



## ASSESSMENT OF THE PHYSICAL DEVELOPMENT LEVEL OF SKILLED FOOTBALL PLAYERS WITH DIFFERENT GAMES

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### ABSTRACT

In this article, the level of development of skilled football players according to age was evaluated using the anthropometric method. In order to determine the level of physical development, total and partial dimensions of the body, including length, width and circumference, with 26 indicators, were studied. Morphological indicators, which are important for predicting prospects in the stages of the long-term training process, were used.

### KEYWORDS

Physical development, total and partial dimensions, anthropometric characteristics, weight-height index, skilled players.

### INTRODUCTION

Football is considered one of the priority sports in our republic, and the results shown by our country's athletes in the last prestigious competitions determine the development trend of this sport. The task of "Identifying talented athletes and creating reserves for youth national teams" is considered one of the urgent issues.

The level of success and the rapid development of sports training in the field of football require the search and creation of new effective methods of conducting research with athletes. It is known that the indicator in sports is an integral indicator, it shows the special effect of various factors, and each factor adds its share. According to the results of studies conducted by V. K. Balsevich (2000), R. N. Dorokhov (2002), E. G.



Martirosov and A. V. Smolensky, the factors that significantly affect the physical performance of an athlete are: listed body structure, a number of morphological characters, energy capacity, speed and strength quality indicators, genetic characteristics, sports selection, etc. But the main place is occupied by morpho-functional indicators, which are genetically determined in 80% of cases and determine the limits of performance in sports and a number of physical characteristics.

54 qualified football players were selected as the research object. The level of physical development of 15-16-year-old teenagers and 17-year-old football players was assessed based on the anthropometric method, which includes the total and partial dimensions of their bodies. The research was carried out at the "Nasaf" football academy in Karshi.

In the table, the growth dynamics of the players' body length and weight is confirmed by the weight-height index.

**In comparison, indicators of development of anthropometric characteristics of 15-17-year-old football players according to age - "Nasaf" Football Academy (n=54)**

**Table 1.**

| <b>№</b>   | <b>Anthropometric parameters</b>         | <b>15 years old</b> | <b>16 years old</b> | <b>Growth %</b> | <b>17 years old</b> | <b>Growth %</b> |
|------------|--|---------------------|---------------------|-----------------|---------------------|-----------------|
| <b>1.</b>  | Weight/height index (cm/kg)              | 345,74±37,19        | 366,39±40,27        | 5,97            | 386,49±30,35        | 5,48            |
| <b>2.</b>  | Chest circumference cm.                  | 81,9±4,77           | 84,9±4,15           | 3,66            | 87,3±5,7            | 2,82            |
| <b>3.</b>  | Arm's length                             | 75,8±3,83           | 77,4±4,7            | 2,11            | 81,2±2,84           | 4,9             |
| <b>4.</b>  | Leg length                               | 93,0±4,62           | 94,8±7,63           | 1,9             | 98,6±4,48           | 4               |
| <b>5.</b>  | Thigh length                             | 46,13±2,85          | 48,4±4,36           | 4,9             | 49,43±3,65          | 2,1             |
| <b>6.</b>  | Calf length                              | 41,7±2,08           | 42,0±3,01           | 0,7             | 45,1±2,73           | 7,4             |
| <b>7.</b>  | Shoulder width                           | 36,2±2,79           | 37,0±2,39           | 2,2             | 37,7±4,67           | 1,9             |
| <b>8.</b>  | Pelvic width                             | 26,8±1,28           | 26,9±2,19           | 0,4             | 29,2±1,62           | 8,5             |
| <b>9.</b>  | The transverse middle of the chest (cm). | 27,0±1,86           | 27,2±1,16           | 0,7             | 28,4±1,89           | 4,4             |
| <b>10.</b> | Shoulder girth                           | 26,15±2,45          | 28,2±2,07           | 7,8             | 28,6±3,7            | 1,4             |
| <b>11.</b> | Front shoulder girth                     | 23,9±2,12           | 25,1±1,71           | 5,0             | 25,91±2,38          | 3,2             |
| <b>12.</b> | Thigh circumference                      | 49,8±3,37           | 52,15±3,5           | 4,7             | 52,91±4,32          | 1,4             |
| <b>13.</b> | Calf circle                              | 33,7±2,49           | 35,5±2,03           | 5,3             | 36,01±2,39          | 1,4             |
| <b>14.</b> | Average thickness of abdominal fat       | 5,3±2,24            | 6,7±2,64            | 6,4             | 5,5±2,62            | -7,9            |

By the age of 15, the VBI is 345.74+37.19, at the age of 16 it is 366.39+40.27, and at the age of 17 it is 386.49+30.35 and the table shows the level of growth of indicators in the course of individual development.

Among the partial indicators of the body, the length measurements of the leg segments, specific to the chosen sports specialty, are important. Because it is in these segments that the accented downloads in football fall. Between the ages of 15 and 16, the length



of the legs increases by 1.9%, and between the ages of 16 and 17, this increase is 4.0%. A high degree of growth was observed in arm length between 15 and 16 years of age. For example, shoulder circumference - 7.8%, front shoulder circumference - 5.0%, calf circumference - 5.3%, fat layer increase - 6.4%. Fat gain is a negative sign, it increases in football players between 15 and 16 years of age, and on the contrary - decreases by 7.9% between 16 and 17 years of age. It was observed that the increase in the indicators of the circumference of the calves was 5.3% by the age of 16, and it decreased by 1.4% by the age of 17. The growth of the transverse size of the pelvis is especially noteworthy: by the age of 16, the indicator increased by -0.4%, and by the age of 17, its growth was 8.5%. The index of the transverse measurement of the breast increased by only 0.7% by the age of 16, and by the age of 17 the increase in the index was 4.4%.

In general, between the ages of 15 and 16, the increase in shoulder girth index was 7.8% by the age of 16, and a slight decrease in the index was found at the age of 17. From 16 to 17 years of age, the thickness of the abdominal fat layer decreased. This is a positive indicator and indicates that the players' physical development has reached a mature level. The study of the dynamics of physical development showed that the anthropometric parameters of 15-16-year-old football players are significantly higher than those of non-athletic peers in the same conditions. As age increases, this difference increases.

According to the results of the research, the anthropometric indicators of football players, such as body weight and length, change under the influence of exercises and depend on the specialized characteristics of each athlete. The process of rapid growth of anthropometric indicators in young football players, different from that of school children, begins much earlier. The greatest increase in body mass in young

football players occurs between the ages of 16 and 17, which corresponds to the second sharpest increase in boys' weight.

In football players, from 15 to 16 years of age, the rate of increase in body length is 3-4 cm per year. If the body length of 15-year-old schoolchildren is 165 cm, then this indicator is 169.5 + 5.74 cm for young players of this age, 172.5 + 9.37 cm for 16-year-olds, and 180.8 + 8.53 cm for 17-year-old players. A rapid increase in body length during puberty coincides with a rapid increase in body mass. In this regard, there is also a sharp increase - at the age of 15, the body mass is 59.7 + 7.38 kg, at the age of 16 - 63.9 + 9.92 kg, and at the age of 17 it reaches 69.7 + 7.83 kg. The given indicators show that the growth process and morphological renewal of the skeleton are genetically determined, this situation corresponds to the experimental indicators obtained by B.A. Nikityuk, B.I. Kogan in 1989. According to the authors' evidence presented in the scientific literature, puberty begins in boys during adolescence, and in girls, this process begins earlier. By this period, the growth of all dimensions of the body continues and takes on the appearance of "puberty jump". The growth rate is especially fast in boys, and during adolescence, the measurements are 90-97% of the last period.

According to the results of the study, body weight and length, which are anthropometric indicators, have more variability under the influence of exercises and determine the specific characteristics of each athlete. In young football players, the main anthropometric indicators enter a period of intensive growth, thus they differ from schoolchildren. According to our studies, the maximum increase in weight of football players corresponds to the period of 16 and 17 years. This is timed for the second growth spurt in boys, while the growth spurt in girls occurs between 15 and 16 years of age. The period of growth of body weight corresponds to the period of growth of body length. If the height of



15-year-old children at school is 165 cm, the height of football players of the same age reaches 169.5 + 5.74 cm, and the height of 16-year-old players reaches 172.5 + 9.37 cm. The pubertal growth spurt that occurs in athletes maintains the same trend in body weight.

In short, morphological indicators of athletes serve as an important factor in managing their training system. The following signs can be used to determine the general morphological characteristics of athletes: body weight and length, weight-height index - together, these are the basis for evaluating the body structure of teenagers and young athletes. Taking into account that the formation process of important morphofunctional systems in 15-17-year-old athletes is mostly completed, we conducted anthropometric research in athletes of this age in full measure, we analyzed the indicators based on the total dimensions of the body as well as on the basis of partial signs. All these signs not only predict the future in the process of many years of training, they also retain their importance in the process of improving sports skills.

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