



## STATE OF STUDY OF THE PROBLEM OF TRAINING PARA-CYCLISTS AND ITS METHODOLOGICAL BASIS

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### Abstract

The article provides an in-depth analysis of the state of study of the problem of para-cycling athlete training, its relevance, and effective methodological foundations. At a time when the importance of cycling among Paralympic sports is increasing, the issues of physical, psychological, and technical training of athletes with disabilities require special attention. In this topic, methodological approaches used in the training of para-cycling athletes, methods developed on the basis of scientific research, and their effectiveness in practice were studied. The process of preparing athletes for competitions based on international experience, advanced technologies, and modern training programs will also be analyzed. The work also examines existing problems, ways to eliminate them, and future proposals. The research results will serve the development of scientific and practical recommendations for the development of para-cycling and the training of athletes at a high level.

**Keywords:** Paracyclists, methodological foundations, annual training period, competition, load, optimal distribution, training, technical training, tactical training.

### Introduction

The insufficient study of problems related to the optimal distribution of training and competitive loads during the annual training period of para-cycling athletes in the world requires the use of training load methodology at various stages of this direction. Of particular interest is the distribution of various exercises, as well as the optimal amplitude of the volume and parameters of loads, depending on the training of para-cycling athletes during the preparatory, competitive, and transitional periods, combined precisely with competitions. Due to the

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insufficient study of changes in the methodology of training loads at the stage of initial specialization of para-cycling athletes, a more detailed review remains one of the urgent tasks.

Currently, prestigious para-cycling competitions are being held in the world sports arena, and their high-level organization testifies to the growing interest of the world community in this sport. A number of studies are being conducted on the preparation of para-cycling athletes, the optimization of their training loads, their differentiation according to the level of importance, the development of selection norms, and the use of active recovery means in the training process of para-cycling athletes.

Also, scientific and practical research is being conducted to determine the indicators of the relationship between the physical work capacity of para-cycling athletes and the existing physical fitness of a para-athlete, depending on the type of sport.

As in any sport, technique in para-cycling is developing and improving. Therefore, when starting training, it is necessary to immediately master the perfect technique. The scientific basis helps to understand the laws of development of a particular technical movement, and at the same time to include it in the technical reserve of the racer. Over time, the meaning of the concept of technology has historically changed in accordance with the development of production. The previously existing meaning became more complex and acquired different meanings in various spheres of human activity, including sports.

**Purpose of the study:**

Development of proposals and recommendations on the state of study of the problem of training para-cycling athletes and its methodological foundations.

**Research objectives:**

Development of features for the development of technical training of para-cycling athletes.

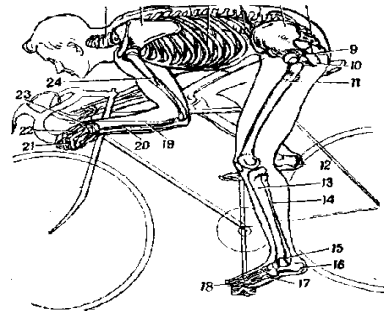
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### Research results and their discussion:

According to experts in the field, sports technique is a set of knowledge and skills necessary for an athlete to effectively apply their physical and mental qualities to achieve specific results in the chosen sport. Para-cycling technique refers to the set of methods for rational cycling. Modern achievements in this sport largely depend on the racer's knowledge of various technical techniques and their effective application in various competitive situations. It is impossible to achieve the pinnacle of mastery without mastering all technical techniques. It was emphasized that technical skill not only allows a cyclist to demonstrate high physical performance with the best results, but also demonstrates the will to show these results.

In the scientific and practical research of E.A. Sukhachev and V.N. Konovalov, it was noted that for the successful mastery of technique, the athlete's understanding of specific tasks and the ability to constantly monitor them are of great importance. Self-control should be reinforced by recording the characteristics of the movements performed during the lesson, by objective control data of the execution of movements. In this case, filming and recording training sessions will be very helpful. To master the reserve of technical techniques and successfully improve mastery, it is necessary to constantly study the theoretical foundations of performing technical techniques. They emphasized that the improvement of technique, in addition to increasing the level of general and special physical training, requires knowledge of the basic laws of mechanics and aerodynamics, on which the cyclist's movements are based.

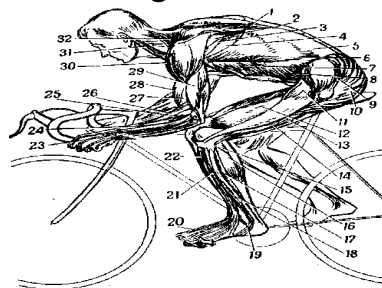
In the scientific research of A.S. Emelyanova, the greatest importance in para-cycling is attached to the racer's sitting in the saddle - it is the main position in which any technical technique is performed by the cyclist, determined by the specific conditions of the competition. There are two types of cycling that differ from each other in their composition of movement: riding while sitting in the saddle and standing on pedals. Depending on which part of the wheel the cyclist holds, sitting in a low, medium, and high position in the saddle is divided into types (see picture 1.1).



**Picture 1.1 Condition of the racer's skeletal bones while sitting in a low position:**

*Note: 1 - cervical vertebra; 2 - shovel; 3 - thoracic vertebra; 4 - ribs; 5-false ribs; 6 - lumbar vertebra; 7 - rib-abdominal bone; 8 - sacrum; 9 - joint connecting the pelvic and femoral bones; 10 - sacral protuberance; 11 - femur; 12 - knee joint; 13 - tibia; 14 - fibula; 15 - joint connecting the tibia with the calcaneus; 16 - calcaneal tuberosity; 17 - metatarsal bones; 18 - phalanges (foot); 19 - radius; 20 - ulna; 21 - finger bones (hand); 22 - dorsal metacarpal bone; 23 - forearm; 24 - humerus.*

According to L.D. Fomina, in most cases, a significant curvature of the spine in the chest or lumbar region can be considered a characteristic feature of a cyclist's body structure. The development of skeletal muscles can change a person's posture and, accordingly, the cyclist's style of riding. When sitting in a low position, the head is slightly raised, and the racer secretly observes the road from underground. The arm muscles are tense. In this case, the cyclist's breathing does not become difficult, since the internal organs press downward onto the abdominal muscles, thereby facilitating chest movement (see picture 1.2).



**Picture 1.2. General condition of the racer's muscles while sitting in a low position:**



Note: 1-*trapezius muscle*; 2 – *abdominal muscles*; 3 - *small circular muscle*; 4 - *large circular muscle*; 5 - *sacrocartilaginous muscle*; 6 - *broad posterior muscle*; 7 - *anterior tensor muscle*; 8 - *external oblique abdominal muscle*; 9 - *middle thigh muscle*; 10 - *greater femoral muscle*; 11 - *tensor of the broad muscular layer of the thigh*; 12 - *quadriceps femoris muscle*; 13 - *biceps femoris muscle*; 14 - *semitendinosus muscle*; 15 - *plantar muscle*; 16 - *calf muscle*; 17 - *thyroid muscle*; 18 - *long calf muscle*; 19 - *short calf muscle*; 20-*long controller of the thumb*; 21 - *long finger regulator*; 22 - *anterior tibial muscle*; 25 - *wrist length regulator*; 26 - *brachioradialis muscle*; 27 - *shoulder muscle*; 28 - *biceps brachii muscle*; 29 - *triceps brachii muscle*; 30 - *deltoid muscle*; 31 - *sternocleidomastoid muscle*; 32 - *trapezius muscle*.

When sitting in a low position, the elbows should not be tightly pressed against the body, as this can make breathing difficult. Sitting in a low position is used when moving against the wind, when increasing long speeds. When a racer sits in a middle position, their body bends less, and their arms are held more evenly. In our opinion, the saddle should be properly mounted not only in height, but also in length so that the ride is not too "short" and "long." Many coaches consider the correct position of the saddle to be the position of the external tibial muscle above the axis of the pedal, which is in the most forward position.

## Conclusion

In conclusion, besides the skill of moving close to the rear wheel of the front rider on a bicycle, it is necessary to learn to choose a place behind the front rider according to the direction of the wind. If the wind is opposite, it is convenient to take a position right behind the racer in front. If there is a side wind, take a place on the right if there is a left wind, and if there is a right wind, take a place on the left. Depending on the direction of the wind, the wheel of a cyclist riding behind can reach the rear wheel of a cyclist riding ahead, even reaching the middle of the carriage.

When passing through the climbing area, the pedaling style changes depending on the length and slope of this area. On the slope, the cyclist sits firmly in the saddle. The shoulder girdle and torso muscles are relaxed, which helps the leg

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muscles work. Leg muscles work as follows: one leg presses the pedal, while the other strongly pulls the pedal upward, which was revealed during our analysis.

## REFERENCES

1. Баряев, А.А. Особенности разработки модельных характеристик уровня подготовленности в паралимпийском спорте / А.А. Баряев, Э.А. Киселева // *Адаптивная физическая культура*. – 2020. – № 3. – С. 44–46.
2. Баряев, А.А. Оценка адаптации паралимпийцев к тренировочной нагрузке методом вариационной пульсометрии / А.А. Баряев, В.Д. Эмельянов, А.В. Иванов // *Адаптивная физическая культура*. – 2011. – № 2. – С. 14–15.
3. Баряев, А.А. Реабилитационно-педагогический потенциал включения лиц с нарушением зрения в физкультурно-спортивную деятельность / А.А. Баряев // *Казанский педагогический журнал*. – 2015. – № 5. – С. 184–188.
4. Баряев, А.А. Совершенствование комплексного контроля подготовленности спортсменов / С.А. Воробьев, А.А. Баряев // *Адаптивная физическая культура*. – 2018. – № 3. – С. 4–5.
5. Верхошанский Ю.В. Теория и методология спортивной подготовки: блоковая система тренировки спортсменов высокого класса // *Theory and Methodology of Sports Training: Block System of Training of Yelite Athletes*. Теория и практика физической культуры, 4, 2005. - P.2-14.