



## THE CRANIAL REGION IN CHILDREN WITH SCOLIOSIS

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**Annotation:** *Among children and adolescents, diseases of the musculoskeletal system are dangerous because they lead to complex consequences. Scoliosis is a lateral curvature of the spine, which is dangerous for severe complications, especially for a growing child's body. In 80% of the number of people with this pathology, idiopathic scoliosis is diagnosed.*

**Key words:** *children, scoliosis, longitudinal diameter of the skull, morphofunctional state, head, vertical diameter of the skull.*

In modern conditions, the study of morphometric parameters of growth, development and condition of the head and facial skeleton of a child can be a methodological basis for the development, improvement of anthropometric methods of diagnosis and reconstruction in medicine. With increasing age of the child, various changes of the head and the maxillary system, as well as the bite, occur, which are associated with the climatic and geographical features of the region of residence, the nature of nutrition and the change of milk teeth to permanent ones.

The purpose of the study is to study the anthropometric parameters of the head and face of children with scoliosis and compare these data with the parameters of healthy children.

**Materials and methods.** 140 children were examined, including 70 children with scoliosis (30 boys and 40 girls) and 70 healthy (30 boys and 40 girls). During the study, the methodology of studies of anthropometric indicators of the head and face of all children was used according to the methodology (methodological recommendations, 1998) by N.H.Shomirzayeva, S.A.Ten and I.Tukhtanazarova). Measurements were carried out using a centimeter tape and a special compass.

**Results.** As a result of the research, it was found that the head circumference in 10-year-old healthy girls ranged from 51.2 cm to 55.3 cm, on average  $54.21 \pm 0.17$  cm, the longitudinal diameter of the skull from 15.1 cm to 17.4 cm on average  $16.98 \pm 0.13$  cm, the transverse diameter of the skull from 13.4 cm to 17.2 cm, on average  $14.67 \pm 0.06$  cm, the transverse size of the forehead from 15.1 cm to 17.4 cm, on average  $16.18 \pm 0.14$  cm, the height or vertical diameter of the skull from 13.1 cm to 14.5 cm, on average  $14.04 \pm 0.09$  cm.

Studies have shown that the head circumference in 10-year-old girls with scoliosis ranges from 51.2 cm to 55.3 cm, on average  $53.21 \pm 0.25$  cm, the



longitudinal diameter of the skull ranges from 15.1 cm to 17.4 cm, on average  $16.17 \pm 0.14$  cm, the transverse diameter of the skull varied from 13.4 cm to 17.2 cm, on average,  $14.24 \pm 0.24$  cm, the transverse size of the forehead from 10.2 cm to 12.2 cm, on average  $11.63 \pm 0.14$  cm, the height or vertical diameter of the skull from 12.1 cm to 13.5 cm, on average  $13.07 \pm 0.09$ .

The head circumference in 10-year-old healthy male children ranges from 52.3 cm to 55.3 cm, averaging  $53.96 \pm 0.19$  cm. The longitudinal diameter of the skull ranged from 13.2 cm to 17.6 cm, on average was equal to  $16.7 \pm 1.30$  cm, the transverse diameter of the skull from 11.6 cm to 14.0 cm, on average  $12.78 \pm 0.15$  cm, the transverse size of the forehead from 8.5 cm to 15.8 cm, on average  $11.98 \pm 0.45$  cm, the height or vertical diameter of the skull from 10.1 cm to 14.0 cm, on average  $11.80 \pm 0.24$  cm.

In the study of children with scoliosis, it was revealed that the head circumference in 10-year-old boys ranged from 53.2 cm to 54.1 cm, on average  $53.82 \pm 0.06$  cm, the longitudinal diameter of the skull from 15.2 cm to 17.4 cm, on average  $16.37 \pm 0.14$  cm, the transverse diameter of the skull from 13.2 cm to 16.2 cm, on average  $11.49 \pm 0.19$  cm, the transverse size of the forehead from 10.6 cm to 12.6 cm, on average  $11.8 \pm 0.12$  cm, the height or vertical diameter of the skull from 13.1 cm to 15.3 cm, on average  $9.01 \pm 0.14$  cm.

The study revealed that in healthy girls of 10 years of age, the head circumference is 1.02 times, the longitudinal diameter is 1.05 times, the transverse diameter is 1.03 times, the transverse size of the forehead is 1.4 times, the height or vertical diameter of the skull is 1.07 times, the zygomatic diameter is 1.07 times, the mandibular diameter is 1.03 times, the morphological height the facial height is 1.5 times, the physiological height of the face is 1.15 times, the height of the nose is 1.33 times, the width of the nose is 1.41 times, the external orbital width is 1.10 times, the inter-orbital width is 1.30 times, the height of the mucous part of both lips is 1.04 times, the width of the mouth is 1.21 times more than in girls with scoliosis.

**Conclusions.** Thus, in children with scoliosis at the age of 10, the parameters of the craniofacial region are inversely proportional to the parameters of healthy children. This is due to the fact that the bone system of children at this age is in the development stage, and scoliosis has a detrimental effect on the growth and development of the child.

## REFERENCES:

1. Muzafarovna, K. S., Radjabovich, B. R., & Joraboy, S. (2022). Morphometric Parameters of the Trunk in Children with Scoliosis. CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES, 3(3), 144-147.



2. Камалова, Ш. М., Тешаев, Ш. Ж., & Хамидова, Н. К. (2020). Параметры физического развития 8-летних детей в норме и при сколиозе. *Морфология*, 157(2-3), 92-93.
3. Gryaznukhin E. G., Klyuchevsky V. V. Injuries and diseases of the foot / / Traumatology and orthopedics: A guide for doctors / Ed. N. V. Kornilov: In 4 volumes. St. Petersburg: Hippocrates, 2004. Vol. 3: Injuries and diseases of the lower extremity / Edited by N. V. Kornilov and E. G. Gryaznukhin. St. Petersburg: Hippocrates, 2006. pp. 542-575.
4. Камалова, Ш. М., Тешаев, Ш. Ж., & Хасанова, Д. А. (2021). Морфометрическая характеристика параметров физического развития детей со сколиозом. *Оперативная хирургия и клиническая анатомия (Пироговский научный журнал)*, 5(2), 26-31.
5. Kamalova, S. M., & Teshaev, S. J. Comparative Characteristics of Morphometric Parameters of Children with Scoliosis. *measurements*, 14, 15.
6. Kashuba V. A. Biomechanics of posture. -Kiev: Olympic literature, 2003. -166 p.
7. Perepelkin A. I., Krayushkin A. I. Dynamics of linear parameters of the foot of girls with increasing load / / Bulletin of the Volgograd State Medical University. 2013. No. 2. pp. 25-27.
8. Muzaffarova, K. S. (2021). Morphometric changes in the parameters of physical development of children with scoliosis. *ACADEMICIA: AN INTERNATIONAL MULTIDISCIPLINARY RESEARCH JOURNAL*, 11(2), 359-361.
9. Камалова, Ш. М., Тешаев, Ш. Ж., Changes in anthropometric parameters of physical development of children with scoliosis (2021). *Society and innovations*, 2(2), 432-440
10. Kamalova, S. M. (2021, January). CHANGES IN THE PARAMETERS OF THE PHYSICAL DEVELOPMENT OF 9-YEAR OLD CHILDREN WITH SCOLIOSIS. In *Archive of Conferences* (pp. 5-6).
11. Камалова, Ш. М., Хасанова, Д. А., & Алимова, Н. П. (2020). НАРОДНАЯ МЕДИЦИНА КАК МЕТОД ЛЕЧЕНИЯ У ДЕТЕЙ СО СКОЛИОЗОМ. *Новый день в медицине*, (4), 525-528.
12. Perepelkin A. I., Krayushkin A. I., Smaglyuk E. S., Suleymanov R. H. Research of the supporting surface of the foot in the youth age. 2011. Vol. 18, no. 2. pp. 150-152.
13. Muzafarova, K. S., & Joraboy, S. (2022). The Effect of Scoliosis on the Morphometric Aspects of the Lower Extremities. *Miasto Przyszłości*, 24, 101-103.