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**INFLUENCE OF CHESS GAMES ON CHILDREN'S HEALTH**

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**Abstract**

Today, to achieve high sports results in chess, planned, comprehensive training is required. Children spend at least 4 hours every day at the computer to analyze opening variations, their own games and the best chess players in the world, which leads to the development of myofascial syndrome, "text neck" syndrome and other conditions in the absence of proper preventive measures. In sports, the main task of medical control is the prevention of diseases that appear as a result of high training and competitive loads. Properly organized medical control contributes to maintaining health and fitness.

**Keywords**

chess, children, health, medical and pedagogical control

Due to prolonged physical inactivity, chess players under certain conditions develop overloads and overstrains, which increase the risk of various occupational diseases in children involved in chess. [1,10,13]. Illnesses among chess players are mainly accompanied by a sudden cessation of training sessions, causing a violation of the established life pattern, which entails a painful reaction of the whole organism and leads to the extinction of conditioned reflex connections developed as a result of many years of systematic training. As a result, the functional ability of the body and all its systems decreases, physical and mental detraining occurs [3,4].

Today, to achieve high sports results in chess, planned, comprehensive training is required. Children spend at least 4 hours every day at the computer to analyze opening variations, their own games and the best chess players in the world, which leads to the development of myofascial syndrome, "text neck" syndrome and other conditions in the absence of proper preventive measures [1,9,12]. In sports, the main task of medical control is the prevention of diseases that appear as a result of high training and competitive loads. Properly organized medical control contributes to maintaining health and fitness. In sports medicine, there are methods for monitoring the health of athletes who perform physical activity to the limit of their capabilities. [6,7,8]. At the same time, chess is a sport that is not directly associated with increased physical activity [5].

Due to the unnatural position of the body during a chess game, postural disorders begin to appear, which is the most significant prerequisite for the development of spinal diseases. A characteristic feature of the game is that it is accompanied by significant emotional and mental stress. This predetermines significant changes in the psychophysiological state of chess players, which can lead to diseases of the circulatory system (hypertension, stroke, myocardial infarction) and nervous system [4,5,10].

Considering the above, medical control is mandatory in chess in order to prevent diseases that arise in children playing chess. In this case, the primary task will be to reduce the risk of the adverse effects of excessive emotional and intellectual overstrain that occurs in many chess players.

**Purpose of the study:** to study the frequency of occurrence of pathological conditions and their causative factors in children playing chess for the subsequent development of preventive measures.

**Materials and research methods:** The study included 49 children playing chess, aged 9-15 years (average age  $13.7 \pm 1.02$  years), of which 38 (77.5%) were boys and 11 (22.5%) girls. The

experience of playing chess was more than 4 years. To analyze the frequency of development of pathological conditions among children involved in chess and compare them with world data, an analysis of literary sources, medical records and data from questionnaires and medical examinations of children was carried out.

All children underwent a standard set of diagnostic measures with the participation of specialized specialists. The examination of children was carried out with the informed consent of the parents.

The exclusion criteria were congenital anomalies of the musculoskeletal system, injuries and diseases not related to playing chess.

The results of the study were subjected to statistical data processing using the MS Excel 2013 software package.

**Results of research.** Analysis of the results of medical examinations according to literary sources showed that the most common diseases among chess players are: pathology of the musculoskeletal system in the form of postural disorders, dorsopathies (59%); myopia (34%); metabolic and nutritional status disorders (25%). The causes of diseases of the musculoskeletal system were a long stay in an uncomfortable position (daily prolonged sitting at a chessboard in a bent position, the use of electronic devices and gadgets), poor development of muscle groups (the "muscle corset" of the body), a low level of development of static endurance, and physical inactivity.

According to the results of the study, poor posture and myofascial syndromes, "text neck" syndrome are observed in 88% of chess players from the total number of those examined. It should be noted that in most cases this problem can be resolved. At the same time, an important role in the prevention of pathology of the musculoskeletal system and the elimination of pain syndromes is played by the targeted use of means and methods of therapeutic physical culture, such as therapeutic gymnastics with the inclusion of corrective exercises in the complex, kinesiological taping, Nordic walking. The formation of correct posture and the prevention of pain syndromes in chess players must begin with initial training groups, since at this age the morphofunctional development of the body occurs most intensively. Therefore, it is necessary to include a complex of health-improving gymnastics in the educational and training process, and in case of postural disorders, use special sets of corrective exercises. If there are persistent postural disorders, it will take more time to implement the correction.

The second most common pathology was myopia, which was observed in 53% of cases of the total number of subjects examined. Such a high percentage is explained by the fact that children, in addition to basic chess classes at a chess school or club, improve their sports skills by training on electronic devices. Also, insufficient lighting and incorrect posture while reading literature have a great impact on vision. In this case, it is necessary to resort to preventive measures such as maintaining a distance from the eyes to the gadget or chess disc; hygiene of training and rest between games while playing at the computer; performing special exercises for the eyes during a training session.

Regarding nutritional and metabolic disorders, our data were comparable to those in the literature (24.5% and 25%, respectively).

Thus, the problem of pathological conditions in children initiated by a chess player playing chess is very relevant, as it plays a significant role not only from the point of view of sports, but also of medical science. Therefore, careful medical and pedagogical supervision by doctors, trainers, psychologists, and other specialists is necessary. Only work in this aspect will make it possible to reduce the risk of developing pathological conditions in children who play chess.

**Conclusion.** Analysis of the results of the study allows us to conclude that the main pathological conditions in children initiated by playing chess are pathology of the musculoskeletal system and the development of myopia, which requires a radical revision and improvement of the structure of the educational and training process in chess schools.

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