# STUDY ON THE HEALTH OPTIMUM STATE OF HIGH SCHOOL STUDENTS 

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Keywords: motor capacity, morpho-functional indicators, health, high school


#### Abstract

The research presented here is composed of a demonstration organized by the implementation of certain tests and different methods of research aimed at the physical training level in order to ascertain the physical condition of the pupils in the secondary education in order to determine the degree of training students in practicing certain physical exercises.


Introduction: With a well-designed and executed physical education program, with a rigorous choice of methods and means, we can raise to the highest level the child's physical and mental capacity, avoiding the installation of diseases and crystallizing the qualities of a well-developed individual: suppleness, spontaneity, skill, agerimity.Therefore, during this research I have proposed to highlight the well-being effects of physical exercise, dynamic games, applied paths and selected ranks, to provide children with growth and development harmonious (the main tasks of the physical education lesson); allowing for a diverse and simultaneous manifestation of driving habits useful to life, motor skills, and psychic processes. Since the young school-age pupil is active, willing to move, ready to run, jump, climb, play with the rope at any time; teachers have to be the ones who guide them and satisfy them in the most pleasant way the need for movement.

Judiciously selected means, according to the psycho-individual age specifics, hope to be received by children with pleasure, as they train all muscle groups in their execution, contribute to the development of the locomotor system, the respiratory apparatus and the circulatory system; favoring growth and a harmonious development.

Material-method: The experiment was conducted in 2018, in Botosani County, Dorohoi County, in an extracurricular activity, the subjects being pupils of the "Grigore Ghica" National College, in the 9th
grade, and the test applied within the research was carried out for two The students who participated in the research were 56,27 pupils of the " X " class and 29 " Y " class students respectively, aged 14-16 being members of the class IX, at the "Grigore Ghica" National College, in Botosani County.

The test applied in the research was Ruffier, and the assessment took place on a sports field, outside Physical Education and Sports classes, being an extracurricular activity.

High school grade „X"

| Test result table Ruffier, grade IX, average age 15 years |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Nr. | Name | P1 <br> (sleeping <br> pulse ) | P2 <br> (pulse <br> effortlessl ) | P3 <br> (return pulse) | Result <br> calculation <br> index |
| 1. | A. L. | $19 \times 4=76$ | $23 \times 4=92$ | $20 \times 4=80$ | 4.8 |
| 2. | A. V. | $24 \times 4=96$ | $35 \times 4=140$ | $27 \times 4=108$ | 14.4 |
| 3. | A. S.. | $16 \times 4=64$ | $30 \times 4=120$ | $27 \times 4=108$ | 9.2 |
| 4. | A. I. | $20 \times 4=80$ | $27 \times 4=108$ | $19 \times 4=76$ | 6.4 |
| 5. | C. V. | $27 \times 4=108$ | $38 \times 4=152$ | $28 \times 4=112$ | 17.2 |
| 6. | C. C. | $24 \times 4=96$ | $29 \times 4=116$ | $25 \times 4=100$ | 11.2 |
| 7. | G. I. | $31 \times 4=124$ | $38 \times 4=152$ | $27 \times 4=108$ | 18.4 |
| 8. | G. G. | $23 \times 4=92$ | $33 \times 4=132$ | $25 \times 4=100$ | 12.4 |
| 9. | H. A. | $26 \times 4=104$ | $34 \times 4=136$ | $28 \times 4=112$ | 15.2 |
| 10. | H. L. | $32 \times 4=128$ | $42 \times 4=168$ | $33 \times 4=132$ | 22.8 |
| 11. | H. R. | $26 \times 4=104$ | $36 \times 4=144$ | $27 \times 4=108$ | 15.6 |
| 12. | H. S.. | $23 \times 4=92$ | $31 \times 4=124$ | $28 \times 4=112$ | 12.8 |
| 13. | I. C. | $26 \times 4=104$ | $35 \times 4=140$ | $29 \times 4=116$ | 16.0 |
| 14. | I. D. | $21 \times 4=84$ | $41 \times 4=188$ | $30 \times 4=120$ | 19.2 |
| 15. | I. I. | $20 \times 4=80$ | $30 \times 4=120$ | $26 \times 4=104$ | 10.4 |
| 16. | M. A. | $24 \times 4=96$ | $29 \times 4=116$ | $18 \times 4=72$ | 8.4 |


| 17. | M. B. | $30 \times 4=120$ | $40 \times 4=160$ | $32 \times 4=128$ | 20.8 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 18. | M. I. | $21 \times 4=84$ | $30 \times 4=120$ | $24 \times 4=96$ | 10.0 |
| 19. | P. V. | $22 \times 4=88$ | $32 \times 4=128$ | $25 \times 4=100$ | 11.6 |
| 20. | P. L. | $26 \times 4=104$ | $38 \times 4=152$ | $29 \times 4=116$ | 17.2 |
| 21. | S. D. | $26 \times 4=104$ | $40 \times 4=160$ | $30 \times 4=120$ | 18.4 |
| 22. | S. D. | $21 \times 4=84$ | $37 \times 4=148$ | $24 \times 4=96$ | 12.8 |
| 23. | S. C. | $20 \times 4=80$ | $31 \times 4=124$ | $22 \times 4=88$ | 9.2 |
| 24. | Ș. C. | $24 \times 4=96$ | $35 \times 4=140$ | $25 \times 4=100$ | 13.6 |
| 25. | U. R. | $18 \times 4=72$ | $31 \times 4=124$ | $24 \times 4=96$ | 9.2 |
| 26. | U. A. | $19 \times 4=76$ | $29 \times 4=116$ | $21 \times 4=84$ | 7.6 |
| 27. | Z. A. | $24 \times 4=96$ | $37 \times 4=148$ | $26 \times 4=104$ | 14.8 |

(Table no. 1, Ruffier test grade IX "X", average age 15 years)
Following the Ruffier test on the 9th grade and the interpretation of the results, we can see that only one pupil has a good physical condition, seven students have a medium physical condition, nine pupils have a satisfactory physical condition and ten pupils have a condition unsatisfactory physics, out of a total of 27 students. The average of the class is 13.3, which classifies the college of students in a ranking of the physical condition to a satisfactory.

(Chart no. 1, test results ruffier class IX "X")

High school grade IX „Y"

| Nr. | Name | P1 <br> (sleeping <br> pulse) | P2 <br> (pulse <br> effortlessl) | P3 <br> (return <br> pulse) | Result <br> calculation <br> index |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | A. A. | $24 \times 4=96$ | $36 \times 4=144$ | $27 \times 4=108$ | 14.8 |
| 2. | A. A. | $26 \times 4=104$ | $38 \times 4=152$ | $26 \times 4=104$ | 16.0 |
| 3. | A. R. | $19 \times 4=76$ | $29 \times 4=116$ | $22 \times 4=88$ | 8.0 |
| 4. | B. A. | $26 \times 4=104$ | $35 \times 4=140$ | $27 \times 4=108$ | 15.2 |
| 5. | B. M. | $23 \times 4=92$ | $34 \times 4=136$ | $24 \times 4=96$ | 12.4 |
| 6. | C. R. | $21 \times 4=84$ | $32 \times 4=128$ | $21 \times 4=84$ | 9.6 |
| 7. | C. G. | $18 \times 4=72$ | $30 \times 4=120$ | $19 \times 4=76$ | 6.8 |
| 8. | C. B. | $21 \times 4=84$ | $38 \times 4=152$ | $25 \times 4=100$ | 13.6 |
| 9. | C. B. | $25 \times 4=100$ | $33 \times 4=132$ | $27 \times 4=108$ | 14.0 |
| 10. | D. D. | $18 \times 4=72$ | $28 \times 4=112$ | $20 \times 4=80$ | 6.4 |
| 11. | F. B. | $26 \times 4=104$ | $37 \times 4=148$ | $29 \times 4=116$ | 16.8 |
| 12. | F. C. | $21 \times 4=84$ | $31 \times 4=124$ | $24 \times 4=96$ | 10.4 |
| 13. | G. B. | $17 \times 4=68$ | $27 \times 4=108$ | $23 \times 4=92$ | 6.8 |
| 14. | H. M. | $20 \times 4=80$ | $36 \times 4=144$ | $21 \times 4=81$ | 10.8 |
| 15. | I. A. | $27 \times 4=96$ | $39 \times 4=156$ | $28 \times 4=112$ | 16.4 |
| 16. | L. Ş. | $23 \times 4=92$ | $32 \times 4=128$ | $24 \times 4=96$ | 11.6 |
| 17. | L. E. | $23 \times 4=92$ | $30 \times 4=120$ | $25 \times 4=100$ | 11.2 |
| 18. | M. L. | $18 \times 4=72$ | $29 \times 4=116$ | $20 \times 4=80$ | 6.8 |
| 19. | M. V. | $19 \times 4=76$ | $32 \times 4=128$ | $23 \times 4=92$ | 9.6 |
| 20. | M. A. | $25 \times 4=100$ | $36 \times 4=144$ | $28 \times 4=112$ | 15.6 |
| 21. | P. C. | $26 \times 4=104$ | $35 \times 4=140$ | $29 \times 4=116$ | 16.0 |
| 22. | P. F. | $23 \times 4=92$ | $37 \times 4=148$ | $27 \times 4=108$ | 14.8 |
| 23. | P. P. | $21 \times 4=84$ | $33 \times 4=132$ | $26 \times 4=104$ | 12.0 |
| 24. | R. A. | $24 \times 4=96$ | $31 \times 4=124$ | $28 \times 4=112$ | 13.2 |


| 25. | R. M. | $27 \times 4=108$ | $41 \times 4=164$ | $26 \times 4=104$ | 17.6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 26. | S. I. | $19 \times 4=76$ | $32 \times 4=128$ | $23 \times 4=92$ | 9.6 |
| 27. | Ș. R. | $24 \times 5=96$ | $36 \times 4=144$ | $27 \times 4=108$ | 14.8 |
| 28. | T. A. | $20 \times 4=80$ | $29 \times 4=116$ | $22 \times 4=96$ | 9.2 |
| 29. | N. R. | $24 \times 4=96$ | $35 \times 4=140$ | $28 \times 4=112$ | 14.8 |

(Table no. 2, test results Ruffier 9th grade " $Y$ ", average age 15 years)

Following the Ruffier test on the 9th grade and the interpretation of the results, we can see that nine students have an average physical condition, thirteen students have a satisfactory physical condition and seven students have unsatisfactory physical condition, out of a total of 29 students. The average of the class is 12.2 , which classifies the group of students in a ranking of the physical condition to a satisfactory level.

Schedule effort index high school grade IX "

(Chart no. 2, test results ruffier class IX " $\mathrm{Y}^{\prime}$ )

According to the results obtained from the Ruffier test for the physical condition assessment, we can see that the level of pupils of both grades IX, IX and IX in the " Y " is satisfactory, with an average of 13.3 for the 9th grade "X" and 12.2 for the "IX" class respectively, the average of both classes being 12.75.

(Chart no. 4, physical condition difference class IX "X" and class IX "Y")

## Conclusions:

Following investigations, we can deduce that the body of each individual requires a healthy diet for proper functioning and to improve physical exercise capacity in various daily and sports activities. The whole food represents the fuel of the organism, without which the physiological functions would not be carried out in normal parameters. In conclusion we can notice that during the adolescence there are remarkable changes in the physiological, biological, psychological and social level, the period of adolescence in which develops physical maturation and development, which propels the body of the adolescent towards the adult body, both physically and mentally healthy.

Consequently, we can deduce that physical activity has a favorable impact on the development of children, representing a beneficial way for the body, which is in a range of both qualitative and quantitative development, the child being in a behavioral, mental, physical, which will influence his / her lifestyle and habits.

We can conclude that by conducting a regular exercise program, we will achieve an improvement in the state of mind, strengthen the heart and lungs, combat various diseases, and the body will be helped to maintain control over its own weight.

Through a correct exploitation of physical exercise and its multiple forms, it will help combat overweight, sedentarism, and support a harmonious physical development.

Increasing the body's resistance to various factors, maintaining a good health, ensuring a harmonious physical development and preventing deficient attitudes, are only a few objectives of physical education and sport, which, through a correct and serious use, would result in most cases, prophylaxis of physical deficiencies.

We distinguish different factors that lead to the reduction of a person's physical condition. These factors are represented by Stress, Alcohol and Drugs, Water, Food, Routine and Will.

In conclusion, in order to develop the level of physical condition, a regular program should be performed that includes exercise that will help the body gradually increase effort, but this is not possible without adequate nutrition and a healthy lifestyle.

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# STUDIUL PRIVIND STAREA OPTIMĂ DE SĂNĂTATE A ELEVILOR DE LICEU 

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Cuvinte cheie: capacitate motrică, indicatori morfofuncționali, sănătate, liceu

Abstract: Menirea cercetării prezentată de față este compusă dintr-o demonstrație organizată printr-o punere în practică a anumitor teste și diferite metode de cercetare ce vizează nivelul de pregătire fizic, pentru a constata condiția fizică a elevilor din cadrul învățământului liceal, pentru a stabili gradul de pregătire a elevilor în activitatea de practicare a anumitor exerciții fizice.

