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Prediction of prospects in dance and gymnastic sports based on the method of assessing the structure of an individual somatotype

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Purpose: *to determine the relationship between the motor, trophic and mental qualities of an athlete in accordance with the constitution of his somatotype in order to establish at an early stage of the morphofunctional development of objective, phylogenetically determined signs of motor talent for sports dancing.*

Material & Methods: *the work was carried out on the basis of the "Ideal" sports club. The study involved dancers in the amount of 20 athletes involved in sports dancing at the initial training stage. In solving the tasks, the following methods were used: analysis and synthesis of scientific and methodological literature; generalization of the practical experience of the coaching contingent working with children in sports dance groups; a modified method of clinical anthropometry M. Ya. Breitman; natural pedagogical experiment, methods of mathematical statistics and mathematical modeling.*

Results: *the significance of competitive interdependent relationships of the constitutional structure of the somatotype in the distribution of universal tissue - body weight was established. The groups of the smallest parts of the body, the average sizes and the longest parts of the body are distinguished, and results are obtained on the frequency of occurring locations of each indicator. Compiled a universal code of the Collective somatotype.*

Conclusions: *the use of the modified method of M. Ya. Breitman allows not only to determine the unified somatotype code, but also to reveal the patterns of motor and trophic qualities most pronounced for certain somatotypes.*

Keywords: *somatotype, body structure, code, sports dancing, natural experiment.*

Introduction

Any comparison requires a comparison of the quantitative expression of one quantity with another. At the same time, the question arises of how much at what time does one compared value differ relative to another. This problem is absolute and occurs in any field of activity. The widespread use of digital technology leads to the need to develop methods for digitally expressing information about the qualitative characteristics of the compared objects. An exceptional property of the digital expression of information is the fact that, regardless of its qualitative nature, the assigned number and the order of its sequence allow in a compact form to accumulate, transmit and subsequently analyze it. If necessary, you can complicate and expand the necessary information by introducing the inclusion of its digital representation in an existing code description.

In the field of sports, this problem is of exceptional interest, which determined the direction of the research.

Purpose of the study: to determine the relationship between the motor, trophic and mental qualities of an athlete in accordance with the constitution of his somatotype in order to establish at the early stage of morphofunctional development of objective, phylogenetically determined signs of motor talent for sports dancing.

Objectives of the study: 1) to formalize the constitutional morphological and functional features of the structure of the somatotype in the digital code representing the phylogenetic conditionality of its structure as information about the internal environment of the body; 2) to develop methods and tests to determine the physical and functional development of athletes, the most appropriate for sports dancing; 3) to identify the correspondence between the motor and trophic qualities of the athlete in accordance with the structure of the somatotype.

Material and Methods of the research

The work was carried out on the basis of the sports club «Ideal». The study involved dancers in the amount of 20 athletes involved in sports dancing at the initial training stage. In solving the tasks, the following methods were used: analysis and synthesis of scientific and methodological literature; generalization of the practical experience of the coaching contingent working with children in sports dance groups; a modified method of clinical anthropometry M. Ya. Breitman; natural pedagogical experiment, methods of mathematical statistics and mathematical modeling.

Results of the research

The task of comparing the geometric structure of the body structure and the morphofunctional features of ongoing processes has been considered for millennia. In the new era, the successful steps in solving this problem were the research of Galileo, 1634; Gefroy-Saint-Hilaire, 1836; K. Darest, 1865; Bodrimon and Martin Saint Angers, 1851; A. Gerlach, 1882;

G. Koch, 1884; Quetelet, 1870; Galton, 1889; M. Ya. Breitman, 1924. This is an extremely small number of studies that have made an extremely significant contribution to the problem under consideration. Among the works summarizing the achievements of their contemporaries and predecessors, one can distinguish authors such as Galileo, Jaffroix-Saint-Hilaire, M. Ya. Breitman.

Galileo introduced the method of physical similarity and dimension, which formed the basis of the theory of allometric development and discreteness of the process of shaping in self-organizing systems. Geoffrey-Saint-Hilaire, summarizing the work of his contemporaries, drew attention to the need for the processes of development of self-organizing systems to separate the growth of mass and its formation as two independent, but interdependent phenomena in the formation of a holistic organism, which represents the individual structural features of somatotypes.

It is customary to use characteristics that reflect the "structural-functional" properties of an organism as the basis for assessing physical development. The correlation of morphological and functional aspects of the biological nature of man is a central issue of the anthropometric constitution, reflecting the law of the unity of form and content.

The constitutional diversity of somatotypes in a population reflects the manifestation of a measure of its reaction to environmental influences. In turn, the concept of "predisposition" reflects the causes of extreme variants of deviation of morphofunctional organizations from the normal characteristics of the observed human populations. Deviations arising in them are a reflection of the ontogenesis of constitutional diseases, which allows you to use the features of constitutional deviations in the structure of the somatotype structure as their prenosological diagnosis.

One of the main tasks of sports anthropology is the study of the action of various means of physical activity on the physique, which ensures success in various types of sports specialization. An equally important task is the organization of monitoring the development of children and adolescents in various environmental conditions and establishing the extreme boundaries of these conditions for each category of the contingent. This, in turn, requires the development of uniform standard tests to assess the level of physical fitness and physical development.

In medicine, which is the main branch of human practical biology, the attention to constitutional somatic diseases is increasingly being paid to the eradication of infectious diseases. In 1881, Benke was one of the first in the study of the somatotype constitution that formulated the main goal of this direction, namely that the diversity of the somatotype constitution reflects the specificity of the organism's resistance to certain diseases, which manifests itself when the individual is in adverse conditions.

In 1924, M. Ya. Breitman gives a deep justification for this phenomenon. Its justification was based on the position that the body is an external reflection of metabolic processes and its biokinematic links are indicators of a prenosological diagnosis of disorders of endocrine relationships in the internal environment of the body. These provisions were substantiated by a large number of observations as an endocrinologist who investigated the pathology of endocrine disorders.

The method of clinical anthropometry developed by him consisted in the fact that when comparing, not the absolute values of the measured parts of the body were compared, but their relationship to the individual's body length. This allowed for any growth to highlight the qualitative structure of the constitutional structure of the somatotype. In this case, it is necessary to know the body height of the subject, age and body weight. The systematization of body parts taken for measurement consisted of nine sizes of vertical and six horizontal indicators, which include the following designations: I) upper face, II) lower face, III) neck, IV) medial vertical distance between the acromial and nipple line, V) such the same distance between the nipple line and the navel, VI) the same distance between the navel and the line through the middle of the inguinal folds, VII) the length of the thigh, VIII) the length of the lower leg, IX) the height of the foot. Horizontal dimensions: X) half interacromial distance, XI) half inter-nipple distance, XII) foot length from heel to thumb. Parts of the arm: XIII) the length of the shoulder, XIV) the length of the hand. The formation of the structure structure of somatotypes based on their proportions was carried out on the material of the examined both normal and pathological types. The structure of each type is represented in the form of a vertical column, consisting of sections representing the percentage of the length of the body part to the length (growth) of the whole body. The horizontal dimensions of the body were also evaluated relative to the length of the entire vertical growth of the body.

Pursuing a similar problem in analyzing body types, Sheldon in 1940 came to the conclusion that the concept of body types fulfilled its positive role in studying body structure and receded into the background and gave way to the concept of continuous distribution. Development went from the idea of a dichotomy of relations to the concept of variability in various spatial directions.

The continuity of the transition from one somatotype to another is laid down initially when constructing the semantic space of its representation. The main difficulty in this case is to measure the variability of traits in different directions of the axes of space and establish a measure of complexity between the compared somatotypes. The solution to this problem allows us to establish the similarity of the content of various somatotypes and their possible transition from one to another. It was this problem that was solved by M. Ya. Breitman 16 years before Sheldon.

In the ongoing research, these two practically complementary scientific approaches were combined. The development of a method for assessing individual characteristics of the structure structure of somatotypes and the measures for their comparison were made using 18 diagrams of somatotypes established by M. Ya. Breitman, which include both normal and pathological types. In their characteristics, 15 parameters are used, which have their sizes in proportion to the whole body. This determines their fixed sequence of order in the scale of names of body parts. The structure of this representation is given in Table 1.

The presented structure of the names of body parts reflects the result of the formation of body mass in the external display of the structure of the somatotype as a result of its internal redistribution with the proceeding differentiation of the

Table 1

Anthropometric proportions in various types of endocrine relationships, %

	Breitman Code	Name of body parts	Average*	Standard	Muscular type	Respiratory type	Digestive type	Brain type	Asthenic type	Infantilism	Premature aging	Adult rickets	Ostopsarosis	Gigantism	Acromegaly	Pituitary-genital fatty degeneration	Bazedova's disease	Myxedema and Creticism	Dystimism	Eunochoidism	Micromelia
Body length along the midline	I	Upper face length	10,17	8,85	8,33	8	8	11	7	10,3	11,7	12,8	11,6	7,8	13,8	9,4	9,85	11,6	10	8	15
	II	Lower face length	4,77	4,21	3	4	4	3	4,5	4,2	4,5	6,1	4,5	4,4	6,4	5	4,54	6,3	5	4	8,25
	III	Neck length	4,33	5,79	4,17	5,33	5,5	3	7	5,3	2,8	3,3	4,1	6,7	2,1	2,6	4,65	1,4	3	4	7,25
	IV	Ascromial nipple distance	8,51	6,84	8,33	6,22	5	8,5	7	6,9	7,8	11,5	7,3	7,8	7,6	13,8	10,65	10,2	10	8,8	9
	V	Nipple-umbilical distance	14,60	13,66	17,66	15,11	18	14	11,5	13,5	13,9	13,8	14,6	15,6	12,8	16,2	13,7	16,5	14	11,2	17
	VI	Umbilical-inguinal distance	8,29	10	7	5,33	7	7,5	10	9,8	9,5	10	8,3	6,7	8,7	8,5	10,5	6,3	5	4	15
	VII	Thigh length	23,53	26,14	23,5	26,66	22	25	27	25,4	25,9	18,3	25,3	22,2	25,5	21	23,8	23	22	30,4	10,5
	VIII	Shank length	21,08	20,33	22,5	24	25	22	21	20,1	19,4	20,2	19,8	24,4	16,7	19,33	18,33	20	26	25,6	14,75
	IX	Foot height	4,72	4,21	5,5	5,33	5,5	6	5	4,5	4,5	4	4,5	4,4	6,4	4,2	4,01	4,7	5	4	3,25
		Total vertical indicators	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Horizontal distance	X	Half acromial distance	9,84	9,5	9	9,33	11	9	7,5	9,5	10,33	11,7	10	8,8	11,7	10,5	9,7	10,33	11	8,8	9,5
	XI	Half spacing	6,84	6,33	7	7,11	7	6	4,75	6,32	6,7	8,1	6,7	6,5	8	8,8	7	7	8	6	5,85
	XII	Foot length from heel to toe	15,01	14,5	16	14,5	15,5	14,5	14,33	15	14,4	14,7	15,6	16	16,5	15	14,5	15,5	16	14,7	13
Hand parts	XIII	Shoulder length	18,02	18	19	17	16,5	15,4	18,5	18	19	20,1	17,7	19	16	18,2	18	18	16	24	16
	XIV	Forearm length	15,44	14,5	14,6	14	13,75	14,4	14,5	14,5	15,4	18,1	16,2	16	10,6	16,1	15,2	16	25	16	13
	XV	Brush length	11,40	10,5	9,2	9,75	11	8,65	11,33	10,5	11,1	14,5	11,8	12	13	11,1	17,77	10	12	12	9
		Total horizontal indicators	**76,56**	**73,33**	**74,80**	**71,69**	**74,75**	**67,95**	**70,91**	**73,82**	**76,93**	**87,20**	**78,00**	**78,30**	**75,80**	**79,70**	**82,17**	**76,83**	**88,00**	**81,50**	**66,35**
		Total indicators	**176,56**	**173,36**	**174,79**	**171,67**	**174,75**	**167,95**	**170,91**	**173,82**	**176,93**	**187,20**	**178,00**	**178,30**	**175,80**	**179,73**	**182,20**	**176,83**	**188,00**	**181,50**	**166,35**

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specialized functions of the incorporated organogenesis and the action of the external controlling factor of the educational environment. A special case of an external controlling factor may be the targeted motor activity of the training process. Depending on the period of age-related development, the effect and its qualitative content can have various consequences. Such an effect may have an effect since the first cell division.

To understand the nature of this effect and the possibility of controlling it, the need arises for a more detailed consideration of it. To this end, the task was set - to establish the significance of competitive interdependent relations of the constitutional structure of the somatotype in the distribution of universal tissue – body weight. Since the body of any individual is included in the set of body types established by M. Ya. Breitman, considering it as a certain variant of this combination, it is necessary to make a comparison of each element of the body under study with similar elements of the Breitman set of body types, building them in a sequential increase from their minimum values by mass of formation up to the maximum observed, including the entire contingent examined.

When conducting these studies, each time an element of the body of the subject appears as a reference point, and this element of each somatotype from the table of M. Ya. Breitman and all previous examined is compared with him. As an example of the implementation of this procedure, let us consider a comparison of the “hip length” of Investigated No. 1, the values of this indicator to eighteen somatotypes from table 1. The results of the procedure are presented in Figure 1.
The construction of the comparable components of the body structure described above was performed for all somatotypes, which allowed us to build unified digital codes for each somatotype. The algorithm for constructing the digital code is shown by the example of the Standard somatotype, which was defined by M. Ya. Breitman as the most harmonious and confirmed by geometric constructions as a result of straight lines measured through the indicated points and combining them into a single structure reflecting the body structure scheme (Table 2).

By complete analogy, a summary table of unified codes of all somatotypes of M. Ya. Breitman and the individuals participating in the study was compiled (Table 3).

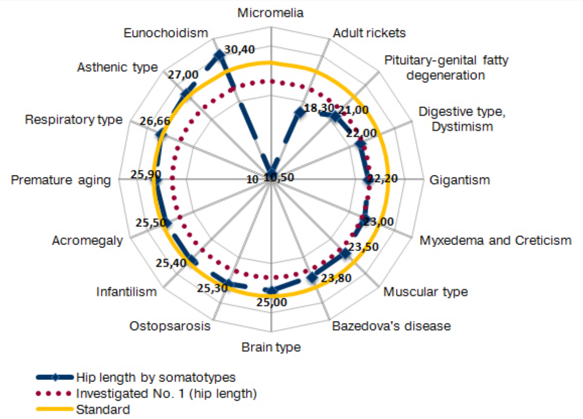

Fig. 1. The ratio of the indicator “hip length” of the Investigated No. 1 to the similar indicators of eighteen somatotype variants from the Table 1

ased on the results obtained, we can note the groups of the smallest parts of the body, average sizes and the longest parts of the body. Thus, the number of standardized codes of somatotypes that correspond to the contingent to be contemplated can only be within the limits of somatotypes defined by M. Ya. Breitman, reflecting the measure of their proximity to them.

During the analysis of studies, results were obtained on the frequency of occurring locations of each indicator, which was reflected in Table 4.

Also, based on the results obtained, one can see clearly expressed groups of the smallest parts of the body, average sizes and the longest parts of the body. Thus, the number of somatotype codes that correspond to the norm is limited.

From Table 4 it is seen that the smallest parts of the body are indicators numbered 2, 3 and 9 (2 is the length of the lower face, 3 is the length of the neck, 9 is the height of the foot). The figures given for the frequency of hit indicators for specific positions of the unified somatotype code were calculated according to Table 3.

If we look at the same table of the frequency of hits of the indicator number on the code position as a percentage of the

Table 2

An algorithm for constructing a digital code using the example of the Standard somatotype

	No. i/o	Names of body parts in the general structure of the somatotype	Structure of the somatotype “Standard”, in% of body length	Structure of a universal digital code
Body length along the midline	I	Upper face length	8,85	6
	II	Lower face length	4,21	1
	III	Neck length	5,79	3
	IV	Ascromial nipple distance	6,84	5
	V	Nipple-umbilical distance	13,66	10
	VI	Umbilical-inguinal distance	10	8
	VII	Thigh length	26,14	15
	VIII	Shank length	20,33	14
	IX	Foot height	4,21	2
Horizontal distance	X	Half acromial distance	9,5	7
	XI	Half spacing	6,33	4
	XII	Foot length from heel to toe	14,5	11
	XIII	Shoulder length	18	13
	XIV	Forearm length	14,5	12
	XV	Brush length	10,5	9

Table 3

Summary table of somatotype codes

No.	Scale somatotypes names	A scale of about 15 somatotype elements arranged in sequence from the minimum value of the body element to the maximum in the redistribution of body weight to its formation in the construction of the somatotype														
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV
1.	Breathing type	2	3	6	9	4	11	1	10	15	14	12	5	13	8	7
2.	Eunhoidism	2	3	6	9	11	1	4	10	5	15	12	14	13	8	7
3.	Muscle type	2	3	9	6	11	1	4	10	15	14	12	5	13	8	7
4.	Brain type	2	3	9	11	6	4	**15**	10	1	5	14	12	13	8	7
5.	Investigated 1	2	3	9	11	1	6	10	15	4	13	14	12	5	7	8
6.	Investigated 2	2	3	9	10	11	4	6	1	15	13	14	5	12	7	8
7.	Investigated 3	2	3	10	9	11	4	6	1	15	14	5	12	13	7	8
8.	Investigated 4	2	3	10	9	11	6	1	12	15	5	4	14	13	7	8
9.	Investigated 5	2	3	10	11	9	4	1	6	15	12	14	5	13	8	7
10.	Investigated 6	2	3	11	9	4	15	10	1	6	12	14	5	8	13	7
11.	Digestive type	2	**4**	3	9	6	11	1	10	15	14	12	13	5	7	8
12.	Investigated 7	2	6	10	3	9	11	4	1	15	14	12	13	5	7	8
13.	Investigated 8	2	9	3	10	11	6	1	15	4	12	5	13	14	8	7
14.	Standard	2	9	3	11	4	1	10	6	15	5	12	14	13	8	7
15.	Infantilism	2	9	3	11	4	**10**	6	1	15	5	14	12	13	8	7
16.	Gigantism	2	9	11	3	6	1	4	10	15	5	12	14	13	7	8
17.	Asthenic type	2	11	9	**1**	**3**	4	10	6	15	5	12	14	13	8	7
18.	Distimism	3	2	6	9	11	1	4	10	15	5	12	13	7	**14**	8
19.	Investigated 9	3	2	6	9	10	11	4	1	15	12	5	14	13	8	7
20.	Acromegaly	3	2	9	4	11	6	**14**	10	5	15	1	13	12	8	7
21.	Prematurely. aging	3	2	9	11	4	6	10	15	1	5	12	14	13	8	7
22.	Osteoporosis	3	2	9	11	4	6	10	1	15	5	12	14	13	8	7
23.	Investigated 10	3	2	10	6	9	11	4	1	12	15	13	14	5	7	8
24.	Investigated 11	3	2	10	9	11	4	6	15	1	14	13	5	12	7	8
25.	Investigated 12	3	2	11	9	4	6	10	15	1	12	5	13	14	7	8
26.	Pituitary-genital fatty degeneration	3	9	2	6	11	1	10	15	**4**	12	14	5	13	8	7
27.	Myxedema and cretinism	3	9	2	6	11	15	4	10	1	12	14	5	13	8	7
28.	Rickets (in an adult)	3	9	2	11	6	4	10	1	5	15	12	14	7	13	8
29.	Average	3	9	2	11	6	4	10	1	15	5	12	14	13	8	7
30.	Investigated 13	3	11	2	9	10	15	6	12	13	1	4	14	5	8	7
31.	Bazedova disease	9	2	3	11	**10**	1	6	**4**	5	12	14	15	13	8	7
32.	Micromelia	9	11	3	**2**	4	15	10	**7**	**12**	14	**8**	**1**	**6**	13	**5**

Remark. *The same font indicates the coincidence of the sequence of code elements in the structures of the presented somatotypes.*

Table 4

The number of hits of each indicator number at the position of the universal somatotype code (positions are numbered in ascending order of indicator values)

Breitman Code	Name of body parts	Scale of order (following body parts)															
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	Total
I	Upper face length	0	0	0	1	1	7	5	10	5	1	1	1	0	0	0	32
II	Lower face length	17	9	5	1	0	0	0	0	0	0	0	0	0	0	0	32
III	Neck length	13	10	6	2	1	0	0	0	0	0	0	0	0	0	0	32
IV	Ascromial nipple distance	0	1	0	1	8	8	8	1	3	0	2	0	0	0	0	32
V	Nipple-umbilical distance	0	0	0	0	0	0	0	0	4	10	4	8	5	0	1	32
VI	Umbilical-inguinal distance	0	1	4	4	5	7	6	3	1	0	0	0	1	0	0	32
VII	Thigh length	0	0	0	0	0	0	0	1	0	0	0	0	2	10	19	32
VIII	Shank length	0	0	0	0	0	0	0	0	0	0	1	0	1	18	12	32
IX	Foot height	2	8	8	11	3	0	0	0	0	0	0	0	0	0	0	32
X	Half acromial distance	0	0	6	2	3	1	11	9	0	0	0	0	0	0	0	32
XI	Half spacing	0	3	3	10	11	5	0	0	0	0	0	0	0	0	0	32
XII	Foot length from heel to toe	0	0	0	0	0	0	0	2	2	8	13	4	3	0	0	32
XIII	Shoulder length	0	0	0	0	0	0	0	0	1	2	2	6	18	3	0	32
XIV	Forearm length	0	0	0	0	0	0	1	0	0	7	9	12	2	1	0	32
XV	Brush length	0	0	0	0	0	4	1	6	16	4	0	1	0	0	0	32
	Total	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	480

Remark. *Dimming highlights values with indicators greater than 1.*

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number of indicators dropped, we get Table 5.

Based on the results obtained in table 5, you can compile a universal code Collective somatotype, which consists of the most common indicators in ascending order (Table 6).

Table 5

The number of hits of each indicator number at the position of the universal somatotype code (positions are numbered in the order of increasing values of the indicators) expressed, %

Breitman Code	Name of body parts	Scale of order (following body parts)															Total
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	
I	Upper face length	0	0	0	3	3	22	16	31	16	3	3	3	0	0	0	100
II	Lower face length	53	28	16	3	0	0	0	0	0	0	0	0	0	0	0	100
III	Neck length	41	31	19	6	3	0	0	0	0	0	0	0	0	0	0	100
IV	Ascromial nipple distance	0	3	0	3	25	25	25	3	9	0	6	0	0	0	0	100
V	Nipple-umbilical distance	0	0	0	0	0	0	0	0	13	31	13	25	16	0	3	100
VI	Umbilical-inguinal distance	0	3	13	13	16	22	19	9	3	0	0	0	3	0	0	100
VII	Thigh length	0	0	0	0	0	0	0	3	0	0	0	0	6	31	59	100
VIII	Shank length	0	0	0	0	0	0	0	0	0	0	3	0	3	56	38	100
IX	Foot height	6	25	25	34	9	0	0	0	0	0	0	0	0	0	0	100
X	Half acromial distance	0	0	19	6	9	3	34	28	0	0	0	0	0	0	0	100
XI	Half spacing	0	9	9	31	34	16	0	0	0	0	0	0	0	0	0	100
XII	Foot length from heel to toe	0	0	0	0	0	0	0	6	6	25	41	13	9	0	0	100
XIII	Shoulder length	0	0	0	0	0	0	0	0	3	6	6	19	56	9	0	100
XIV	Forearm length	0	0	0	0	0	0	3	0	0	22	28	38	6	3	0	100
XV	Brush length	0	0	0	0	0	13	3	19	50	13	0	3	0	0	0	100
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	

Remark. *The maximum values obtained by columns are highlighted by dimming..*

Table 6

Universal collective somatotype code

Universal code	2	3	9	11	4	6	10	1	15	12	14	5	13	8	7
Breitman code	II	III	IX	XI	IV	VI	X	I	XV	XII	XIV	V	XIII	VIII	VII
Name of body parts	Lower face length	Neck length	Foot height	Half inter-nipple distance	Ascromial-nipple distance	Umbilical-inguinal distance	Half acromal distance	Upper face length	Hand Length	Foot length from heel to large. fingers	Forearm length	Nipple-umbilical distance	Shoulder length	Shin length	Thigh length

Conclusions / Discussion

Using the modified method of M. Ya. Breitman allows not only to determine the unified code of the somatotype, but also to reveal the patterns of motor and trophic qualities most pronounced for certain somatotypes.

Conducting further studies using standardized tests makes it possible to establish a direct relationship between the inherent phylogenetically predetermined correlation of the level of development of the athlete's physical qualities and his unified somatotype code.

The correspondence between the unified code of the somatotype and its physical qualities allows you to accurately select team members in the formation of more stable and productive couples in sports dancing, and the choice of the most optimal types of training organization to develop the necessary ratio of the athlete's motor qualities in achieving high sports results.

During further research in this direction, the selection of athletes at its initial stage, this method will be fully automated. Building a somatotype model based on a natural pedagogical experiment, which ensures the selection of athletes who have achieved the highest results.

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