



MORPHOMETRIC CHARACTERISTICS OF INDICATORS OF PHYSICAL DEVELOPMENT OF MALES IN POSTNATAL ONTOGENESIS AND IN CHRONIC ALCOHOLISM

Radjabov A.B.

Bukhara State Medical Institute

Article history:

Received: January 3rd 2024
Accepted: February 26th 2024

Abstract:

The article presents the results of a study on the development and growth of the main parameters of physical development of males during postnatal ontogenesis and in chronic alcoholism. It has been established that this process is uneven and depends on the age characteristics of the body in each age period.

In males, the greatest increase in the parameters of physical development is observed in infancy, in elderly and senile men there is a slight decrease in them. In people with chronic alcoholism, there is a noticeable lag in the development of anthropometric parameters compared with the control group, this is most pronounced in old age.

Keywords: physical development, body weight, body length, chest circumference, chronic alcoholism.

INTRODUCTION

The physical development of the body obeys biological laws and reflects the general patterns of growth and development. Obeying biological laws, physical development depends on a large number of factors and reflects not only a hereditary predisposition, but also the influence of all chemical factors on the body. Physical development remains one of the most important indicators of health and age-related improvement standards, therefore, the practical ability to properly assess it will contribute to the upbringing of a healthy generation [1,2,6].

The study of the proportional development of the human body at the main age stages will reveal the patterns of human ontogenesis as a biological species [3,4,5,7,8].

MATERIALS AND METHODS

The object of the anthropometric study was 654 males from the period of newborn to senile age. Including morphometry of 154 mature (III periods) and elderly men suffering from chronic alcoholism.

The recommended scheme of age-related periodization of human ontogenesis, the Institute of Physiology of Children and Adolescents, was used. It includes 12 age periods:

- newborns – 0-10 days;
- infant age – 10 days – 1 year;
- early childhood – 1-3 years;
- the first childhood is 4-7 years old;
- second childhood – 8-12 years old boys;
- adolescence – 13-16 years old boys;

- youth age – 17–21 years old boys;
- the first mature age is 22-35 years old men;
- the second mature age is 36–60 years old men;
- elderly age – 61–74 years old men;
- senile age – 75-90 years;
- Centenarians are over 90 years old.

Anthropometric measurements of indicators of physical development of newborn boys were carried out in the maternity department of the Bukhara regional Perinatal Center. Boys under the age of 16 were examined at the "Nasridin-Shams" multidisciplinary private clinic in Bukhara. Adult men over the age of 16 were examined at the Bukhara Multidisciplinary Regional Hospital and the Regional Narcological Dispensary.

Measurements of physical development indicators were carried out according to the methodological recommendations "Morphometric characteristics of the assessment of physical development of children and adolescents" (Tashkent, 1998), developed by H.N. Shamirzaev, S.A.Ten and S.I. Tukhtanazarova.

A standard-type height meter was used to measure body length (height). The body height of children under two years old was measured by a specially adapted height meter, which consisted of a wooden board 80 centimeters long and 40 centimeters wide. To determine the body weight, the subjects were weighed with standard scales in the morning, on an empty stomach after emptying the intestines and bladder, while outerwear and shoes were removed.



The body weight of newborns and children under 1 year old was measured on special medical pediatric scales. The circumference of the chest (chest) was measured at rest using a conventional centimeter tape.

The data obtained during the study were subjected to statistical processing on a Pentium-IV personal computer using the Microsoft Office Excel-2016 software package, including the use of built-in statistical processing functions and BioStat for Windows (version 2007).

RESULTS AND DISCUSSION

An anthropometric study found that in newborn boys, body height ranges from 46.1 to 53.2 cm, with an average of 51.6 ± 0.43 cm. The body weight index at this age is in the range of 3.5-4.3 kg, on average – 4.0 ± 0.05 kg. The chest circumference at rest varies from 34.2 to 43.1 cm, with an average of 37.8 ± 0.54 cm.

The study showed that in infancy, the body length ranges from 68.4 to 75.3 cm, on average – 72.0 ± 0.39 cm, while the growth rate is 39.5%. Body weight at this age varies from 8.4 to 11.1 kg, on average it is 9.6 ± 0.15 kg, compared with the newborn age, this indicator increases 2.4 times. The chest circumference in the pause ranges from 47.1 to 51.4 cm, on average – 49.5 ± 0.25 cm, while the growth rate is 31.0%.

It was found that in boys of the early childhood period, body height varies from 79.6 to 92.6 cm, on average it is 87.8 ± 0.47 cm, the growth rate is 21.9%. The body weight of these boys ranges from 12.4 to 16.3 kg, on average – 14.3 ± 0.14 kg, the growth rate of this indicator is 49.0%. The chest circumference at rest ranges from 48.6 to 55.8 cm, with an average of 51.7 ± 0.26 cm, while the growth rate is 4.4%.

The study showed that in the first period of childhood, body length ranges from 94.3 to 124.2 cm, on average – 109.8 ± 0.78 cm, while the growth rate is 25.1%. Body weight at this age varies from 13.4 to 31.3 kg, the average is 21.4 ± 0.47 kg, while the growth rate is 49.7%. The chest circumference in the pause ranges from 50.3 to 61.8 cm, on average – 56.4 ± 0.30 cm, while the growth rate is 9.10%.

It was found that in boys of the second period of childhood, body height varies from 120.2 to 158.1 cm, the average is 141.5 ± 0.95 cm, the growth rate is 28.9%. The body weight of these boys ranges from 20.5 to 48.4 kg, on average – 33.1 ± 0.70 kg, the growth rate of this indicator is 54.7%. The chest circumference at rest ranges from 55.2 to 74.5 cm,

with an average of 65.9 ± 0.48 cm, while the growth rate is 16.8%.

The study showed that in adolescence, body height ranges from 141.2 to 175.0 cm, on average – 162.3 ± 0.78 cm, while the growth rate is 14.7%. The body weight index varies from 34.1 to 61.0 kg, with an average of 47.6 ± 0.62 kg. The growth rate of this indicator is 43.8%. The breast circumference in the pause ranges from 65.0 to 80.1 cm, on average – 69.0 ± 0.35 cm, while the growth rate is 4.7%.

It was found that in adolescence, body height varies from 154.0 to 180.0 cm, on average – 176.7 ± 0.80 cm. The growth rate of this indicator is 8.9%. Body weight at this age ranges from 45.0 to 80.2 kg, with an average of 65.6 ± 1.0 kg. The growth rate is 37.8%. The chest circumference at rest ranges from 67.0 to 93.2 cm, on average – 76.5 ± 0.78 cm, the growth rate of this indicator is 10.9%.

The study showed that in men of the first period of adulthood, body length ranges from 156.2 to 184.0 cm, on average – 179.4 ± 1.36 cm, while the growth rate is 1.5%. The body weight index at this age ranges from 48.0 to 84.1 kg, on average – 72.3 ± 1.77 kg, the growth rate is 10.2%. The breast circumference in the pause varies from 68.4 to 95.0 cm, on average it is 80.2 ± 1.3 cm, while the growth rate is 4.8%.

It was found that in men of the second period of adulthood, body height varies from 158.0 to 182.4 cm, on average it is 179.0 ± 1.78 cm, the growth rate is 0.1%. Body weight ranges from 50.4 to 86.8 kg, on average – 75.8 ± 1.78 kg, while the growth rate is 4.8%. The chest circumference at rest ranges from 69.9 to 96.0 cm, on average – 81.7 ± 1.28 cm, the growth rate is 1.9%.

The study showed that in older men, body height ranges from 152.4 to 178.0 cm, with an average of 176.4 ± 1.25 cm, compared with the previous age, this indicator decreases by 1.45%. The body weight index varies from 49.0 to 81.3 kg, on average – 72.4 ± 1.58 kg, this parameter decreases by 4.49% compared with the second period of adulthood. The breast circumference in the pause ranges from 66.4 to 92.0 cm, on average is 78.6 ± 1.25 cm, compared with the previous age, this indicator decreases by 3.79%.

It was found that in men of senile age, body height varies from 153.0 to 173.5 cm, on average it is 172.0 ± 1.0 cm, compared with older age, this indicator decreases by 2.5%. Body weight at this age ranges from 48.2 to 77.0 kg, on average – 68.2 ± 1.4 kg, compared with the previous age, this parameter decreases by 5.8%. The circumference of the chest



ranges from 62.8 to 88.0 cm, on average it is 73.0 ± 1.23 cm, compared with older age, this indicator decreases by 7.1%.

An anthropometric study found that in men of the first period of adulthood suffering from chronic alcoholism, body height ranges from 153.0 to 180.5 cm, with an average of 176.0 ± 1.35 cm. Compared with the same control group, this indicator decreases by 1.9%. The body weight index at this age is in the range of 46.1-80.0 kg, on average – 69.2 ± 1.66 kg. Compared to the control, body weight decreases by 4.3%. The chest circumference at rest varies from 64.0 to 90.7 cm, with an average of 77.0 ± 1.3 cm. When compared with a similar control group, this parameter decreases by 4.0%.

The study showed that in men of the second period of adulthood suffering from chronic alcoholism, body height varies from 154.0 to 179.4 cm, with an average of 175.1 ± 1.24 cm. Compared with the same control group, this indicator decreases by 2.2%. Body weight at this age is in the range of 47.0-79.4 kg, on average – 71.0 ± 1.59 kg. Compared to the control, body weight decreases by 6.3%. The chest circumference at rest ranges from 65.2 to 90.0 cm, with an average of 76.4 ± 0.22 cm. When compared with a similar control group, this parameter decreases by 6.5%.

The study found that in elderly men suffering from chronic alcoholism, body height ranges from 149.7 to 168.0 cm, with an average of 167.0 ± 0.89 cm. Compared with the same control group, this indicator decreases by 2.9%. The body weight index at this age ranges from 44.0 to 73.2 kg, with an average of 62.2 ± 1.4 kg. Compared to the control, body weight decreases by 8.8%. The chest circumference in the pause varies from 59.2 to 84.0 cm, on average it is 67.0 ± 1.21 cm. Compared with the same control group, this indicator decreases by 8.2%.

CONCLUSION

In males, the greatest increase in the parameters of physical development is observed in infancy, in elderly and senile men there is a slight decrease in them. In people with chronic alcoholism, there is a noticeable lag in the development of anthropometric parameters compared with the control group, this is most pronounced in old age.

REFERENCES

1. Barchukov I.S. Physical culture: a textbook for students. institutions of higher education. education / I.S. Barchukov; under the general editorship of N.N.

- Malikov. – M.: Publishing center "Academy", 2013. – 528 p.
2. Baranenko A.A. Student's health and physical culture [text]: textbook / V.A. Baranenko, L.A. Rapoport, ed. V.A. Baranenko. – 2nd ed., reprint - M.: Alpha – M.: INFRA – M, 2010. – 336 p.: ill.
3. 3.Bolshakov, A.M. General hygiene: textbook / A.M. Bolshakov. – Moscow: GEOTAR-Media, 2016. – 432 p.
4. Landa, B.H. Methodology for the comprehensive assessment of physical development and physical fitness [Text]: textbook / B.H. Landa. 3rd ed., ispr. and additional. – M.: Soviet sport, 2006. 208 p
5. Muller A.B. Physical culture: textbook for universities / A.B. Muller, N.S. Dyadichkina, Yu.A. Bogashchenko, A.Yu. Bliznevsky, S.K. Ryabinina. – M.: Yurayt Publishing House, 2013. – 424 p. – Series: Bachelor. Basic course.
6. Rajabov A.B. Dynamics of growth of body weight index and anatomical parameters of the prostate of male rats during postnatal ontogenesis // Journal of Biomedicine and practice. - Samarkand, 2022. - Volume 7. - No.2. - pp. 136-141.
7. Radjabov A.B. Morphometric characteristics of organometric parameters of the prostate gland of children in postnatal ontogenesis // American Journal of Medicine and Medical Sciences. - America, 2021. - Volume 11 (10). - pp. 744-746.
8. Radjabov A.B. Microanatomy of the prostate gland of mature rats and its reactive changes in chronic alcoholism // American Journal of Medicine and Medical Sciences - America, 2023. - Volume 13. - No. 7. - pp. 867-871.