ASSESSMENT STANDARDS OF GENERAL ENDURANCE IN THE "COOPER" TEST FOR FOOTBALL PLAYERS OF DIFFERENT AGES

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Today, more and more football coaches are interested in objectifying the results of their work, the methods of its evaluation, and the comparison of different control methods helps to improve the training process. However, there are many doubts about the methods of conducting measurements, analysis of results and their interpretation. An example of this is the widely used Cooper general endurance test. While there is no doubt about the appropriateness of using this test, there are doubts about whether this test accurately assesses the endurance of the athlete being studied. In this case, we are talking about assessment standards, the scale of which is narrow, often including 3-6 levels for one age group. An example of this is the method of evaluating an 8-year-old young athlete: if the subject runs a distance of 1550 m to 1950 m, he gets a good grade, that is, the range of this grade is 400 m. The situation is similar in the category of senior athletes, where the criterion for one grade is often 200 m to 400 m.

Based on this, there is a need to create more objective and more "sensitive" evaluation criteria in this test, which includes the entire population of players and divides it into age groups. The Konkoni test, which is very convenient for pedagogical control, also causes certain problems in its use. Here it is primarily about the breaking point (point of deviation) of the curve of the frequency of heart contractions and the interpretation of the obtained results.

The test is primarily designed for skiers and long-distance runners, the assessment criteria are set for them. The indeterminacy of these criteria when assessing general endurance in football players makes it necessary to determine its reliability and validity in practical studies. The main factors that determine the manifestation of endurance are the functional state of the blood circulation and respiratory systems. The potential possibilities of effective development of endurance depend on the morphofunctional settings of the organism. The high level of endurance performance in various types of sports is determined primarily by the aerobic and anaerobic capabilities of energy supply, biomechanical characteristics of movements, proportions of the body structure, as well as nervous and humoral regulation mechanisms.

Many experts believe that it is possible to start developing endurance from the age of 8-10, and generally from the age of 12. This opinion is supported by the fact that children at this age have clearly expressed predispositions to develop endurance, which arise from good proportions of organs, good interactions of the cardiovascular and respiratory systems.

From the point of view of the theory and methodology of sports training, the rational influence in this direction is the improvement of the high endurance of football players to the growing training loads in the later stages of long-term training. Here it is mainly about aerobic

endurance, which is the basis for further improvement of special endurance, strengthens health, and educates the necessary moral and spiritual qualities. On the other hand, it is necessary to pay attention to the fact that the tools used for the development of endurance are not too intense. Because they can quickly adapt to them and exhaust the adaptation mechanisms of the developing organism. Very intense loads, characterized by great physical and mental stress during training sessions and competitions, often cause children to leave sports, and some of them say goodbye to sports due to personal grievances. It is necessary to take care of the health of young players by gradually developing their endurance, which is achieved by using training tools that require moderate intensity - 60-70% of the maximum capacity. .

Nowadays, the problem of controlling the level of development of endurance in athletes, especially in football players of different age groups, is a very important and urgent problem. Cooper's test is widely used to develop general endurance. It is based on running for 12 minutes, and the grade is the length of the distance covered during this time. A modified variant of this test is distance running, taking into account the frequency of heart contractions during the first 30 seconds of the 2nd, 3rd and 4th minutes of rest.

The index of the modified Cooper test (IZTS) is calculated as follows:

IZTS = distance (in meters) × 100: (t1-ht2-f-t3),

Here t1, t2, t3 are the 2nd, 3rd and 4th minutes of rest during the first 30 s of YuQCh.

The main element of the test modification is the clarification of the evaluation criterion, that is, the determination of the counting point, which allows for the objectification and individualization of the evaluation itself. The modified estimate also takes into account the ratio of the running speed achieved in Cooper's original test to the maximum speed achieved by the athlete being studied when running short distances.

The popularity of Cooper's original test is based on the simplicity of its execution, as well as its relatively high diagnostic value. The test is not only used as a control tool in various types of sports, but also in countries such as the Czech Republic, Slovakia, Great Britain, New Zealand, Canada, the Netherlands, the USA and other countries, and tests designed to assess the general physical fitness of children and young people who do not play sports. is also used in the complex.

This test is especially important in the training process of football players, especially when it comes to tests of "local" importance. It is characteristic that almost 80% of the energy spent during the game is aerobic. Based on this, the size and efficiency of these energy mechanisms will be of primary importance for the player.

The popularity of this test is evidenced by numerous publications, the analysis of which allows us to confirm that this test is a universal control tool worldwide. The above-mentioned shortcomings of such a widespread test do not allow concrete assessment of the development of endurance in Polish players. The lack of evaluation scales was the reason for conducting special studies in order to create objective criteria for the assessment of general (aerobic) endurance in individual age categories of football players, from 11-year-old young athletes to adults. Initially, it is planned to conduct research with the use of the modified Cooper test, which takes into account the rapidity of the decrease in the frequency of heart contractions after loading. However, preliminary studies have shown that the actual reduction in heart rate (2nd, 3rd and 4th minutes of rest) will be difficult to detect in a large number of subjects -

2037 people. In this case, there were diagnostic difficulties in the process of registration of HCV itself.

The research method was the "classic" Cooper test based on running for 12 minutes. The researchers recorded the number of laps each athlete ran around the stadium. After 12 minutes, the test subjects stopped running according to the signal and started walking from the place where they heard the signal of the end of the test. It was possible to determine the distance the athlete ran along the lines of the stadium's running lanes with an accuracy of up to 10 m.

In the case of young athletes, the football player's belonging to the appropriate age category was determined according to the principle of "closer limits", for example, the 11-year-old category covered young players from 10.5 to 11.5 years old.

In the category of senior athletes (senors), 138 athletes with different levels of sports skills were studied. Velkopolski), "Sleja" (Wrocław) sports clubs, "Domb" (Dembno), "Cellulosa" (Kostshin), "Lyubushanin" (Dresdenko) sports clubs of the 3rd league.

The number of those studied, as well as their basic biometric data, are presented in Table 1.

Table 1.
Descriptions of players to be studied

Age category	Testing the number of chis	Age	Body weight, kg	body length, cm	Sports seniority, year
Boys	138	25,3	75,3	176,3	14,9
17	317	17,1	70,7	174,1	6,9
16	298	16,9	66,4	173,2	5,8
15	255	15,1	62,3	170,3	4,7
14	257	14,2	59,1	169,1	3,9
13	252	12,9	53,4	162,4	3,0
12	302	12,1	49,7	156,4	2,0
11	218	10,9	41,5	146,7	1,2

A total of 2037 athletes were studied. In order to achieve high reliability of measurements, researches were conducted personally by the authors of the work together with their assistants (graduate students). Researches were conducted during the preparatory period of training, in similar location and atmospheric conditions.

It is presented in Table 2 (Table of scores of Cooper's test). Evaluation criteria of the Cooper test ("T scale") for Polish football players of different ages (length of running distance during 12 minutes), m. Table 2.

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Table 2

Table of scores of Cooper's test

Points	Age of athletes								Points
	Youngs	17	16	15	14	13	12	11	
100	4150	4090	4000	3780	3760	3748	3672	3430	100
98	4124	4060	3968	3748	3728	3714	3640	3400	98
96	4098	4030	3936	3716	3696	3680	3608	3370	96
94	4072	4000	3904	3684	3664	3646	3576	3340	94
92	4046	3970	3872	3652	3632	3612	3544	3310	92
90	4020	3940	3840	3620	3600	3578	3512	3280	90
88	3994	3910	3808	3588	3568	3544	3480	3250	88
86	3968	3880	3776	3556	3536	3510	3448	3220	86
84	3942	3850	3744	3524	3504	3476	3416	3190	84
82	3916	3820	3712	3492	3472	3442	3384	3160	82
80	3890	3790	3680	3460	3440	3408	3352	3130	80
78	3838	3730	3616	3396	3376	3340	3288	3070	78
76	3786	3670	3552	3332	3312	3272	3224	3010	76
74	3734	3610	3488	3268	3248	3204	3160	2950	74
72	3682	3550	3424	3204	3184	3136	3096	2890	72
70	3630	3490	3360	3140	3120	3068	3032	2830	70
68	3578	3430	3296	3076	3056	3000	2968	2770	68
66	3526	3370	3232	3012	2992	2932	2904	2710	66
64	3478	3310	3168	2948	2928	2864	2840	2650	64
62	3422	3250	3104	2884	2864	2796	2776	2590	62
60	3370	3190	3040	2820	2800	2728	2712	2530	60
58	3318	3130	2976	2756	2636	2660	2648	2470	58
56	3266	3070	2912	2692	2674	2592	1584	2410	56
54	3214	3010	2848	2628	2608	2524	2520	2350	54
52	3162	2950	2784	2564	2544	2456	2456	2290	52
50	3110	2890	2720	2500	2480	2388	2392	2230	50
48	3058	2830	2656	2436	2416	2320	2328	2170	48
46	3006	1760	2592	2372	2352	2252	2264	2110	46
44	2954	2710	2528	2308	2288	2184	2200	1990	44
42	2902	2650	2464	2244	2224	2116	2136	1930	42
40	2850	2590	2400	2180	2160	2048	2072	1930	40
38	2798	2530	2336	2116	2096	1980	2008	1870	38
36	2746	2470	2272	2052	2032	1912	1944	1810	36
34	2694	2410	2208	1988	1968	1844	1880	1750	34

32	2642	2350	2144	1924	1904	1776	1816	1690	32
30	2590	2290	2080	1860	1840	1780	1752	1630	30
28	2538	2230	2016	1796	1776	1640	1688	1570	28
26	2486	2170	1952	1732	1712	1572	1624	1510	26
24	2434	2110	1888	1668	1648	1504	1560	1450	24
22	2382	2050	1824	1604	1584	1436	1496	1390	22
20	2330	1990	1760	1540	1520	1368	1432	1330	20
18	2304	1960	1728	1580	1488	1334	1400	1300	18
16	2278	1930	1696	1476	1456	1300	1368	1270	16
14	2252	1900	1664	1444	1424	1266	1336	1240	14
12	2226	1870	1632	1412	1392	1232	1304	1210	12

Summary. Based on this, there is a need to create more objective and more "sensitive" evaluation criteria in this test, which includes the entire population of players and divides it into age groups.

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