naturally changing their activity. Circadian (circadian) rhythm is a modified daily rhythm with a period of 24 hours, which relates to freely running rhythms. In circadian rhythm there are two lifting capacity: from 10 to 12 and from 16 to 18 hours.

To determine human biorhythm in the study, the Horn-Ostberg test was used. According to the criteria of this test, daily human biorhythms can be divided into 4 types: definitely morning type (70-

86 points), moderate morning type (59-69 points), neutral type (42-58 points), moderately evening type (39 - 41 points) and distinctly evening type (16-39 points). The purpose of the test: the definition of chronotypes: "lark", "dove" you or "owl".

At the end of the following results:

1) You are a "lark". Your biological clock goes faster than astronomical ones. Accordingly, you go to bed early and you wake up before. In a number of cases, with a significant difference in biological and astronomical hours, this problem can worsen the quality of life and is seen as a sleep disorder, which is called sleep-inducing syndrome.

2) You are an owl. Your biology clocks are slower than astronomical ones. Accordingly, it is difficult for you to fall asleep in the evening and it is difficult to wake up in the morning. In a number of cases, with a significant difference in biological and astronomical hours, this problem can worsen the quality of life and is seen as a sleep disorder, which is called a sleep latency syndrome.

3) You are a "dove". Your biological watches are roughly the same as the astronomical ones. This is the most favorable type of daily rhythm, in which there are no problems with both going to sleep and with lifting.

In determining circadian biorhythm, 30 students of the Kharkiv National Medical University at the age of 18 years (19 persons - female, 11 persons - male sex) received the following results:

1) to a neutral type include 84.5% (19 - female sex, 6 - male);

2) to moderate-morning type include 8,3% (1 female and 1 male sex), to a definite evening type include 7.2% (1 male sex and 1 female sex). These studies clearly show the relevance of a greater number of students to a neutral type, which is directly related to the maximum functional activity in the time interval from 15:00 to 18:00. A distinctive feature of this circadian rhythm is moderate activity in the period from 7.00 to 11.00 and very low activity in the period from 20.00 to 2.00. This manifestation of the daily biorhythm directly depends on the activity of a person, which in turn depends on the factors of the environment.

You can determine the impact of environmental factors on a person through the meteopathic list (METEO-Q). It consists of 11 points and a structured checklist for identifying the physical and psychological symptoms associated with climatic variations. Paragraphs 1-5 quantitatively study variations in mood associated with or conditioned by specific weather conditions (mood changes in latitude, mood changes relative to atmospheric changes, mood variations in relation to brightness of the sky, mood induced by changes in temperature, mood changes caused by changing seasons), and in paragraphs 6-11, the qualitative implications of symptoms are studied (the degree of connection between symptoms and climatic changes, the tendency of violations to minimize or disappear when the condition stops) or when the opposite occurs such ecological status, the possible coincidence of these obstacles with other cyclic phenomena, the presence of prodromic symptoms, interference with daily activities, anxiety, caused by climatic changes). The checklist examines the most common obstacles associated with climatic, atmospheric, temperature, or vivid changes. For each of the 21 symptoms, individuals are asked to rate on a 5-point Likert scale from 0 (absent) to 4 (severe).

The object of the study was an indicator of the strong impact of environmental factors on the change in student meteorological indices. On the basis of this study, the following results were obtained:

1) mood changes depending on the change in latitude of the geographical zone, time zone (23,3%);

2) mood changes depending on atmospheric changes (11,34%);

3) mood change depending on temperature changes (15,25%);

4) coincidence of these changes with other cyclical changes (9,35%);

5) the impact of changes caused by changes in climatic factors on daily activity (40.76%).

In the context of this study, the following factors should be attributed to the effects of environmental factors on medical students: weakness (10.25%), irritability (17.6%); anxiety (13.37%), uncertain pain: articular and muscular pain (6.63%), headache (15.34%), difficulty concentrating attention (4, 67%), drowsiness (6.65%), weakness during daily activity (4.49%).

Conclusions. The results of the study show that changes in the functional activity of medical students are in some degree dependent on natural environmental factors. Indicators of the second study directly depend on the indicators of the first study, so we can conclude that the circadian biorhythms of man directly depend on the influence of natural environmental factors. To date, this question is very relevant because it includes not only the setting of the correct regime of the day in accordance with the

definition of daily biorhythm, but also the ability of a modern person to independently provide and monitor the full value of their health.

REFERENCES

1. Gayvoronskaya N.G., Pugachev Y.V., Pugachova I.M. Investigation of the possibility of improving the quality of human life through the study of its biorhythms // International Journal of Applied and Fundamental Research. — 2015. — 196-200 p.
2. Agadjanyan N. A., Radish I.V. Biorhythms, habitat, health. M: // — 2013. — 362 p.
3. Kovalzon V.M., Dorokhov VB The cycle of wakefulness-sleep and biorhythms of a person under different modes of alternating light and dark period of the period // — 2013. — 151-162 p.
4. Chernyshova Yu.M., Glutkin S.V., Fedosenko G.V., Gulamova A.V. Functional status of persons with different chronotypes at the smallest duration of the light part of the day // — 2016 – 101p.