

Hygiene Requirements for School Furniture

Tukhtarov Bakhrom Eshnazarovich

Head of the Department of General Hygiene and Ecology, At the Samarkand State Medical University

Soatov Mirmukhsin Makhmatmurot ugli

2nd year master's degree resident of Department of Hygiene at the Faculty of Preventive Medicine

Saydaliyeva Mokhira Zayniddin kizi

A student of the 4th stage of the Faculty of Medical Prevention

Article Information

Received: December 18, 2022

Accepted: January 19, 2023

Published: February 20, 2023

Keywords: Sanitation and hygiene, children's health indicators, school furniture, scoliosis, hygienic regulation, general education schools.

ABSTRACT

The conditions of the residential environment where students receive education and training affect the health and physical development of the young organism, as well as the quality of education and the effectiveness of education in general. One of the most important factors affecting a child's physical and mental development and performance is the school environment, and in this respect, school furniture. Nowadays, the increase of diseases among children is mainly observed during the school period. For this reason, implementing hygienic regulation of school furniture as part of the factors that have a negative effect on the child's body in the school environment. One of the main factors contributing to the increase in musculoskeletal diseases in children and causing inconsistency in the child's anthropometric indicators is the hygienic justification of improperly selected school furniture.

Relevance of the problem. We know that for 11 years of a child's life, he spends most of his time in secondary schools. In this case, there is mutual contact between the student and the school furniture. Most of us know very well what adverse changes will occur in the child's body if this contact is not directed in the correct direction from a hygienic point of view. Currently, one of the main issues facing the WHO is protection from the side effects of school equipment, including school furniture, on children's bodies.

Hygienic arrangement of school furniture, provision of high-quality and durable furniture to general education schools, and selection of school furniture together with children and adolescents hygiene specialists, and ensuring that the selected furniture does not have an adverse effect on children's health indicators a number of works are being carried out. Several laws and sanitary rules and norms have been adopted in our republic. Including: Sanitary rules and norms of the Ministry of Health of the Republic of Uzbekistan of the Republican Sanitary Epidemiological Peace and Public Health Service No. 0341-16 and 0145-03 and Law of the Republic of Uzbekistan, dated 23.09.2020 No. LRU-637 the including the educational package.

The last decades are characterized by the unreasonable aggressive influence of the current school social environment on the health of students [1]. In addition, children's health, including physical

inactivity and hypoxia, acute contact infections due to a violation of the diet and quality, as well as factors of a psychological and social nature (reform of school programs, the rate of increase in educational workload), affects the formation of the priority of the child's values [2]. Based on the current data, it can be said that more than 70% of students and 82% of their parents during the period of schooling are concerned about the health of children. [3] One of the main reasons for this is the teachers' instruction to children in the school environment on hygienic health and the correct use of school furniture, correcting the body when sitting on the seat. Due to the lack of information about behavior and parents' lack of knowledge and skills about this information at home, children's height it can be seen that violations are observed.

According to F. F. Erisman, one of the great hygienists of the last century, the height of the school desk seat is 28.5 - 30% of the total length of the student's body [4]. If we apply these indicators, we can witness that they found their confirmation (Table 1).

№	Number of desks	Height indicators of the child (mm)	Height of the front edge of the seat from the floor (mm)
1	1	1100-1190	320
2	2	1200-1290	340
3	3	1300-1390	380
4	4	1400-1490	410
5	5	1500-1590	440
6	6	1600-1690	470

If the school furniture is numbered in the form of 1, 2, 3, 4, 5, 6 and the student's height is calculated in this way, it will be possible to calculate the height of the school chair. As for the description of height indicators in this form, students who differ from each other in terms of length by 100 mm were obtained [3-5]. For example: if the height of students corresponding to table number 4 is 1400 - 1490 mm, then we get the average height of students of this length. That is, if a school chair suitable for a student with a height of 1440 mm is 28.5% of it, the height of a suitable chair should be around 410 mm. $1440 \cdot 0.285 = 410.4$ mm. Based on the account books, we can see that the indicators in the table have been confirmed.

The main school furniture, desks and chairs, are of different sizes depending on the height of the children. Each student is provided with a height-appropriate desk or chair based on their visual and hearing abilities. Pupils are assigned to desks and chairs according to their height (measured with shoes). 6 groups of colored furniture are produced for schoolchildren [5].

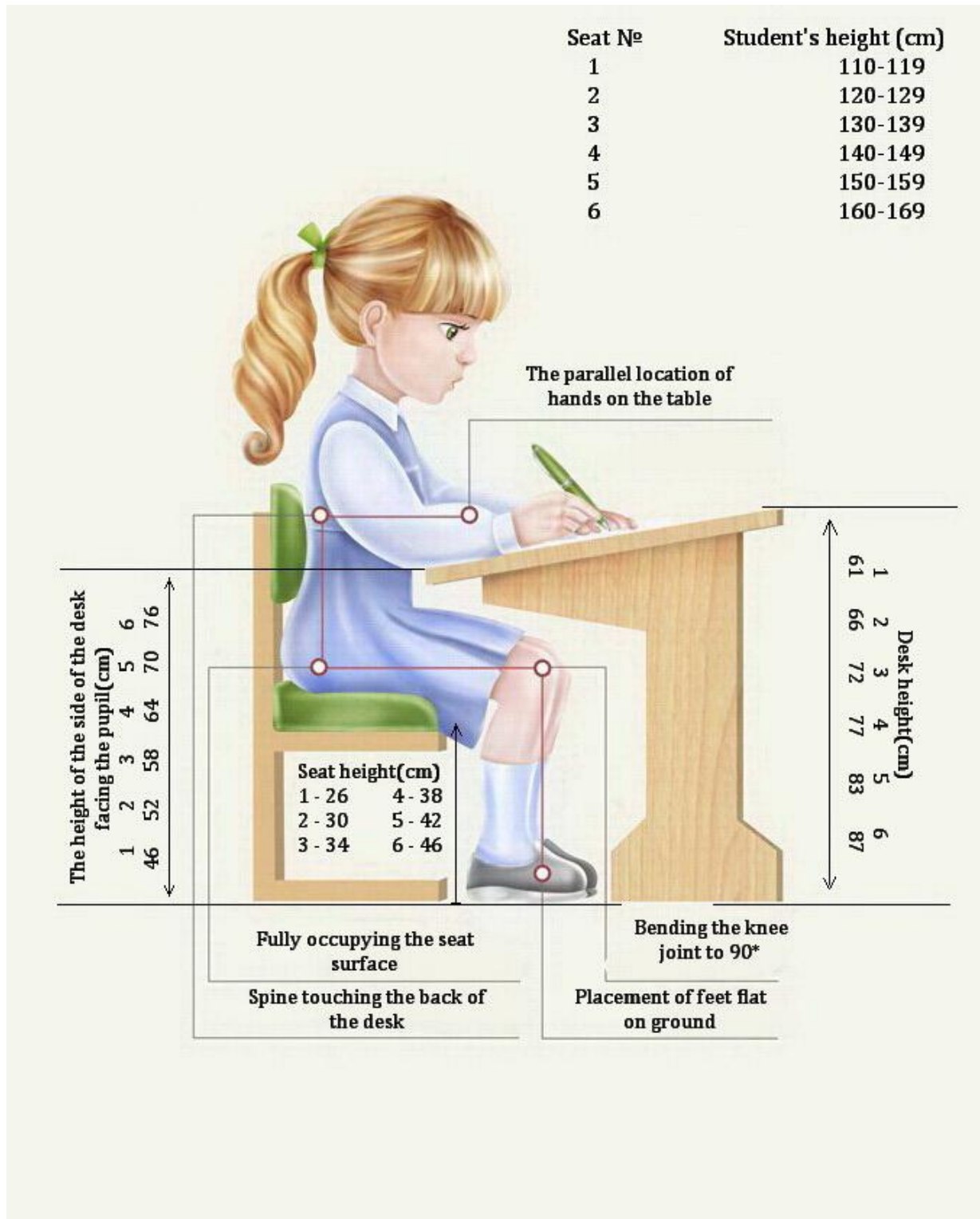
When choosing school furniture, it is appropriate to follow the rules of sanitation and hygiene. The use of school furniture selected based on the rules of sanitation and hygiene is of great importance in ensuring the long-term work of schoolchildren without fatigue, proper physical development, and preventing the deterioration of the height and sight of students. When the child comes to the first grade, he spends a lot of time sitting in the chair, learns to listen to the lesson and pay attention. The teacher should teach elementary school students how to sit correctly on the seat. The correct sitting of a child on school furniture is defined by several aspects:

- ✓ the student sits straight at the desk while keeping his body upright;
- ✓ both shoulders should be at the same height;
- ✓ if the height of the child is too short for the school furniture, a special board should be installed under the feet of a child of this height and his feet should touch this board completely;
- ✓ the hip and pelvis should be in full contact with the surface area of the seat;
- ✓ the child's spine should touch the backrest of the seat;

- ✓ when reading or writing, the child's hands should be on the edge of the table and both eyes should be at the same distance from the book or notebook. The optimal distance is considered to be about 30-35 cm, which should often be equal to the length of each student's wrist [6].

If students choose desks and chairs according to their height and age, and provide them with the right workplace, there will be no negative changes in the health indicators of children. In the picture below, we can see the standard dimensions for the school desk.

1-fig. Standard dimensions of a school desk for a student.



Otherwise, various pathological disorders in them significantly affect the quality of education due to the symptoms of rapid fatigue, inability to concentrate, etc. during classes.

Usually, the height of the school chair should be in proportion to the student's legs, so that during the lesson, the seat should support the pelvis, and the floor should support the student's legs. In this case, the weight of the body, legs, and arms is distributed equally. If the height of the seat is not enough, a sharp angle is formed between the thighs and calves, and the knee area is in a position raised above the seat. As a result, a student sitting in such a position develops symptoms of rapid fatigue, due to the improper distribution of body weight, due to the compression of the blood vessels passing through the pelvic area, the calf muscles of the child can be cramped [4].

Too high a chair also has a negative impact on a child's development. In this case, the pupil's legs do not reach the floor, and the weight of the trunk, legs and arms falls on the lower surface of the thigh and the pelvic area. As a result, the child is forced to move towards the front edge of the seat in order to stretch his legs, rest on the tip of his toes and reach his feet to the floor. This leads to the loss of stability of the body and the occurrence of fatigue [4]. Negative changes in the spine begin to occur as a result of students sitting for months and even years in a seat that does not meet such incorrect hygiene rules and standards.

It has become common for most schoolchildren to be provided with desks and chairs that do not fit their height. This can later lead to the development of pathology of the locomotor system (postural disorders and scoliosis), deformation of the chest, and a decrease in the organs of vision. As a result of repetition of such wrong situations day by day, children lose the sense of keeping their height correctly, and they always choose the wrong position, which has become comfortable and familiar for them.

Conclusion. Teachers, school doctors and child and adolescent hygiene specialists should choose school furniture that conforms to the rules of sanitation and hygiene in order for students to have the correct height and height, and to ensure that schoolchildren are comfortable during lessons, especially when writing and reading. they should observe how they are sitting. Also, they should strictly replace studying with recreation, physical education, games and other recreational activities. The execution of these works must be strictly controlled by the relevant official organizations.

REFERENCES:

1. Иванов В.Д., Вахитов М.Г. Факторы, воздействующие на здоровье учащихся в современных условиях // Физическая культура. Спорт. Туризм. Двигательная рекреация. 2018. Т. 3, №1. С. 70–73.
2. Абубакирова А.В., Скачкова М.А., Плигина Е.В. Скрининговые методики в комплексной оценке состояния здоровья детей и подростков // Врач-аспирант. 2014. №1.2. С. 245–249.
3. Гигиеническое нормирование школьной мебели как составляющая парадигмы профилактики нарушения осанки ребенка. Саргош Оксана Дмитриевна, Четверикова Оксана Петровна, Катрушов Александр Васильевич. Здоровье человека, теория и методика физической культуры и спорта • 2019. №2(13) с92-95.
4. О. В. Флеров. Гигиенические требования к устройству школьной парты. Гигиена и санитария №9 с 33-34
5. Bolalar va o'smirlar gigiyenasi. G. I. Shayxova. Toshkent 2019. 250-bet.
6. Школьная мебель и ее влияние на здоровье детей. Е.В. Пятырова, Е.Е. Ефременко, Е.В. Ковалевская, Т.Н. Рымина. Здоровье. Медицинская экология. Наука 1-2 (41-42) – 2010 с 99.