BIORS

HSC Bioscanner Wellness automatic report

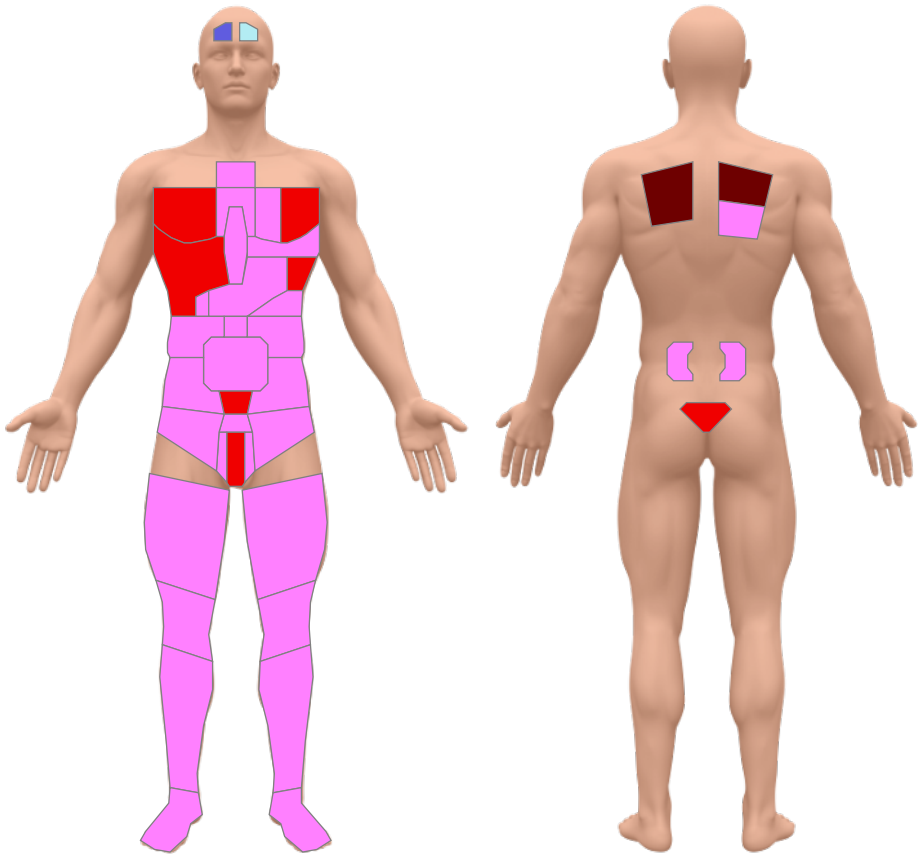
12.04.2019

Bista Tsering

Age: 48

Attention! The obtained automatic reports are not a reason for the establishing clinical diagnosis. In case the stable abnormalities are revealed it is necessary to see a doctor for the detailed examination.

Electrosomatogram

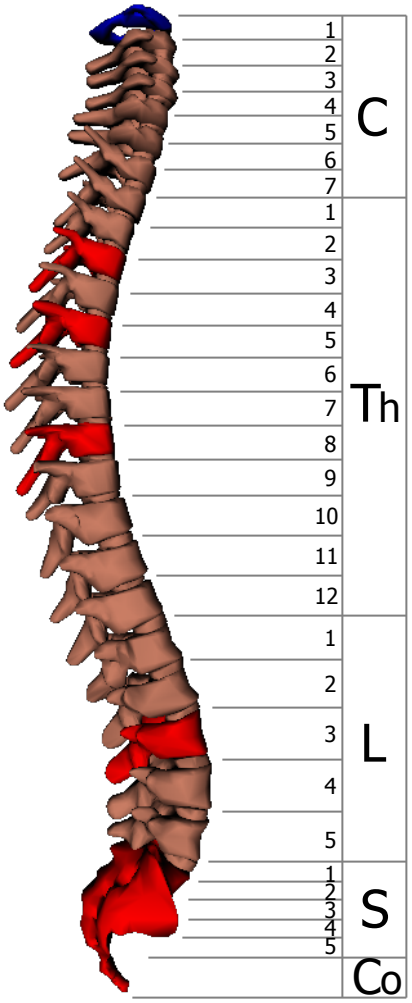


- overstrain
- stress state
- hyperactivity
- normal range
- fatigue
- over-fatigue
- body reserve depletion

☑ Show only areas with deviations from the norm

Target zones	
65%	Superior lobe of left lung region
65%	Superior lobe of right lung region
52%	Right breast region
52%	Liver region
51%	Left breast region
40%	Frontal lobe of the brain cortex region, right side
37%	Spleen region

Lesions in spine



	Probable symptoms
C 1	Headache, nervousness, high blood pressure, migraine, trouble sleeping
Th 3	Bronchitis, asthma, pleuritis, pneumonia
Th 5	Liver function disorder, jaundice, blood-clotting disorder
Th 8	Digestive disorders, hiccup, respiratory disturbance
L 3	Urinary bladder diseases, sexual dysfunction, knee pain
S 1-5	Sacrum pain, haemorrhoids, pelvic organ dysfunction

hyperactivity
fatigue

Assumed pathology

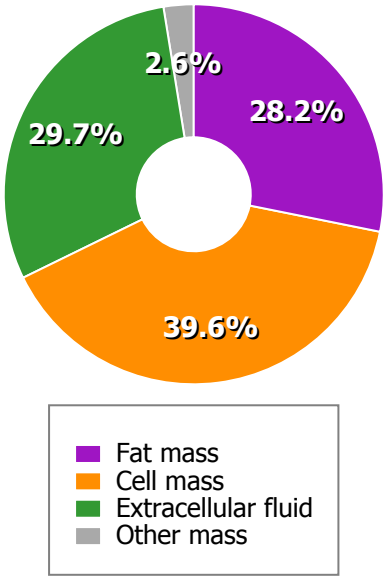
Pneumosclerosis. Steatohepatitis. Atherosclerotic lesions of brain blood vessels. Immunodepression.

Measurement table of bioimpedance

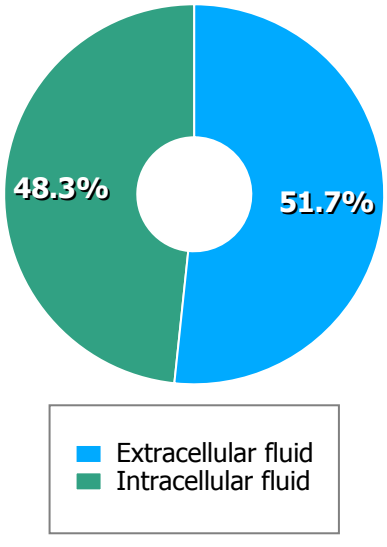
	50000 Hz
Right hand - Right foot	R 282 Xc 42
Left hand - Left foot	

Parameter	Value	Normal value
Height (cm)	186	
Weight (kg)	125	
Waist circumference (cm)	115	
Hip circumference (cm)	112	
Body mass index (kg/m2)	● 36.1	20.5 - 27.0
BMI classification	Obesity I degree	
Waist-hip ratio	● 1.03	0.70 - 0.95
Phase angle (degree)	8.52	6.53 - 9.00
Fat mass (kg)	● 35.2	15.5 - 23.2
Proportion of fat mass (%)	● 28.2	12.4 - 18.5
Lean body mass (kg)	● 89.8	67.3 - 87.3
Cell mass (kg)	49.5	47.4 - 72.4
Proportion of cell mass (%)	55.1	50.0 - 56.0
Skeletal muscle mass (kg)	● 55.1	41.4 - 48.9
Proportion of skeletal muscle mass (%)	● 61.4	46.1 - 54.4
The total liquid (kg)	● 71.8	62.0 - 69.4
Extracellular fluid (kg)	● 37.1	18.8 - 28.8
Intracellular fluid (kg)	34.7	33.2 - 50.7
Basal metabolism (kcal/day)	2801	

Body mass distribution



Body fluid distribution



Calculation of body composition

	Deficiency	Normal value	Overage
Body mass index (kg/m2)	20.5	27.0	36.1
Waist-hip ratio	0.70	0.95	1.03
Phase angle (degree)	6.53	9.00	8.52
Fat mass (kg)	15.5	23.2	35.2
Proportion of fat mass (%)	12.4	18.5	28.2
Lean body mass (kg)	67.3	87.3	89.8
Cell mass (kg)	47.4	72.4	49.5
Proportion of cell mass (%)	50.0	56.0	55.1
Skeletal muscle mass (kg)	41.4	48.9	55.1
Proportion of skeletal muscle mass (%)	46.1	54.4	61.4
The total liquid (kg)	62.0	69.4	71.8
Extracellular fluid (kg)	18.8	28.8	37.1
Intracellular fluid (kg)	33.2	50.7	34.7

Explanations corresponding to the calculated values

Body mass index (kg/m2) BMI is a weight to height ratio of a person. This value makes it possible to evaluate how well these measures relate to each other. It is used for the assessment of obesity or cachexia level. The body shape and bone tissue thickness have direct impact on BMI. The same BMI value (depending on the availability/ conditional absence of muscle mass) can relate to a person of solid build/obese or athletically built/fit person.
Observed value: 36.1 *kg/m2 (Normal range: 20.5 - 27.0 kg/m2)*

Phase angle (deg) It can be considered as a score of muscle tissue state and performance capability as well as a score of metabolic activity. Healthy people are characterized by phase angle score in the upper range of the interval of allowed values. When the person is healthy, high values point to the good state of cell membranes as well as high activity and high proportion of musculoskeletal mass. Sick people (especially with chronic illnesses) are characterized by phase angle score in the lower range of the interval of allowed values. As a general rule, the lower the values, the more unfavorable prognosis for a disease.
Observed value: 8.5 *deg (Normal range: 6.5 - 9.0 deg)*

Fat mass (kg) The total mass of the body fat cells. Standard levels of the body fat mass are varied between men and women. Normal levels are defined depending on height and age. Too high proportion of fat mass results in the negative changes of metabolism, which make further fat gain easier. Guarding health and body shape throughout a long period of time is only possible when values are set in the normal range. Each kilogram of fat is about 7000 kcal. Such a high level of energy explains why it is much harder to degrade fat than muscle mass (1100 kcal per kilogram).
Observed value: 35.2 *kg (Normal range: 15.5 - 23.2 kg)*

Lean body mass (kg) The part of the body mass including all tissues which are not fat: muscles, all organs, the brain, nerves, bones and all body fluids.
Observed value: 89.8 *kg (Normal range: 67.3 - 87.3 kg)*

Cell mass (kg) This part of the lean body mass depends on the age, height and genetic characteristics. Body cell mass includes muscles, organs, the brain, and nervous cells. Therefore fat degradation and maintenance of cell mass (fat loss occurs in this particular tissue) are very important aspects of weight loss. Cell mass loss is a main reason of failure with maintaining the weight loss because the progress is hindered after the first successes. Consequently, it is necessary to keep an adequate nutrition of the cell mass. The proteins should be included in the diet. They are 'building blocks' for all the body cells, enzymes, hormones. Exceptionally proteins can be a source of energy. The body constantly needs proteins because it is essential for the cell mass maintaining. Dietary fats are the source of fat-soluble vitamins A, E, K, D, essential fatty acids, lecithin. The fats are vital source of energy. The fats are part of cells and cell organelles, they are involved in the metabolic processes. Normal proportion of body fat is an important condition of a good health, performance capability, and well-being. Excess of dietary fat can be a threat of liver and pancreas illnesses, obesity, atherosclerotic vascular disease, cholelithiasis. Carbohydrates are the source of energy for all body cells. They form certain enzymes, hormones and other biologically important compounds when paired with proteins. Complex carbohydrates satisfy the appetite perfectly. Carbohydrate-rich foods are potatoes, whole grains, macaroni products from durum wheat, legumes. When the cell mass gets enough energy from the carbohydrates it helps maintain the basal metabolic rate and calorie intake by the body. Simple carbohydrates (sugars) are contained in sweets, juices, honey, fruits. You should eat them only as an addition to complex carbohydrates, in limited quantities.
Observed value: 49.5 *kg (Normal range: 47.4 - 72.4 kg)*

Proportion of cell mass (%) Too low or too high percentage of body cell mass leads to esurience. Low percentage of cell mass can point to malnutrition.
Observed value: 55.1 *% (Normal range: 50.0 - 56.0 %)*

Skeletal muscle mass (kg) It is the measure of body's adaptive reserve.
Observed value: 55.1 *kg (Normal range: 41.4 - 48.9 kg)*

The total liquid (kg) Total body water includes intracellular and extracellular fluid.
Observed value: 71.8 *kg (Normal range: 62.0 - 69.4 kg)*

Extracellular fluid (kg) The part of the total body water. The fluid outside the cells (blood, lymph, spinal and synovial fluid).
Observed value: 37.1 *kg (Normal range: 18.8 - 28.8 kg)*

Intracellular fluid (kg) The part of the total body water. The fluid inside the human cells
Observed value: 34.7 *kg (Normal range: 33.2 - 50.7 kg)*

Basal metabolism (kcal/day) This is the amount of energy required to sustain the body's vital functions while resting in a neutrally temperate environment when the digestive system is inactive. It reflects how much energy the body spends for the constant activity of the heart, kidneys, liver, breathing muscles and some other organs and tissues. The heat energy released during metabolism is spent on maintenance of the constancy of body temperature.
Observed value: 2801.8 *kcal/day (Normal range: 2099.8 - 2723.8 kcal/day)*

Recommendations

Diagnosis	Obesity I degree
Main risks	There is a very high risk of cardiovascular diseases, carbohydrate metabolism disorder (which mainly manifests itself as impaired carbohydrate tolerance - prediabetes), risk of degenerative joint disease.
Suggestion	Eating small meals, 5 or 6 times per day. It is allowed to eat raw vegetables and fruites for snacks between main meals. All dishes in obesity are cooked in boiled, stewed, baked form. Fried, strained and chopped dishes should be avoided.
Recommendations	<u>Nutritional composition of diet:</u> 1. Proteins - 120 g (50% of them are foods of animal origin). 2. Fats - 90 g. 3. Carbohydrates - 120 g. 4. Caloric value is more 1800 kcal. 5. Free fluids: 1-1.2 l  The diet in obesity should contain 400-500 g of protein-containing products (meat, fish, seafood, dairy products, cottage cheese, egg whites). Protein uptake from the egg whites (the egg white omelettes) can increase energy expenditure more than protein uptake from cottage cheese or meat.  It is recommended to get fats from butter, oil and sour cream.  It is recommended to get carbohydrates from vegetables (beetroot, cabbage, carrots, white zucchini squash, onions, green peas) and fruits (mainly apples). <u>The dietary recommendations:</u>  Bakery products: rye and chiselly bread, protein bran bread and wheat protein bread (100-150 g per day).  Different kinds of soup: with vegetables, borshch, beetroot soup, okroshka (200-300 g). It is allowed to eat soup with greaseless meat or fish broth (2 or 3 times per week).

Meat and fish dishes: lean meat and fish, mainly in boiled form, seafood with a large amount of iodine (superior to body metabolism). It is allowed to eat meat and fish in stewed or baked form after boiling.

Groat dishes: amount of grains is limited. Grains should be added to soup, eaten as fluffy pearl barley, peeled barley and buckwheat porridge.

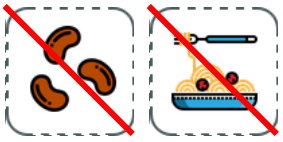
Dairy products: milk and cultured low fat dairy foods, cottage cheese, 1 or 2 eggs per day (boiled eggs or egg white omelettes).

Vegetable and fruit dishes: unrestricted amounts of sweet and sour fruits, berries and vegetables of all kinds (part of them should be eaten in raw form).

It is recommended to get fats from oil (amount of butter is limited).

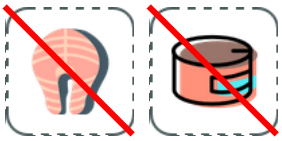
Drinks: black coffee, tea, coffee with milk.
Sauces: white sauce with vegetables, red sauce, tomato sauce.
<u>These foods should be excluded from a diet:</u>

1. Bakery products made of straight white and light wheat flour, puff and fancy pastry.



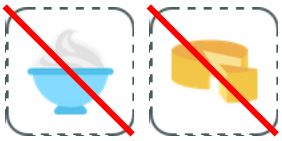
2. Potato, grain, milk soup as well as soup with legumes and macaroni products.

3. Fatty kinds of meat, duck, goose, lunch meat, sausages, ham, preserved food.



4. Fatty kinds of fish, caviar, salted fish, smoked fish, canned fish in oil.

5. Fried eggs.



6. Fatty cottage cheese, cream, sweet cottage cheese, baked yogurt, sweet yogurt, baked milk, brined and high-fat cheese.

7. All kinds of graines excluding buckwheat, pearl barley, peeled barley, especially rice, manna and oat groats, macaroni products, legumes.

8. Fat and hot spicy sauces, mayonnaise, all kinds of spices.

9. Fatty and spicy snacks.

10. Grape, bananas, raisins, figs, dates, other sweet fruits, sugar, jam, honey, jelly, ice-cream, pastry.

11. Grape and other sweet juices, hot chocolate.

12. Pork, beef, mutton fats.

Additionally	 The duration of the dietary therapy is about (weeks) 26.   Salt consumtion should be reduced to a minimum. It is necessary to avoid of adding more salt to ready-made foods and salt consumption in its pure state. Evaluation of the probability of developing heart diseases and urinary system pathology should be made. Higher metabolic rate against the background of the increasing physical activity.

Indices of heart rate variability

	Indicators of cardiac rhythm		Normal value	
HR	Heart Rate	90.7	60.0 - 85.0	bpm
mRR	Mean value of RR intervals	661	700 - 1000	ms
sdRR	Standart deviation	59.4	40.0 - 90.0	ms
RMSSD	The root mean square deviation of RR-intervals	56.3	30.0 - 65.0	ms
pNN50	The ratio of pairs of RR-intervals (>50 ms) to the number of all RR-intervals	9	2.0 - 30.0	%
VAR	The coefficient of variation	9.0	3 - 8	%
Mn	The minimum value of the length of the RR-interval	311	700 - 1000	ms
Mx	The maximum value of the length of the PR-interval	758	700 - 1000	ms
MxDMn	The Difference Mx-Mn	447	150 - 300	ms
Mo	Mode	660	700 - 900	ms
Amo	Amplitude mode	58	30 - 50	%
SI	Stress index	98.3	50.0 - 200.0	conv.un.
TP	Total power	3910	2350 - 4550	ms2
ULF	Power in excess of low-frequency domain HRV spectrum		200 - 310	ms2
VLF	Very low frequency power for the domain of HRV spectrum	585	355 - 1175	ms2
LF	Low-frequency power in domain HRV spectrum	1269	754 - 1586	ms2
HF	The power of a high frequency domain HRV spectrum	2057	772 - 1178	ms2
LF/HF	The power ratio of the low - and high-frequency domains	0.6	0.5 - 2.0	conv.un.
VLFmx	The maximum power of the waves range VLF	25.8	-	ms2
LFmx	The maximum power of the waves range LF	35.5	-	ms2
HFmx	The maximum power of the waves range HF	21.4	-	ms2
VLFav	The average power of the waves range VLF	53.2	-	ms2
LFav	The average power of the waves range LF	38.5	-	ms2
HFav	The average power of the waves range HF	27.1	-	ms2
(LF/HF)av	The ratio of average values of low and high frequency component of HRV	1.4	-	conv.un.
VLFt	The dominant period component VLF	59.7	-	sec
LFt	The dominant period component LF	18.6	-	sec
HFt	The dominant period component HF	2.8	-	sec
VLF%	The relative value of the power of the waves range VLF	15	17 - 40	%
LF%	The relative value of the power of the waves range LF	32	24 - 43	%
HF%	The relative value of the power of the waves range HF	53	21 - 51	%
HFnu	The relative value of the power of the waves range HF in normalized units	61.8	40 - 59	n. u.
LFnu	The relative value of the power of the waves range LF in normalized units	38.2	41 - 60	n. u.
(LF/HF)nu	The ratio of LFnu to Hfnu	0.6	0.9 - 3.0	conv.un.
IC	The index of centralization	0.9	0.9 - 3.0	conv.un.
ISCA	The index activation of subcortical nerve centers	0.3	0.3 - 1.5	conv.un.
VB	The index of autonomic balance	0.6	0.6 - 2.0	conv.un.
IARS	The activity index of regulatory systems (IARS)	6	0 - 2	conv.un.
SPO2	Level of blood saturation	96	94 - 99	%

Conclusion:
Moderate tachycardia. Moderate violation of automaticity. Vegetative homeostasis saved. The pronounced weakening of the activity of subcortical nerve centers. State regulatory systems: expressed functional voltage activation of cholinergic regulation link. A high level of resilience. High level mobilizing potential. Low hormonal modulation of regulatory mechanisms. Adaptive capacity of the organism increased (good level of fitness, provisioning adaptation).

Functional status

0	Optimal level of regulation	Normality
1	Normal level of regulation	
2	Moderate functional stress	
3	Expressed functional stress	Functional stress
4	Pronounced functional stress	
5	Overstrain of regulatory mechanisms	Overexertion
6	Pronounced overstrain of regulatory mechanisms	
7	Depletion of regulatory systems	Depletion of regulatory systems and stress-adaptation failure
8	Pronounced depletion of regulatory systems	
9	Failure mechanisms of regulation	

Adaptation level is medium low. Stress of the autonomic nervous system. The normal energy supply of the body. The level of the psycho-emotional activity is low. Signs of fatigue. Health status is not normal.

Explanations corresponding to the calculated values

Mild tachycardia refers to a fast resting heart rate – between 90 and 120 beats per minute (the adult resting heart beats between 60 and 90 times per minute).

Short-term mild tachycardia may be considered as a norm in the following conditions:

- emotional excitement;
- intense physical exercise (also a short period of time thereafter);
- pregnancy.

The following conditions and illnesses are possible causes:

- overuse of coffee, green and black tea, alcohol;
- smoking;
- infection with fever (it is accepted that 1°C increase in temperature corresponds to 10 beats increase in the heart rate);
- nervous system dysregulation and mental illness (neurotic disorders, vegetovascular dysfunction);
- long-term ingestion or inadequate administration of some drugs (atropine, corticosteroids, diuretics, thyroid hormones, hypotensive drugs, etc.);
- blood loss and anemia (a low level of hemoglobin – the protein inside red blood cells that carries oxygen);
- cardiac disorders (heart failure, myocarditis, etc.);
- increase of thyroid function (hyperthyroid).

Cases when tachycardia can be dangerous:

Mild tachycardia is not a particular disease. It can be a prodrome (an early symptom indicating the onset of a disease) especially if it is a frequent and/or long-term condition. Besides, it can be a sign of the listed above diseases.

Mild cardiac automatism disturbance is impairment in heart's ability to maintain a regular rhythm driven by electrical impulses produced by the heart. Normally the sinus node, situated in the right atrium, controls the heart rhythm. The sinus node problems in some diseases result in alternating slow and fast heart rates – arrhythmias occur and the heartbeat becomes irregular.

Mild cardiac automatism disturbance occurs in nervous system dysregulation or mineral (selenium, magnesium) deficiency. This condition requires readjustment of the disturbed body balance.

Cases when cardiac automatism disturbance can be dangerous:

- it can be a prodrome (an early symptom indicating the onset of a disease) of more severe cardiac rhythm disorders.

The autonomic homeostasis is constant – it means that sympathetic and parasympathetic nervous systems are in healthy balance. The sympathetic nervous system is one of the two divisions of the autonomic nervous system, the other being the parasympathetic nervous system. The autonomic nervous system controls most of the body's internal organs, endocrine glands and blood vessels.

Significant decrease in activity of subcortical nervous centers can be a normal condition in trained persons, whose nervous centers are trained to react less to irritations (i. e. emotional excitement, heavy physical activity). Besides, this condition can be a sign of subcortical center hypoexcitability.
High nervous centers of brain cortex are responsible for the nervous regulation of the body in general as well as for the body interaction with the environment. The subcortical nervous centers provide the balance of the different body systems (cardiovascular, respiratory systems etc.). The signals from these centers to organs intensify or inhibit their activity. For example, decrease in activity of the cardiovascular center slows down the heart rate.

The following conditions and illnesses are possible causes:

- different chronic diseases;
- long-term stress;
- long-term intake of psychostimulants (alcohol, caffeine and others) exhausts nervous system and leads to decrease in excitability of subcortical centers.

This condition can be dangerous:

It is necessary to determine the cause of significant decrease in activity of subcortical nervous centers, because this condition can be relate to different diseases.

Expressed functional stress means that the organism works at the peak of its capabilities. If the **activation of**

cholinergic division of the autonomic nervous system occurs, there is a lack of energy required for the body activity, so the organism tries to save remaining resources.

The sympathetic nervous system is one of the two divisions of the autonomic nervous system (ANS), the other being the parasympathetic nervous system. The autonomic nervous system controls most of the body's internal organs, endocrine glands and blood vessels.

So called cholinergic division of ANS is parasympathetic division of the autonomic nervous system which controls restitution and relaxation. Therefore cholinergic mechanisms reduce the energy expenditure. They are responsible for maintenance of functional reserves and restoration of body resources.

Cases when this condition can be dangerous:

This condition is characterized by decrease in functional reserves and can be related to prodrome (an early symptom indicating the onset of a disease). Higher load of regulatory systems can lead to the fast depletion of body resources and different organs diseases. Usually, in the first place, functions of the most vulnerable organs are impaired – the ones weakened by infection or in cases when the liability to disease presents. The activation of cholinergic mechanisms (when the energy level is so low) increases the risk of fast depletion of functional reserves significantly.

Body adaptive capability is an ability of the organism to constantly adapt to the changes of internal and external environment. Decrease in adaptive capability leads to the low level of functional reserves which spent on balance maintenance. Severe body imbalance can lead to different diseases.

High level of restoration potential means that the organism does not much time to restore its functional reserves. Usually it is true for young organism and/or the physically trained person.

Every person has so-called body functional reserves (reserve energy) which constantly spent on optimal balance maintenance. In case of reduction of functional reserves, for various reasons, it is necessary to restore energy resources.

High level of mobilizing potential reflects that the organism can easily mobilize internal reserves and restore them fast.

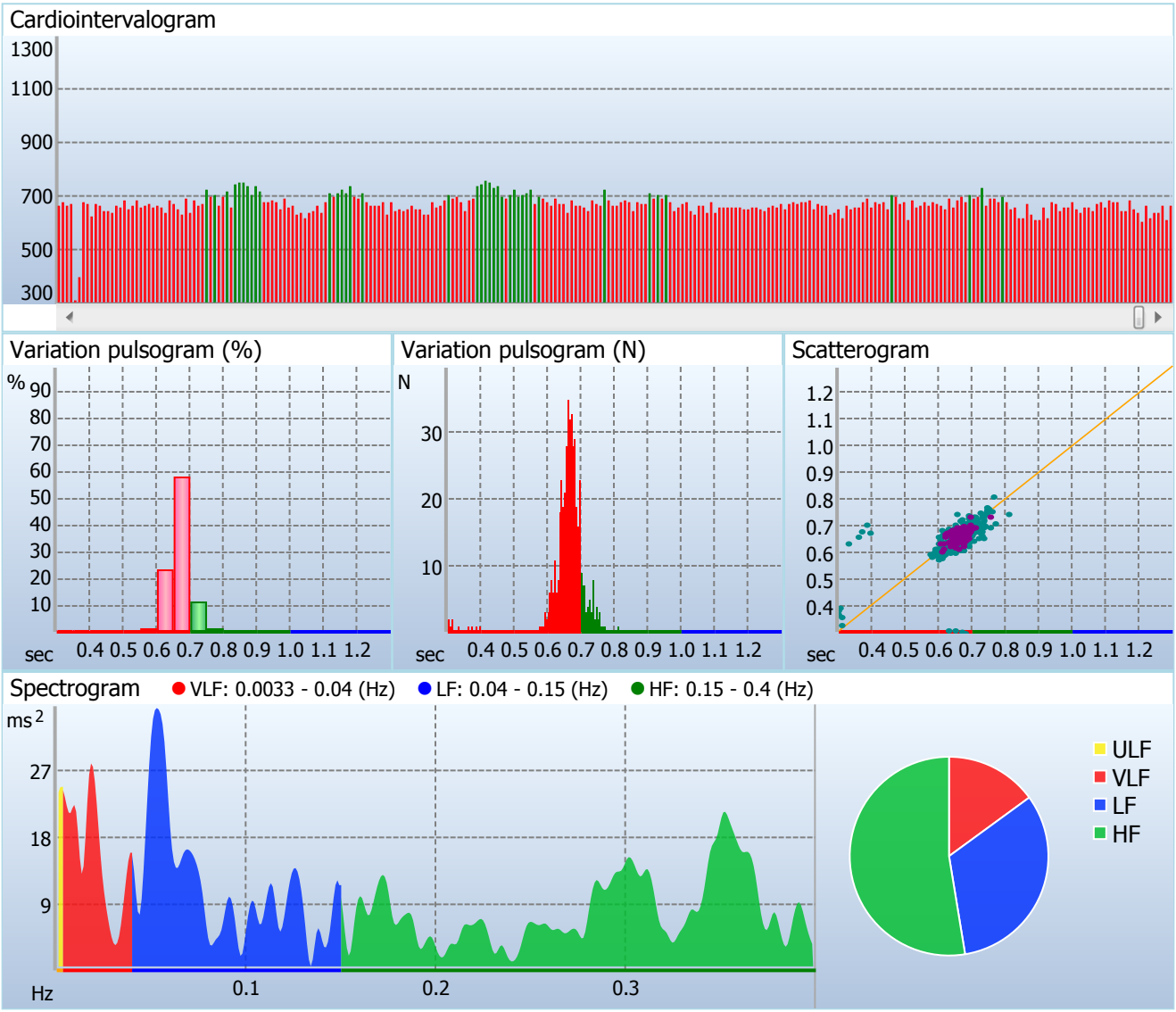
The organism constantly adapts to the changes of internal or external environment. When there is an additional load (stress) it is required to use (mobilize) so-called functional reserves, i. e. increase energy expenditure. The high level of body functional capabilities relates to the slight stress of regulatory systems.

Low level of hormonal modulation of regulatory mechanisms points to the low involvement of hormones in the nervous regulation. Hormones are essential body resources so the low level of hormone involvement means that the nervous system works enough well. It relates to the high level of body adaptation.

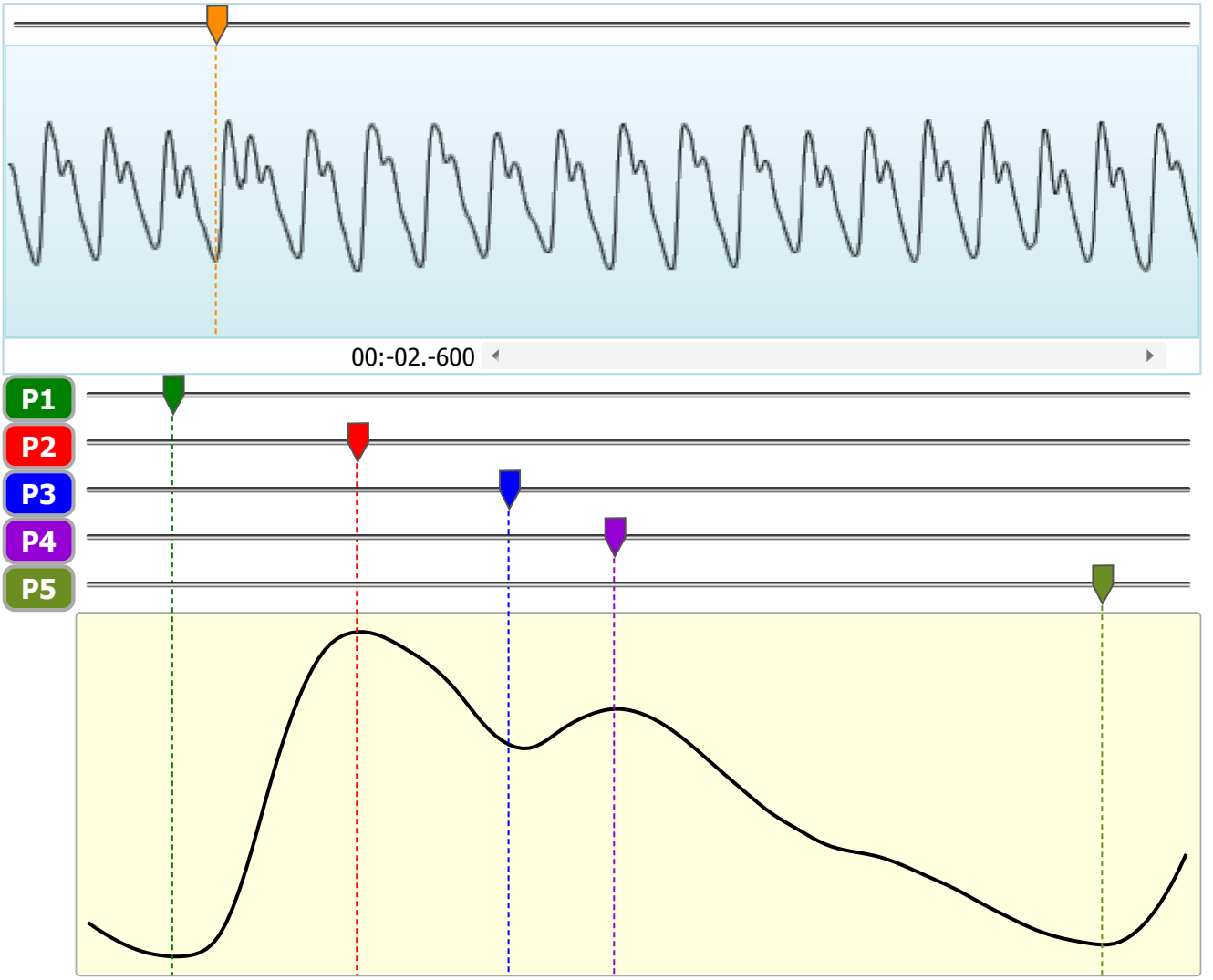
The organism adapts to the changes of internal or external environment by nervous system with the involvement of hormones produced by endocrine glands. For example, adrenal glands produce stress hormone adrenaline, thyroid produces thyroid hormones etc.

Low level of hormonal modulation of regulatory mechanisms relates to the good level of physical training and the adequate level of functional resources.

Graphical view of heart rate variability



Photoplethysmogram



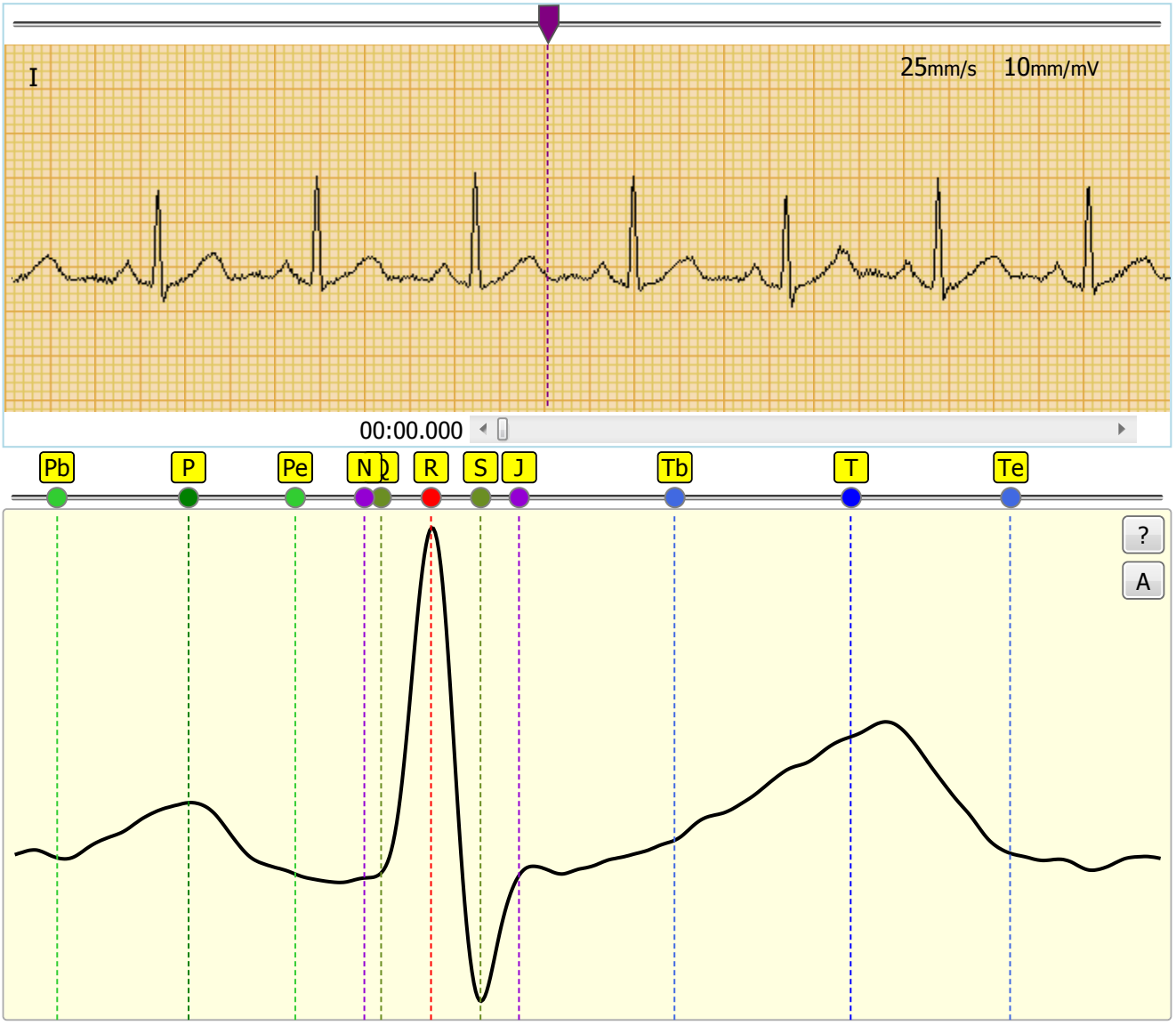
	Photoplethysmogram parameters		Normal value	
APW	Amplitude of Pulse Wave	0.88		conv.un.
ADW	Amplitude of Dicrotic Wave	0.64	0.44	conv.un.
HI	Height of Incisura	0.54	0.58	conv.un.
IDW	Index of Dicrotic Wave	61	60 - 75	%
DAP	Duration of Anacrotic Phase of pulse wave	255		ms
DDP	Duration of Dicrotic Phase of Pulse Wave	450		ms
DPW	Duration of Pulse Wave	705	700 - 1000	ms
IAW	Index of Anacrotic Wave	19	15 - 30	%
DF	Duration of Filling	140	60 - 200	ms
DS	Duration of the systolic phase of cardiac cycle	335	350 - 550	ms
DD	Duration of the diastolic phase of cardiac cycle	370	400 - 600	ms
DBW	Duration of Backward Wave	195	200 - 400	ms
IS	Index of Stiffness	9.5	5 - 9	1/s
IBW	Index of Backward Wave	72	40 - 70	%
HR	Heart Rate	85	60.0 - 85.0	bpm

Conclusion:

Index of Stiffness. It reflects the stiffness of arterial wall to the pulse volume. Standard values averaged about 5 - 9
Observed value: 9.5 *1/s*

Index of Backward Wave. It corresponds to the value of backward wave. It mainly reflects the tone of arterioles and minute vessels, indirectly indicates presence of atherosclerotic lesions (increase of atherosclerotic lesions). Standard values vary 40 - 70%.
Observed value: 72.0 *%*

ECG contour analysis



Electrocardiogram parameters		Normal value	
Pulse rate	91	60.0 - 85.0	bpm
Mean duration of RR interval	655	700 - 1000	ms
Minimum duration of RR interval	623	700 - 1000	ms
Maximum duration of RR interval	712	700 - 1000	ms
Electrical axis of the heart	-30	0 - 90	deg
Wave P duration	130	< 110	ms
Wave P amplitude	0.16	< 0.2	mV
Duration of PQ interval	167	< 210	ms
Macruz index	3.5	1.1 - 1.6	conv.un.
Wave Q duration	10	< 40	ms
Wave Q amplitude	0.01	< 0.18	mV
Duration of QRS complex	84	60 - 100	ms
Wave R amplitude	0.87	0.5 - 1.5	mV
Wave S amplitude	0.31	< 0.5	mV
Deviation of the beginning of ST segment (J)	0.00	-0.05 - 0.1	mV
Duration of ST segment	84	-	ms
Deviation of ST segment (J+60)	0.05	-	mV

Wave T duration	183	-	ms
Wave T amplitude	0.28	-	mV
Duration of QT interval	● 352	< 314	ms
Corrected value of QT interval	● 0.44	< 0.42	conv.un.

Conclusion:

Rhythm from AV node, regular. Left Axis Deviation.

The rhythm from AV node is pathological. It is characterized by pacemaker localization in atrioventricular node. In that case ventricles activate as usual (from top to bottom), but atria activate retrogradely (i. e. from bottom to top). P waves on the ECG may be absent because they can be buried in normal QRS complexes. P waves can be negative as well and located after each QRS complex. The rhythm from AV node is associated with HR which is slower than sinus rhythm. It is about 40 to 60 beats per minute.
Left axis deviation can point to left ventricular hypertrophy or overload. To specify the nature of a heart condition it is necessary to analyse other parameters.

Electrical axis of the heart. The direction of the electric axis of the heart shows the total value of the bioelectric changes that occur in the cardiac muscle with each contraction. The position of the heart axis is only an additional parameter in the diagnosis of diseases. For people older than 40 years, the normal angle of the heart axis is between –30 and +90°, for people younger 40 years it is between 0 and +105°.
Observed value: -30.0 *deg*

Wave P duration. P wave corresponds to atrial activation. You should pay special attention to P wave in ECG interpretation. Normal P wave in I, II and III limb leads has a semispherical shape. That semispherical wave consists from the curve of activation of the right atrium and subsequent activation of the left atrium. Normal width of the P wave does not exceed 0.11 sec, normal height is up to 0.20 mV. Usually deviations of those values of P wave from the normal values can point to atrial hypertrophy.
Observed value: 130.0 *ms*

Macruz index. Ratio of wave P duration to segment PQ duration is called Macruz Index. Normal value of Macruz Index is 1,1-1,6. This index is used in diagnosis of atrial hypertrophy.
Observed value: 3.5 *conv.un.*

Duration of QT interval. QT interval (electrical systole of the ventricles) is a time interval from the beginning of the QRS complex to the end of the T wave. QT interval duration depends on gender, age, heart rate. Normal QT interval shall not be more than 50% of the preceding RR interval. The possible cause of QT interval elongation is hypokalemia (hypocalcaemia), cause of QT interval shortening is hyperkalemia (hypercalcaemia).
Observed value: 352.0 *ms*

Corrected value of QT interval. It is calculated upon the Bazett's formula: $QTc=QT/\sqrt{RR}$. QT interval is considered pathologic when its value exceeds 0.42.
Observed value: 0.4 *conv.un.*

Risk analysis