



## ABU-ALI IBN SINA ON THE BENEFIT OF PHYSICAL EXERCISE IN THE LIFE OF SOCIETY

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**Abstract:** The article is devoted to the contribution of the famous philosopher, thinker, physician and naturalist Abu Ali Hussein ibn Abdullah ibn Sina (Europeanized name Avicenna) to the theory of physical education. The article, based on the analysis of the fundamental work "Canon of Medical Science", shows Ibn Sina's approach to the classification of physical exercises, which act in his theoretical legacy as a means of diagnosing a person's physical condition, a means of developing his physical strength, preserving and improving health, as well as a means of self-regulation while satisfying human vital needs. The authors of the article propose a system of criteria for the classification of physical exercises, highlighted by Ibn Sina. According to the criterion "the amount of physical activity", a block is allocated, which includes "small and large", "strong and weak", "sluggish" physical exercises. According to the criterion "development of certain physical qualities", "fast", "smooth" and "light" physical exercises are distinguished, which correspond to the modern group of speed and strength exercises. Anatomically, there are "chest exercises", "exercises for the digestive organs", "exercises of vision" and "exercises of hearing", "exercises for teeth and ears". The characteristic of the types of physical activity, which is the essence of each typological group of physical exercises, is given. The article presents the requirements that Ibn Sina puts forward for the organization of physical exercises, their intensity, time, age and physical condition of a person. It is concluded that the classification of Ibn Sina's system of physical exercises is internally interfaced with modern classifications of physical exercises, as well as with his own classification and nomenclature of diseases, the description of each of which is accompanied by a recommendation on their use or refusal to exercise.

**Keywords:** Arabic culture; physical culture; Ibn Sina; physical exercises; classification; classification criterion; human physical potential; physical health

### Introduction

The interest in the problems related to the study of the history and current state of science and culture of Asian countries reflects the current trends in the development of cooperation in the Asian civilizational frontier. In this context, attention to the fundamentally significant heritage of world-famous representatives is natural and understandable

The cultural heritage of the greatest thinker of the Middle Ages, naturalist, physician, poet and statesman Abu Ali Hussein ibn Abdullah ibn Sina has always attracted the attention of domestic and foreign scientists. The object of special attention was the philosophical, socio-political, medical, philological, scientific, pedagogical views of the scientist. Ibn Sina's works were studied at the dissertation level. Dissertation research is devoted to the analysis of philosophical, logical, pedagogical and natural science views of the thinker. A special place in this series is occupied by studies devoted to the evaluation of Ibn Sina's works in the countries of the Arab



East and France, which indicates his influence on the formation and development of knowledge within the framework of various scientific approaches and traditions.

In the European tradition, the name of Ibn Sina was Latinized, he is known in the West as Avicenna (Avicenna)<sup>1</sup>. The European scientific tradition honors Ibn Sina as a skilled physician, whose medical knowledge was ahead of time and left a significant mark on world medical practice. Research shows that Ibn Sina's medical concept is a kind of projection of his philosophical views. The issues of the relationship between soul and body, the solution of which to a certain extent was unconventional for the system of religious beliefs of Islam, were fundamental and became the reason for accusing the scientist of heresy. The meaning of the discrepancies was Ibn Sina's assumption that the intellectual life of a person is not in the soul, but in the brain of a person who directs the body.

The problems of the physical condition of a person are reflected in the main work of Ibn Sina – "The Canon of Medical Science" (المانون في الطب), written presumably in 1023. It existed for a long time in the form of numerous Arabic manuscripts and became one of the first books published in mass circulation after the invention of printing. The printed version, published in 1473 in Italy (Milan), became widely known and widespread. Ibn Sina's work has long remained a medical textbook for European and Asian universities.

This medical book contains descriptions of various conditions of the human body and the classification of diseases, a description of ways to treat them with medicinal and non-medicinal products, as well as issues of hygiene and disease prevention. Among non-medicinal products, it is necessary to highlight the practice of using physical exercises. Almost every description of diseases and methods of their treatment contains an author's reference to physical exercise as a factor that can have a positive or negative effect on the human body under certain conditions. Ibn Sina recommends that nurses exercise to strengthen their health, and – in a limited version – patients to improve their health. The ability to perform physical exercise is a marker of health and/or illness.

The problem of analyzing the effects of physical exercise arises in the context of Ibn Sina's consideration of the problems of adults who, under all circumstances of their lives, must comply with the regime. The characteristic of physical exercises comes down, first of all, to their definition as "arbitrary movement leading to continuous deep breathing." "A person who exercises moderately and in a timely manner," Ibn Sina asserts, "does not need any treatment aimed at eliminating diseases caused by spoiled juices, as well as diseases caused by nature and dependent on previous [diseases]". Physical exercises are considered as a factor contributing to the cleansing of the body from physiological excesses and raising the overall tone of the human body.

Ibn Sina's work distinguishes between physical activity, which is associated, among other things, with physical work, and pure physical exercises, which a person consciously engages in to benefit his body. The scientist gives a typology of physical exercises, which are classified on various grounds. This classification is historically determined, but not fully consistent with modern approaches to the definition of classification features that have developed in the modern theory of physical education.

According to the criterion "the amount of physiological load", "small and large", "strong and weak", "sluggish" physical exercises are distinguished. This group of physical exercises corresponds to a certain extent to the modern classification, in which the criterion for distinguishing this group of physical exercises is the power of the work performed, and the nomination includes "high-power exercises", "maximum power exercises", "moderate power exercises", "sub-maximum power exercises", etc.

Ibn Sina points to physical exercises that fall under the modern criterion of preferential focus on the development of certain physical qualities. These are "agile exercises" consisting of sharp movements that promote the development of dexterity. There are "fast", "smooth and easy" physical exercises, which, with a certain degree of conditionality, correspond to a group of speed-strength physical exercises.



Ibn Sina's work indicates the need to distinguish physical exercises based on anatomical features. He believes that exercises aimed at developing the muscles of the arms and legs are well known in the practice of training warriors and in competitive practice, and therefore do not need a special description. To preserve and strengthen health, "exercises of the chest and respiratory organs", "exercises for the digestive organs", "exercises of vision", "exercises of hearing", "exercises for teeth and ears" are highlighted.

Ibn Sina's concept of classification of physical exercises contains a description of those types of physical activity that are included in each of the identified typological groups. Thus, the group of "fast exercises" includes a number of types of physical exercises used for military training, namely: walking (mainly at a fast pace, which is necessary to move around the battlefield), alternating jumps on one leg, archery, javelin throwing, sword fencing, spear fencing, jumping up in order to hang on a crossbar or branch, riding at speed (including reining in a horse), fist fighting, sharp flapping of the arms at the initial toe stand, tug of war, jumping sideways and backwards, changing places between two partners.

Ibn Sina describes an original "exercise with two large needles", which, according to his classification, belongs to the category of "fast exercises". It consists in the following: "a person stands in a certain place and sticks two large needles into the ground on both sides at a distance of a fathom from each other. Then he turns to the needle on the right side and transfers it to the left side, and transfers the needle from the left side to the right, and tries to do all this as quickly as possible."

"Fast" physical exercises necessarily alternate with "light exercises" or a fairly long rest.

"Smooth and easy exercises" include swinging on swings and in cradles in standing, sitting and lying positions, as well as riding on small boats and less prone to rolling larger vessels. These exercises are aimed at strengthening (developing) the vestibular apparatus. This type of exercise is suitable for patients who have difficulty moving, for those who find it difficult to stand and sit, for those who have lost strength, for those suffering from chest diseases and head diseases, including forgetfulness and /or memory loss. The benefit of "light exercises" is seen in the fact that with a slight rocking, a person calms down and can fall asleep, which is good for his health. This position is fully confirmed by modern science.

According to Ibn Sina, various types of "light exercises" have a healing effect depending on their intensity and orientation. Thus, the benefit of these types of exercises is seen by him in the fact that in the human body "bad juices are prepared for removal" [20]. "At the same time, they pump strongly when [juices] are strong, and weakly when [juices] are weak. Riding in carts also has this effect, but more strongly. Riding in a cart, sitting backwards, is of great benefit for weak eyesight and blurred vision. If [the patient] feels sick from rocking, and then he calms down, then this is good for the stomach. Sailing on ships on the high seas has a stronger effect on the eradication of these diseases due to the fact that the soul [of the patient] experiences joy and sadness."

Special types of exercises are placed between "light" and "strong" exercises, which Ibn Sina characterizes as exercises of intermediate intensity of physiological load. This includes camel riding and quiet horse riding, riding in stoles and carts.

"Strong exercises" include such types of physical activity as simulated combat with one's own shadow, lifting stones, playing chowgan-polo<sup>2</sup> with a large and small ball, baiting and chasing an animal on a hunt, exercises on reining in a horse, wrestling, playing ball.

Of particular interest is Ibn Sina's position regarding physical exercises that help restore the health of individual organs. So, from the "exercise of vision", the doctor recommends performing by gazing intently at small objects and (less often) looking at distant hills. It is proposed to exercise hearing by listening to the sound of blurred sounds. The throat is cured by exercises aimed at gradually raising the voice, as well as through exercises for holding your breath, sharply inhaling and exhaling air.



Ibn Sina formulates a number of recommendations regarding the time and intensity of physical exercise. Such provisions include the requirement to take into account the physical condition of a person – "for a weak person, physical exercises should be easier, and for a strong person – strong", exercises should be performed on a moderately full stomach, preferably after a warming massage, in the morning or closer to lunch. Physical exercise should be stopped if a person is overtired. Ibn Sina pointed out the need to take into account age and individual characteristics when doing physical exercises, declaring undesirable intensive exercises for dizziness and falling, as well as a sharp increase in the volume of exercises without prior preparation in the form of walking and running. These positions can be considered quite acceptable and not objectionable.

## Conclusion

An analysis of the content of Ibn Sina's work "The Canon of Medical Science" shows that a certain type of physical exercise of established intensity is an effective non-medicinal remedy recommended (or definitely not recommended) in the treatment of the disease.

The classification of Ibn Sina's system of physical exercises is internally linked to modern classifications of physical exercises, as well as to his own classification and nomenclature of diseases, the description of each of which is accompanied by a recommendation on their use or refusal to exercise. For those engaged in physical exercises, Ibn Sina recommended the use of a bath that helps restore blood circulation in internal organs, as well as bathing in moderately cold water after exercise (in combination with massage), massage as the final part of physical exercises, adherence to a diet before and after exercise, including giving up fish after heavy physical exercises exercises that give high loads.

In general, it can be noted that physical exercises act in the legacy of Ibn Sina as a means of diagnosing the patient's condition (the one who is unable to perform the usual exercise is very ill), means of developing physical strength, preserving and improving health, means of self-regulation while satisfying vital needs. Being a deep thinker, an encyclopedically educated man, Abu Ali Hussein ibn Abdullah ibn Sina was far ahead of his time. His humanitarian and natural science heritage is a source that encourages our contemporaries to reflect on man, his capabilities, spiritual and physical potential. It retains its meaning at the present time.

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