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**ІННОВАЦІЙНІ ТЕХНОЛОГІЇ В СИСТЕМІ
ПІДВИЩЕННЯ КВАЛІФІКАЦІЇ ФАХІВЦІВ
ФІЗИЧНОГО ВИХОВАННЯ І СПОРТУ**

ТЕЗИ ДОПОВІДЕЙ
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VEGETATIVE STATS OF EARLY -SCHOOL AGE CHILDREN WITH POSTURE VIOLENCE

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Sustainable growth of number of children with violence of musculoskeletal system (MSS) functions, which leaves with out своєчасної correction, as a result becomes the factor of development of spine structure alteration and the cause of workability decrease. Physical rehabilitation of children with functional disorder of MSS is an arduous, multidimensional task, due to the fact, that such kind of children has own distinctive features of physical, functional and psychological development. Especially, this relates to children of early-school age. The key basic destination in development of rehabilitation technology remains formation of adaptation reaction in children with posture disorder.

It is well known, that leader role in adaptation process formation and homeostasis support, as well as in pathogenesis of any condition belongs to vegetative nervous system (VNS). The important objective criteria for scheduling of rehabilitation technique is evaluation of vegetative state, reflecting destination of kid's VNS functioning as integral body regulation system [4, 6].

42 schoolboys with posture disorder aged from 7 to 8 ($7,3 \pm 0,2$) years old, underwent investigation, 22 girls and 20 boys were among them.

Vegetative tonus was evaluated by integrated hemodynamic index – vegetative index of Kerdo (VIK) [3,5]. Source data for it calculation were elementary hemodynamic features, likewise, heart rate (HR) and arterial pressure (ArP) [5]. Level of adaptation potency (AP) was calculated according this formula:

$$AP=0,011(HR)+0,014(ArPs)+0,008(ArPd)+0,014(B)+0,009(BW)-0,009(BL)-0,27,$$

where AP – adaptation potency (points), HR – heart rate (beats per minute.), ArPs – arterial pressure systolic (mm.hg.), ArPd – arterial pressure diastolic (mm.hg.), BW – body weight (kg.), BL – body length (sm.), B – age (years) [2].

Coefficient of endurance was calculated by means of formula A. Kwaasa [1].

Analysis of provided investigations results has pitched that sympathicotony was in the ascendant among boys, what is justified by VIK (28,9±1,7) conditional units, eutony (17,4±1,3) conditional units was noticed among them 2,3 times rarely ($\chi^2=4,9$; $p=0,03$).

Among girls roughly with the same frequency it was observed sympathicotonic as well as eutonic type of VT ($\chi^2=1,50$; $p=0,22$), in case of VIK indexes (29,2±1,0) and (16,1±1,1) conditional units respectively. In rare cases, it was found parasympathicotony in case of VIK indexes (-7,0±2,3) conditional units. Contrary to boys, vegetative balance among girls was characterized by simultaneous activation of sympathetic and parasympathic parts of VNS ($r=0,47$; $p=0,01$ и $r=0,42$; $p=0,03$, respectively).

Level of cardiovascular system adaptation potential is presented in the figure 1.

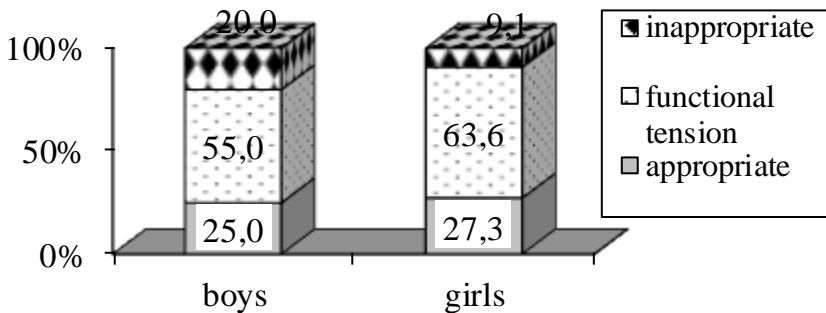


Figure 1 – Distribution frequency of investigated children by the level of adaptation potencies

As seen from presented in bar chart information, appropriate adaptation was observed in a quarter of patients. Number of boys with in appropriate adaptation abilities of cardiovascular system in case of AP ($3,8 \pm 1,15$) has the tendency to grow in comparison with girls ($3,5 \pm 1,4$), ($\chi^2=0,03$; $p=0,85$).

The largest specific gravity in structure of adaptation potency alteration was presented by functional tension, which almost similarly frequently was observed among boys in case of AP ($2,71 \pm 0,06$) as well as girls ($2,28 \pm 0,05$).

Analyzing functional state of cardiovascular system by coefficient of endurance, it was estimated that in all boys this index was increased up to ($22,6 \pm 0,8$) conditional units, and correlated negatively with AP ($r= 0,52$; $p=0,01$), that acknowledged shortage of cardiovascular system training.

Among girls similar alterations were found in 77,3 % of cases with growth of KB up to ($22,2 \pm 0,5$) conditional units.

Complex analysis of physiological options, characterizing homeostatic power of VNS, permitted to estimate that process of vegetative regulation in children of early-school age with posture disorder is performed in condition of imbalance inside VNS. Its attitude is determined by particularity of heart activity vegetative regulation, which has gender differences and reflects on adaptation ability of children organism, what is necessary to take into consideration on occasion of scheduling of motional activity regime in case of physical rehabilitation.

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