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STUDYING THE EFFECT OF PROFESSIONAL SPORTS ON THE MENSTRUAL FUNKTION OF GIRLS

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SUMMARY

Target. In recent years, the number of teenage girls engaged in professional sports is increasing and the impact of this activity on the reproductive health of girls, especially the reproductive system of teenage girls, i.e. the frequency of menstrual cycle disorders depends on the type of physical exercise and it can be seen that it varies depending on the nature of the downloads, **Materials and methods:** Tashkent City Children's and Adolescent Sports Complex No. 1 in 2023-2024 12-16-year-old teenage girls who are constantly engaged in special professional types of sports and sports adolescent girls who do not engage in sports were analyzed based on the results of a prospective survey and examination. **Research results:** The research was conducted on the basis of 3 groups, and the late onset of the menstrual cycle among 12-16-year-old girls engaged in long-term professional sports or indicated that there will be disturbances in the duration. I. In the main group, according to the frequency of menstrual cycle disorders, the frequency of Oligomenaria, Menarche, Primary dysmenaria was found to be 10% higher than in the II. Comparison and III. Control groups**. Conclusion.** When choosing the type of physical activity and training cycle, intensity, age, gender relatively incorrect planning is the result of teenage girls not following a healthy lifestyle, there is a connection between the formation of the menstrual function of teenage girls and it affects the reproductive system.

Key words: *Physical education, professional sports, rhythmic gymnastics, reproductive health, menstrual cycle, menarche, dysmenorhea.*

ИЗУЧЕНИЕ ВЛЯНИЯ ПРОФЕССИОНАЛЬНОГО СПОРТА НА МЕНСТРУАЛЬНУЮ ФУНКЦИЮ ДЕВУШЕК

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РЕЗЮМЕ

Цель: В последние годы увеличивается количество девочек-подростков, занимающихся профессиональным спортом, и влияние этой деятельности на репродуктивное здоровье девочек, особенности репродуктивной системы девочек-подростков, т.е. частота нарушений менструального цикла зависит от типа физические упражнения и видно, что она варьируется в зависимости от характера нагрузок, **Материалы и методы:** Ташкентский городской детско-юношеский спортивный комплекс №1 в 2023-2024 гг. Девочки-подростки 12-16 лет, постоянно занимающиеся Специальные профессиональные виды спорта и спортивные девушки-подростки, не занимающиеся спортом, проанализированы по результатам проспективного опроса и обследования. **Результаты исследования:** Исследование проведено на базе 3-х групп с поздним началом менструального цикла. среди девушек 12-16 лет, длительно занимающихся профессиональным спортом или указавших, что будут нарушения в продолжительности. I. В основной группе по частоте нарушений менструального цикла выявлена частота олигоменарии, менархе, первичной дисменарии на 10% выше, чем во II группе сравнения и III. **Заключение.** Относительно неправильное

планирование физической активности и тренировочного цикла, интенсивности, возраста, пола является следствием неведения девочками-подростками здорового образа жизни, имеется связь между формированием менструальной функции девочек-подростков и ее влиянием на репродуктивную систему.

***Ключевые слова**: Физическое воспитание, профессиональный спорт, художественная гимнастика, репродуктивное здоровье, менструальный цикл, менархе, дисменорея.*

Toshkent, O'zbekiston

PROFFESIONAL SPORTNING QIZLARNING HAYZ FUNKSIYASIGA TA'SIRINI O'RGANISH

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XULOSA

Maqsad*:* So’ngi yillarda professional sport bilan shug’ullanadigan o’smir qizlar soni tobora ko’payib borayotgani va bu faoliyatning qizlarning reproduktiv salomatligiga ta’siri ayniqsa, o’smir qizlarning reproduktiv tizimi ya’ni hayz sikli buzilish chastotasi jismoniy mashqlarning turiga va yuklamalarning xususiyatiga qarab turli xil kechishini ko’rish mumkin,**Materiallar va usullar:**Toshkent shahar 1-sonli Bolalar va o'smirlar sport majmuasi 2023-2024yil davomidagi sportning maxsus professional turlari bilan doimiy shug'ullanadigan 12-16 yosh o’smir qizlar xamda sport bilan shug'ullanmaydigan o’smir qizlar prospektiv so’ravnoma va tekshiruv natijalar asosida tahlil qilindi**.Tadqiqot natijalari:**Ta’dqiqot 3 ta guruh asosida olib borildi va uzoq muddatli professional sport bilan shug’ullanuvchi 12-16 yosh qizlar orasida hayz sikli kech boshlanishi yoki davomiyligida buzilishlar bo’lishini ko’rsatdi. I.Asosiy guruhda hayz sikli buzilish chastotasi bo’yicha Oligomenariya, Menarxe, Birlamchi dismenariya chastatasi II.Taqqoslama va III.Nazorat guruhlariga nisbatan 10%ga yuqori ekanligi aniqlandi.**Xulosa**.Jismoniy faolik turini tanlashda va mashg’ulot siklini, intensivligini yoshga, jinsga nisbatan noto’g’ri rejalashtirish o’smir qizlarning sog’lom turmush tarziga to’g’ri rioya qilmasligi natijasi,o’smir qizlarning hayz funksiyasi shaklanishi orasida bog’liqlik borligi va bu reproduktiv sistemaga ta’sir etadi.

***Kalit so’zlar**: Jismoniy tarbiya , professional sport, badiiy gimnastika, repraduktiv salomatlik, hayz sikli, menarxe, dismenoriya.*

Relevance of the topic: Today, menstrual cycle disorders are common among adolescent girls, especially among adolescent girls aged 12-16. This figure is found in modern literature in percentages higher than 13%. When studying the causes of this, along with somatic diseases, lifestyle, and supplemental deficiencies, girls' involvement in professional sports also takes the leading place. There is very little literature and scientific work on the impact of professional sports on girls' menstrual activity, and opinions are contradictory. Maintaining the reproductive health of adolescent girls and the possibility of forming normal menstrual function in girls is one of the most important medical and social problems. In recent years, the number of girls and women involved in professional sports and sports that require maximum endurance has been increasing sharply. This is also confirmed by the fact that in recent years, both in our country and abroad, the number of girls and women involved in purely male sports: boxing, wrestling, weightlifting, football, hockey has been increasing (E. A. Istyagina-Eliseeva, 2000). However, despite some existing experiences in this regard [2, 4, 6, 3], today there is not enough information about the impact of "male" sports on the female body. Information on the impact of the chosen sport on the health of girls, especially on the formation of their menstrual function, is of practical importance. Information on the impact of physical education and sports on reproductive health, including the formation of menstrual function, is of practical importance, first of all. According to various authors, the prevalence of menstrual disorders among female athletes exceeds 20%, depending on the type of sport, and oligomenorrhea and amenorrhea predominate among menstrual disorders. In 1983, K. Karlberg et al. The high frequency of menstrual disorders in athletes may be partly due to specific selection related to the demands of a particular sport, but many of them also develop menstrual disorders due to the inability to adequately increase energy intake from food as compensation for training. [10, 1-2,3]. Unfortunately, in professional sports, adolescent girls and women often overexert their bodies with high loads. The reproductive system is one of the most sensitive systems of the body to the effects of physical stress, and significant changes occur in it, which is primarily manifested in the development of menstrual cycle disorders (changes in its regularity, duration, rhythm). Later, amenorrhea and other disorders occur. The energy deficit caused by the combination of physical exercise and dietary restrictions leads to menstrual disorders, both for the menstrual cycle and for the period. With excessive physical exertion and calorie restriction, estrogen synthesis in adipose tissue is disrupted. One of the earliest and most interesting observations of menstrual disorders in female athletes was published by R. Frisch and MacArthur in 1974, who found that the onset of menarche occurs only when a "critical threshold of fat tissue is reached, equal to 17% of total body weight, and when the amount of fat tissue decreases below 22% of total body weight. [7] Menstrual dysfunction in girls involved in sports can be considered a form of hypogonadotropic hypogonadism, accompanied by additional neuroendocrine changes, including adrenal activation and suppression of thyroid function. N. Constantini and M. Warren, studying the

prevalence of menstrual disorders in young swimmers, concluded that their first menstruation occurs later, like athletes involved in other sports, and menstruation The prevalence of menstrual disorders is high, but the associated hormonal profile differs from the hypothalamic amenorrhea described in gymnasts and runners and is considered to be associated with a mild hyperandrogenic nature of the main mechanism of menstrual disorders. During menstruation, the breakdown products of arachidonic acid - prostaglandins, thromboxanes, leukotrienes, and others - accumulate in large quantities and stimulate pain centers. [3] As a result, during menstruation, pain syndrome occurs in the lower abdomen and lumbar region, accompanied by neurovegetative, metabolic, and psychoemotional disorders. In 1983, K. Karlberg et al. It has also been shown that menstrual irregularities in female athletes are statistically significantly associated with low body weight and reduced muscle mass [5]. Cohort studies have confirmed the causal effect of physical exercise on the development of anovulation. Incorrect selection of physical activity and errors in the design of the training cycle often lead to delayed sexual development, various disorders of menstrual function, masculinization, and all kinds of pathologies of the cardiovascular system and musculoskeletal system (L.S. Startseva, 1961, V.G. Bershadsky, 1975, S.A. Levenets, 1980, E.P. Kvitsiridze, 1986, E.A. Bogdanova 1986, T.S. Soboleva). This topic is important due to its relevance, especially considering the complex course of puberty in girls, taking into account the influence of psychoemotional factors, especially since among the risk factors leading to menstrual cycle disorders in adolescent girls, the influence of regular sports training is also high, especially since they have an impact on the reproductive health of adolescent girls, that is, on menstrual cycle disorders.Purpose of the scientific work. To study the effect of regular sports training on the menstrual function of adolescent girls.

Materials and methods. Constant stress factors in professional athletes have a negative effect on the reproductive function of girls. K. Karlberg et al., based on their scientific research, concluded that three main types of reproductive system pathologies occur in female athletes: 1. Delayed sexual development. This is understood as the absence of secondary sexual characteristics at the age of 13-14, menstruation at the age of 15 and older. 2. The most common form of reproductive pathology in girls is menstrual disorders, among which the following types of pathology can be distinguished: Amenorrhea - absence of menstruation, Dysmenorrhea - violation of the amount and rhythm of menstruation: a) oligo or opsomenorhea - small, scanty, infrequent menstruation; b) polypromenorhea - prolonged, heavy menstruation. 3. The third form of reproductive function pathology in athletes is masculinization, which is characterized by a number of clinical signs: Athletic (male or intersex) morphotype, characterized by high growth, a wide pelvis and broad shoulders; Hypoplasia of the chest and uterus; In a rough voice - external boyish appearance. The reproductive system is one of the systems that is hormone-dependent and sensitive to physical stress. Studies show that a single physical activity leads to the release of large amounts of hormones, and regular physical activity leads to a violation of endocrine homeostasis. In addition, the energy deficit resulting from the combination of physical exercise and dietary restrictions leads to a violation of the menstrual cycle, as well as to the menstrual cycle. With excessive physical exertion and calorie restriction, estrogen synthesis in adipose tissue is disrupted.Female ballerinas and athletes often have the female athlete triad "Athletic triad", the triad was first described in 1997 by specialists from the American College of Sports Medicine [4]. In 2005, a working group of the International Olympic Committee introduced a broader concept describing the negative effects of sports on the body of athletes of both sexes: it includes three components: 1. Malnutrition or insufficient energy intake without food, 2. Menstrual disorders and 3. Decreased bone mineral density [7]. Ye Vian Quah et al. concluded that the incidence of menstrual disorders can reach up to 50% in sports where low body weight plays a significant role. A. Melin et al. developed the Low Energy Experience in Girls Questionnaire (LEAF-Q), which includes questions on injuries, digestion and reproductive system function, and in 2013 a group of experts published a statement on the criteria for diagnosing and treating the triad for returning to regular training in female athletes.

Research result. The study involved adolescent girls without somatic diseases, girls without a history of hormonal hereditary diseases, and girls aged 12-16 who regularly engage in professional sports. The prospective analysis of the study was divided into 3 groups, and questionnaires and examinations were conducted in these groups. The study involved adolescent girls who were engaged in professional sports in Tashkent city children's and youth sports complex No. 1 and Taekwando sports schools in 2023-2024, and girls aged 12-16 who were not involved in sports in specialized schools No. In our study, the frequency of menstrual disorders, depending on the type of sport, was found to be 10% to 50% higher in girls involved in professional sports than in girls not involved in sports and amateur athletes, especially primary dysmenorrhea, menarche, and oligomenorrhea. During the study, we studied various parameters of menstrual function in girls and compared them with similar parameters in professional athletes and non-athletes.The age of first menstruation in girls was 13.4±1.4 and 13±1.3 years, respectively ($p<0.001$). At the same time, it was found that the age of first menstruation in athletes who started regular training before the onset of menstruation was statistically significantly higher than in athletes who started training after the onset of menstruation (13.9 ± 1.4 and 13 .1 ± 1.4, respectively, $p<0.001$). Primary amenorrhea was statistically significantly more common in girls who regularly engaged in sports than in girls who were not athletes (in 15% of cases, respectively). The overall frequency of menstrual dysfunction was higher in girls in both groups (20% and 5%, respectively), but in sports where low body weight is of great importance, in gymnastics, 40% of female athletes had any menstrual dysfunction. It was found that 40% of girls involved in various sports have changes in their menstrual cycle - 17% of them have stressful situations. The impact of

professional sports training, heavy physical exertion, constant stress on the menstrual cycle of girls first of all affects the menstrual cycle and reproductive health of girls.

Conclusion: A connection was found between the formation of the menstrual cycle in teenage girls as a result of incorrect selection of the type of physical activity and planning of the training cycle, intensity in relation to age and gender, and the incorrect adherence to a healthy lifestyle of teenage girls. Girls who started professional sports early and regularly engage in them, constant stress and an unhealthy lifestyle lead to defects in the endocrine system. This affects the reproductive system. Through this study, we want to emphasize that the solution to this process is to provide them with information about the menstrual cycle and its changes depending on their age.

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