

# *Технології навчання фізичної культури*

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## **The Formation of Posture of Pupils as an Actual Problem**

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**Problem.** Posture is formed in the process of growth of the child in a close relationship with the development of other motor functions. The particular importance in the formation of a posture has a spine, because it is the basis of the skeleton on which all parts of the body are formed [1; 4; 6].

The correct posture of the body is relatively easy to keep in motion, but to keep the position of the body during prolonged standing or sitting is extremely difficult even for those who regularly engaged in sports. To maintain the correct posture for a long time one should have not only sufficient culture of muscles, but also enough strength-fitness of the muscles that keep the body in correct posture position [2; 4; 6].

The formation and preservation of skills of correct posture and the prevention and correction of possible violations, constitute one of the major sections of physical education. The main period of the formation of posture accounts for younger school age. At the same time forming a correct posture of schoolchildren should be made throughout the period of studying.

**Purpose of work** to determine the theoretical aspects of the posture of students during physical education.

Tasks:

1. To examine factors that influence the formation of posture.
2. To identify key aspects of correct posture of schoolchildren.

**The main material.** Formation of posture – a difficult act of coordinated dynamic, static tensions and relaxations of neuromuscular system, characterized by processes of excitation and inhibition in the central nervous system [4; 6].

Statics of a person is characterized by a vertical body position in space, which determines its posture. Posture of a man, his usual posture, the location of the trunk and extremities, is typical for each person individually. But posture has properties to change due to various factors [4].

According to experts [4; 6], the formation of posture depends on the anatomical, physiological and social factors. Anatomical factors determine the posture of the child – the shape of the spine and its location on the anterior and medial axis of the body, the severity of physiological bends, the presence of deformations. The appearance of the spine depends on the position of the pelvis and the angle of its inclination. Important anatomical determinant of posture are also ties and muscles of the spine, of upper and lower extremities.

The physiological factors that affect posture, and determine its formation are the state of the individual development of motor skills and static reactions, the balance of the basic nervous processes. Physiological patterns of the bearing characterize it as a dynamic stereotype.

Biomechanical features of the formation of posture were researched by V. O. Kashuba (2002). However, he identified a number of factors that have a significant impact on the posture: socio-economic, heredity, environment, static-dynamic regime of pupils, nutrition, development of musculoskeletal diseases, physical activity, irrational exercise, ergonomic requirements to the baby furniture, ontogenesis of motility in certain age periods, the forces acting on the human body.

Analysis of the literature [3; 4] shows that an imbalance in muscle development is one of the reasons of violations of posture. During the research O. I. Bychuk [2] found that the change of tone of the skeletal muscles that are involved in the formation of posture is a sign of possible violations. To the main muscles

that have a significant impact on posture the author attributes: trapezius, rectifier spine, large gluteal, quadriceps thighs and triceps tibia, and justifies the need for its harmonious development.

Formation of correct posture is primarily based on harmonious development of the muscular system of the body, the ability to coordinate movements and manage them. Physical exercises, that are recommended for the formation of posture, are divided into three groups. The first group includes exercises to strengthen the muscular, the second group – is specific exercises to form a correct posture, the third group – is corrective exercises that are included in the system of exercise for the prevention of defects of posture [3; 5; 6].

As testified the analysis of literature [4; 5], it is appropriate to use exercises that form a correct posture in varieties of complexes. In the process of implementing systems, special attention should be given to methods of teaching exercises. A significant role is also played by the principles and methods of teaching, which activate the learning process.

In the development of complex exercises of building the correct posture it is necessary to consider the following key aspects: the intensity of training impact should be at the level of threshold, compliance with the gradual increase in the intensity and duration of exercises used in the training process, the sequence of exercises-from simple to more complex and combined, and the use of special exercises that promote correct posture of the pupils, the use of exercise most appropriate for this age, systematic effects (at least 2–3 times a week), individual selection of effects and their diverse nature, high emotional intensity training influences the implementation of forming a correct posture of schoolchildren.

Exercises included in the complexes are performed in static and dynamic modes, and muscles work in isometric and auktotonical modes.

During the implementation of didactic aspects of systems it is appropriate to apply the principles of identity, activity, consistency, durability, systematic, using different practices.

In developing systems it is necessary to use exercises that help consolidate the skill of correct posture, relaxation exercises and exercises, that affect the development of strength of different muscle groups. It is recommended to include in complexes not more than 10–13 exercises with obligatory control of posture.

The formation of posture of children should take place in close connection with the formation of motor functions. Several authors [3; 4; 6] emphasize the relationship between posture and general physical development, between the formation of posture and mental, aesthetic and moral upbringing of the child.

The basic principles of posture include: the regularity of exercises on formation and prevention of posture violations; the a variety of physical exercises to maintain mobility in the spine, exercises to unload the spine and strengthening the muscles and ligaments, creating muscular corset; education of the child the reflex of correct posture with its constant consolidation; individualization of preventive measures on the basis of detected abnormalities in the child's physical development, development of physical traits and disorders of the musculoskeletal system; organization of a favorable external environment (right daily routine, and nutrition, clothing, furniture, hygiene, work and leisure); education of the child and his parents the conscious relation to the formation of posture.

Evaluation of the functional state of the musculoskeletal system usually includes: the definition of the spine state, orthopedic spring properties of the foot and muscular corset torso, as well as identifying key physical properties, associated with the level of physical development [1; 2; 4; 6].

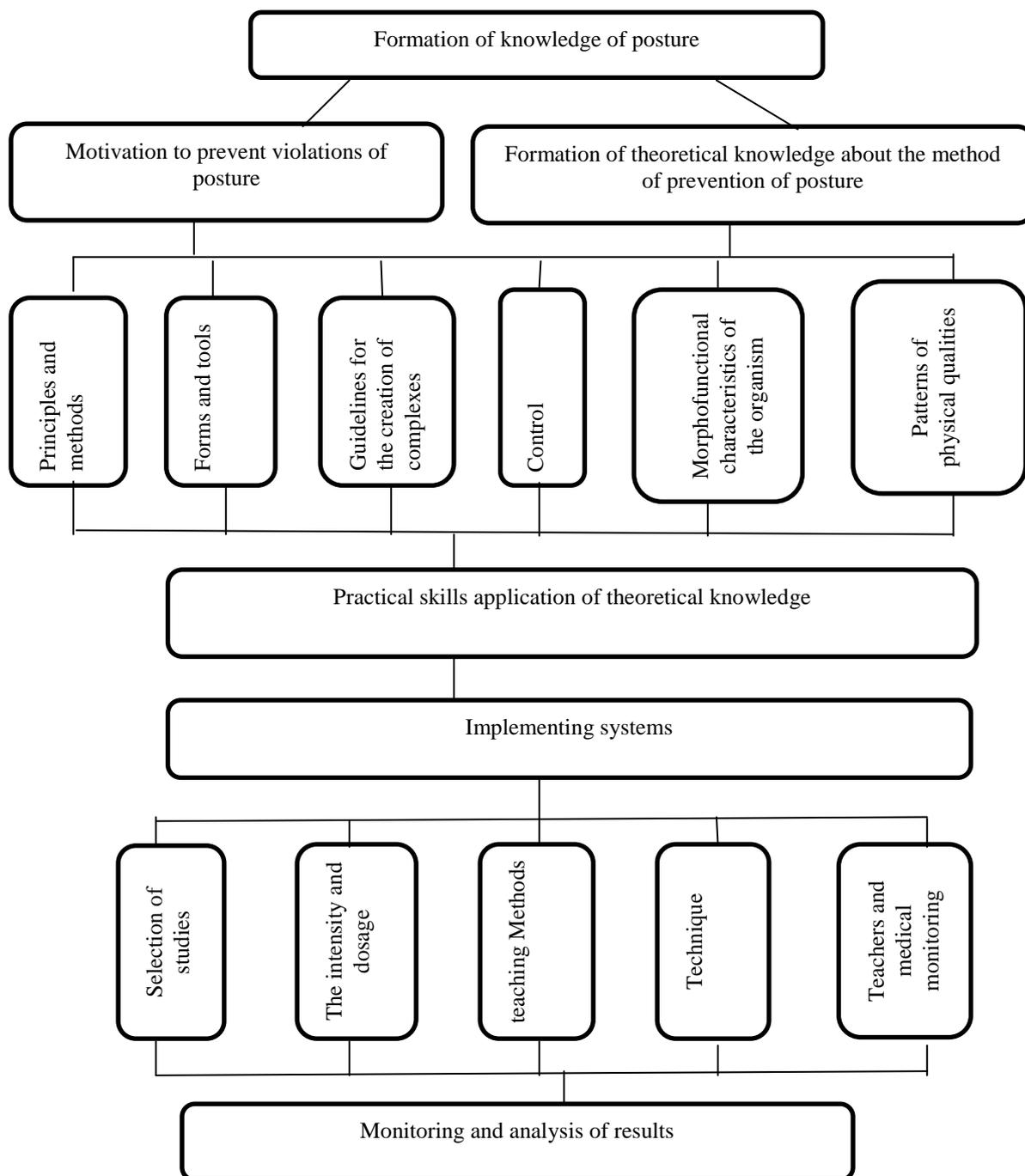
Based on the above material, we have developed a flow diagram of method of forming pupils posture (Fig. 1).

Formation of knowledge about the posture of teachers, parents and students. This should hold thematic discussions, educational classes, meetings with health professionals, scientists who are working on this problem. A possible option is the acquisition of literature, including guidelines, which are available to read a wide range of readers. Measures aimed to create knowledge about posture should be included not only within the classroom team, but across the school. The formation of this knowledge has to be fixed: it is necessary to hold contests, quizzes, and the results should be displayed in the information communications of school.

The formation of motivation to prevent violations of the posture of parents, teachers and children can be successful only on the basis of relevant knowledge about posture and the effects that may cause the disturbances of posture of children. To generate motivation, in our opinion, it is useful viewing video materials about the consequences of violations of posture, thematic discussions, round tables, etc.

The Formation of theoretical knowledge about the method of prevention of carriage contains a number of interconnected blocks: morphofunctional characteristics of the body of the child; patterns of physical qualities; principles and methods of physical education; forms and means of physical education;• recommendations to create complexes; control of obtained knowledge.

To generate this knowledge it is recommended to use methodological literature, which contains information on the data aspects, discussions, round tables, audio and video materials.



**Fig. 1.** Block Diagram of the Method of Forming Posture of Pupils

Practical skills of application of theoretical knowledge involve various aspects of activity for teachers, parents and pupils for each block. Teachers must learn to make a variety of physical exercises, depending on age, gender and indicators of physical development and physical fitness of the child, using a variety of methods and tools. Parents should be familiar with the proposed complexes and clearly understand the mechanism of their action on the child.

Children should also have a clear idea about these systems and be able to implement them.

Implementing systems provides a number of successive stages: selection of place for sports; intensity and dosage; methods of teaching; technique; teachers and medical monitoring.

Selection of studies are usually carried out by a teacher (at school) and parents (at home), taking into account the wishes of children. The intensity and dosage is determined by the teacher, supervised by parents and students, increased (decreased) if necessary together by exchanging information.

Methods of teaching – involve training of children by teachers using general pedagogical principles and familiarize parents with this process.

Technique involves technically correct performance of elements and exercise, which is achieved through the proper use of teaching methods and teaching analysis on the part of teachers and parents.

Teachers and medical monitoring includes the assessment of children during the process of realization of the program of prevention of posture, on the part of parents, teachers and school physician.

Monitoring and analysis of results is usually based on a number of parameters, which are determined individually for each student, but must include information from teachers, parents and school physician.

**Conclusions.** 1. The process of formation of posture of schoolchildren depends on the anatomical, physiological and social factors. Among the factors that have affected the posture are: heredity, environment, static – dynamic regime of pupils, nutrition, development of musculoskeletal diseases, musculoskeletal, motor activity, irrational exercise, ergonomic requirements for children's furniture, ontogenical motility in separate age periods, the forces acting on the human body.

2. Formation of posture is based on two main groups of activities: organization of favorable to the child environmental conditions (conditions of static load) and improve of the physical development of the child through the extensive use of various types of exercise (dynamic load conditions).

3. The main objectives of purposeful formation of correct posture are: limitations of negative factors, the compliance requirements of the harmonious development of skeletal system during exercise; timely prevention of disorders of posture with the specific exercises, accustom children to self-monitoring of posture.

4. Formation of correct posture of schoolchildren should be done in accordance to the developed by us flowcharts, which involves the formation of knowledge about posture, motivating them to prevent posture violations, the theoretical knowledge about prevention methods posture violations, as well as practical skills of the proposed complex exercises and control and analysis of results.

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#### **Анотація**

*Проаналізовано процес формування постави в дітей. Визначено анатомічні та фізіологічні фактори, що впливають на процес формування правильної постави. Вивчено біомеханічні аспекти формування постави та чинники які мають вплив на нього. Проаналізовано основні принципи й засоби формування постави, які сприяють гармонійному розвитку особистості школярів. Вивчено основні положення створення комплексів фізичних вправ, спрямованих на формування правильної постави. Визначено основні принципи формування правильної постави та розроблено блок-схему методики її формування, яка містить такі складові: формування знань про поставу, формування мотивації до профілактики постави, формування теоретичних знань про методику профілактики постави, а також практичні навички реалізації запропонованих комплексів фізичних вправ та контроль й аналіз результатів.*

**Ключові слова:** *правильна постава, школярі, принципи формування постави, фізичні вправи, блок-схема.*

**Алла Алёшина. Формирования осанки школьников как актуальная проблема.** Проанализирован процесс формирования осанки у детей. Определены анатомические и физиологические факторы, которые влияют на процесс формирования правильной осанки. Изучены биомеханические аспекты формирования осанки и факторы, которые имеют влияние на него. Проанализированы основные принципы и средства формирования

осанки, которые содействуют гармоничному развитию личности школьников. Изучены основные положения создания комплексов физических упражнений, направленных на формирование правильной осанки. Определены основные принципы формирования правильной осанки и разработана блок-схема методики ее формирования, которая содержит такие составляющие: формирование знаний об осанке, формирование мотивации к профилактике осанки, формирование теоретических знаний о методике профилактики осанки, а также практических навыках реализации предложенных комплексов физических упражнений и контроле и анализе результатов.

**Ключевые слова:** правильная осанка, школьники, принципы формирования осанки, физические упражнения, блок-схема.

***Alla Aleshina The Formation of Posture of Pupils as an Actual Problem.*** The process of forming of carriage of children is analyzed. Anatomic and physiology factors which influence on the process of forming of correct carriage are determined. The biomechanics aspects of forming of carriage and factors which have an influence on it are studied. Basic principles and facilities of formings of carriage, which assist to harmonious development of personality of schoolboys are analysed. The substantive provisions of creation of complexes of physical exercises directed on forming of correct carriage are studied. The basic principles of forming of correct carriage are determined and the flow-chart of methods of its forming is worked out, which contains such constituents: forming of knowledge about a carriage, forming of motivation to the prophylaxis of carriage, forming of theoretical knowledge about the methods of prophylaxis of carriage, and also practical skills of realization of the offered complexes of physical exercises and control and analysis of results.

**Key words:** correct carriage, schoolboys, principles of forming of carriage, physical exercises, flow-chart.