

UDC 796.071.2 : 615.83

KHOROSHUKHA M.*National Pedagogical University named after M. P. Dragomanov*

Spiritual and salutary effects of tempering of young athletes by the nature on the system of Porfiry Ivanov (as from the twenty-five years of experience of the author).

Abstract. Purpose: to fill and to substantiate expediency of using health system of Porfiry Ivanov on the principles of theoretical and empirical materials to resolve the questions of valeological attitude of young athletes to their health. **Material and Methods:** this paper presents matter staffs of many years of researches, which have been provided young athletes around 13–16 years old of Brovary high college of physical training. **Results:** research suggests that, we denote positive characters in dynamics of changes in physical staffs and psycho-emotional being of organism of the figure athletes, who are doing system of Porfiry Ivanov, and there were also registered the facts, that there were not any case of catarrhal diseases. General grounds of health system of P. K. Ivanov has been analyzed as from the side of valeological knowledge. **Conclusions:** it was proved, that health improving system of P. K. Ivanov, could be one of alternative programs on forming of healthy lifestyle of scholar's youth.

Keywords: cold water treatment, system of P. K. Ivanov, spirituality, health, young athletes.

Introduction. Today, as well as in the last years, the resistant tendency to a deterioration of psychosomatic health of student's and student's youth is noted [3–5; 11]; school students are not an exception who plays sports [9; 10].

Using of health-improving forces of nature (training by air, water, a ray of sunlight and so forth) as one of means of physical training [1] is one of the leading solutions of a problem of preservation and promotion of health of the younger generation.

The improving efficiency of effect of cold water on an organism of people of different age is proved, mechanisms of adaptation reactions of a human body to an action of cold are scientifically generalized, the question concerning training of sportsmen under conditions of low temperatures is reflected, practical trainings on hardening and so forth are carried out by the number of experimental researches (A. K. Podshibyakin, 1986; Y. N. Chusov, 1987; M. M. Bulatova, V. N. Platonov, 1998; I. M. Chornobay, 2003; V. Dikiy, 2007; M. F. Khoroshukha, 2008, but other). As for researches of influence of "trainings-hardening" according to the system of P. K. Ivanov on an organism of children and teenagers (V. E. Gusakovskiy, 1992; A. G. Mutalov, 1992 but other) (including young sportsmen [6; 7]), they are small. In our opinion, using of the system of natural improvement of P. K. Ivanov can be one of the alternative programs for formation of a healthy lifestyle (HLS) in the system of sports training of young sportsmen and one of the nonconventional that doesn't need material compensations, methods of physical and spiritual improvement of youth (M. F. Khoroshukha, 1992, 2005, 2009; V. I. Kurilova, V. G. Lola, 2006 but other) and also the stimulation of working capacity and increase of functionality of an organism [6], like using of other means of a nonconventional character [2]. At the same time the insufficiency of scientific data of problems of studying of influence of trainings by hardening on this system on growth of sports results and opportunities of its use for the solution of a question of valeological attitude of young sportsmen towards the health, indicates the need of carrying out researches in this direction.

Communication of the research with scientific programs, plans, subjects. The research was carried out according to the subject of the RW of the chair of biological bases of physical training and sports disciplines of National pedagogical university of M. P. Dragomanov "Medico-biological and valeological problems of human health with a different physical state".

The objective of the research: to prove the expediency of using of the health-improving system of Porfiry Ivanov for the solution of a question of the valeological attitude of young sportsmen towards the health on the principles of theoretical and empirical materials (the last is based on the long-term experience of the author – the follower of the studies of P. K. Ivanov).

Material and methods of the research. Young sportsmen of 13-16 years old (28 persons: 18 girls and 10 boys) – pupils of Brovarysky Highest School of Physical Culture (BHSPC) who were engaged in training according to the system of P. K. Ivanov (experimental group – EG) were under our supervision within 20 years (from 1990 to 2010). The control group (CG) was made by sportsmen-coevals (n=14) who didn't become tempered. The researches were conducted in laboratory and natural conditions (after bathing in an open reservoir or dousing with cold water).

Research methods: theoretical (analysis of scientific and scientifically methodical literature on problems of training of people of different age and professional employment), empirical: pedagogical [(poll, supervision, pedagogical experiment (an assessment of indicators of a physical state)], psychology and pedagogical (testing in determination of levels of aggression and personal uneasiness) and clinical (analysis of incidence).

Results of the research and their discussion. We reflected the following during the long-term supervision over young sportsmen of BHSPC concerning the check of the efficiency of use of the mentioned system in strengthening of their health: 1) positive shifts in dynamics of changes of indicators physical (tab. 1 and 2) and psycho-emotional are registered states (tab. 3) under the influence of the dosed dousing with cold water at sportsmen of a teenage age; 2) the positive influence on a vegetative tone is noted, namely, –mainly a vagotonic type of regulation of functions of an organism is formed at supporters of a healthy lifestyle [7], 3) any individual, who would never have catarrhal diseases for a year, wasn't by the results of incidence of pupils who play sports, such is established: at the 1st stage of the research (before trainings by hardening according to the system of P. K. Ivanov); 78,6% of sportsmen twice a year, and every fifth child that makes 17,9% was ill –three and more times. It is possible to note that any of them weren't ill any more in a year

© KHOROSHUKHA M. , 2015

of systematic classes in this system.

The results of influence of cool loads of force on indicators of muscles-flexors of a brush and static endurance that characterize a physical condition of EG are given in tab. 1, and in tab. 2 –sportsmen of CG. As it is visible from the tables, it is observed a reliable ($P<0,05$) increase of force of muscles of a brush (at sportsmen and sportswomen) and the time of the content of provision of an angle 90° on horizontal bars – for boys and at a vis on wall bars – for girls whereas statistically reliable changes from the given indicators aren't noted ($P>0,05$) at representatives of CG after one-time dousing with cold water.

Table 1

Indicators of a physical condition of the experimental group before and after dousing with cold water, $X\pm m$ [6]

Indicators	Boys (n=10)		Girls (n=18)	
	Hand dynamometry, kg	Static endurance of muscles, s	Hand dynamometry, kg	Static endurance of muscles, s
Before dousing	40,1 \pm 2,47	8,9 \pm 0,69	29,3 \pm 0,90	7,6 \pm 0,64
In 10 min after dousing	47,3 \pm 1,90	11,6 \pm 0,83	33,3 \pm 1,23	10,2 \pm 0,75
P	<0,05	<0,05	<0,05	<0,05

Table 2

Indicator of a physical condition of the control group (sportsmen-volunteers) before and after dousing with cold water, $X\pm m$ [6]

Indicators	Boys (n=14)	
	Hand dynamometry, kg	Static endurance of muscles, s
Before dousing	42,3 \pm 2,27	12,0 \pm 0,48
In 10 min after dousing	47,6 \pm 2,08	13,3 \pm 0,45
P	>0,05	>0,05

Indicators of a psycho-emotional condition of both groups were investigated in dynamics (in a year of trainings by "training-hardening" according to the system of P. K. Ivanov) (tab. 3). Apparently from the table, the high level of aggression (1,4 \pm 0,12 points) and the average level of personal uneasiness (42,0 \pm 1,14 points) was noted at representatives of EG before trainings by the improving system of Porfyrii Ivanov, mental unbalance, aggression completely disappeared in a year of trainings, and also the level of personal uneasiness significantly (at $P<0,001$) reduced. The mood improved, the attitude towards itself, to study, to his friends changed, the purpose appeared in life and so forth near the disappearance of negative manifestations of reactions to a stress at them (according to a poll). Whereas high indicators were registered at sportsmen of CG as on the first, and on the second stages of the research aggression (1,3 points and more).

Table 3

Indicator of a psycho-emotional condition of the experimental and control groups on the first and second stages of the research (in a year of training by "training- hardening" according to the system of P. K. Ivanov), $X\pm m$ [6]

Indicators	Experimental group (n=28)		Control group (n=14)	
	Index of quality of aggression, points	Level of personal uneasiness, points	Index of quality of aggression, points	Level of personal uneasiness, points
1st stage of the research	1,4 \pm 0,12	42,0 \pm 1,14	1,3 \pm 0,13	43,1 \pm 1,79
2nd stage of the research	0,3 \pm 0,05	31,5 \pm 0,66	1,4 \pm 0,16	40,9 \pm 1,73
P	< 0,001	< 0,001	> 0,05	> 0,05

As annoyingly, but there are also who smoke, take alcoholic beverages and narcotic preparations among young sportsmen (according to our supervision [8]). It is known that smoking, alcohol, drugs do a person dependent; destroy his organism (especially an organism of children and teenagers). A person learns to remove stress and fatigue natural means; he has forces and abilities to resist to any difficulties thanks to the system of natural improvement of Ivanov.

So, four sportsmen (14,3%) smoked according to an anonymous poll. The addiction disappeared in 2–3 weeks of classes in the mentioned system at them. The case which happened to the student D., the candidate of the master of sports in swimming, the graduate of BHSPC can be a striking example of physical and spiritual healing. The sportsman dreamed to fill up lava of a national team of Ukraine on swimming. Because of certain circumstances he didn't manage to make it. Incidentally (according to the young man) he became the drug addict, he was on the "border" of lives and death.

He found a rescue in the system of Ivanov which remembered from those lectures which were given to us when he was a student. He is engaged on this system more than 5 years. He feels well. He dreams to marry, to have a family. He is grateful to us very much.

Despite of that fact that hardening as one of the HLS of attributes and a component of improving forces of nature (the last as it was noted earlier, belongs to means of physical training), has to be the contents of the educational and training process of student's youth, but as practice testifies, the improving system of Porfyrii Ivanov didn't get the wide appendix in sports activity for the present. According to some coaches, those sportsmen who were engaged in hardening on this system, the growth of sports skill happened more slowly, than before the "experiment". They consider that such dousing or bathing in cold water are additional physical and mental activity at which energy resources of an organism of sportsmen which are used not "for designated purpose" are substantially mobilized, that is they keep within not a sports result, and adaptation of an organism to cold.

The explanation for it can be found from the works of scientists L. H. Harkavi, O. I. Kvakina, M. A. Ukolova (1977) who developed the provision on nonspecific adaptation of an organism. According to authors, nonspecific firmness of an organism is acquired by means of so-called "training reactions" (the last develops on an action of a "weak" irritant), "activation reactions" and "reactions" of a stress (respectively, develop on an action of the irritant "moderated" by force and very "strong").

The explanation from our supervision. So, cold loading is more or less powerful by a force of the irritant on the first year of training, as a result of which action the organism mobilizes the energy resources more as for 50% to its reserve; the metabolism raises considerably and as a result – loss in weight (on average on 4-5% for the first 2-3months of classes by hardening procedures). But already in 1,5-2nd years of systematic classes, as a rule, the metabolism is normalized, indicators of body weight remain invariable, and cold loadings are perceived by an organism mostly not as "stressful", and as "training".

In addition we will note that cold water is at the same time both stressor and "anti-stressor". As the strong stressor it works only when the organism is in ice water the long period of time (for example, a tragic case with passengers of the steamship "Titanic") or when very cold water within several minutes affects a person, unexercised to cold (for example, "winter-swimming" for the unprepared person). The organism includes a complex of nonspecific adaptation reactions or reactions of a stress in response to action of a strong stressful factor (G. Selye, 1974).

We give some examples below from our supervision over sportsmen of BHSPC which are the evidence of strengthening of their physical, mental and spiritual health as a result of classes in the improving system of P. K. Ivanov.

The first example. Sportswoman T. B., the master of sports of Ukraine of track and field athletics (sports walking), suddenly got sick (a body temperature 39°C, cold, an ache in joints, the general weakness and so forth) in December, 1991 three days before competitions on track and field athletics on prizes of the newspaper "Zerkalo Nedeli" which were carried out in Kiev. The diagnosis – is flu. Any doctor wouldn't give permission to a participation in competitions. But the big desire of the sportswoman to make a speech at these competitions forced the sports doctor (the author of the article) to offer her the natural "medicaments", which are checked by long-term practice of our ancestors – a reusable dousing with cold water in the yard (every two hours) as the system of Porfyrii Ivanov needs.

A body temperature lowered to "norm" after two times dousing; the functional condition of an organism renewed almost completely in a day; for the third day – day of competitions, she executed the standards of the master of sports of Ukraine.

After that case, the sportswoman became the supporter of HLS, joined ranks of members of Brovarysky city club of the natural improvement of a person on the system P. K. Ivanov "Vodoliy". She wasn't ill any more. Essential shifts were observed in mental and spiritual spheres, namely: the attitude towards itself and the environment changed, the arrogance, negative manifestations of reactions of an organism to a stress disappeared, a purpose appeared in life and so forth. Upon the termination of school she arrived for study to National university of physical training and sport of Ukraine, later – to a postgraduate study.

The second example. Sportswoman V. P., the candidate of the master of sports in cross-country skiing, a pupil of the same school. Frequent catarrhal diseases, chronic tonsillitis are in the anamnesis. She missed much training through diseases. She began training on the system of P. K. Ivanov under a control of the doctor – the author of this work. She never was ill within two years of classes in this system. But thus (according to the sportswoman) the growth of sports results stopped. Coaches forbade her to be engaged in training (dousing with cold water and winter bathing in open reservoirs). In half a year after the sportswoman ceased to be engaged in training, "old" diseases renewed at her, but the subsequent growth of sports skill wasn't. Sports career on it is ended.

The third example. Sportswoman S. Ch., the candidate of the master of sports in track and field athletics (discus throw) was engaged in training no more than a year by hardening of forces of nature. "Complaints" of the coach that after the beginning of classes by her on the system of Porfyrii Ivanov, she ceased "to feel" emergence of fatigue on training, were a cause of failure from natural improvement on the mentioned system. Paradoxically, but the fact, according to her coach Y.R. speech, we learn about such: "...Svetlana has such potential of natural forces which puts me as a coach with wide practical experience, in a difficult situation concerning a choice for her to the volume of training loads. So, for example, today the volume of loadings of power character by the lump of the lifted encumbrances (according to the plan-abstract of the educational and training classes) made approximately 15 tones; she carries out this volume of work and asks "additives" as, on the one hand, doesn't come notable fatigue, from another, there is an impetuous desire to work more than from the planned.

The teacher Ivanov established on practical experience that today scientific theories aren't able to explain all. In this regard, we will try to analyze the basic provisions of the system of P. K. Ivanov from a position of valeological knowledge (tab. 4).

Table 4

The essence of basic provisions of system of natural improvement of the person Porfyrii Ivanov and science valueology (according to M. F. Khoroshukha)

№	Signs (provisions)	Characteristics of signs from positions	
		Valueology	Studies of Ivanov
1	What do the science valueology and Ivanov's system study?	V. – science about health: formation, preservation and strengthening of it	The system of Ivanov – is the doctrine about health which cornerstone are love to the Nature and people, and hardening by forces of the Nature
2	The definition of the concept "a person"	A person – is an open thermodynamic self-organizing bio-system	A people – is " a part of the Nature" as an open bio-system
3	The main criteria which characterize a person as a bio-system:	– updating; – self-control; – self-restoration	"A person is independent in the nature"; "The person starts treating himself, as if only he wanted"; "The person has to look for means in himself for a victory over death"
4	What is an object of science and systems?	Individual health and mechanisms of its formation	A person who wishes to become healthy, but not his illness
5	Purpose	Education of a healthy harmoniously developed and spiritually glorified person	Improvements of a person, forces of nature (at the expense of water, air and earth) and education of spirituality due to self-improvement
6	The main objects of their activity	All population, and also those who is in a condition of a pre-illness (the 3rd state) or have factors of risks	All people of the planet. "I ask, I beg all people: become and take the place in the Nature. It is occupied by nobody and isn't bought at any price. And only own affairs and work in the nature, itself, for the benefit that it was easy for you"
7	Definitions of the concept "health"	H. – is a whole dynamic condition of an organism which is defined by reserves of power, plastic and regulatory ensuring functions, which is characterized by resistance to an action of pathogenic factors of environment, and also is a basis for implementation of biological and social functions	H. –is the level of power potential and improvement of consciousness of a person which will be able to live in the Nature independently (without food, clothes and housing) and to receive immortality in the future
8	What is the formation of health?	This creation of a comprehensively harmoniously developed person with high reserves of power potential at the physical, mental and spiritual levels	It is not only hardening of bodies at the physical level, it is also hardening to Spirit, training of will, achievement of a harmony in the development due to love to the Nature and people; «To live with a constant desire to do good to people and not to wish what you won't wish yourself»
9	The essence of preservation of health	It includes at itself observance of the principles of HLS and return of health to the safe level in a loss of it	Includes also the principles of HLS which are based on the implementation of 12 rules "DIETKA"
10	The essence of strengthening of health	This increase of it is due to trainings	The same (due to trainings by hardening)
11	Methods of improvement	Natural, non-drug (physical activity, a balanced diet, training, natural drugs for healthy)	Natural (at the expense of "alive" bodies of water, air and the earth)
12	Principles of improvement	According to the principle of A. Maslou of "pyramidal creation of a person", the improvement has to you pass from above from the top to the bottom, that is at first at the spiritual level, then on mental and right at the end – on physical	It is necessary to change the consciousness in the relation to the Nature, people, and also to himself before revitalizing himself by the advises of P. K. Ivanov
13	The didactic principles of improving training and training by hardening	In the course of trainings it is necessary to adhere to the following principles: sequences, gradualness, overtraining, individualization	The same
14	The appointment of a person on the Earth	To carry out the biological and social functions	To live, "not to get to hospitals and prisons"

Conclusions:

1. The problem of formation of a healthy lifestyle of youth by means of physical training is of current importance for today which provide not only the preservation and promotion of health, and also the formation of spirituality, universal moral values and national consciousness. However till the present time the above-mentioned mostly carries declaration, but not a pragmatic character; as before, a sports result is a prerogative in the initial training process of teenagers.

2. Using of the health-improving system of Porfyrii Ivanov can be one of the alternative programs of formation of a healthy lifestyle of student's youth for the purpose of humanistic orientation which is reflected in altruistic understanding of essence of the human life, his appointment in the Earth, love and trust to the Nature and surrounding people, and also one of the nonconventional that doesn't need material inputs, methods of physical and spiritual improvement.

Prospects of the subsequent researches. The insufficient level of scientific studying of influence of training by hardening on the growth of sports results by this system induces to the subsequent carrying out researches in this direction.

References:

1. Arefev V. G. *Osnovi teorii ta metodiki fizichnogo vikhovannya [Basic theory and methodology of physical education]*, Kam'yanets-Podilskiy, 2011, 368 p. (ukr)
2. Vinogradov V. Ye. *Pedagogika, psikhologiya ta mediko-biologichni problemi fizichnogo vikhovannya ta sportu [Pedagogy, psychology and medical-biological problems of physical education and sports]*, Kharkiv, 2012, vol. 4, p. 21–24. (rus)
3. Korol S. A. *Pedagogika, psikhologiya ta mediko-biologichni problemi fizichnogo vikhovannya i sportu [Pedagogy, psychology and medical-biological problems of physical education and sports]*, Kharkiv, 2014, vol. 11, p. 23–28. (ukr)
4. Podrigalo L. V., Danilenko G. N. *Donozologicheskiye sostoyaniya u detey, podrostkov i molodezhi: diagnostika, prognoz i gigiyenicheskaya korrektsiya [Prenosological condition in children, adolescents and young adults: diagnosis, prognosis and hygienic correction]*, Kyiv, 2014, 200 p. (rus)
5. Yermakov S. S., Apanasenko G. L., Bondarenko T. V., Prasol S. D. *Pedagogika, psikhologiya ta mediko-biologichni problemi fizichnogo vikhovannya i sportu [Pedagogy, psychology and medical-biological problems of physical education and sports]*, Kharkiv, 2010, vol. 11, p. 31–33. (rus)
6. Khoroshukha M. F. *Visnik Chernigivskogo derzhavnogo pedagogichnogo universitetu imeni T. G. Shevchenka. Seriya : Pedagogichni nauki. Fizichne vikhovannya ta sport [Journal of Chernihiv State Pedagogical University named after Taras Shevchenko. Series: Pedagogical Sciences. Physical education and sport]*, Chernigiv, 2010, Vip. 81, p. 473–477. (ukr)
7. Khoroshukha M. F. *Visnik Chernigivskogo derzhavnogo pedagogichnogo universitetu imeni T. G. Shevchenka. Seriya : Pedagogichni nauki. Fizichne vikhovannya ta sport [Journal of Chernihiv State Pedagogical University named after Taras Shevchenko. Series: Pedagogical Sciences. Physical education and sport]*, Chernigiv, 2011, Vip. 86. T. 2, p. 264–267. (ukr)
8. Khoroshukha M. F. *Naukoviy chasopis Natsionalnogo pedagogichnogo universitetu imeni M. P. Dragomanova. Seriya vol. 15. "Naukovo-pedagogichni problemi fizichnoi kulturi (fizichna kultura i sport)" [Science magazine National Pedagogical University MPDragomanov. Series № 15. «Scientific-pedagogical problems of physical culture (physical culture and sport)»]*, Kyiv, 2012, Vip. 16, p. 76–83. (ukr)
9. Khoroshukha M. F. *Naukoviy chasopis Natsionalnogo pedagogichnogo universitetu imeni M. P. Dragomanova. Seriya vol. 15. "Naukovo-pedagogichni problemi fizichnoi kulturi (fizichna kultura i sport)" [Science magazine National Pedagogical University MPDragomanov. Series № 15. «Scientific-pedagogical problems of physical culture (physical culture and sport)»]*, Kyiv, 2012, Vip. 17, p. 126–132. (ukr)
10. Shmaley S. V., Shcherbina T. I. *Pedagogika, psikhologiya ta mediko-biologichni problemi fizichnogo vikhovannya i sportu [Pedagogy, psychology and medical-biological problems of physical education and sports]*, Kharkiv, 2014, vol. 3, p. 85–89. (ukr)
11. Shpak V. M. *Pedagogichni nauki : teoriya, istoriya, innovatsiyni tekhnologii [Teaching science: theory, history, innovation technologies]*, Sumi 2010, vol. 1 (3), p. 280–289. (ukr)

Received: 10.11.2015.

Published: 30.12.2015.

Mykhailo Khoroshukha: National Pedagogical University named after M. P. Dragomanov: Pirogova str. 9, Kyiv, 01601, Ukraine.
ORCID. ORG/0000-0001-5024-5792
E-mail: horoshuha@gmail.com