

## FORMATION OF HYGIENE KNOWLEDGE OF ELEMENTARY SCHOOL PUPILS

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**Annotation:**

**Relevance of the topic.** The formation of hygienic knowledge which are necessary to maintain our own health is an extended period in the life of each pupil at all levels of education. An effectively developed and established system of hygienic knowledge in the organization of education of schoolchildren will maintain a stable level and favorable dynamics of the functional state of the body of pupils, their mental efficiency, will increase the desire to preserve personal health and will become part of the education of any cultural person. **Purpose:** assessment of the level of hygienic knowledge 34 students of the 3rd and 34 grades of secondary school No. 59 in Gomel attending extended-day groups. **Methods:** theoretical analysis and synthesis of data of scientific and methodical literature, questioning, test exercises and statistical methods of processing of materials. **Results:** the results of the questionnaire of pupils on the formation of hygienic knowledge have been determined. Among pupils of 3rd and 4th forms, the "middle" level of knowledge dominates. **Conclusions:** Familiarization of primary school pupils with the basics of their hygienic knowledge is one of the effective ways to involve children in physical exercise, sports, interest in physical improvement. The lesson of physical culture and health, due to its methodological features, cannot make up for the lack of this type of knowledge. Therefore, it is obvious that there is a need to develop additional educational material (methodological manuals, logical tasks on this topic, didactic games), to conduct quizzes, talks, information hours, to select modern, research-containing films and to watch them at optional classes, in extended-day groups, etc.).

**Key words:**

hygienic knowledge, hygiene, pupils, physical culture, healthy lifestyle, health

**Сформованість гігієнічних знань учнів початкової школи**  
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**Актуальність теми.** Формування гігієнічних знань, необхідних для підтримки свого здоров'я – довготривалий період у житті кожного учня на всіх ступенях освіти. Ефективно розроблена і закладена система гігієнічних знань в організації навчання школярів збереже стійкий рівень і сприятливу динаміку функціонального стану організму учнів, їх розумової працездатності, підвищить прагнення до збереження особистого здоров'я та стане частиною освіти будь-якої культурної людини. **Мета:** оцінка рівня сформованості гігієнічних знань 34 учнів 3-х і 34 учнів 4-х класів середньої школи № 59 м. Гомеля, які відвідують групи продовженого дня. **Методи:** теоретичний аналіз та узагальнення даних науково-методичної літератури, анкетування, тестові вправи та статистичні методи обробки матеріалів. **Результати:** визначено результати анкетування учнів на предмет сформованості гігієнічних знань. Серед учнів 3-х і 4-х класів домінує «середній» рівень знань. **Висновки:** ознайомлення учнів початкової школи з основами гігієнічних знань є одним з ефективних способів залучення дітей до фізичних вправ, спорту, формування інтересу до фізичного вдосконалення. Урок з фізичної культури і здоров'я, в силу своїх методичних особливостей, не може заповнити недолік такого виду знань. Тому очевидна необхідність в розробці додаткового навчального матеріалу (методичних посібників, логічних завдань з цієї тематики, дидактичних ігор), проведенні вікторин, бесід, інформаційних годин, підборі сучасних методів, що містять дослідження, фільмів і їх перегляд на факультативних заняттях, у групах продовженого дня тощо).

гігієнічні знання, гігієна, учні, фізична культура, здоровий спосіб життя, здоров'я

**Сформированность гигиенических знаний учащихся начальной школы**  
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**Актуальность темы.** Формирование гигиенических знаний, необходимых для поддержания своего здоровья – протяженный период в жизни каждого учащегося на всех ступенях образования. Эффективно разработанная и заложенная система гигиенических знаний в организации обучения школьников сохранит устойчивый уровень и благоприятную динамику функционального состояния организма учащихся, их умственной работоспособности, повысит стремление к сохранению личного здоровья и станет частью образования любого культурного человека. **Цель:** оценка уровня сформированности гигиенических знаний 34 учащихся 3-х и 34 учащихся 4-х классов средней школы № 59 г. Гомеля, посещающих группы продленного дня. **Методы:** теоретический анализ и обобщение данных научно-методической литературы, анкетирование, тестовые упражнения и статистические методы обработки материалов. **Результаты:** определены результаты анкетирования учащихся на предмет сформированности гигиенических знаний. Среди учащихся 3-х и 4-х классов доминирует «средний» уровень знаний. **Выводы:** ознакомление учащихся начальной школы с основами гигиенических знаний является одним из эффективных способов приобщения детей к физическим упражнениям, спорту, формирования интереса к физическому совершенствованию. Урок по физической культуре и здоровью, в силу своих методических особенностей, не может восполнить недостаток данного вида знаний. Поэтому очевидна необходимость в разработке дополнительного обучающего материала (методических пособий, логических заданий по данной тематике, дидактических игр), проведении викторин, бесед, информационных часов, подборе современных методов, содержащих исследования, фильмов и их просмотр на факультативных занятиях, в группах продленного дня и др.).

гигиенические знания, гигиена, учащиеся, физическая культура, здоровый образ жизни, здоровье

**Problem statement.** The modern system of general secondary education in the field of physical culture is aimed at forming in pupils such knowledge and ideas about physical culture as a part of the general culture of the person, which would contribute to increasing pupils' interest to sports, development of their own physical abilities and, above all, increase the desire to preserve and maintain personal health [2].

Constant changes in the educational process of school education: the use of various electronic means of education, changes in content and the emergence of new educational subjects along with unfavourable indicators of health of schoolchildren require a new understanding of the problem in the field of hygienic knowledge [1].

"Hygienic knowledge," one of the sections of the curriculum of the subject "Physical culture and health," involves familiarizing schoolchildren with a number of questions, necessary for the maintenance

and preservation of health: motor mode of educational and weekend day, importance of physical exercises and mobile games in day mode and their impact on the state of health and physical development, requirements to sports clothes and shoes at classes in different times of the year. This list also includes the rules of formation and preservation of correct posture, value of hardening for health, simplest takes and rules of its carrying out, overcooling of organism and measures of its prevention. Knowledge of the meaning and rules of water procedures, air and solar baths is certainly included in this section. The rules of performing exercise complexes of morning hygienic gymnastics are also to be learned within the framework of the program [6].

Education in hygienic knowledge in the course of education contributes to the formation of an understanding among children of the importance of a healthy lifestyle, the mastering of knowledge, skills, necessary for the independent maintenance of health not only in educational time, but also in out-of-school time.

Hygienic knowledge plays a role in the prevention of diseases and, of course, the observance of personal hygiene and the care of their health [7].

Hygienic knowledge contributes to many major challenges:

- development of attitude to own health and health of others as a value;
- formation of the need for healthy lifestyle, sports and sports activity;
- development of such features as discipline, perseverance, responsibility;
- a harmonious combination of moral, physical and intellectual qualities of the individual;
- versatile and harmonious development of personality [6].

According to N.I. Pyrogov, a great Russian surgeon, "the true progress of science lies in hygiene." He noted that "the future belongs to safety medicine. This science, going hand in hand with statehood, will bring undeniable benefits to humanity. " [15].

An effectively developed and established system of hygienic knowledge in the organization of education of schoolchildren will maintain a stable level and favorable dynamics of the functional state of the pupils' body, their mental efficiency and will become a part of the education of any cultural person [6].

Resolving the contradiction between the high importance of hygiene knowledge and the insufficient level of methodological support for the primary school process is one of the pressing problems of improving the physical culture of the individual of schoolchildren.

**Analysis of scientific research and publications.** The issues of hygienic education are brought to the attention of scientists and specialists of medical and pedagogical spheres of activity. Their research allows the accumulation of new knowledge and experience that enrich the system of values of hygienic knowledge.

Hygienic education, as a medical and pedagogical problem, was considered by Gorbachev E. Yu. According to her point of view, "the formation of positive hygienic behavior of younger schoolchildren can be carried out more effectively if a system of value orientations with regard to health is laid down in the lesson and in out-of-school activities by conducting classes with organization of situational tasks, role games, use of visual material" [3].

A number of authors such as Stepanova M.I., Quinji N.N., Sazanyuk Z.I., Polenova M.A., etc., were engaged in the issues of scientific justification of the necessity and possibility of hygienically rational organization of educational activities in modern secondary school, as well as the search for the main ways of hygienic optimization of education and ways of organizing the educational process in school [8, 9].

The research of Laponov E.D. is of particular interest. She devoted a sufficient amount of time to studying the state of health of modern schoolchildren and hygienic assessment of the impact of education with in-depth study of subjects (on the example of a foreign language) on the functional state of the body of schoolchildren of different sexes [5].

The study of Alexandrova I.E. on hygienic foundations of optimization of educational process in conditions of school digital environment deserves attention. This made it possible to determine the

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dependence of the development of expressed fatigue of pupils on the indicators of educational organization. The author found that lessons in primary school with simultaneous use of two types of electronic tutorials (interactive board, laptop) significantly increase intensification of educational work and are accompanied by more pronounced fatigue of younger schoolchildren than lessons without the use of electronic tutorials [1].

Chernik V.F. in her manual outlined the problems of scientific and hygienic organization of teaching and educational process at school and children's pre-school institution, optimal mode of educational work of children and teenagers, their rational nutrition. It also revealed the issues of hygiene of the educational environment, personal hygiene of children and teenagers, elements of the regime of the day [7].

Foreign authors also dealt with the issue of hygiene education of primary school pupils.

Alyssa Vivas, Bizu Gelaye, Nigusu Aboset, Abera Kumie, Yemane Berhane, and Michelle A. Williamsa conducted a study to assess hygiene knowledge, approaches, and practices among rural school children in Ethiopia. The data consisted of hygiene and hand washing practices, knowledge of sanitation, personal hygiene characteristics, and the presence of gastrointestinal parasitic infection [16].

An extensive study across eleven countries on the usual hygienic behavior of children was conducted by Valerie A. Curtis, Lisa O. Danquah, and Robert V. Aunger. Their studies have been undertaken to develop national programmes to promote the use of hand washing for children at home [11].

Staff of a university in the UK, Anita Eves, Gill Bielby, Bernadette Egan, Margaret Lumers, Monique Raats, Martin Adams, investigated the knowledge and behaviour of schoolchildren in food hygiene and also obstacles to the adoption of proper food hygiene standards [10].

The issue of regular hand hygiene in Peru worried American and Peruvian authors such as William E. Oswald, Gabrielle C. Hunter, Andres G. Lescano, who also conducted a study of families with children on the subject [14].

Information on the state of hygiene, sanitation and water supply in schools in the pan-European region is contained in the publication of German authors Valentina Grossi, Emanuel Klimschak, Andrea Rechenburg, Enkhtsetseg Shinee and Oliver Schmoll [12].

An analysis of literary sources pointed to a significant number of works on the above-mentioned issue. However, there is still a lack of comprehensive research on issues and methods of organizing hygiene education in primary school. There is a lack of data on the impact of hygienic education of younger schoolchildren, on its impact on the formation of positive hygienic behaviour skills and the prevention of children's diseases. Therefore, the question of how to implement and create conditions for hygienic education of younger schoolchildren in the educational process of primary school remains always relevant.

*Research objective:* to estimate the level of knowledge formation about hygienic knowledge of the 3rd and the 4th classes pupils visiting day-care centers in educational institution.

**Material and methods of the research.** *Participants of the research.* The research was conducted on the basis of high school No. 59 in Gomel with participation of 34 pupils of the 3rd classes and 34 pupils of the 4th classes visiting day-care centers.

*Organization of the research.* The organization of the research is presented by carrying out questioning with the above-named pupils. Questions of the test were made according to the material of the Physical Culture and Health program.

The hygienic knowledge test consisted of 8 questions reflecting knowledge of the types of exercises to form proper posture, the meaning and rules of hardening and measures to prevent overcooling of the body, proper breathing during exercise, indication of safe time in the sun, in hot weather and outdoor during the day, selection of suitable clothes and shoes during physical exercise.

The assignments were designed in illustrated form with one or more required answer options selected. The maximum number of points scored for correct answers in the test was 16. The questionnaire fragment is shown in fig. 1.

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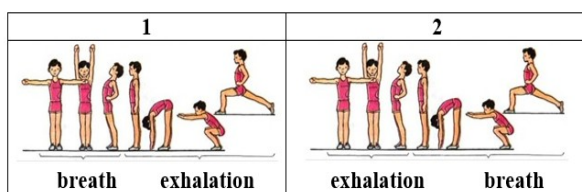
## Hygienic knowledge

### 1. Choose exercises to form the correct posture.

(several possible answers)



### 2. Choose 1 or 2 pictures showing proper breathing while performing exercises.



### 4. What do you need to temper for?

- A. to run faster, jump, etc.;
- B. to strengthen immunity and increase the resistance of the body;
- B. to strengthen muscles;
- C. I do not know.

### 5. What should be the first water temperature when tempering?

- A. 20°C
- B. 16°C
- C. 30 °C
- D. 10°C



### 6. When can you be in the sun in hot weather?

- A. till 11 a.m. and after 3 p.m.;
- B. from 12 p.m. to 3 p.m.;
- C. from 10 a.m. to 1 p.m. day;
- D. I do not know.



### 7. How many hours does a pupil need to spend outdoors during the day?

- A. 1 hour;
- B. 3-3,5 hours;
- C. 2 hours;
- D. I do not know.



Fig. 1. An example of the questionnaire of determination of level formation of the hygienic knowledge

The assessment of pupils' knowledge was distributed on levels: high, above average, average, below average and low according to an integrated 10-mark scale of assessment of pupils' educational achievements. Then the total number of the received answers was counted and the formation levels of knowledge about physical exercises are expressed in percentages.

### Results of the research

The results of the formation of the hygienic knowledge are presented in table 1.

Table 1

### Results of the formation of the hygienic knowledge

Level of sports knowledge	the hygienic knowledge (number of the 3 <sup>rd</sup> classes pupils)	the hygienic knowledge (number of the 4 <sup>th</sup> classes pupils)
High	–	–
Above average	4 (12%)	6 (18%)
Average	24 (70 %)	22 (64%)
Below average	6 (18%)	5 (15%)
Low	–	1 (3%)

It can be seen from the table that students in neither 3<sup>rd</sup> nor 4<sup>th</sup> classes have reached a high level of hygiene knowledge. The "above average" level is for 4 (12%) 3<sup>rd</sup> class pupils and 6 (18%) 4<sup>th</sup> class pupils. The "average" level of knowledge is observed in 24 (70%) pupils in 3<sup>rd</sup> classes and 22 (64%) pupils in 4<sup>th</sup> classes, and "lower than average" in 6 persons (18%) and 5 (15%), respectively. "Low" level of knowledge - only in 1 (3%) pupil of the 4<sup>th</sup> class.

Errors in pupils' responses of the 3<sup>rd</sup> and 4<sup>th</sup> classes are observed in the correct indication of the optimal water temperature during the first hardening procedure, the total amount of time spent in the open air during the day. The question of safe sun time in hot weather caused difficulties to some pupils. Children successfully noted the value of hardening for the body. Most schoolchildren correctly noted exercises to form the correct posture and image the correct breath when performing exercises. However,

there are errors in the selection of suitable shoes for sports.

As a result of the testing, the "average" level of hygienic knowledge among pupils of 3rd and 4th classes prevails.

**Discussion.** A number of factors explains the average results in this type of knowledge. According to the training program in the subject "Physical Culture and Health», only 0.25 hours are allotted on studying of topics with this type of knowledge for all academic year and pupils' acquaintance with this type of knowledge occurs only in the first quarter. Besides, it is recommended to present the material in incontinous stories and conversations (5–10 min.). Moreover, the number of hours, taken away on studying material on this subject, does not increase during academic year [10].

The list of questions on hygiene knowledge to be learned during primary school is quite extensive. The first class deals with such topics as: requirements for clothing in classes in different conditions, the concept of "correct posture" and its importance for health and good study.

In the second class, pupils need to have an understanding of breathing rules during general physical exercises and during water procedures, air and sun baths. Educational material in the 3rd class covers such topics as: requirements for sports clothes and shoes in different periods of the year, overcooling and measures of its prevention, meaning and rules of hardening, influence of physical exercises on mental performance of the pupil. The topics of the program in the 4th class repeat the topics of the 1 and 3 classes, except the topic of overcooling [6].

It is obvious that the acquisition of pupils' knowledge of the announced topics or, at least, studying of their bases for the number of hours provided by the program cannot be fully realized.

**Conclusions.** Summarizing the above, it can be concluded that familiarizing primary school pupils with the basics of physical (including hygienic) knowledge will serve as the basis of a solid foundation for the formation of the physical culture of the child's personality [4].

The lesson on physical culture and health, due to its methodological features, cannot make up for the lack of hygienic knowledge. Here the need to develop additional methodological manuals, electronic applications, select discussions on hygienic topics, conduct talks and quizzes, watch films at optional classes, in extended-day groups, use of didactic games, etc.

In addition, the conduct of sports, health and integrated classes can become very relevant. For example, the study of hygiene knowledge in a foreign language and the improvement of the level of formation and knowledge on the basis of physical education and healthy lifestyle of pupils through the integration of the subjects "English" and "Physical culture and health" [13].

Prospects for further research include integrated classes in extended-day groups and the development of guidance tools, comprehensive programmes to improve pupils' hygiene knowledge.

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