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Anatomical-Morphological Features of Selection for Running Types in Children's and Teenagers' Sports School

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Abstract: *The fact that many decisions, decrees and orders are being issued by the head of our state and our government on the development of physical education and sports today serves to further develop the field.*

Keywords: *Athletics, distance, oxygen, marathon, physical education, anatomical-morphological features.*

It is certainly gratifying that many trainers working in the field of athletics are doing things worthy of their reputation in the system of training athletes. However, there are still certain shortcomings in the system of training athletes. Leading scientists have been carrying out a number of works on the organization of training processes in scientific institutions. Including K. on selection of athletes for sports, involvement in training, planning and management of training. T. Shokirjonova, F. A. Kerimov, R. D. Kholmukhammedov, V. N. Nikutishkin, M. N. Umarov, N. T. Tokhtaboev, M. S. Scientific research was carried out by scientists.

But it was found in the research process that little importance was paid to the issues of selection of future athletes for running races. Today, the daily growth of sports results in world arenas is becoming one of the most urgent issues of improving sports training based on the development of new options.

It is of great importance to further develop high spirituality in Uzbekistan, improve the existing education system, strengthen its national foundations, and raise it to a higher level in accordance with the requirements of the time. In this regard, the general national program on personnel training and the state program on the development of school education were also adopted. For example, the transition to independent and mandatory stages of 9-year general secondary and 3-year secondary special vocational education is one of the distinctive features of the national model of personnel training. In this period, in addition to playing an important role in human life, the main processes of physical and mental development begin to manifest, and the period of puberty occurs, and this period serves as the basis of preparation for a big life, work, and family building.

Pupils grow by 11-12 years, on average 52-54 cm for boys, 40-42 cm for girls. The annual growth rate of height tends to decrease as the child gets older. But when it comes to a certain time, growth acceleration occurs. It accelerates before puberty and is called the "puberty jump." This period corresponds to 11-13 years for girls and 13-15 years for boys. In one year, the length of the body can grow by 10 cm. At the age of 18, this period practically stops. [5,6]

From birth and through 9 years, girls grow more slowly than boys, but at the age of 10-11, they begin to catch up with boys in development, and this trend persists until the age of 14-15. At the age of 14-15, a boy significantly surpasses a girl in development. Along with height growth, the

shape of the body and its proportions also change. Up to the age of 9-10, the length of the upper half of the body slightly dominates the length of the lower half, and from the age of 10-11, active growth of the legs is observed.

During the growth and development of children, the functioning of organs and systems improves. Anatomical structures of the brain are formed mainly at the age of 8-9, but the functional development of body parts continues from admission to BO'SM until completion. The increase in the size of the body and the improvement of the locomotor apparatus are closely related to the development of the respiratory and cardiovascular systems.

The process of sexual maturation takes place at the age of BSOM. It lasts for several years: on average, 10-16 years for girls, 11-17 years for boys. Not all children have the same growth patterns. Some children (10-15%) grow and develop faster than most of their peers. About the same number of children fall behind the norm for their age. That is, in some children, the "biological" age may exceed the age of the calendar ("passport") or lag behind. [6]

Biological age is determined by body weight and length, locomotor apparatus (chest circumference, muscle strength, etc.) according to the average indicators of sexual development for this age. If the difference between the child's biological and passport age is around 1.5-2 years, this is the norm, and if the difference exceeds two years or lags behind, it definitely indicates changes in health.

Athletics is one of the most important types of mass sports, and its effects on the body are extremely wide. People of any age can do athletics. Under the influence of Ui, it is possible to develop the functional capabilities, physical qualities, strength, speed, and endurance of the body to a much greater extent. Several types of physical exercises are used in athletics. They include jogging, long jump, pole vault, shot put, and long jump.

By exercise movements are cyclical movements according to the physiological classification of exercise. In such movements, the cycles of movement take the same form, and the first cycle causes the second cycle to occur. In short, in cyclical movements such as walking and running, the cycles of movement are connected to each other. Dynamic work is performed in four different strengths depending on the distance to be covered B.C. Defined by Farfel: short distances /60. 100, 200 m/, hurdle races /100,1 10. 200 m/ with maximum strength. medium distances /400, 800, 1500 m/ with submaximal power, long distances /3000, 5000, 10000 m / with high power and finally extreme long distances /20, 30. 42 km 195 m. hourly running, 20 to 50 km up to sports walking/ with moderate strength. The work of the functional systems of the organism changes in a unique way by crossing the indicated distances.

Changes that occur in the movement apparatus. The work performed during short distances is performed mainly in anaerobic conditions, and the muscles involved in the movement contract at the highest speed. As a result of exercise, the excitability, conduction of excitation, lability /functional mobility/ of the muscles increases, that is, the contraction time of the muscles decreases. In this case, contraction leads to an increase in movement speed. The speed of movement also depends on the type of muscles involved in the work. It is known that muscles have fast-twitch and slow-twitch fibers. Arrow muscles have a lot of fast-twitch fibers. So, the more fast-twitch fibers there are in the leg muscles of runners, the higher the speed of movement. When the best-known runners were examined by the biopsy method, it was determined that 80-85% of the muscle in short-distance runners consists of fast-twitch fibers, and 20-15% of slow-twitch fibers. In marathoners, 85-90% are slow-excited. 10-15% should be fast-twitch fibers.

When traveling long distances. the energy that ensures the performed work is mainly obtained at the expense of oxidation processes, that is, the work is performed in aerobic conditions.

Changes in blood composition. It is known that under the influence of any kind of physical exercise, changes in the morphological composition and physico-chemical properties of blood occur. Such changes mainly depend on the distance traveled and the power of work. / Table I/, In the tests, the results obtained during running show an increase in the number of elements of the form of blood, an increase in the amount of hemoglobin, but not a change in the blood reaction, an increase in the viscosity of the blood, etc. For example, an increase in the amount of lactic acid in the blood, a decrease in glucose, etc. However, the extent of these changes depends on the duration and power of the work it is not without benefit to remind again and again that it depends. [5,9]

Table 1.1. Changes in the number of erythrocytes, leukocytes and hemoglobin amount of running different distances. Yu.M. According to Tsigankova.

Distance	Erythrocytes in 1mm blood	Гемоглабин Микдори	1 mm of leukoids in the blood
Short	4 760 000	88%	9 340
Medium	4 980 000	92 %	9 340
Long	4 890 000	89 %	10 000
too far	4 860 000	83 %	22 000

The evidence presented in the table shows that the 1st neutrophilic phase of myogenic leukocytosis occurs when traveling long distances, especially over long distances, that is, the number of leukocytes in 1 mm of blood increases by 3-4 times compared to the resting state.

When sprinting over short distances: intense formation of lactic acid occurs in muscle tissue, and its amount increases to 130-200 mg%. However, the norm is 10 mg%.

During medium and long distances, the amount of lactic acid in the blood reaches 200-250 mg%. This process leads to a decrease in blood pH, a shift of the blood reaction to an acidic side. In sprinters and middle-distance runners, the active reserve of the blood decreases.

During long-distance running, for example, marathon running, the blood content is significantly reduced compared to the norm, i.e. a decrease of 40-60 mg%, while the norm is 80-120 mg%.

Running in high-temperature conditions increases the physical and chemical properties of blood, i.e. its viscosity, causes the blood to darken, blood coagulation accelerates.

An important role is played in improving the work of blood circulation organs - heart and blood vessels when athletes are engaged in running. It was found that the number of contractions of the heart in a minute is up to 50 times in the resting state of physically well-trained individuals who run especially long and very long distances, up to 56 times in runners of medium distances, and up to 63 times in runners of short distances. In some athletes who run very long distances, the number of contractions of the heart in one minute can fluctuate 32-36 times. [5,6,8]

As a result of running, the reduction in the number of heart contractions per unit of time is due to the development of the heart muscle, its volume increase, and the systolic blood volume increase. Long-distance runners - stayers have an average heart size of 970 cm, middle-distance runners - 1002 cm. The systolic volume of blood is 70-80 ml. will be equal to

The systolic volume of blood in middle and long-distance running is 160-190 ml. up to 150-170 ml when running short distances. increases to In runners, arterial blood pressure after reaching the finish line is equal to 160-200 mm Hg. Diastolic pressure often decreases during long and extreme long-distance running.

Changes in the function of the respiratory organs vary depending on the distance traveled. It

should be said that the living capacity of the lungs in runners is 5.5 l. from 5.8 l. up to 6 l in highly qualified runners. goes up to

Lung ventilation during short-distance running is 60-80 l/min in the first minutes. Lung ventilation reaches 140-160 l/min during middle-distance running, breathing rate is 40-60 times per minute for long distances, lung ventilation is 160-180 l/min. Oxygen demand for running short distances is 12-20 l. around, and 5-10% of it is absorbed during running. During middle-distance running, the oxygen demand is 30-50 l, of which 10-40% is absorbed during running. /1. 2 - table /.

For very long distances, for example, in marathon running, the oxygen demand is 500 l. and almost all of it is absorbed during running.

Oxygen debt is 15 l in short-distance running, 20 l in middle-distance running. 10-15 liters per day for long distance running and up to 5 liters per day for ultra-long distance running.

1.2 – table. Changes in oxygen uptake and oxygen debt depending on running speed and distance covered (according to N. K. Svetlichnaya).

Distance /m/	Average speed /m/sec/	Oxygen demand l	Oxygen absorption l %	Oxygen debt l %
200	8. 9	11.6	1. 2 10.3	10.4 89.7
300	8. 0	13. 9	2. 0 14.4	11.9 35.6
400	8. 0	16. 6	3. 0 18.0	13.6 86.0
400	8.34	19. 0	3.0 15.8	16.0 84.2
400	8. 89	23. 5	3.0 12.7	20.5 87.3

Features of energy exchange. Energy supply of running is its basis. The athlete's energy-related capabilities are not determined by the amount of energy reserves in him, but by his ability to mobilize energy in the necessary conditions.

Energy consumption fluctuates in a wide range depending on the athlete's physical fitness. Compared to men, energy consumption is 15-20% less in women.

1. The amount of energy spent per m distance is at the highest level during short distance running. The total amount of energy expended during running increases as the distance increases.

From theoretical concepts and competition experiences, it can be concluded that the energy supply of the best runner is approximately in proportion to the tune. When sprinters run 100 m, the main energy source is creatine phosphate, and when they run 400 m, the work is done at the expense of glycolytic energy.

In middle-distance runners, 60-80% of energy is due to the glycolytic process and 40-20%) is done due to aerobic energy production. In marathoners, 10% of the necessary energy is obtained by glycolytic means and 90% by aerobic means. [3.5]

A change in body temperature, similar to other types of dynamic work, is observed with a strong generation of heat. Especially when the external temperature is high and during long runs: the athlete's body temperature can rise by 2°C even more. Such an increase in body temperature compared to the norm, that is, a violation of thermoregulation, with a negative effect on the work of physiological systems, leads to a decrease in the athlete's ability to work.

Middle distance running. 800 and 500 m. Long distance running is actually middle distance, and the "long sprint" is sub-maximal exercise by all its characteristics and physiological definition. Similar to sprinting, performance is related to energy production, but here the anaerobic mechanism of energy production gradually begins to give way to anaerobic energy production.

D. According to J. Pulso, Patrick Milroy (2011), MKI in 400m runners is 4.9 l/min or 67 ml/min/kg. In 800 and 1500 m runners, these numbers are 5.4 and 7.5 times.

Thus, during middle-distance running, the muscles work as much as possible in conditions where the maximum oxygen debt is accumulated. In this case, the oxygen debt is 24-26 l. , from 65 to 84 percent of which is the lactate fraction, N.K. Svetlichnaya, this is due to the accumulation of lactic acid in the body in a very large amount - 250-300 mg% and more. In this case, the blood reaction changes sharply to the acidic side, pH 7.0 and below. Acidic coma may develop in such a decrease in blood pH in people who are not physically fit.

References

1. Ibragimov A. BOSHLANG'ICH SINF O'QUVCHILARINI JISMONIY RIVOJLANTIRISH ASOSLARI //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2021. – Т. 8. – №. 8.
2. Karomatovich I. A. PSYCHOLOGICAL AND PEDAGOGICAL SUPPORT OF YOUNG TEAM ATHLETES //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 02. – С. 1011-1016.
3. Karomatovich I. A. Methods of Teaching Children for Movement Activities in The Process of Physical Education //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 1. – С. 242-249.
4. Ibragimov A. K. Developing The Professional Competence Of Teachers As A Pedagogical Problem //E-Conference Globe. – 2021. – С. 333-338.
5. Qizi A. S. S. Teach handball to 19-20 year Olds using action games. – 2022.
6. Abduyeva S. AGE-SPECIFIC DYNAMICS OF ATTACK AND DEFENSE RESPONSE SPEED IN HANDBALL PLAYERS //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2021. – Т. 7. – №. 7.
7. Abduyeva S. THE ROLE OF HEALTHY MOTHERS AND FAMILIES IN THE DEVELOPMENT OF WOMEN'S SPORTS //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2021. – Т. 8. – №. 8.
8. Abduyeva S. THE ROLE AND IMPORTANCE OF PHYSICAL EDUCATION IN THE FAMILY //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2021. – Т. 8. – №. 8.
9. Ilkhomovich M. F. Methods of Developing Strength of 12-15 Year Old Football Players //European Journal of Innovation in Nonformal Education. – 2022. – Т. 2. – №. 1. – С. 273-276.
10. Ilxomovich M. F. FEATURES OF THE EDUCATIONAL AND TRAINING PROCESS OF YOUNG FOOTBALL PLAYERS AT THE STAGE OF INITIAL TRAINING //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 02. – С. 1314-1320.
11. Ilxomovich M. F. YOSH FUTBOLCHILARNI TEXNIK VA TAKTIK TAYYORGARLIGINI OSHIRISH SAMARADORLIGI //INTEGRATION OF SCIENCE, EDUCATION AND PRACTICE. SCIENTIFIC-METHODICAL JOURNAL. – 2022. – Т. 3. – №. 6. – С. 97-102.
12. Ilxomovich M. F. Methodological Basis for The Formation of Football Training //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 1. – С. 355-363.
13. Sattorov A. E., Saidov G. K. IMPROVING THE TRAINING ELEMENTS IN PRIMARY TRAINING GROUPS OF SPORTS SCHOOLS //Web of Scientist: International Scientific Research Journal. – 2021. – Т. 2. – №. 05. – С. 737-746.

14. Хайдаров У. Р. ЭКСПЕРИМЕНТАЛЬНОЕ ОБОСНОВАНИЕ МЕТОДИКИ РАЗВИТИЯ СКОРОСТНЫХ СПОСОБНОСТЕЙ СПРИНТЕРОВ УЧЕБНО-ТРЕНИРОВОЧНОЙ ГРУППЫ: 10.53885/edinres. 2021.59. 33.029 Хайдаров Улугбек Рустамович Магистрант Бухарского государственного университета Научный руководитель: Кадиров Рашид Хамидович Профессор кафедры Теории и методики физической культурык. п. н. Бухарского государственного университета //Научно-практическая конференция. – 2021.
15. Shokhrux U. et al. WAYS TO INCREASE THE EFFECTIVENESS OF PRE-COMPETITION PSYCHOLOGICAL TRAINING OF FREESTYLE WRESTLERS //INTEGRATION OF SCIENCE, EDUCATION AND PRACTICE. SCIENTIFIC-METHODICAL JOURNAL. – 2022. – Т. 3. – №. 6. – С. 68-73.
16. Nematovich K. S. Ways to Hold National Action Games with Kindergarten Children. – 2022.
17. Kadirov S. Sports, physical, physical education as necessary elements of sports culture //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2020. – Т. 2. – №. 2.
18. Kadirov S. THE POSSIBILITIES OF PHYSICAL CULTURE IN THE MODERN YOUTH INTERNET COMMUNITY //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2020. – Т. 2. – №. 2.
19. Sabirova Nasiba Rasulovna. THE MECHANISM OF IMPROVING THE PRIMARY TRAINING METHODS OF BASKETBALL SPORTS, TRAINING SKILLED BASKETBALL PLAYERS. Web of Scientist: International Scientific Research Journal . DOI: https://doi.org/10.17605/OSF.IO/YMRTH Published: Feb 28, 2022
20. SN Rasulovna. TOOLS FOR DEVELOPING SPECIAL PHYSICAL TRAINING AND PHYSICAL QUALITIES IN SPORTS GAMES. E-Conference Globe, 2021
21. Rasulovna S. N. STAGES OF MODELING AND AGE INDICATORS IN THE OPTIMIZATION OF THE PROCESS OF SPORTS ACTIVITIES //Web of Scientist: International Scientific Research Journal. – 2021. – Т. 2. – №. 05. – С. 75-86
22. The Importance of Three-Stage Model in Developing the Functional Status of Athletes. SN Rasulovna - International Journal on Economics, Finance and …, 2021
23. FS Fazliddinov -Optimization of training workloads for primary group players 1025-1030 2022 Science and Education
24. F Fazliddinov - TECHNICAL AND TACTICAL TRAINING OF FOOTBALL PLAYERS Buxoro davlat universitetining Pedagogika instituti …, 2021
25. FS Fazliddinov - PSYCHOLOGICAL TRAINING OF ATHLETES E-Conference Globe, 2021
26. F Fazliddinov -Types of competition loads in football Buxoro davlat universitetining Pedagogika instituti …, 2021
27. Abdullaev M. J. Methodology of application games in the training of young athletes //European Journal of Research and Reflection in Educational Sciences. – 2020. – Т. 8. – №. 11.
28. Samijonovich, T. S., AbdullaevMolecular & Clinical Medicine, 7(6), 2907-2914.
29. Abdullayev, M. J., Berdiyev, O. I., & Omonova, N. R. (2021). Methodology Of Organization Of" Physical Education And Sports" Lessons In Higher Educational Institutions. The

American journal of social science and education innovations (TAJSSEI) SJIF-5.857 DOI-10.37547/TAJSSEI, 3(02), 312-320.

30. Абдуллаев, М. Ж. (2018). Swot-анализ в структуре информационных технологий физического воспитания. In Система менеджмента качества в вузе: здоровье, образованность, конкурентоспособность. Сб. науч. тр. VII Междунар. науч.-практ. конф (pp. 14-18).
31. Mahasti Djurayeva Zokir qizi. Rol fizkultury v formirovanii zdorovyx privychek u molodyx lyudey. Academy. № 10. 14.10.2020 s 47-49.
32. Djuraeva.M.Z "Psixologicheskaya sushchnost vospitaniya sportsmenov". Psychology № 1.2021 pp. 51-55.
33. Abdullaev, M. J. (2020). Characteristicsages. European Journal of Research and Reflection in Educational Sciences Vol, 8(11).
34. DZ Safarov, BX Xamroev, MM Mavlonov. Ispolzovanie pedagogicheskix texnologiy v protsesse obucheniya gimnastike - Voprosы nauki i obrazovaniya № 14 (139), 2021
35. Xamroyev Behruz Xalimovich. DEVELOPING STUDENT'S READINESS TO USE ADAPTIVE PHYSICAL CULTURE. International Journal of Advanced Research in Management and Social Sciences. Vol. 11 | No. 2 | February 2022