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FEATURES OF SYSTEM-VEGETATIVE DEPENDENCE OF THE YOUNG SCHOOL

(FINAL INFORMATION-2)

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Summary. *The above materials do not have analogues and belong to the section "Age-based vegetogy (Functional-vegetative homeostasis of the young school age. Features of system-complex dependence.). On the example of sexual-age groups there is a biophysical reality of "acupuncture channels" - the basic basis of an unknown previously functional and vegetative human system. It is shown its system-complex organization, vegetative orientation and matrix dependence. Scientifically adapted information is available for professional understanding and requires the attention of pediatricians, general practitioners and rehab. The materials of the section are presented in six consecutive "Final Information" (separately for each age group).*

Key words: *age-old vegetology, functional-vegetative homeostasis, Zhen-Tszyu therapy.*

Резюме*. Наведені матеріали не мають аналогів і відносяться до розділу "Вікова вегетологія (Функціонально-вегетативний гомеостаз молодшого шкільного віку. Особливості системно-комплексної залежності.)". На прикладі статево-вікових груп доводиться біофізична реальність "акупунктурних каналів" – базової основи невідомої раніше функціонально-вегетативної системи людини. Показана її системно-комплексна організація, вегетативна спрямованість і Матрична залежність. Науково адаптована інформація доступна для фахового розуміння і вимагає уваги педіатрів, лікарів загальної практики та реабілітологів. Матеріали розділу представлені в шести послідовних "Заключних інформаціях" (окремо по кожній віковій групі).*

Ключові *слова: вікова вегетологія, функціонально-вегетативний гомеостаз, Чжень-цзю терапія.*

Резюме. *Представленные материалы не имеют аналогов и относятся к разделу "Возрастная вегетологии (Функционально-вегетативный гомеостаз младшего школьного возраста. Особенности системно-комплексной зависимости.)". На примере половозрастных групп доказывается биофизическая реальность "акупунктурных каналов" - базовой основы неизвестной ранее функционально-вегетативной системы человека. Показана её системно-комплексная организация, вегетативная направленность и Матричная зависимость. Научно адаптированная информация доступна для профессионального понимания и требует внимания педиатров, врачей общей практики и реабилитологов. Материалы раздела представлены в шести последовательных "Заключительных информациях" (отдельно по каждой возрастной группе).*

Ключевые слова: *возрастная вегетологии, функционально-вегетативный гомеостаз, Чжень-цзю терапия.*

Introduction

The Second questions of the age-old vegetation of the young school age (YSE) refers to the biophysical reality of its "Functional-vegetative system" (FVS) [1,2,4]. Functional-vegetative diagnostics developed in Ukraine [1,4,5] allowed to identify "acupuncture channels" of the traditional Eastern Zhen-Tszyu therapy, to prove its direct relation to the human vegetative homeostasis [5,6] and to raise the question of the expediency of the problem of "Age-based vegetology".

For many years we have been involved in the program of sanatorium and health improvement "Two-stage system of rehabilitation of vegetative violations in children living in regions of radiation control" (order of the Cabinet of Ministers of Ukraine № 12010/87, scientific supervisor of the Program - Doctor of Medical Sciences, Professor V.G.Makats). A sufficient number of children of this group was inspected (Table 1.1).

Table 1.1

Static of the age group of YSE (7-12 years)

YSE	Women's group (7-12 years old)	Men's group (7-12 years old)
Inspected	2386	3026

Before considering these materials, let us pay attention to the classification of "Functional-autonomic human systems" (acupuncture channels, Table 1, 2) and their vegetative orientation due to "vegetative coefficients" (k-V; Table 1.3).

Table 1.2

Acupuncture channels (meridians) for the international nomenclature of the WHO

Traditional channel	IAN *	FN	Traditional channel	IAN *	FN
Lungs	**LU**	P	Urinary bladder	**BL**	V
Large intestine	**LI**	GI	Kidney	**KI**	R
Stomach	**ST**	E	Pericardium	**PC**	MC
Spleen – Pancreas	**SP**	RP	Triple energizer	**TE**	TR
Heart	**HT**	C	Gall bladder	**GB**	VB
Small intestine	**SI**	IG	Liver	**LR**	F

**IAN - International Acupuncture Nomenclature (WHO); FN - its French analogue.*

Table 1.3

Functional-vegetative attention zone by size k-V

ZONE OF ATTENTION OF VEGETATIVE COEFFICIENTS

VALUE of **k**	ZONE OF FUNCTIONAL ATTENTION	SYMBOL OF ZONE
to 0,75	syndrome of significant parasympathetic prevalence	**PA-s**
0,76-0,86	syndrome of significant parasympathetic prevalence;	**PA-e**
0,87-0,94	zone of functional compensation of parasympathetic activity	**FcP**
0,95-1,05	zone of functional-vegetative equilibrium	**VE**
1,06-1,13	zone of functional compensation of sympathetic activity	**FcS**
1,14-1,26	syndrome of expressed sympathetic prevalence	**SA-e**
1,26 and >	syndrome of significant sympathetic prevalence	**SA-s**

At the same time, let us pay attention to the separate functional complexes (FC) of the "acupuncture channels": FC-1 (BL-G-ST), FC-2 (SP-LR-KI), FC-3 (SI-TE-LI) and FC -4 (LU-PC-HT). The increase in the activity of the functional systems of FC-1 and FC-3 causes the sympathetic orientation of vegetative homeostasis, and the growth of systemic activity of FC-2 and FC-4 is a parasympathetic orientation (and vice versa) [1,4,5].

Materials and methods

The study is unique in and performed to study the age of autonomic activity focus at different functional and autonomic systems. The method of control is selected "Functional-vegetative diagnostics" (FVD) by the method of V.G.Makats [1,5]. ERF admitted to medical practice Academic Council of Ministry of Health of Ukraine and its committees problem: Pediatrics, Obstetrics and Gynecology, Quantum Medicine, Hematology and Transfusiology, new medical technology and new diagnostic tools (protocol №1.08-01 of 11.09.94r.).

FVD does not use traditional external sources of current, has an original normative base and the only one of modern "acupuncture diagnostics" causes the comparability of repeated results of the survey ... The probability of the obtained indicators was estimated by means of parametric and nonparametric statistics. The analysis of the results was carried out on the basis of the computer programs "Search" (development of the European Center for Postgraduate Education of the PO Ukrainian National Academy of Natural Sciences).

In view of the problematic nature of the issue, the gender-age peculiarities of systemic and vegetative dependence will be considered when excitement and inhibition of individual channels in women's and men's groups. Studies of vegetative dynamics were conducted in the mode of observation of increasing levels of k-V for each functional group (PA-s, PA-e, FcP, VE, FcS, SA-e, SA-s). The number of observations in the female group was 9,947 cases, and male - 5.492.

Results and discussion

I. FEATURES OF SYSTEM-VEGETATIVE DEPENDENCE OF THE YOUNG SCHOOL AGE (WOMEN'S GROUP)

The experimental and graphological basis of the biophysical identification of the vegetative system-complex orientation are presented in Table 4 and Fig.1-4

Table 4

Vegetative orientation of systemic activity (in % from the zone of functional norm)

k-V	BL	GB	ST	SP	LR	KI	SI	TE	LI	LU	PC	HT
1,8	0,20	-1,98	-2,36	2,12	-0,31	1,39	-1,91	-3,15	-3,16	2,42	3,19	3,48
2,16	1,91	-1,73	-1,56	3,14	-0,53	1,37	-0,69	-2,62	-3,32	0,97	1,59	1,44
2,37	-0,02	-0,92	-0,80	0,55	0,16	1,05	0,22	-1,89	-2,07	1,30	1,36	0,98
2,52	0,83	-0,70	-0,87	0,92	-0,07	0,58	0,18	-1,95	-1,66	0,71	1,14	0,71
2,67	0,35	-0,73	-0,99	0,93	-0,38	0,30	0,74	-1,23	-1,08	0,55	0,76	0,59
2,79	0,34	-0,41	-0,58	0,48	0,00	0,11	0,60	-1,06	-0,72	0,45	0,47	0
2,91	-0,19	-0,46	-0,47	-0,03	-0,27	-0,14	1,32	-0,13	-0,51	0,65	0,50	0,08
3,06	1,09	-0,46	-0,11	0,45	-0,45	-0,06	1,51	-0,50	-0,94	0	-0,15	-0,16
3,21	0,25	-0,24	-0,39	-0,13	-0,75	-0,38	1,75	0,44	-0,06	0,04	-0,17	-0,17
3,33	0,65	0	-0,01	-0,04	-0,88	-0,51	1,49	0,49	-0,01	-0,02	-0,37	-0,45
3,51	0,15	0,14	0,10	-0,40	-0,85	-0,56	1,93	0,87	0,29	-0,02	-0,72	-0,92
3,69	1,33	-0,68	0,30	0,09	-0,88	-1,21	2,11	1,33	0,43	-0,47	-1,19	-1,28
3,93	1,17	-0,09	-0,28	-0,46	-1,39	-1,96	2,50	2,61	0,73	-0,17	-1,15	-1,27
4,92	2,62	0,75	1,08	-0,26	-1,28	-2,21	2,53	2,44	1,55	-2,23	-2,51	-2,51

1. FIRST FUNCTIONAL-VEGETATIVE COMPLEX (BL-GB-ST). WOMEN'S GROUP (WG).

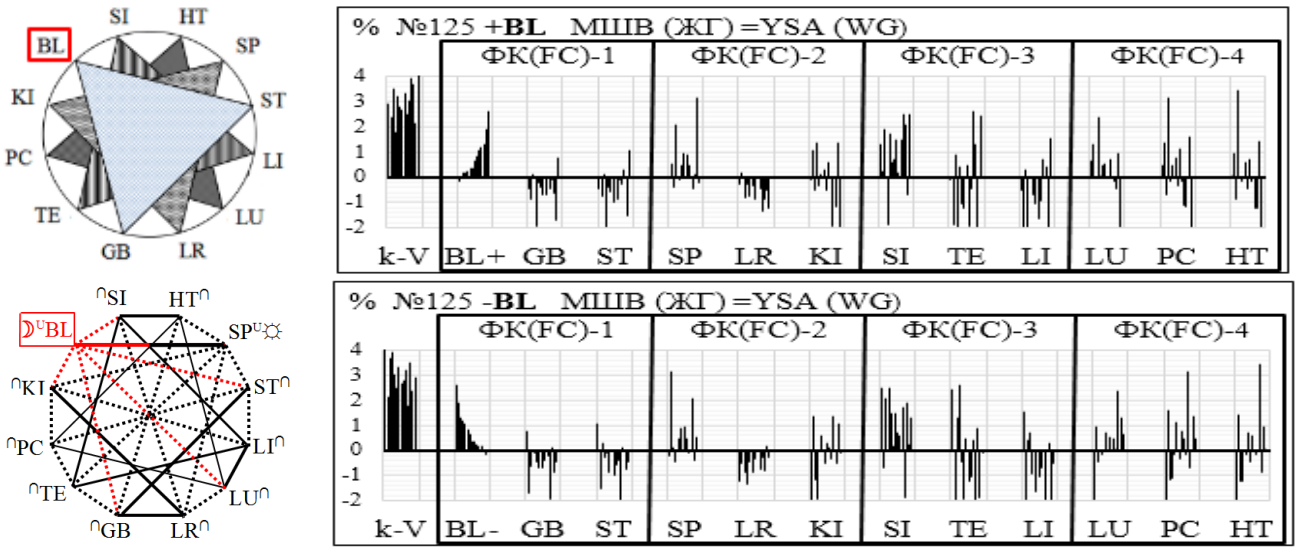
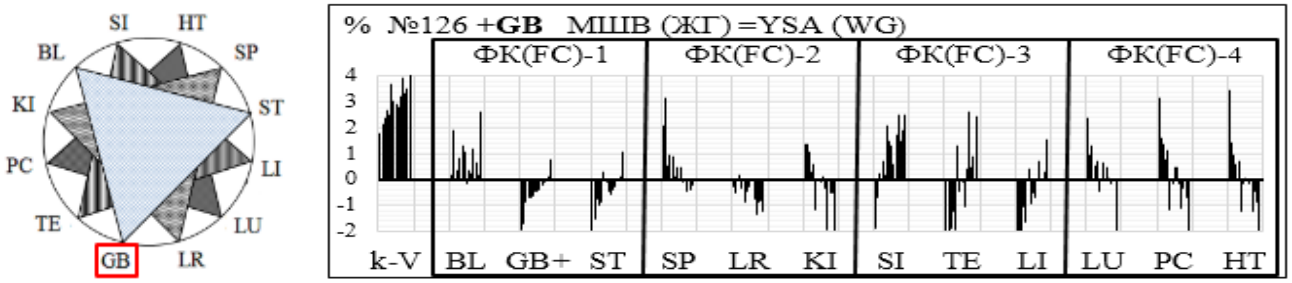


Fig.1.1 Identification of systemic and vegetative dependence at ± **BL** (WG)



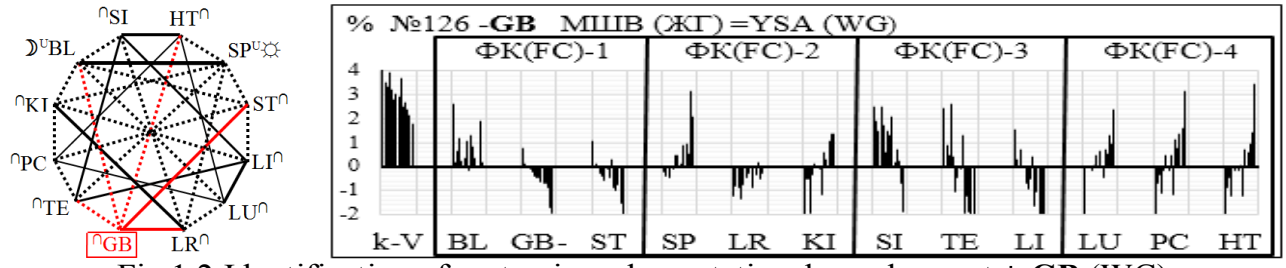


Fig.1.2 Identification of systemic and vegetative dependence at ± **GB** (WG)

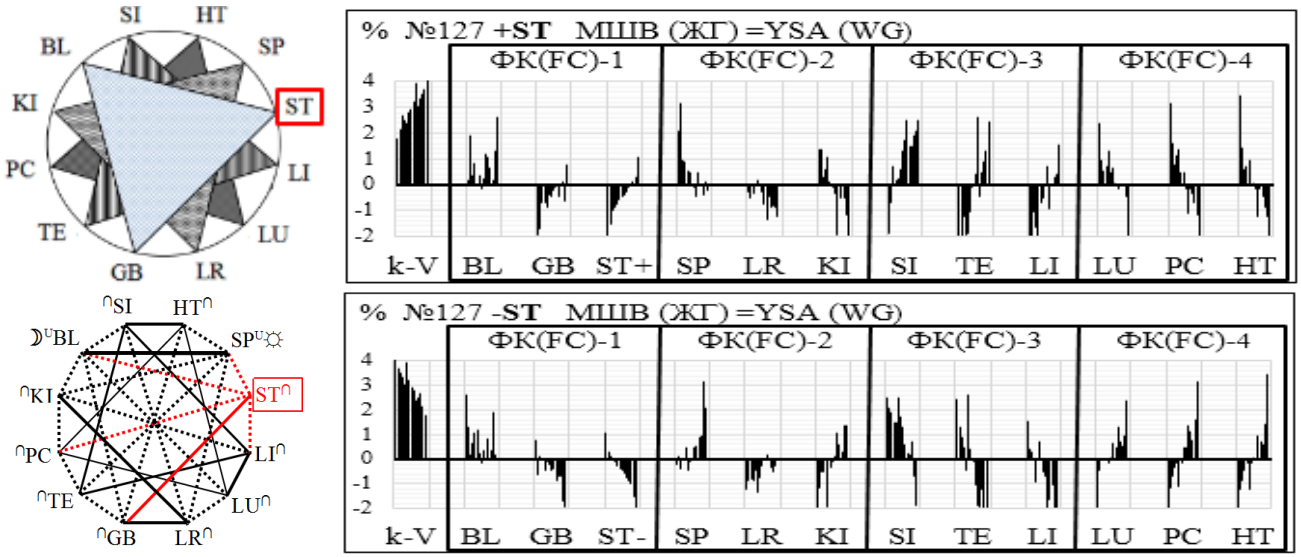


Fig.1.3 Identification of systemic and vegetative dependence at ± **ST** (WG)

2. OTHER FUNCTIONAL-VEGETATIVE COMPLEX (SP-LR-KI). WOMEN'S GROUP (WG).

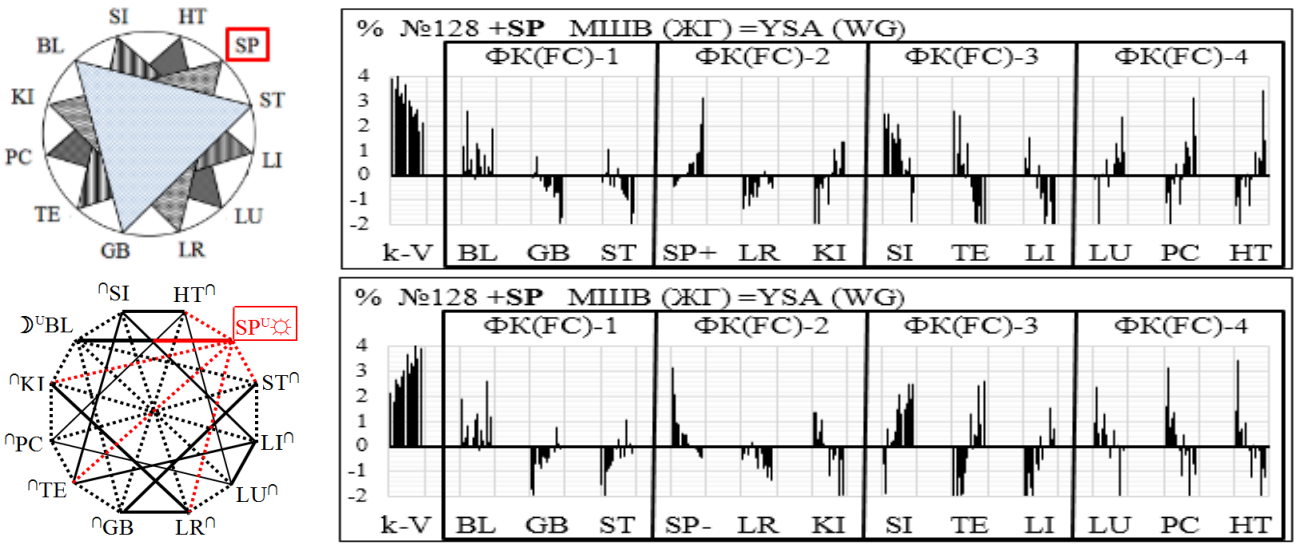
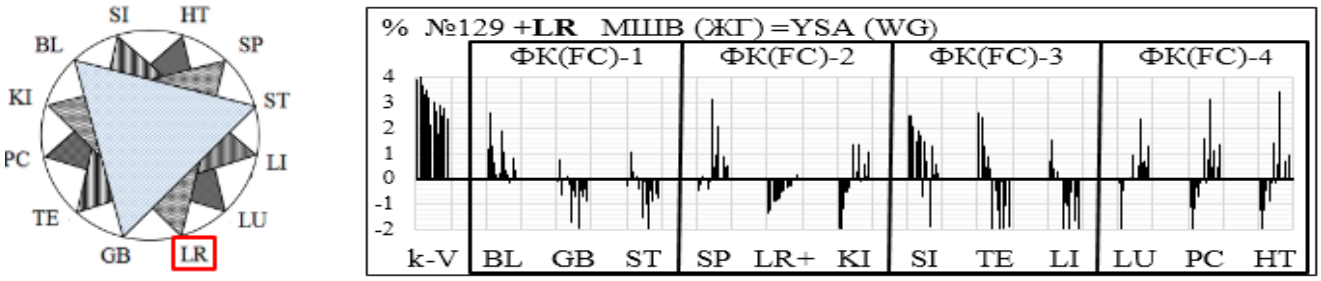


Fig.2.1 Identification of systemic and vegetative dependence at ± **SP** (WG)



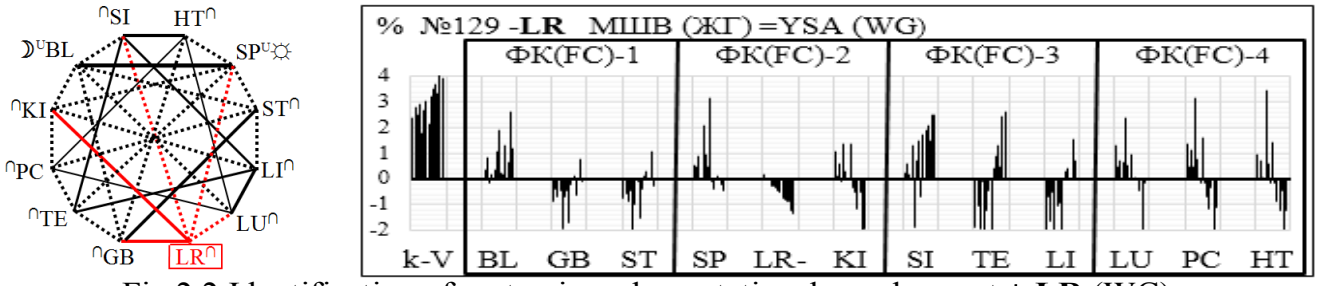


Fig.2.2 Identification of systemic and vegetative dependence at ± **LR** (WG)

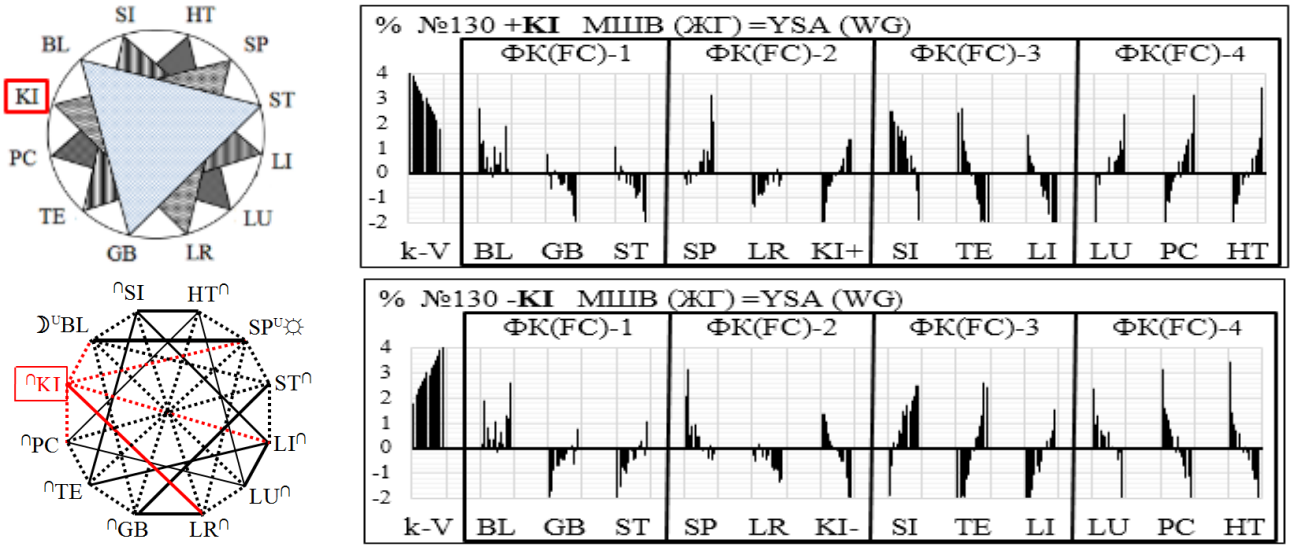


Fig.2.3 Identification of systemic and vegetative dependence at ± **KI** (WG)

2. THIRD FUNCTIONAL-VEGETATIVE COMPLEX (SI-TE-LI). WOMEN'S GROUP (WG).

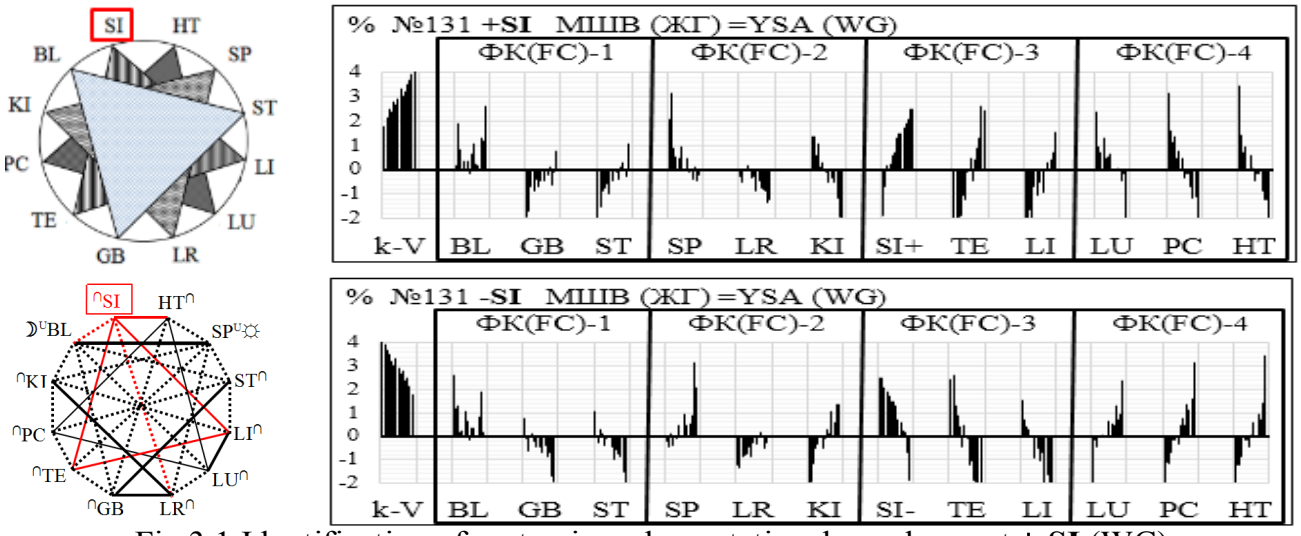
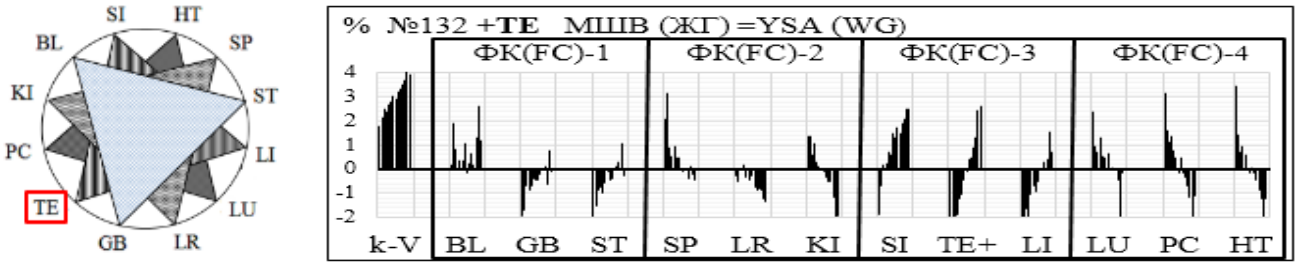


Fig.3.1 Identification of systemic and vegetative dependence at ± **SI** (WG)



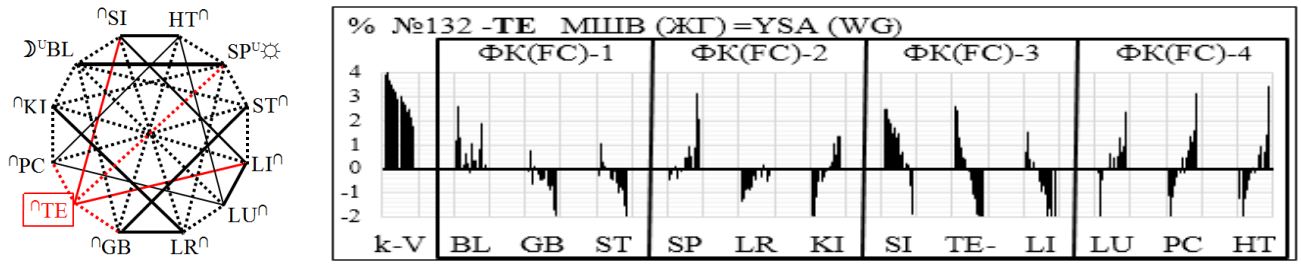


Fig.3.2 Identification of systemic and vegetative dependence at ± **TE** (WG)

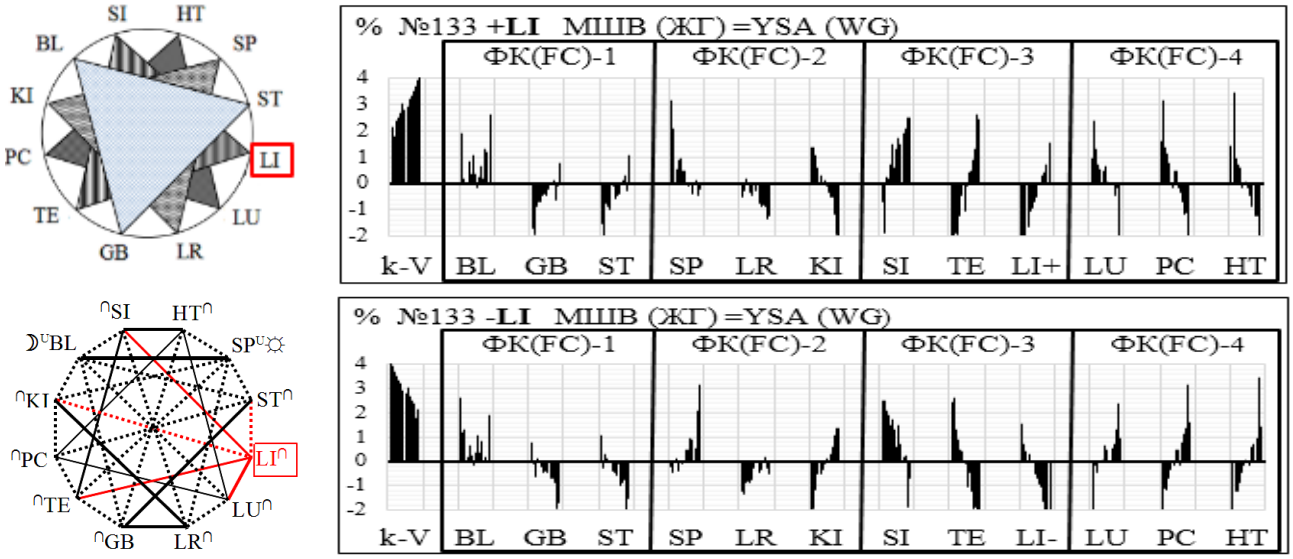


Fig.3.3 Identification of systemic and vegetative dependence at ± **LI** (WG)

3. QUARTET FUNCTIONAL-VEGETATIVE COMPLEX (LU-PC-HT). WOMEN'S GROUP (WG).

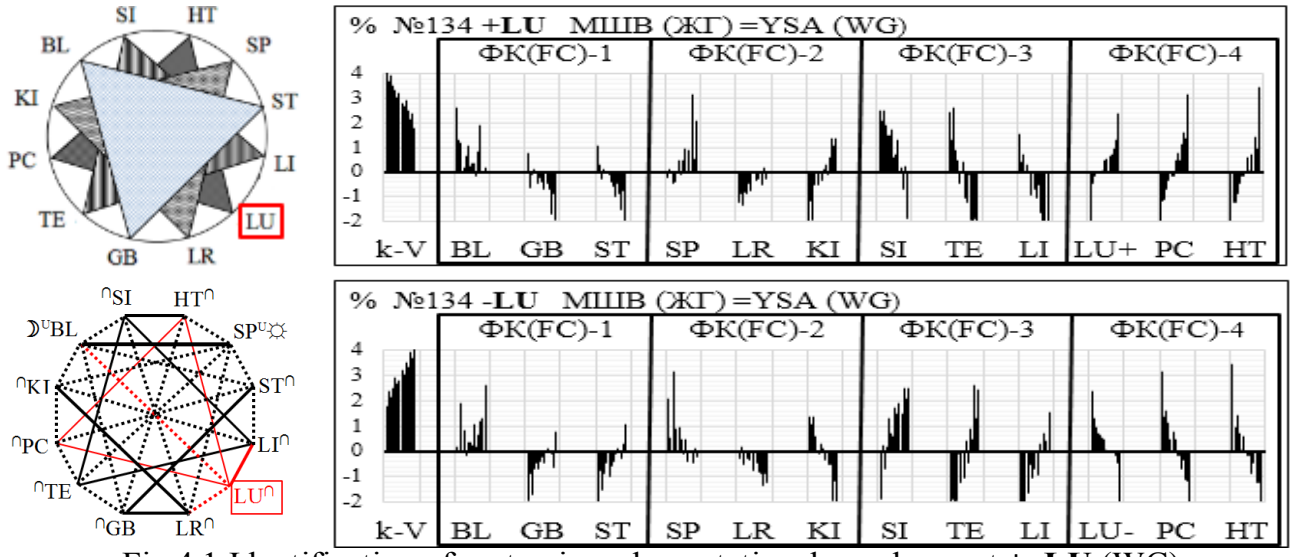
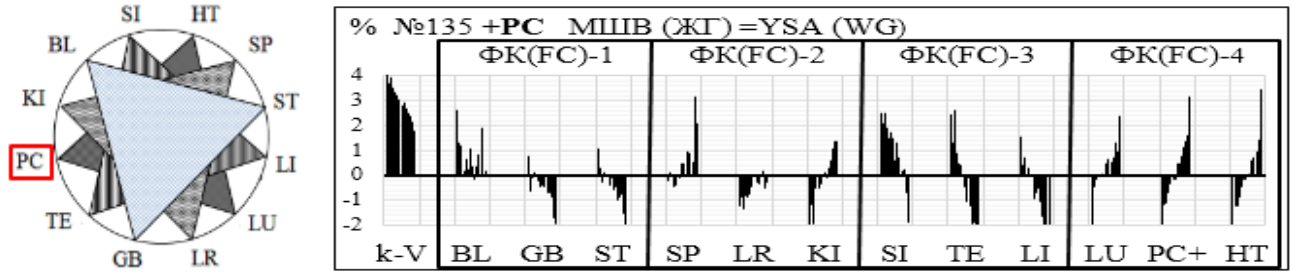


Fig.4.1 Identification of systemic and vegetative dependence at ± **LU** (WG)



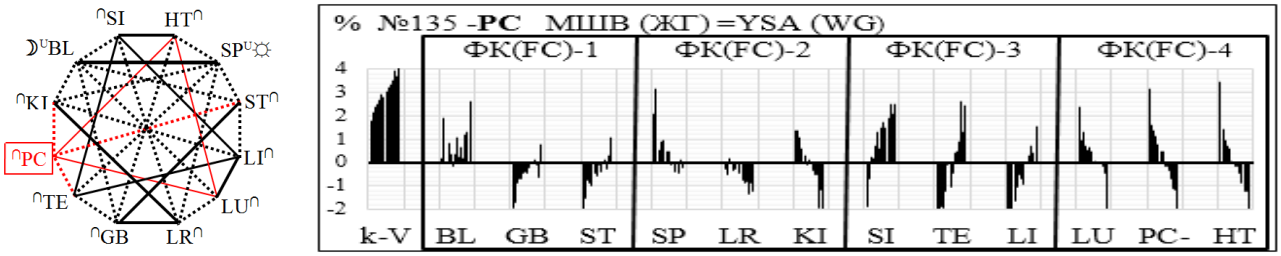


Fig.4.2 Identification of systemic and vegetative dependence at ± **PC** (WG)

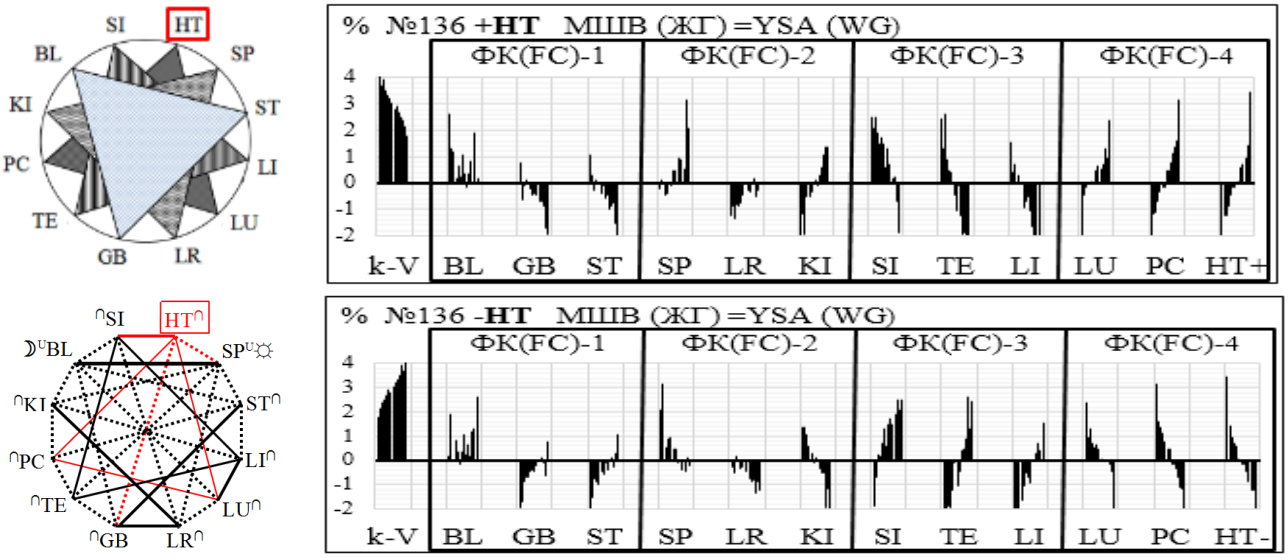


Fig.4.3 Identification of systemic and vegetative dependence at ± **HT** (WG)

II. FEATURES OF SYSTEM-VEGETATIVE DEPENDENCE OF THE YOUNG SCHOOL AGE (MEN'S GROUP)

The experimental and graphological basis of the biophysical identification of the vegetative system-complex orientation are presented in Table 5 and Fig.5-8

Table 5

Vegetative orientation of systemic activity (in % from the zone of functional norm)

k-V	BL	GB	ST	SP	LR	KI	SI	TE	LI	LU	PC	HT
1,83	0,09	-1,46	-2,22	2,48	-0,60	1,57	-3,04	-3,01	-2,56	1,97	3,47	3,16
2,16	0,93	-0,87	-1,56	2,11	-0,18	1,20	-2,23	-2,32	-1,77	1,00	1,73	1,83
2,37	0,37	-0,49	-1,09	1,32	0,12	1,47	-1,78	-1,51	-1,25	0,38	1,10	1,15
2,52	0,13	-0,14	-0,72	0,85	0,17	0,75	-0,90	-1,60	-1,00	0,35	1,15	0,76
2,64	-0,11	-0,45	-0,19	0,17	0,22	0,38	-0,84	-0,75	-0,44	0,54	0,72	0,78
2,76	0,69	-0,42	-0,26	0,66	0,03	0,04	-0,53	-0,63	-0,66	0	0,51	0,43
2,91	-0,52	-0,07	-0,03	-0,10	0,13	0	-0,06	0	0,11	0,28	0,27	0,14
3,06	0,87	0,07	-0,27	0,25	-0,27	0	-0,10	0,13	-0,06	-0,35	-0,05	0,08
3,21	0	0,21	0,16	0	0,17	0	0,11	0,71	0,42	-0,22	-0,44	-0,34
3,33	0,89	0,26	0,07	0	-0,18	0	-0,03	0,99	0,18	-0,40	-0,51	-0,61
3,45	0,08	0,35	0,20	-0,07	-0,32	0	-0,01	1,66	1,10	-0,16	-0,98	-0,97
3,63	0,81	0,78	0,86	-0,17	0,10	0	0,26	0,80	0,94	-0,90	-1,65	-0,99
3,9	0,27	0,36	0,26	-0,76	-0,65	-0,68	1,19	1,86	2,21	-0,43	-1,25	-1,42
4,47	1,98	1,16	0,54	-0,66	-1,13	-1,25	0,96	2,97	1,74	-1,04	-2,18	-2,16

5. FIRST FUNCTIONAL-VEGETATIVE COMPLEX (BL-GB-ST). MEN'S GROUP (MG).

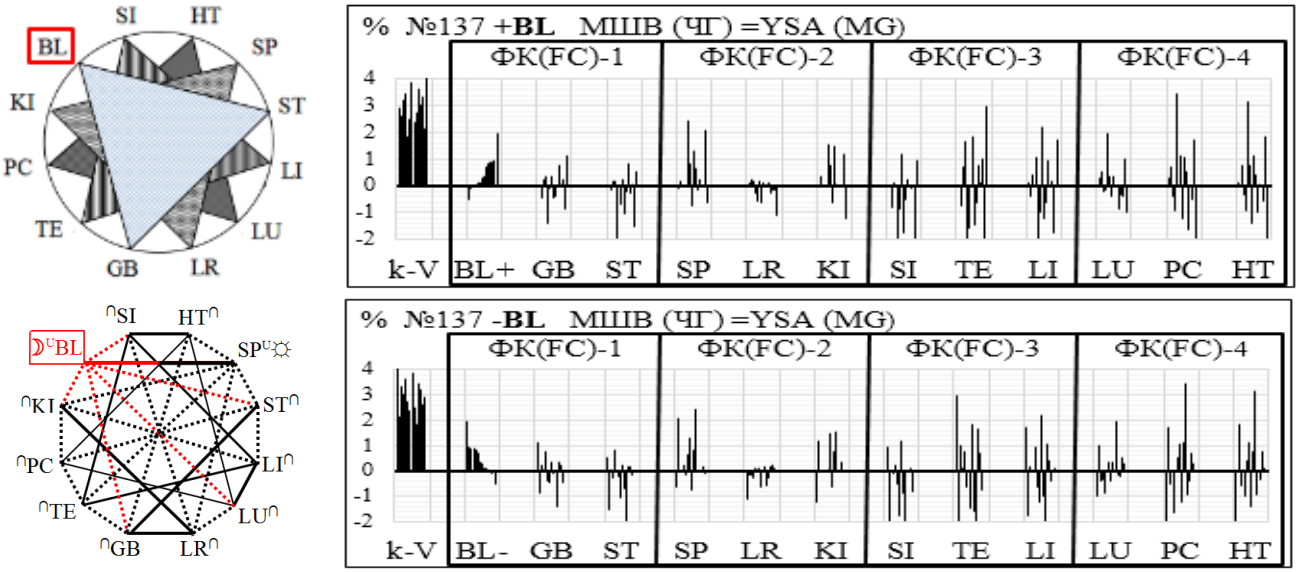


Fig.5.1 Identification of systemic and vegetative dependence at ± **BL** (MG)

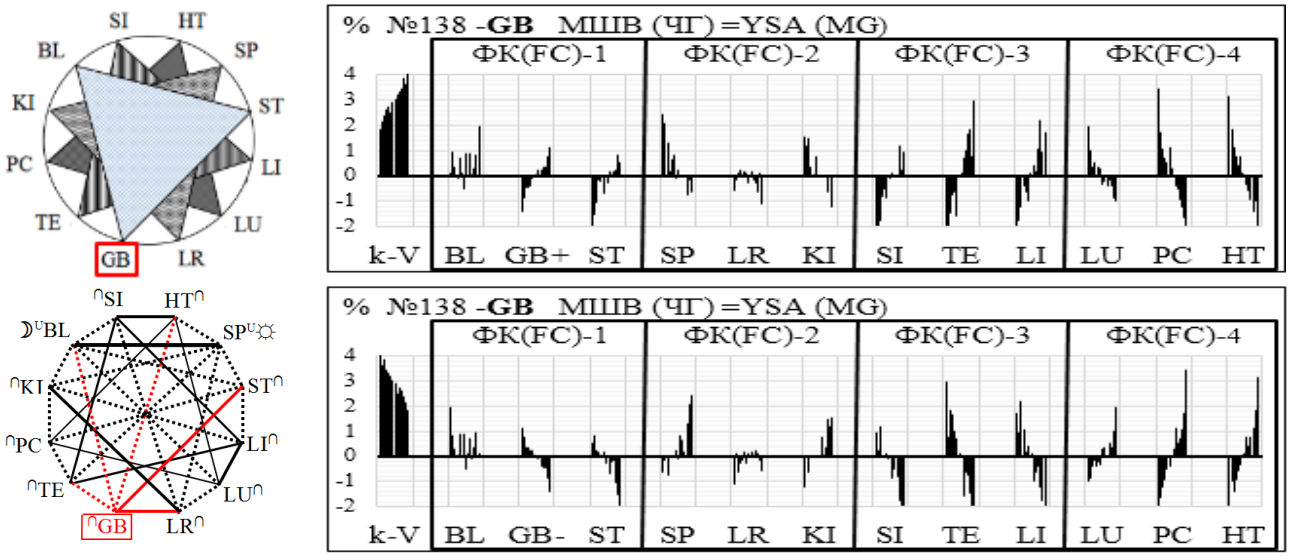


Fig.5.2 Identification of systemic and vegetative dependence at ± **GB** (MG)

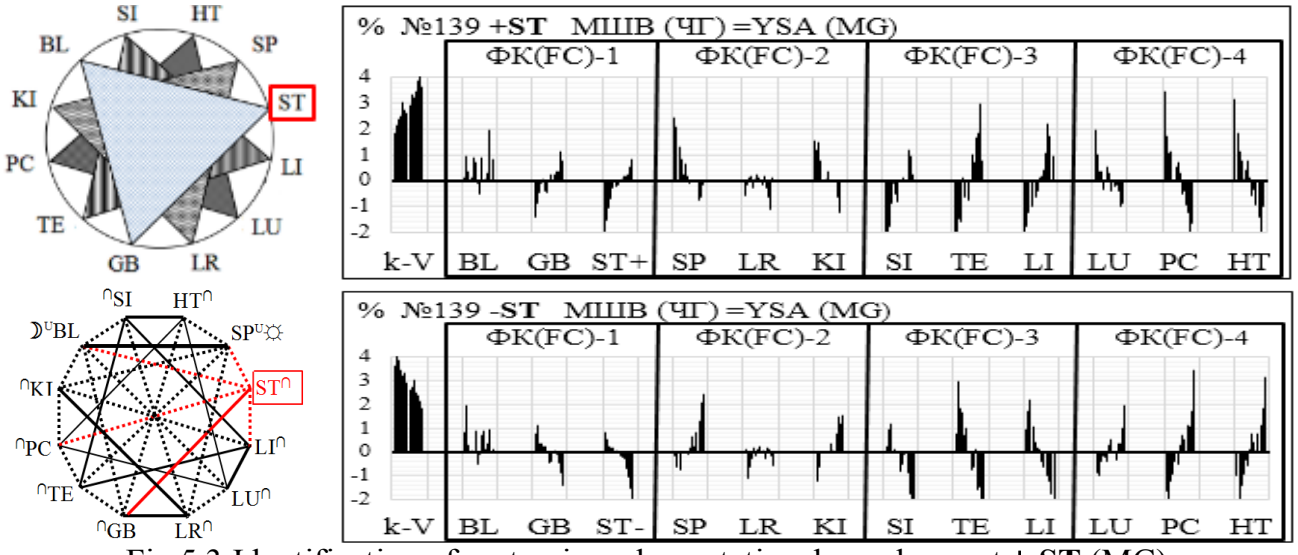


Fig.5.3 Identification of systemic and vegetative dependence at ± **ST** (MG)

6. SECOND FUNCTIONAL-VEGETATIVE COMPLEX (SP-LR-KI). MEN'S GROUP (MG).

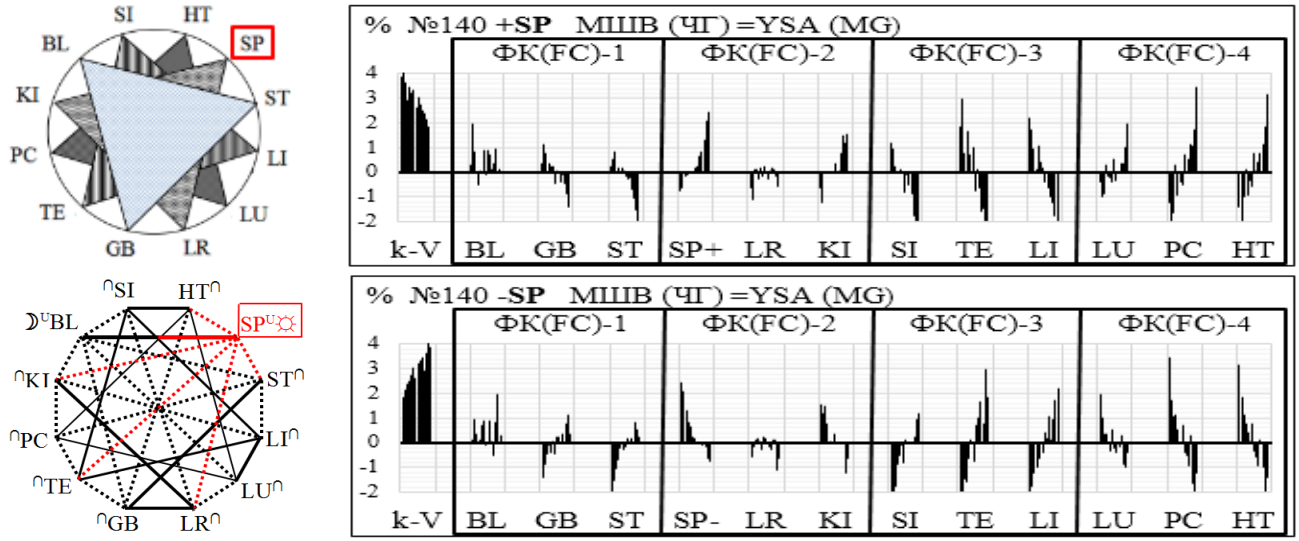


Fig.6.1 Identification of systemic and vegetative dependence at ± **SP** (MG)

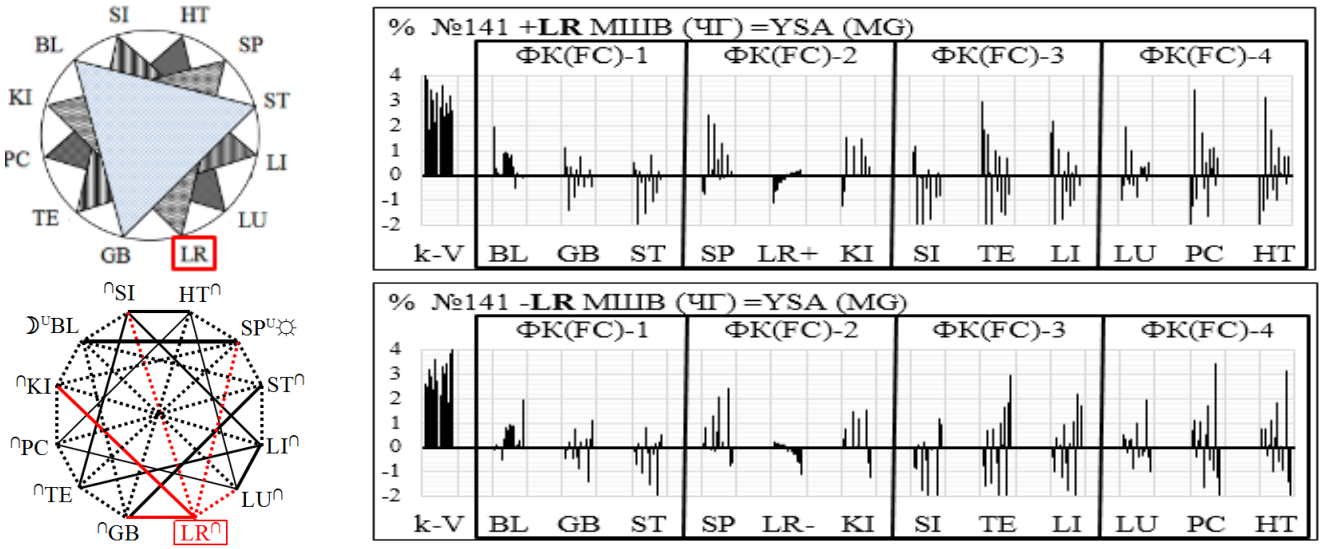


Fig.6.2 Identification of systemic and vegetative dependence at ± **LR** (MG)

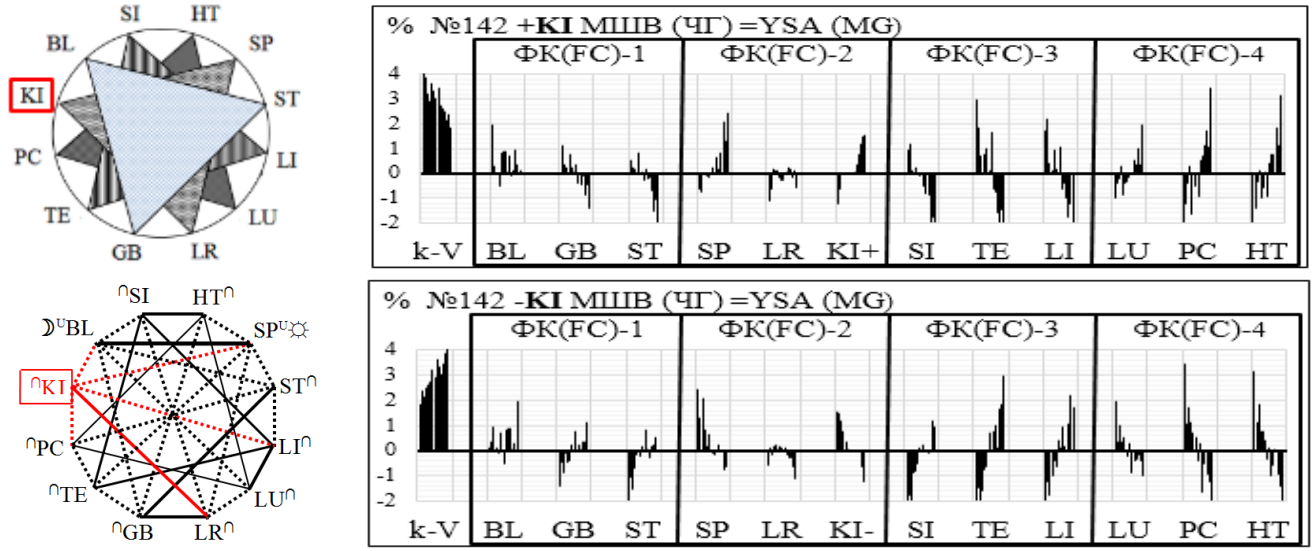


Fig.6.3 Identification of systemic and vegetative dependence at ± **KI** (MG)

7. THIRD FUNCTIONAL-VEGETATIVE COMPLEX (SI-TE-LI). MEN'S GROUP (MG).

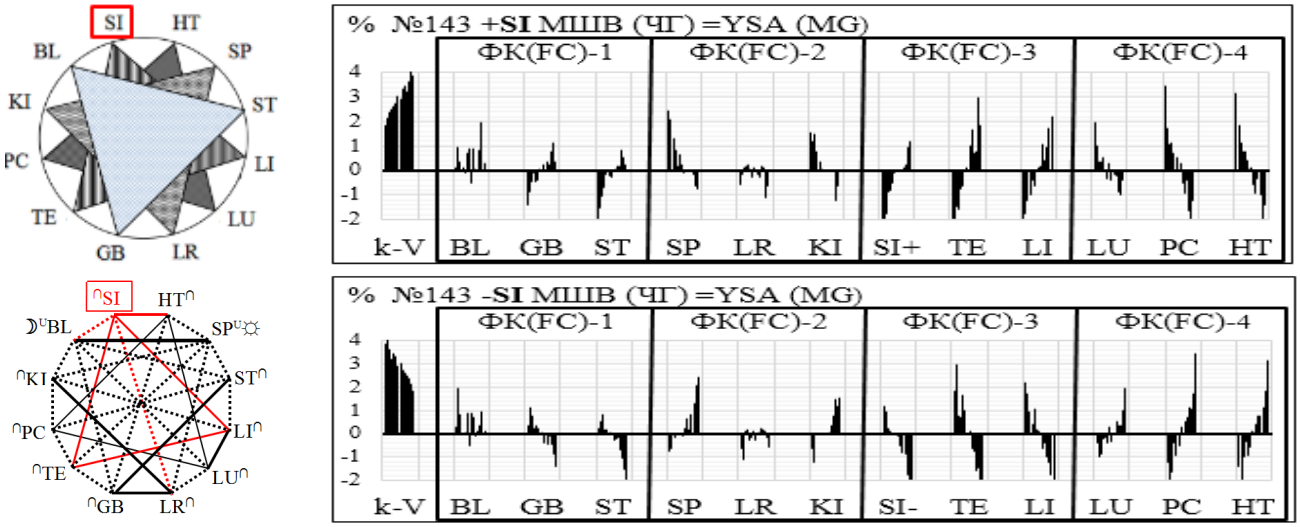


Fig.7.1 Identification of systemic and vegetative dependence at ± **SI** (MG)

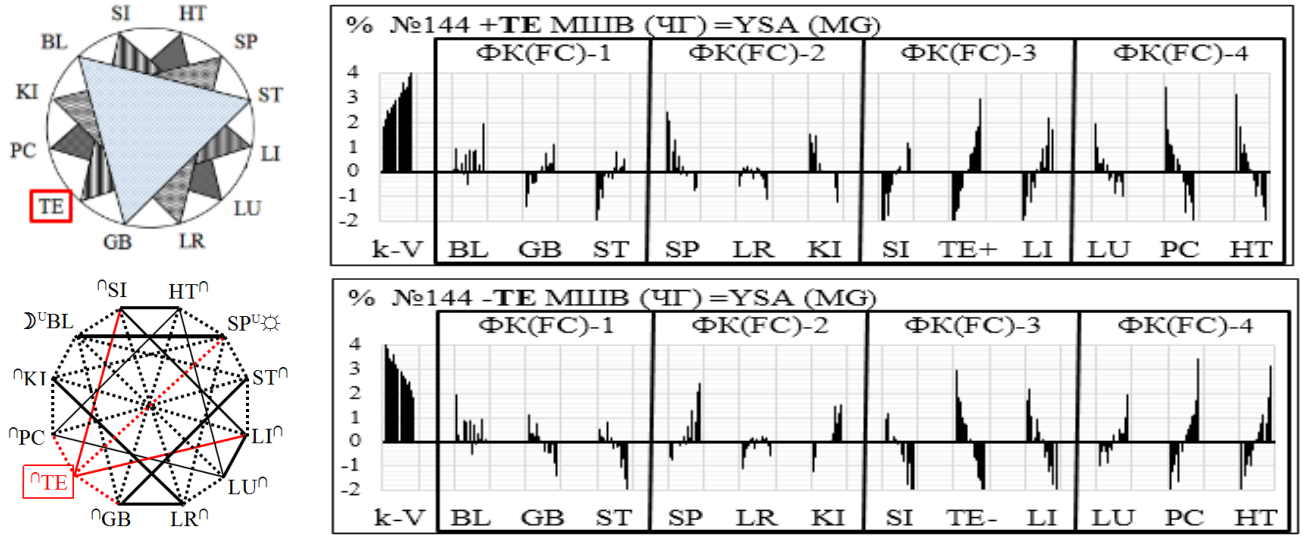


Fig.7.2 Identification of systemic and vegetative dependence at ± **TE** (MG)

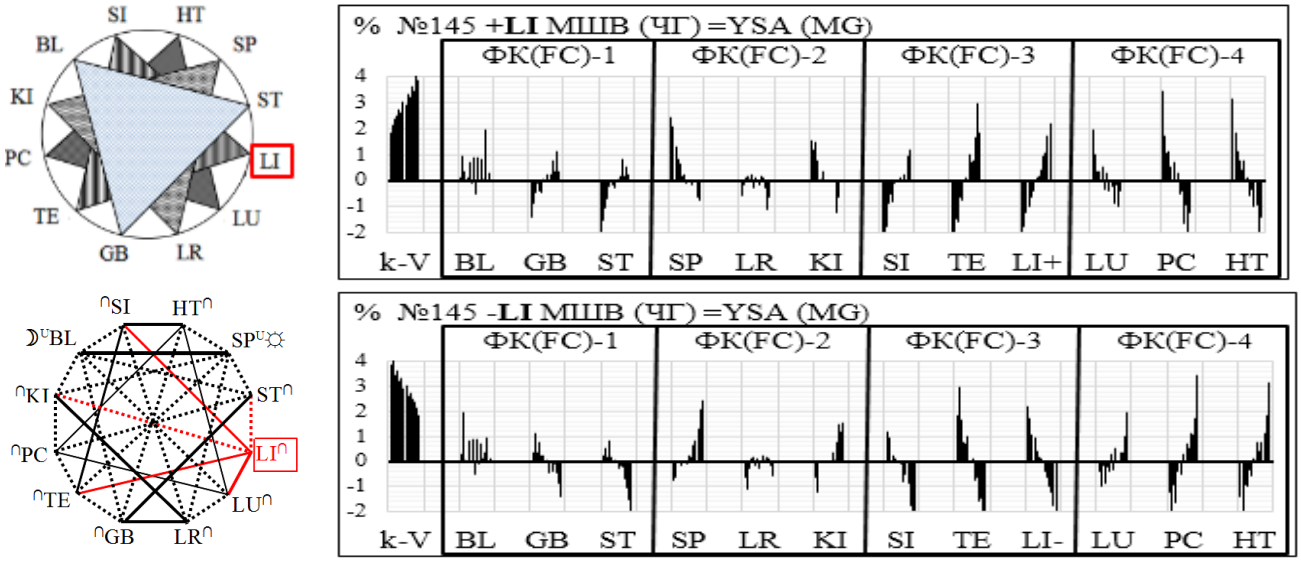


Fig.7.3 Identification of systemic and vegetative dependence at ± **LI** (MG)

8. QUARTET FUNCTIONAL-VEGETATIVE COMPLEX (LU-PC-HT). MEN'S GROUP (MG).

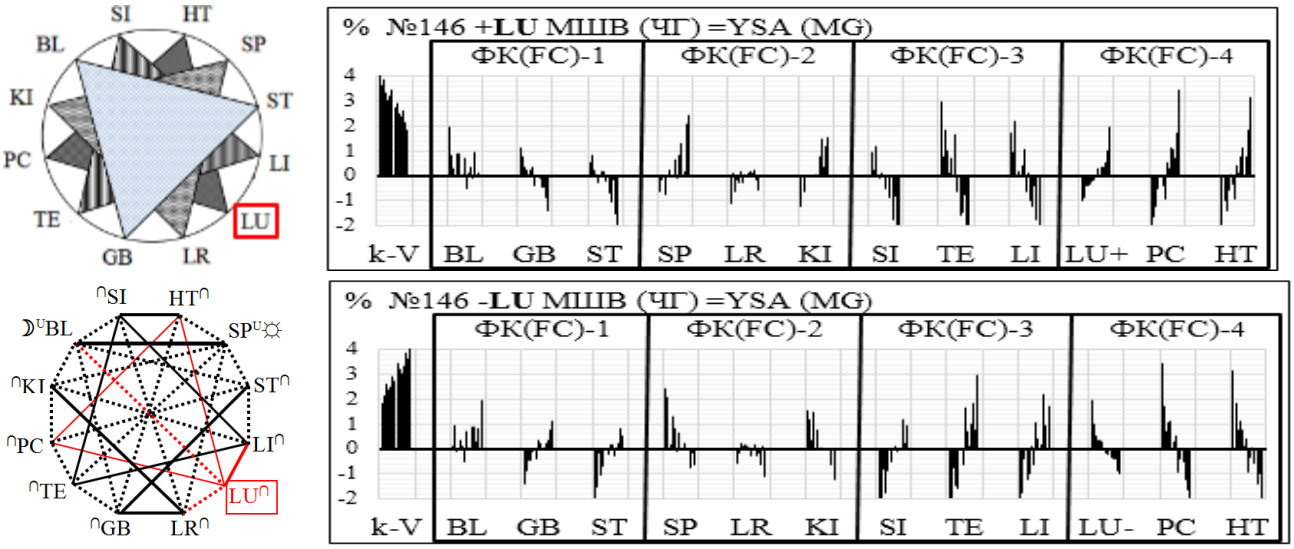


Fig.8.1 Identification of systemic and vegetative dependence at ± **LU** (MG)

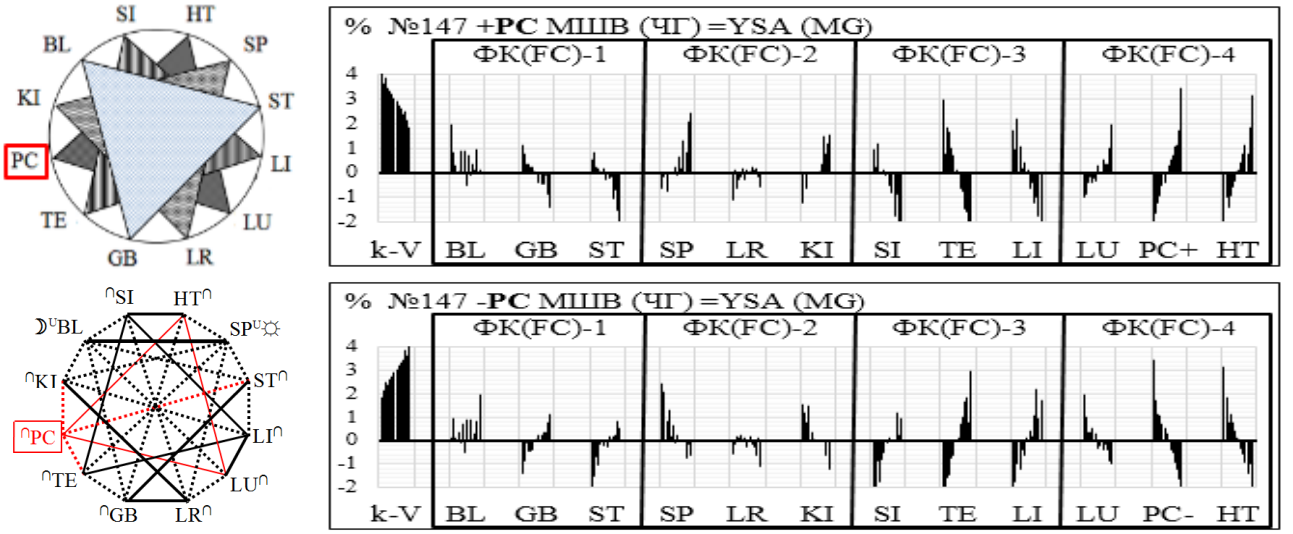


Fig.8.2 Identification of systemic and vegetative dependence at ± **PC** (MG)

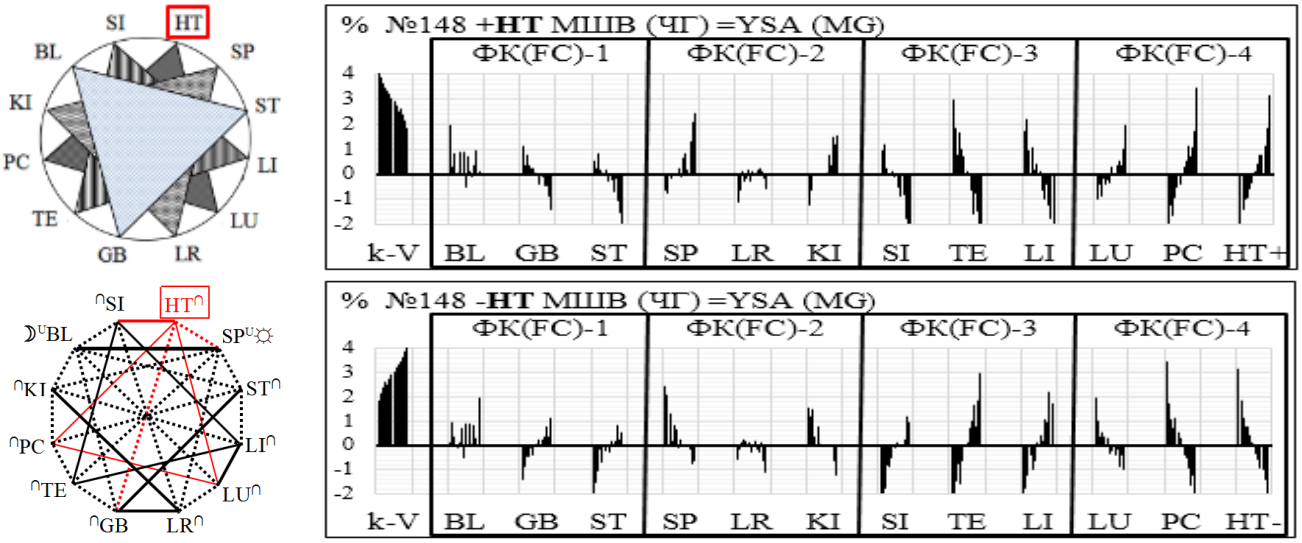


Fig.8.3 Identification of systemic and vegetative dependence at ± **HT** (MG)

III. BIOPHYSICAL ANALYSIS OF SYSTEMIC-VEGETATIVE DEPENDENCE OF YOUNG SCHOOL AGE.

Functional-vegetative system of children of young school age (YSE) testifies to its biophysical reality and age-specificity. The focus is on the stabilization of its systemic reactions that cause the expressed autonomic orientation of functional complexes (FCs): FC-1 (BL-G-ST), FC-2 (SP-LR-KI), FC-3 (SI-TE-LI) and FC-4 (LU-PC-HT). The revealed features point to the formation of mechanisms of immune protection and adaptation to the dynamic conditions of external and internal environments and the expediency of attention to the problems of "Functional Vegetology of YSE ".

From modern literary sources [1,4,5] it is known that the excitation of the systems of the first group and the third functional complexes (FC-1, FC-3) causes the sympathetic orientation of the vegetative homeostasis, and the second group and the fourth group of the second group (FC-2 , FC-4) - parasympathetic. In this case, their functional inhibition forms a reverse vegetative orientation (tab.4).

Table 4

Vegetative orientation of system-complex activity according to [1,2,4]

FVS	FC-1 (SO)			FC-2 (PO)			FC-3 (SO)			FC-4 (PO)		
	BL	GB	ST	SP	LR	KI	SI	TE	LI	LU	PC	HT
+ FVS	+	+	+	−	−	−	+	+	+	−	−	−
− FVS	−	−	−	+	+	+	−	−	−	+	+	+

Note: + sympathetic orientation (SO); - parasympathetic orientation (PO);
FVS- functional-vegetative systems

Observations on the vegetative dynamics (k-V) of functional health of children of the YSE revealed gender-age peculiarities of its systemic and complex influence (Table 5).

Table 5

Vegetative effects of excitation of separate functional systems of children of YSE

k-V	FC-1(k-V)			FC-2 (k-V)			FC-3(k-V)			FC-4(k-V)		
	BL	GB	ST	SP	LR	KI	SI	TE	LI	LU	PC	HT
ЖГ(WG)	−+	+	+	−	−X	−	+	+	+	−	−	−
ЧГ(MG)	+−	+	+	−	−X	−	+	+	+	−	−	−

Note: Functional-vegetative direction by k-V (+ sympathetic; −parasympathetic; −+,+−, −+− paradoxical; **X** - is chaotic (inconsistent); WG (female group); MG (male group);

An analysis of the experimental material indicates the following.

1. The result of any individual systemic influence is the general vegetative direction k-V. The study of its dynamics in the YSE confirms the established vegetative activity of the system complexes (Table 4) and indicates the real age features.

- The dynamics of vegetative activity of the first YSE system complex (FC-1 = BL-GB-ST) indicates its age characteristics ("sympathetic" orientation; Table 5, Fig. 1.1-3 in the WG and 5.1-3 in MG). Attention is drawn to the expressed "stabilization" of other systemic reactions. At the same time the sexual-age feature is the paradoxical vegetative dynamics BL (−+ in WG; +− in MG)...

- The dynamics of vegetative activity of the second system complex MSH (FC-2 = SP-LR-KI) indicates its age "parasympathetic orientation" (tab.5, fig. 2.1-3 in the WG and 6.1-3 in CH). Draws attention to the "chaotic nature" of the directed activity of LR (-X).

- The direction of vegetative activity of the third system complex of YSE (FC-3 = SI-TE-LI) indicates its "sympathetic" vegetative orientation (Table 5, Fig. 3.1-3 in WG and 7.1-3 in MG). Pay attention to a certain "stabilization" of system-oriented activity in WG and MG...

- Functional-vegetative activity of the fourth system complex YSE (FC-4 = LU-PC-HT) confirms its age "parasympathetic" orientation; Table 5, Fig. 4.1-3 in WG and 8.1-3 in MG). Attention is drawn to the "stabilization" of system-directed activity in WG and MG…

Conclusions and prospect of research

1. The experimental materials presented indicate the biophysical reality of the "Functional-vegetative system of YSE "and determine the understanding of the pathogenesis of its age-old vegetology.

2. Specificity of the system-vegetative dependence of the YSE indicates the peculiarities of physiological development, the imperfection of the mechanisms of immune protection and adaptation to the dynamic conditions of the environment.

3. Graphological structures of individual "Vegetative complexes" and "Functional-vegetative matrix" are biophysically real in the conditions of the examination of children of YSE,

4. The received data require special attention to the problem "Functional vegetology of young school age".

Used books

1. Makats V., Makats E. Unknown Chinese acupuncture (reality, errors, problems). Vol. I // Ukraine, Vinnytsia: "Naukova initsiatyva", editorial office "Nilan LTD", 2016, 276 P. ISBN 978-966-2932-80-5

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3. Makats V., Nahaychuk V., Makats E. Unk-nown Chinese acupuncture (problems of functional vegetales). Vol. III // Ukraine, Vinnytsia: "Naukova initsiatyva", editorial office "Nilan LTD", 2017, 204P. ISBN 978-966-2932-80-5

4. Makats V., Nahaychuk V., Makats E. Yer-myshev O. Unknown Chinese acupuncture (problems of vegetative pathogenesis). Vol. IV // Vin-nytsia: "Naukova initsiatyva", editorial office "Nilan LTD", 2017, 286P. ISBN 978-966-2932-80-5

5. Makats V., Makats E., Makats D., Makats D. Bases of functional vegetology (unknown chinese acupuncture). Vol.V - Vinnytsia: "Naukova Initsi-atyva", Editorial office "Nilan Ltd.", 2018. – 152 P., ISBN 978-617-7706-69-3

6. Makats V.G., Kurik M.V., Petruk V.G., Nahaychuk V.I., Yermyshev A.V. Bases of functional-ecological examination (unknown vegetology). Vol.VI – Vinnytsia: "Naukova Initsiatyva", Editorial office "Nilan Ltd.", 2018. – 128 P. ISBN 978-617-7706-69-3