Bioresonance approach to the use of biological age markers in the fight against aging V.A. Ivanchenko (Medical center "Biopharm-test", Moscow, Russia)

Currently used in the vegetative resonance test (ART) biological indices (BI) marker No. 1 are insufficiently clear and incompletely correlated with biological age (BV), i.e. an integral indicator of health, characterizing primarily the energy state of a person, his tone, activity. At the cellular level, BV is the bioenergetic activity of cell nuclei (genome), the intensity of all biophysical and biochemical processes, which reaches its maximum values at the age of 20–23 years and then decreases by more than seven times by old age [1]. It is practically very difficult to translate BI into BV. In addition, BIs reflect only a small part of the aging process. Meanwhile, since this process is uneven for different organs and systems, it is customary in gerontology to use a large number of physiological and biochemical

indicators for the total determination of BV [2]. In this regard, we used the method for determining BV by the intensity of energy metabolism on the Inner Skan apparatus, Tanita, Japan (marker No. 2), as well as proposed by Professor V.G. Shakhbazov [3] a method for determining BV by the percentage of mobility of electronegative nuclei (EON) of cheek epithelium cells in an alternating electric field (marker No. 3). These methods were used to verify our proposed bioresonance tests of BV (markers 4-9) using ART on the IMEDIS equipment: marker 4 - potentiated preparation of somatotropic hormone (STH); marker No. 5 potentiated preparation of bone marrow stem cells; marker No. 6 - potentiated preparation of lipofuscin aging brown pigment; marker No. 7 - potentiated drugs characterizing the antioxidant activity (AOA) of the body (glutathione, tocopherol, superoxide dismutase); marker No. 8 - frequency resonance drug (FRP) of the EOJ of the cheek epithelium; marker No. 9 - VFD of genes of the SIRT family (obtained from Harvard University, USA), which suppress unnecessary dormant genes and restore damaged genes. The total BV was determined for all markers using a computer program.

A total of 224 volunteers were examined, divided into four groups. The first group received adaptogens individually tested using ART (ginseng, Siberian ginseng, Schisandra chinensis) for 3 months, each for one month. The second group within 3 months consumed individually tested repeatedly thawed magnetized,

structured water prepared according to our method. The third group twice a day for 3 months engaged in health-improving exercises "Five Tibetans" (Eye of revival). The fourth group used all the above-mentioned health-improving methods (adaptogens, melt water, exercises) for 3 months. Four age categories were identified in each group. The first category (20–23 years old), the second category (24–40 years old), the third category (40–60 years old), the fourth category (over 60 years old). BV indices, as well as the SAN test (health, activity, mood) were examined every 7–10 days for 3 months.

## Research results and discussion

It was found that all bioresonance indicators of BV increased in all age categories with increasing age. However, they correlated with each other in different ways. Thus, BI had a moderate correlation with marker No. 2 (r = 0.57; p <0.05) and No. 3 (r = 0.62; p <0.05). Marker # 4 (growth hormone) had a closer correlation with # 2 (r = 0.68; p <0.05) and # 3 (r = 0.72; p <0.05). Marker # 5 (stem cells) correlated moderately with # 2 (r = 0.69; p <0.05) and # 3 (r = 0.71; p <0.05). Marker # 6 (lipofuscin) correlated with # 2 (r = 0.59; p <

0.05) and No. 3 (r = 0.64; p <0.05) only in the oldest age category. Contrary to what was expected, marker # 7 (AOA) correlated poorly and insignificantly with BV for markers # 2 and # 3 in all age groups. Marker # 8 had the highest correlation with # 2 (r = 0.84; p <0.05) and # 3 (r = 0.89; p <0.05). Marker No. 9 increased unevenly with age, increasing as much as possible with old age, correlating with No. 2 (r = 0.91; p <0.05) and No. 3 (r = 0.95; p <0.05).

It was found that the total BV in the surveyed of the first age category was 23 years 8 months. (passport age 21 years 6 months). After 3 months of use of adaptogens, BV decreased slightly (20 years 8 months; p> 0.05). The consumption of melt water and health-improving exercises also did not significantly change the total BV. At the same time, the complex use of all these factors (group 4) in young people (20–23 years) significantly reduced the total BV up to 20 years 2 months. (p <0.05). In the second age group, the changes were similar, but less significant, and the decrease in the total BV was only 1 year 8 months. (p <0.05). In persons of the third and fourth age categories, the total BV, even with the complex use of all factors, did not significantly change, although it had a tendency to decrease. Nevertheless, in some individuals during the study in dynamics, a significant decrease in BV was obtained by 6–12 months.

These results were unexpected for us, since Earlier, when we studied BV by BI, in almost all people who used the proposed health complex, we almost always found a significant decrease in BI, indicating a decrease in BV. Nevertheless, the total BV significantly changed only in persons of the first and second age categories (young and middle age). Apparently, with aging, the number of adaptogen receptors, the intensity of the response to melt water, and health-improving exercises decrease. It is interesting that all the subjects after using the health-improving complex noted an improvement in their well-being, activity, and mood according to the SAN test. Undoubtedly, this is due to the individual selection of each component of the complex. Indeed, the growth hormone preparation was chosen due to the that we know of numerous families in the United States who have consumed STH supplements on a daily basis for many years. According to their reviews, it increases tone, performance, sleep, appetite. However, a selective examination of such persons using ART (for BI, stem cells, VFR of lipofuscin and, especially, VFD of EON) did not reveal a significant difference in their BV compared to the passport in the direction of rejuvenation. We have a negative attitude towards such a struggle for longevity, because gradually, according to the principle of feedback, the artificial hormone inhibits the formation of its own growth hormone. according to VFD EOJ) did not reveal a significant difference in their BV in comparison with the passport in the direction of rejuvenation. We have a negative attitude towards such a struggle for longevity, because gradually, according to the principle of feedback, the artificial hormone inhibits the formation of its own growth hormone. according to VFD EOJ) did not reveal a significant difference in their BV in comparison with the passport in the direction of rejuvenation. We have a negative attitude towards such a struggle for longevity, because gradually, according to the principle of feedback, the artificial hormone inhibits the formation of its own growth hormone.

Our monograph [4] lists dozens of plants that increase

working capacity and used by the people to combat aging. However, most of them have no scientific evidence, so we selected only the most studied adaptogens. We know of many cases when elderly people, after the use of ginseng-like plants, melt water and especially the Five Tibetans complex, decreased gray hair, improved vision, hearing, and general health. Indeed, our studies have shown that inhibition of aging occurs after the use of the entire complex, and the closer a person is to the most optimal age (20–23 years), the more effective the means. This once again shows the correctness of the well-known proverb "Take care of your health from a young age". Probably, the use of one health-improving component does not allow us to reliably reverse the biological age. In the best case, aging is inhibited, but the antiaging process is little affected. In combination, they reliably reduce BV in almost all parameters. Do the signs of aging really decrease and disappear? According to our observations, this is possible precisely when using agents with different mechanisms of action. The VFD of SIRT genes should be emphasized in particular. As you know, they promote the synthesis of sirtuin proteins, which silence the extra genes present in every cell. This prevents the accumulation of metabolic errors and endotoxins. Our data show that it is the SIRT genes that play the most important role in the aging and antiaging processes. Indeed, sirtuins not only inhibit aging, preventing the formation of foreign proteins, but also "heal" gene damage, keeping them young (anti-aging). With age, there are not enough sirtuins to work on two fronts. This leads to the activation of "dormant" genes, damage to working genes, the development of senile degenerative diseases. That is why we have noted the greatest correlation between the genetic marker and the total BV. In the process of reversing aging, the best results are also obtained at a younger age, when SIRT genes form a sufficient number of sirtuins.

It is also necessary to evaluate the effectiveness of structured water that has been melted many times over. According to some authors [5], it is the use of such water that ensures the longevity of the Hunza tribe in Pakistan, the indigenous inhabitants of Yakutia and the Vilcabamba valley in Ecuador. In such water, harmful environmental information is erased, the content of the heavy isotope of deuterium is reduced, and the structuredness and magnetization makes it easy to be included in the metabolism without additional energy consumption. It is no coincidence that in our studies such "living" water was more active than adaptogens.

Finally, the "Five Tibetan Exercises" health complex is now widely used by millions of people around the world. Apparently, it increases the energetic activity of the chakras, meridians, biologically active points and the entire metabolism. It follows from our data that it even affects the activity of SIRT genes, AOA, the formation of STH, and reduces the deposition of the aging pigment lipofuscin. At first glance, it seems strange that there is a low correlation between AOA indicators and other markers of BV. Apparently, the thesis about the leading role of free radicals in the pathogenesis of aging needs to be corrected. Free radical oxidation of lipids is necessary and normal, maintaining the level of prostaglandins, permeability of biomembranes, activity hydrogen peroxide in macrophages, apoptosis of tumor cells, etc. Excessive enthusiasm for the use of antioxidant dietary supplements can disrupt these processes and even contribute to aging. In the monograph [6], as well as in our book [7], a number of anti-aging agents are described. For example, pearl powder is widely used for this in China. However, selective testing in people who used it showed that it does not significantly reduce BV. At the same time, testing BV before and after the course application of some Hathayoga poses, especially sarvangasana (shoulder stands) and sirshasana (headstand) showed that they reduce BV, but only when performing exercises under the guidance of an experienced yoga instructor. The overdose negatively in slightest effect on the body, so we did not include their our wellness complex.

Interesting, what some surveyed so carried away health improvement, which independently increased the dose of adaptogens, melt water and the number of repetitions of exercises. In addition, they used other healing methods (fasting therapy, breathing exercises,

natural nutrition, etc.). This led to the fact that, especially during an epidemic of influenza and acute respiratory infections, they developed symptoms resembling a cleansing crisis known in naturopathy: a runny nose, cough, increased stool frequency, urination, etc. Apparently, such loads for the elderly and senile organism can be excessive. It is interesting that young people with ART did not show inflammation, there was a high level of immunity and vegetation tension, i.e. the development of the first phase of homotoxicosis according to G.G. Requweg (compensatory excretion of homotoxins by body secretions). Consequently, the health-improving complex increases the defenses so much that the body reacts to contact with the infection, mainly physiological, and not pathological reactions. In some individuals, we observed 4–5 such crises within 3 months. After BRT, rest and the gradual activation of the health-improving complex, BV began to decline again. In middle-aged and elderly people, the symptoms of a crisis were most often expressed in an exacerbation of BV.

The different relationships between BV markers can be explained as follows. It is known that the most labile are physiological parameters (in this case, energy metabolism) and cytobiophysical parameters (% EOT and VFR EOT). Biochemical constants (STH, glutathione, tocopherol, superoxide dismutase) are more stable. The most conserved genetic marker (VFR of SIRT genes). That is why the latter showed the greatest correlation with BV with aging. Apparently, it is more correct to speak about physiological, biochemical, biophysical, and genetic markers of BV and aging. However, it does not follow from the results obtained that genetic markers are more important than others. Each person is individual and in the process of interacting with the environment, certain biochemical, biophysical, physiological indicators may be disturbed. Therefore, the larger the set of such tests, the more accurately the total BV is determined. For example, when determining BV on the Tanita apparatus, in some people aged 65-70 years, BV was equal to 39–40 years. At the same time, the total BS even exceeded the passport one by 8–12 years. Naturally, in the second case, the BV was determined by more than

exactly. Ultimately, most people need BV research in order to visually assess the effectiveness of health improvement measures. Abroad, this is called revitalization. In Russia - rejuvenation. Apparently, more appropriate, the proposed by us term reversal - reversing aging (reverse in the translation from English - reverse). The fact is that revitalization is too general a term that does not give specifics, rejuvenation is too specific and means a person's return to a younger age, both by external signs (reduction of gray hair, wrinkles, improvement of turgor, skin color), and improvement of work and structure internal organs. Unfortunately, in a recently published report by a large group of international experts who have studied various

methods of rejuvenation, it was concluded that such nonexistent means, at best, only delay aging. reversal of aging is probably most accurate wellness short-term studies: on the one hand, aging was inhibited, on the other hand, antiaging processes were activated. mand all known therefore the term reflects the essence in carried out us

Thus, we have established the possibility of using new bioresonance markers for the determination of total BV. They are much more sensitive and accurate in comparison with BIs used in ART. Their use made it possible to evaluate the effectiveness of a complex of health-improving measures (adaptogens, melt water, Tibetan exercises). Apparently, it not only stops aging, but also reverses it, especially at young and middle age. Research continues with the use of a new class of geroprotectors - VFD of SIRT genes, which will be discussed in a report at the conference.

## Literature

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