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## CONTENTS

<b>Chernobay L., Vasylieva O., Lenska O., Morozov O., Terentyev V.</b> TO THE ISSUE OF THE MECHANISM OF ADAPTATION DEVELOPMENT TO THE PSYCHOEMOTIONAL STRESS OF TRAINING IN FEMALE MEDICAL STUDENTS OF GENERAL AND SPORTS GROUPS.....	5
<b>Goncharova A. V., Pavlov S. B., Pavlova O. S., Razumovskiy A. N., Kaur A.</b> ADAPTABILITY OF CARDIORESPIRATORY SYSTEM IN NORMOTENSIVE AND HYPOTENSIVE FEMALE STUDENTS WITH DIFFERENT IMPACT OF THE AUTONOMIC NERVOUS SYSTEM SUBDIVISIONS.....	8
<b>Nataliia S. Hloba, Inna M. Isaieva, Irina S. Karmazina, Dmytro I. Marakushin, Oleksandr A. Hloba</b> THE INTERCONNECTION BETWEEN INDIVIDUAL CIRCADIAN RHYTHMS AND EATING BEHAVIOR AS ONE OF MAIN REASONS OF OVERWEIGHT AND OBESITY IN YOUNG PEOPLE.....	12
<b>Maslova N., Maslova Y.</b> RESEARCH OF THE DENTAL STATUS OF MEDICAL UNIVERSITY STUDENTS.....	16
<b>Pandikidis N. I., Stovan A. O.</b> INFLUENCE OF THE ENVIRONMENTAL FACTORS ON THE HUMAN DIABETES.....	18
<b>Alekseienko R. V., Rysovana L. M.</b> THE INFLUENCE OF NATURAL AND SOCIAL FACTORS ON THE VITAL ACTIVITY OF THE ORGANISM IN MODERN CONDITIONS.....	21
<b>Bulynina Oksana, Voytenko Taisiya</b> THE EMPATHIC ABILITY OF KHARKIV NATIONAL MEDICAL UNIVERSITY STUDENTS WITH THE FUNCTIONAL ASYMMETRY OF A DIFFERENT TYPE.....	24
<b>Nadiia V. Hryhorenko, Marina S. Zimina, Stanislav M. Zimin, Maryna N. Kucher</b> PHYSICAL AND CHEMICAL PROPERTIES OF BILE IN DIABETIC PATIENTS.....	28
<b>Dunaeva O. V., Korovina L. D.</b> THE DEPENDENCE OF THE DEGREE OF METEOSENSITIVITY ON THE STATE OF THE CARDIORESPIRATORY SYSTEM AND THE PRESENCE OF PREPATHOLOGICAL CHANGES IN THE BODY IN MEN AND WOMEN.....	32
<b>Dmytro I. Marakushyn, Inna M. Isaieva, Iryna S. Karmazina, Natalia S. Hloba, Elijah Adetunji Oluwasegun, Kateryna M. Makarova</b> FEMALE VS. MALE: DIFFERENCE IN IMMUNE RESPONSE.....	35
<b>Kyrychenko M. P., Marakushin D. I., Shenher S. V., Dunaeva O. V., Bondar O. O.</b> SOME FEATURES OF THE EYE TEST IN PERSONS WHO ARE SYSTEMATICALLY INVOLVED IN SPORTS.....	38
<b>Sokol O. M., Polishchuk T. V., Khorshunova A. M., Kadnai O. S., Volkov I. I.</b> CORRELATES OF AUTONOMOUS NERVOUS AND IMMUNE SYSTEMS AT INTELLECTUAL EXERTION OF MEDICAL STUDENTS IN CONDITIONS OF COMBINED ACTION OF ENVIRONMENTAL STRESSORS.....	40
<b>Hanna M. Zelinskaya, Katerina A. Zelenskaya, Sukhachova I. A., Kovalenko A. A., Yuliya G. Bazyleva</b> FEATURES OF ADAPTATION REACTIONS OF ORGANISM OF STUDENTS, WHICH DEPEND ON THE PRESENCE OF CHRONIC DISEASES IN ANAMNESIS.....	43
<b>Tishchenko A. N., Lisina A. V., Yurkova O. V., Tishchenko M. O.</b> CERTAIN ASPECTS OF ADAPTOLOGICAL INFLUENCES ON THE DEVELOPMENT OF PSYCHOPHYSIOLOGICAL ADDICTION.....	47
<b>Shtrakh Kateryna Vasyliivna, Rak Larisa Ivanivna, Mulenga Natasha, Samuel Arko Addo, Okoronkwo Ugochukwu, Innocentia Awuzie</b> CORRELATION OF STRESS-PROVIDING AND RENIN-ANGIOTENSIN-ALDOSTERONE SYSTEMS AND NT-PROBNP IN ADOLESCENTS WITH RHYTHM DISORDERS.....	49

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<i>Маракушин Д. І., Ісаєва І. М., Кармазіна І. С., Глоба Н. С.</i> ВПЛИВ ОКСИЕТИЛЬОВАНИХ НОНІЛФЕНОЛІВ ТА ЇХ ПОХІДНИХ НА СТАН НЕСПЕЦИФІЧНОЇ ІМУННОЇ РЕЗИСТЕНТНОСТІ ЩУРІВ.....	54
<i>Л. М. Дяченко</i> ВІДПОВІДЬ КЛІТИН ЛЕЙКОЦИТАРНОГО РЯДУ НА ВПЛИВ СТРЕС-ФАКТОРІВ ТА МОЖЛИВІСТЬ ЇЇ КОРЕЛЯЦІЇ ПРИРОДНИМИ АНТИОКСИДАНТАМИ.....	60
<i>Vaschuk Mykola A., Sokol Olena M., Khorshunova Anastasiy M., Chernysh Hanna O., Yacenko Alina Yu.</i> ADAPTATION INDEX AND FUNCTIONAL STATE OF CENTRAL NERVOUS SYSTEM IN MEDICAL STUDENTS DURING THE PERIOD OF INTENSIVE LEARNING ACTIVITY.....	67
<i>Ковальов М. М., Чеботенко О. Р.</i> ЯВИЩЕ ЕМПАТІЇ ЯК СПОСІБ АДАПТАЦІЇ ТА ВЗАЄМОДІЇ В СОЦІАЛЬНІЙ СФЕРІ.....	70

# CERTAIN ASPECTS OF ADAPTOLOGICAL INFLUENCES ON THE DEVELOPMENT OF PSYCHOPHYSIOLOGICAL ADDICTION

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## ABSTRACT

The purpose of the study was the investigation of the relationship between psycho-emotional lability and the development of addiction to adaptogens at the physiological level. Variants of abuse of certain adaptogen types were simulated, which helped to deepen the understanding of the physiological basis of the negative influence of stress-limiting action of adaptogens in the context of the development of addiction. The study allowed to reveal the essential role of psychological causes in the development of psychophysiological addiction to adaptogens. The basis was taken data on the positive effects of adaptogens on the body and the presence of a specific contingent of individuals transition to the degree of excessive use non-food adaptogens in everyday life.

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**Introduction.** Adaptogens are natural or synthetic substances that increase the body resistance to diseases and adaptability to living conditions [1]. Not only classical herbal products, but also sports exercises and consumption of certain food products that cause individual response from the nervous system, can be considered as factors contributing to the improvement of the body adaptation due to anti-stress action, reducing acute nervous excitement [2,3]. It is known that the main properties of adaptogens include the harmonious mobilization of all the protective forces of the human body, since these substances directly affect tissue metabolism, increase mental and physical capacity, and also prevent disorders caused by stress and other extreme factors [4].

However, despite the positive immunostimulatory, psychostimulatory and anabolic effects on the condition of the central nervous system, hematopoietic organs and hormones, it is necessary to take into account the possibility of negative influence of adaptogens among a certain cohort of individuals who resort to their use up to abuse [5,6].

**Purpose.** Clarification and actualization of the problem of addiction to permanent stimulation with adaptogens in people who are in a situation of continuous exhaustion of mental and physical forces, which are usually not eliminated in the first place, and forced to find means of adaptation to them. First of all it is a matter of psychological dissatisfaction with oneself, the rejection of one's appearance or dissatisfaction with the level of one's ability to work. Often in such cases, the person finds the way out not in a rational and adequate perception of the problem or in solving it with a psychotherapist, but in excessive perfectionism and the introduction of adaptogens into a systematic use, which leads to a certain addiction, as without rituals that help to adapt to the problems at psychological level, a person would feel exhausted physically, could not resist stress, physical exertion, will not be able to solve some intellectual tasks in everyday life and in professional sphere.

The purpose of the next study will be to develop certain preventive methods that will address the initial recommendations on the use of adaptogens and to determine the real need for their use with possible psychological counseling and the real reasons for the desire to use certain ways to enhance workability, endurance and adaptability to stress conditions. This multi-step study will help prevent the development of addiction from adaptogens and form a healthy culture of their application from the point of view of physiology and psychology.

**Study methods.** To demonstrate our opinion, we simulated three situations that will help to understand the psycho-physiological basis of the development of addiction.

1. The stress-limiting action of herbal adaptogens (for example, ginseng and eleutherococcus) is based on a very broad spectrum of their pharmacological action. Efficacy and rapid result achieved with herbal adaptogens leads to a complex of biochemical processes that are controlled by the hormones in the body and affect the pleasure center located in the hypothalamus. Intervention in the dopamine process leads to the formation of addiction to satisfaction. In the particular case, the expectation of satisfaction from, for example, increased working efficiency is associated with the use of herbal adaptogens. Therefore, the habit develops at the physiological level, which is a consequence of the secretion of dopamine; the lack of it may cause apathy and depression.

2. The stress-limiting effect of some products is based on the fact that they are an exogenous source of the amino acid tryptophan, from which serotonin is produced – this is a hormone that influences the enjoyment of flavors and aromas, and the memory of the experience of eating such products that cause joy and psycho-emotional stability, which is the short-term adaptogenic effect of certain products (chocolate, dates, bananas, nuts). Unfortunately, such an effect can cause a change in eating behavior, a value-based attitude to food and its consumption, a stereotype of nutrition in stress conditions that can lead to impulsive overeating or the development of bulimia.

3. As a result of sports, the production of endorphins increases 5-fold, which has a positive effect on the body adaptation to changes in environmental conditions. But this mechanism can have an effect on consciousness, causing a permanent desire to increase the load, resulting in tolerance to sports exercises, the failure of doing which will cause a withdrawal symptom due to the lack of the ability to stimulate the production of endorphins in the explained way. In the presence of body dysmorphia (inability to objectively assess the condition of one's own body) and bigorexia manifestations (the pathological tendency of a person to develop a greater muscular mass due to the disorder of perception of the body image), an individual may develop an addiction to physical exercise, which can be considered as a certain protective mechanism designed to compensate for low self-esteem by the body's appearance.

**Research results.** Mental instability in these cases can be the basis for the development of psychophysiological addiction to adaptogens, which play the role of a compensatory habit, the key function of which is to adapt an individual to stress factors by shifting attention from the main problems to the use of those adaptive resources that contribute to the partial short-term mobilization of the body reserve forces.

**Conclusions.** Under normal circumstances, adaptogens make an individual less susceptible to stress, improving general well-being, and in the presence of certain "emptiness" they become the only source of satisfaction, and as a result can stop exerting a positive effect, which is explained by physiological exhaustion of the body. With the results of this study and the indication of physiological factors, as well as taking into account the important role of the accompanying psychological factors of the development of addiction, in the future, a method of psychological correction and prevention of the occurrence of dependence on the level of physiological and biochemical reactions in the body can be formed.

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