

Indicators of Physical Development of Healthy Boys from Birth to 3 Years

Saidova S. Y., Khasanova D. A.

Department of Anatomy, Clinical Anatomy (OSTA), Bukhara State Medical Institute named after Abu Ali Ibn Sino, Uzbekistan

Abstract Physical development is one of the main criteria of health. Physical development is a dynamic process of a child's growth and development at different ages of childhood, and it is considered one of the main indicators of health status. This article presents indicators of physical development of healthy boys.

Keywords Body, Measure, Anthropometric study

1. Introduction

Children's health is the greatest wealth of any country. Physical development is the most important health indicator. It is the development during childhood that determines the main characteristics of the health of this generation [2,8].

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Physical indicators are important indicators of personality development and body composition. These parameters depend on the lifestyle, age, gender, diet and ethnic group of the population [1,3].

Physical development is a directly related process between morbidity and mortality [6,9].

The term anthropometry is derived from the Greek words "anthropo" meaning "man" and "metria" meaning "measurement". Anthropometry is an important standardized and non-invasive method of studying human biological differences. Anthropometric indicators and body composition are the main indicators of personal growth [7,5].

2. Research Materials and Methods

This work presents an anthropometric analysis of healthy children born in Bukhara region.

3. Research Result

Children's height, body weight, chest circumference are the main criteria for assessing physical development. This article presents a comparative analysis of the morphometric

parameters of these criteria, which determine the physical development of children, measurements of head and abdominal circumference.

Studies have shown that the height of newborn healthy boys is from 48.5 to 58.0 sm, the average is 52.2 ± 0.66 sm, body mass is 2, From 6 to 4.3 kg, the average was 3.6 ± 0.11 kg. We know that newborns usually lose physiological weight in 2-5 days, that is, children lose weight from 200 to 500 grams. This is considered a normal state, and after 9-11 days, the child's body mass at birth is restored. The circumference of the chest in baby boys is from 38.0 to 44.8 sm when taking a deep breath, on average - 40.6 ± 0.47 sm, and when exhaling, the chest size is from 32.5 to 39.4 sm, the average was 37.6 ± 0.48 sm.

The growth rate of one-year-old boys ranges from 60.5 to 68.3 sm, the average is 64.6 ± 0.16 sm. At this age, the body weight is from 4.8 to 7.8 kg, on average - 6.4 ± 0.06 kg. The circumference of the chest is 48.6 to 54.1 sm when taking a deep breath on average - 50.2 ± 0.11 sm, and when fully exhaling, the size of the chest changes from 42.0 to 48.9 sm, on average - 46.1 ± 0.14 sm organized.

As a result of our research, the height of two-year-old boys ranges from 67.6 to 76.5 sm, the average is 71.8 ± 0.16 cm. At this age, it was found that the body mass is from 6.6 to 9.5 kg, on average - 8.1 ± 0.16 kg. The circumference of the chest during deep breathing is 47.8 to 54.6 sm, on average - 50.7 ± 0.12 sm, and when fully exhaling, the circumference of the chest is 43.7 to 49.6 sm. It changed to 46.7 ± 0.10 sm on average.

From the indicators of physical development of healthy three-year-old boys, the height growth indicator is from 82.1 to 91.1 sm, the average is 86.8 ± 0.18 sm, body weight is from 8.3 to 11.2 kg, the average is 9.6 ± 0.05 kg. The circumference of the chest during deep breathing is 51.3 to 56.8 sm, on average - 52.8 ± 0.11 sm, and when fully exhaling, the size of the chest is 44.8 to 51.6 sm. changed up to, the average was 47.1 ± 0.13 sm.

Table 1. Morphometric indicators of physical development of healthy boys

Indicators Childhood periods	Number of children	Height length (sm)	Body weight (kg)	Chest circumference (when breathing) (sm)	Chest circumference (when exhaling) (sm)
Infancy period (1-10 days)	17	48,5-58,0 52,2±0,66	2,6-4,3 3,6±0,11	38,0-44,8 40,6±0,47	32,5-39,4 37,6±0,48
Breastfeeding period (under 1 year)	95	60,5-68,3 64,6±0,16	4,8-7,8 6,4±0,06	48,6-54,1 50,2±0,11	42,0-48,9 46,1±0,14
Early childhood (under 2)	116	67,6-76,5 71,8±0,16	6,6-9,5 8,1±0,16	47,8-54,6 50,7±0,12	43,7-49,6 46,7±0,10
The first of childhood period (3 years)	101	82,1-91,1 86,8±0,18	8,3-11,2 9,6±0,05	51,3-56,8 52,8±0,11	44,8-51,6 47,1±0,13

Table 2. Morphometric indicators of head and abdomen sizes of boys according to childhood periods

Indicators Childhood periods	Number of children	head circumference (sm)	Longitudinal size of the head (sm)	Transverse size of the head (sm)	Abdominal circumference (sm)
Infancy period (1-10 days)	17	33,5-38,8 37,6±0,37	13,0-14,9 13,8±0,13	7,4-9,4 8,6±0,14	29,5-39,1 37,6±0,67
Breastfeeding period (under 1 year)	95	36,5-43,3 39,8±0,14	12,0-15,2 14,9±0,06	7,0-11,2 10,3±0,08	38,8-45,6 42,3±0,14
Early childhood (under 2)	116	37,0-45,0 41,1±0,14	14,1-16,0 15,0±0,03	9,3-12,1 10,9±0,05	41,5-48,5 45,1±0,12
The first of childhood period (3 years)	101	39,3-47,2 43,6±0,15	14,1-16,2 15,2±0,04	10,2-12,1 11,4±0,03	45,6-52,5 48,7±0,13

The results of the examination showed that the head circumference of baby boys varied from 33.5 to 38.8 sm, on average - 37.6 ± 0.37 sm, the longitudinal size of the head and it is from 13.0 to 14.9 sm, the average is 13.8 ± 0.13 sm, the transverse size of the head is 7.4 to 9.4 sm, the average is 8.0. It was found to be equal to 6 ± 0.14 sm. At this age, the abdominal circumference changed from 29.5 to 39.1 sm, and the average was 37.6 ± 0.67 sm.

In healthy 1-year-old boys, the head circumference is from 36.5 to 43.3 sm, the average is 39.8 ± 0.14 sm, when we measure the longitudinal size of the head, it is from 12.0 to 15.2 sm, the average is 14.9 ± 0.06 sm, and the transverse size of the head is from 7.0 to 11.2 sm, the average is 10.3 sm. At the same age, the abdominal circumference changed from 38.8 to 45.6 sm, and the average was 42.3 ± 0.14 sm.

At the age of 2, the head circumference of boys is from 37.0 to 45.0 sm, on average - 41.1 ± 0.14 sm, the longitudinal size of the head is from 14.1 to 16, 0 sm, the average is 15.0 ± 0.03 sm, and the transverse size of the head is 9.3 to 12.1 sm, the average is 10.9 ± 0.5 sm. At this age, the abdominal circumference changed from 41.5 to 48.5 sm, and the average was 45.1 ± 0.12 sm.

In 3-year-old boys, the head circumference is from 39.3 to 47.2 sm, the average is 43.6 ± 0.15 sm, the longitudinal size of the head is from 14.1 to 16, It varies up to 2 sm, the average is 15.2 ± 0.04 sm, and the transverse size of the head is from 10.2 to 12.1 sm, the average is 11.4 ± 0.03 sm. At this

age, the abdominal circumference changed from 45.6 to 52.5 sm, and the average was 48.7 ± 0.13 sm.

4. The Results of the Study

In healthy boys from birth to 3 years of age, it was found that physical development increases rapidly at 3 years of age.

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