LOTUS PULSE

HEART ACTIVITY MONITOR

User Guide

Dynamic Technologies

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www.dyn.ru

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BASIC INFORMATION

This manual contains basic information, technical characteristics and description of the operation of the Lotus Pulse Heart Activity Monitor software (hereinafter referred to as the Monitor).

The Monitor is not a medical device and is not intended for medical use. Using the Monitor for purposes other than those specified in the manual is a violation of the rules for its proper operation.

The Monitor is designed to record information about the user's cardiac activity and transmit it via a USB channel to a personal computer.

The Lotus Pulse software (hereinafter referred to as the Application), installed on the computer, processes the information and provides the user with an interpretation of cardiac activity readings.

The Application is designed to work under the MS Windows 10 operating system and higher. It can be used on Apple Mac computers using BootCamp or Parallels® Desktop (only the DCR-8 monitor).

To record cardiac activity signals, the Monitor uses standard reusable FIAB F9024 electrodes or similar.

The Monitor can be used for personal, home or commercial use by a wide range of people.

The monitor can be used for children from 10 years old, for adults without age restrictions.

The monitor in combination with specialized software for personal computers performs the following functional operations:

- recording heart activity signals and simultaneous transmission of information in digital form to the user's personal computers via a USB channel
- storing and analytical processing of information about heart activity
- visual display and color interpretation of heart activity on displays of personal computers with the Windows operating system using the Application installed on them

Scope of the Monitor:

- express assessment of the heart activity of visitors to sports and health centers
- self-monitoring of health at home
- assessment of the effectiveness of traditional and non-traditional methods of therapy

Attention!
The results of automatic interpretation of cardiac activity are of a purely advisory nature. The information provided is useful, but cannot be used as a basis for ignoring symptoms of the disease. If you have any symptoms of the disease or feel worse, you should consult a doctor regardless of the result of the automatic interpretation.

Contraindications for using the Monitor:

- damage or disease of the skin in places where the electrodes are applied
- allergy to a specific type of electrodes
- results of interpretation of cardiac activity will be unreliable if the user has heart rhythm disturbances (atrial fibrillation, extrasystole, etc.)
- results of interpretation of cardiac activity will be unreliable if the user uses a pacemaker

The manufacturer reserves the right to make changes to this manual in connection with the release of device and software updates. You can read the current manual on the website www.dyn.ru.

DELIVERY SET

ECG Recording Module, model LOTUSPULSE	1 pc.
Cardiography Electrodes Skintact F 9024 AC	2 pcs.
Interface cable USB v2.0	1 pc.
Medical wallet	1 pc.
Lotus Pulse Software	1 pc.

STANDARDS

The technology used by Dynamic Technologies is approved by the Ministry of Health of the Russian Federation, permitted for use in medical purposes, and protected by patents and copyright certificates of the Russian Federation.

The software and hardware of Dynamic Technologies diagnostic complexes meets the requirements of the standards for exam, physiological interpretation and clinical use of cardiointervalometry indicators adopted by the European Society of Cardiology and the North American Association of Electrophysiology.

The production complex of Dynamic Technologies meets the quality standards of ISO 13485:2016.

EQUIPMENT

The monitor is a unique analog-to-digital converter of bioelectric signals of the body. When developing it, the company Dynamic Technologies used an original patented method of differential digital filtering. The use of this method made it possible to abandon the use of a three-electrode ECG recording circuit and at the same time ensure high noise immunity.

The Monitor is powered from a computer via a USB interface. Patient safety is ensured by optocoupler isolation, which eliminates direct electrical contact between the computer and the person.

Important!
In some laptop models, when operating from the mains (110-220V, 50-60Hz), interference may occur during ECG recording. To eliminate interference, it is recommended to use a grounded outlet or disconnect the laptop power adapter from the mains during recording and switch to battery power. Also, to eliminate interference during ECG recording, it is recommended to disconnect other devices connected to the mains (printers, routers, etc.) from the computer.

TECHNICAL CHARACTERISTICS

Heart rate recording range	from 30 to 150 bpm
Input voltage range	0.03-5 mV
Direct current in the human circuit	no more than 0.1 µA
Input signal sampling frequency	1000 Hz
ADC bit depth	12 bit
Number of leads	1
Lead cable length	1.1 m
Number of electrodes	2 pcs.
Communication interface	USB 2.0
USB cable length	1.8 – 3.0 m
Power supply	via USB channel, 5 V, 90 mA
Operating temperature	from +5°C to +50°C
Electrical safety	complies with GOST R 50267.0 and GOST 50267.25 (IEC 601) for products of protection class II, type BF
Content of precious metals	No
Housing material	ABS plastic
Housing color	matte white
Dimensions	116 x 54 x 22 mm
Weight	83 g
Service life	at least 10 years

PREPARATION FOR WORK

Preparing equipment

Connect the electrodes to the plugs and secure them securely with screws.

Connect the Monitor to the computer using a USB cable.

It is recommended to connect the Monitor to the computer for the first time before installing the software.

Installing the software

Run the Application installation file. The installation file can be found on the USB drive included in the delivery package, or it can be downloaded from the Company's website – https://en.dyn.ru/downloads.

Follow the instructions of the installation wizard until it completes.

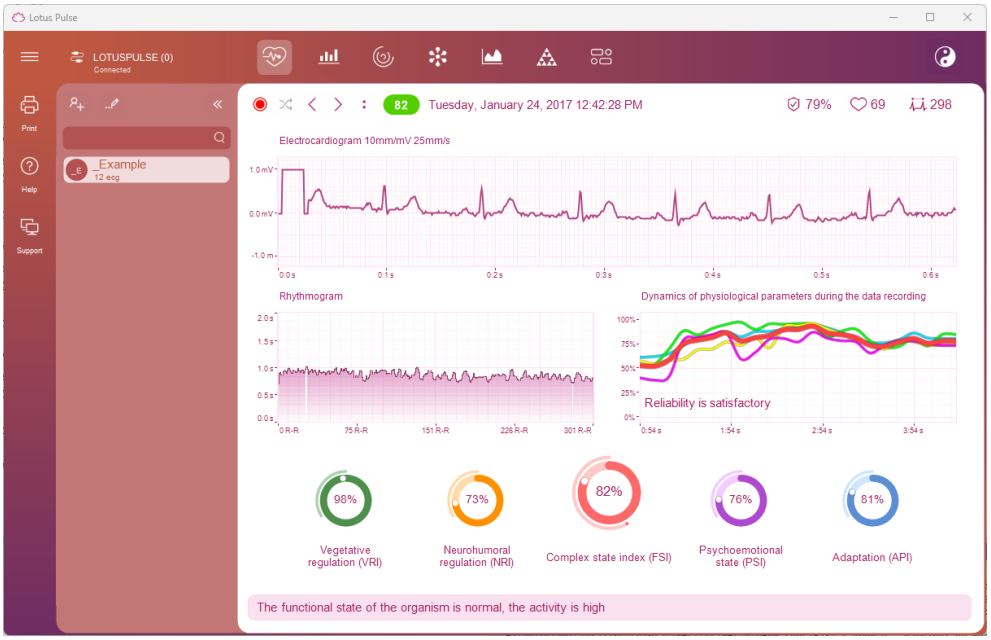
First launch of the Application

Launch the Application using the shortcut on the desktop. After launching, the Application should automatically detect the connected Monitor. If, after launching the Application, the operating system displays a warning that the Windows firewall has blocked the network capabilities of the Dynamic Tech Device Driver program, then you must allow this program to work in private and public networks. Dynamic Tech Device Driver is part of the Application and is used to access the Monitor.

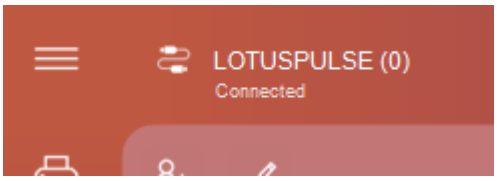
QUICK START

Preparing for exam

Launch the Application:

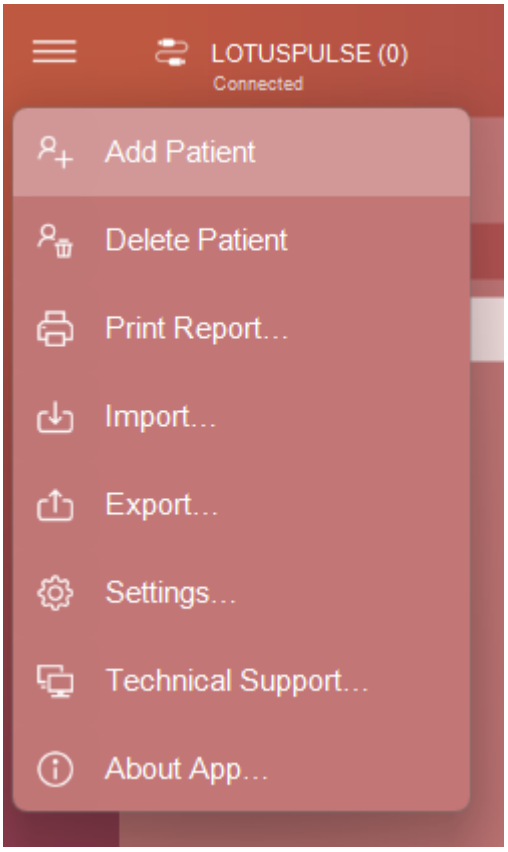


The upper left part of the Application window should show the name of the connected Monitor and its status: connected, not connected, or incompatible (if the Monitor connected is not the correct type).

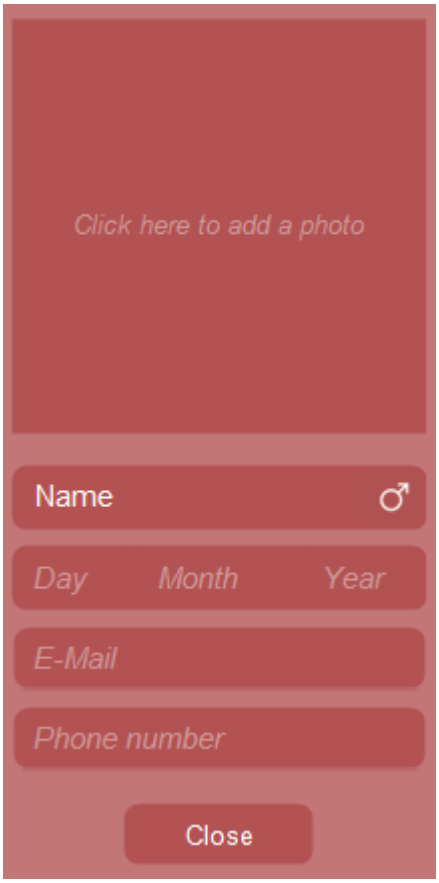


Adding a new patient

Click the button with three stripes in the upper left part of the Application window, the main menu of the Application (hereinafter referred to as the Menu) will open.



Select Add Patient. A new patient with empty personal information will be added to the patient list.



By default, a new patient is given the name "Name". It should be replaced with the patient's real last name, first name and patronymic. To the right of the name is a button for selecting the patient's gender – male or female.

In the Date of birth field, enter the date of birth of the patient being added.

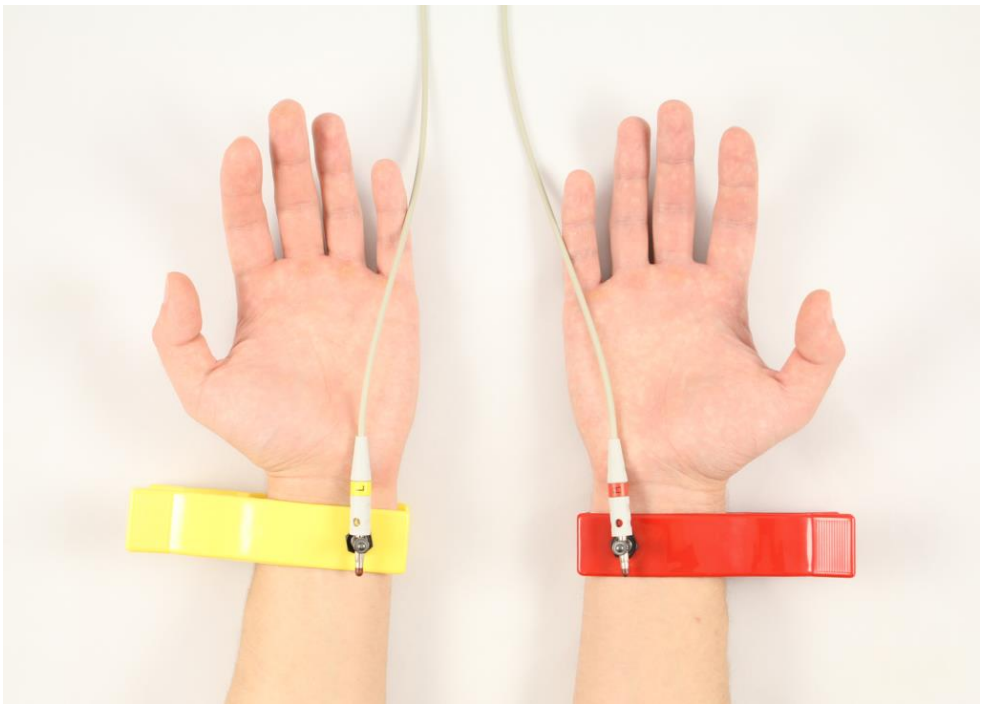
In the E-Mail field, you can enter the patient's e-mail address. In this case, you can send this patient the results of his exams, including in automatic mode (upon completion of the patient's exams).

In the Phone field, you can enter the patient's phone number.

Clicking on the photo field above the patient's name will open a menu for selecting a patient photo. Any image file can be used as a patient photo without any restrictions on the size of this image. If a webcam is connected to the computer, you can display the video from this camera in the patient photo field. Left-clicking on this video allows you to save the current frame as a patient photo.

Connecting the Monitor to the patient

- the electrodes are applied to the hands in the wrist area, with the contact pad on the inside
- it is recommended to moisten the wrists with water at the contact point
- the electrode with the red plug is put on the right hand, with the yellow plug – on the left
- during signal recording, the user must be at rest in a sitting position
- in some cases, with a very low signal amplitude, the electrode with the red plug is placed on the wrist of the right hand, and with the yellow plug – on the ankle of the left leg, moistened with water



The electrode with the red plug is placed on the right hand, and the one with the yellow plug is placed on the left. Please note: this does not refer to the color of the electrode, but to the color of the plug on the wire connected to the electrode.

To reduce interference when recording a signal from the Monitor, the following rules must be observed:

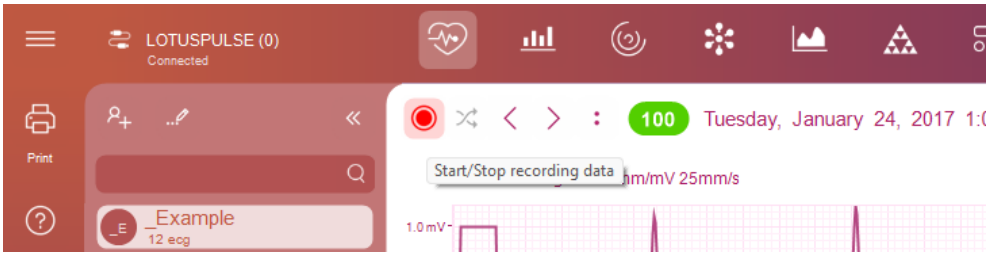
- arms must be motionless and relaxed
- when sitting, place your hands on your knees or on the armrests
- no strangers should be moving within a radius of 1.5-2 meters
- the user must be in a comfortable and relaxed state

- the user's breathing must be calm and natural
- the user is not recommended to talk or look at the computer screen

During the recording of the ECG signal, interference from the 220V electrical network may occur. Most often, this occurs due to the absence of grounding in the electrical network. Network interference is also possible due to powerful industrial equipment operating nearby: fans, transformers, air conditioners, etc. The signal coming from the Monitor has the form of a frequently repeating pattern, which has little in common with correct cardiac complexes. Despite the fact that the Application can recognize this interference as a correct ECG signal, the result of such a exam will have nothing in common with the ECG of the patient being examined. For more information about interference, see the section **Problems with ECG signal recording**.

Recording an exam

Make sure that the upper left corner of the Application window displays the Monitor name and its status – “Connected”, meaning that the Monitor is ready for operation. If the Monitor status is “Not connected”, this means that the Monitor is not connected to the computer, is faulty, or is not recognized by the operating system. If the Monitor status is “Incompatible”, this means that the Monitor connected to the computer is not suitable for working with this Application.



Click the Start new exam button. The ECG signal being recorded should appear in the patient's ECG display field. Check the signal polarity and change it if necessary using the Change signal polarity button.

After the Application detects a correct and stable ECG signal, it will automatically start recording it. At the same time, the message "exam in progress" will appear in the patient's ECG display field.

During the exam, the Application continuously monitors the quality of the recorded signal. Any interference will be displayed on the rhythmogram. If the amount of interference is large, the exam process will be interrupted and the Application will start recording the ECG signal again.

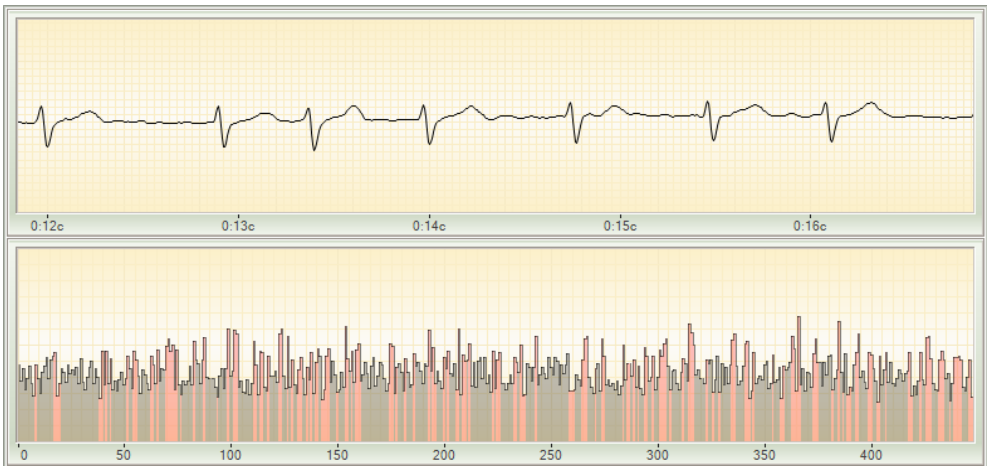
To terminate the exam early, click the End exam button.

During the exam, the Application displays the patient's pulse rate, as well as, as data is collected, the normalized values of the current functional state indicators. If significant changes in these indicators are observed during the exam, this means that the patient is not at rest.

Also, the number of registered R-R intervals is displayed during the exam. After recording 300 R-R intervals, the exam will automatically end and the Application will switch to the exam results viewing mode.

If the patient has heart rhythm disturbances (atrial fibrillation, extrasystole, etc.), or if the patient uses a pacemaker, the calculation of functional state indicators will be incorrect.

Examples of such disorders are shown in the following figures:



atrial fibrillation

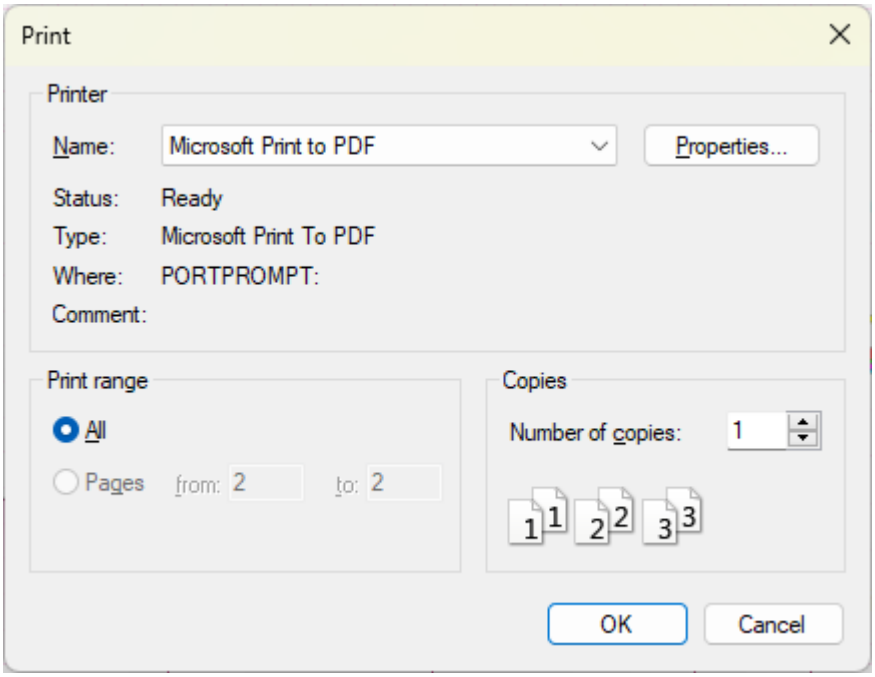
extrasystole

Viewing exam results

To view a patient's exam results, select the patient in the patient list. If necessary, you can use the quick patient search function. To select a different exam date, use the Next exam and Previous exam buttons.

Printing exam results

To print the exam results of a patient, select the desired exam and click the Print button, or select Print report in the Menu. This will open the print settings window.



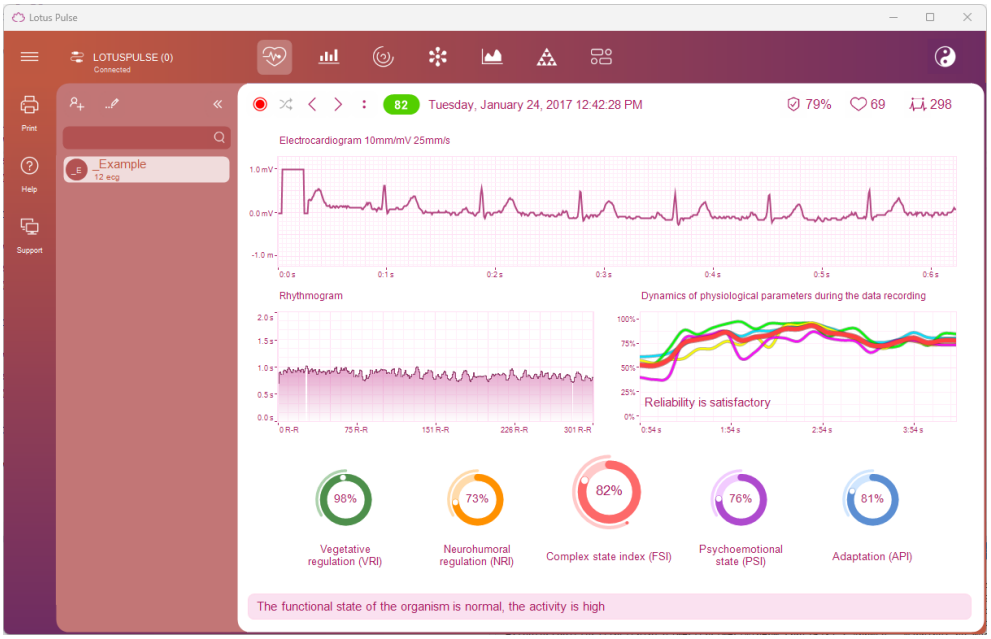
In this window, you can select and configure the printer on which the report will be printed.

After clicking the OK button, the report will be printed on the selected printer.

If necessary, you can print the report not on paper, but as a file. To do this, select one of the virtual printers installed in your operating system, for example, Microsoft XPS Document Writer. You can also use the Export…/Save report… function in the Applications Menu.

APPLICATION INTERFACE

The Application window is conditionally divided into two areas: the list of patients and the patient's exam results.



Patient List

In the upper left corner of the Application window there is a Menu button.

To the right of it is the name of the connected Monitor and its status.

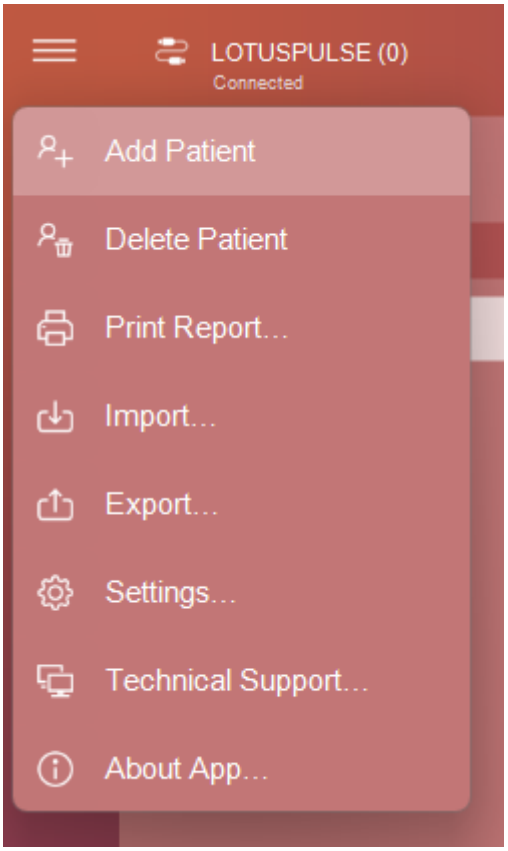
Under the Menu button are the Print, Help and Support buttons. To the right of these buttons is the Patient List.

Above the Patient List are the Add Patient, Edit Patient buttons, and a button to hide the Patient List from the screen. Just below is a field for quickly searching for a patient by name

Clicking on any patient in the List will display the exam results of this patient in the right part of the Application window. Double-clicking on any patient will open a window for changing the personal information of this patient.

Application Menu

A large number of Application features are collected in the Main Menu.



Add patient – adds a new patient named “Name” to the list and opens a window for editing his personal information.

Delete patient – deletes the currently selected patient. Be careful: the patient’s record is deleted along with all his exams, including those that could have been made in other Company applications.

> *Attention!*
> *It is not possible to undo the deletion of a patient.*

Print report – print the report displayed in the right part of the Application window on a regular or virtual printer.

Import… – a group of actions related to adding new patient records and their exams from an external file to the Application.

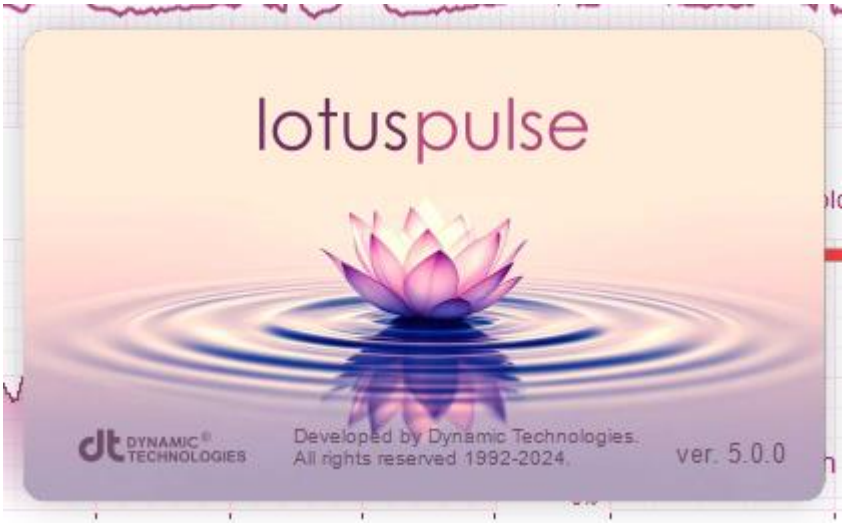
Export… – a group of actions related to saving records and exams of either the current patient or all patients from the list to an external archive file.

Using the import and export functions, you can transfer patient exams between different copies of the Application on different computers.

Settings… – a group of Application settings. Here you can set up an individual signature in reports, specify the settings of the mail account for sending reports by e-mail, turn on or off the sound and check for Application updates, and select the Application language.

Technical support… – a group of actions that help solve possible technical problems: install the Monitor driver, contact the Company's Technical Support Department, open the User Guide.

About the Application… – shows information about this version of the Application.



Exam results

On the right side of the Application window there is a block for displaying exam results – one or two at once. This block is a set of several tabs. To switch between them, use the buttons at the top of the block.

The application can display exam results in two versions – traditional and alternative. In the traditional version, the exam is analyzed in accordance with scientific, evidence-based medicine. In the alternative version, the exam is analyzed from the point of view of Ayurvedic practices. To switch between these modes, use the button on the right side of the tab list:

ECG Registration and Viewing

This tab contains controls for registering and displaying the patient's electrocardiogram.

Variational Analysis

This tab displays the assessment of the body's autonomic regulation using the methods of variational analysis of heart rhythms.

Spectral Analysis

This tab displays the assessment of the body's autonomic regulation using the spectral analysis method.

Neurodynamic Analysis

This tab displays the assessment of hormonal regulation using the neurodynamic analysis method.

Psycho-Emotional State

This tab displays the assessment of the psycho-emotional state using the method of mapping brain biorhythms.

Fractal Analysis

This tab displays the assessment of the body's adaptation level and determining biological age using the fractal analysis method.

Dynamics of Functional State Indicators

This tab displays the dynamics of changes in functional state indicators over time, as well as summary information for an individual exam.

Energy Potential

This tab displays the assessment of the patient's energy potential (aura).

Chakra Activity Map

This tab displays the estimated state of the patient's chakras.

Meridian Diagram

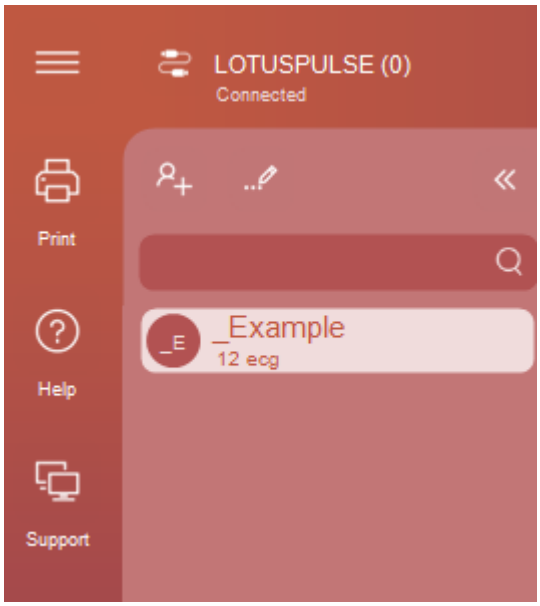
This tab displays the estimated states of the patient's meridians and five Wu Xing elements.

Doshas

This tab displays the patient's exam to determine their dosha type, as well as the recommended diet.

Printing the report and user manual

In the upper left corner of the Applications window there is a Print button, a Help button used to display this document, and a Support button that launches the remote computer control module (for more details, see the **Contacting Technical Support** section).



Monitor Status

Information about the connected Monitor is displayed in the upper left corner of the Application window. The number of exams taken with this Monitor is indicated in brackets. The current Monitor status is displayed under the Monitor name:

- not connected – Monitor not detected
- incompatible – Monitor connected from another Application
- connected – Monitor ready for operation

Heart Rate Variability

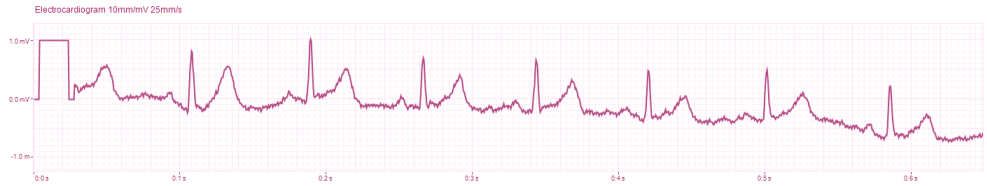
This tab contains controls for recording and displaying the patient's electrocardiogram.

The upper part of the tab contains controls for recording and displaying the exam:

From left to right are the following elements:

- exam recording start/stop button
- button to change the polarity of the recorded ECG signal
- Previous exam button
- Next exam button
- menu button with actions for this exam
- the value of the patient's functional state in this exam, as a percentage. It can be from 0 to 100 and red, yellow or green, depending on the value
- date and time when this exam was made
- exam reliability – characterizes how high-quality the exam was
- average heart rate (HR) recorded in this exam
- the number of correct R-R intervals in the recorded ECG signal used in the calculations

ECG



Depending on the Application operating mode, this graph displays either the previously recorded ECG signal during the patient exam, or the ECG signal being recorded at the moment.

The horizontal axis shows the time in minutes and seconds from the start of signal recording, and the vertical axis shows the ECG amplitude in millivolts.

The graph is scaled by moving the mouse with the right button pressed. The graph is moved by moving the mouse with the left button pressed.

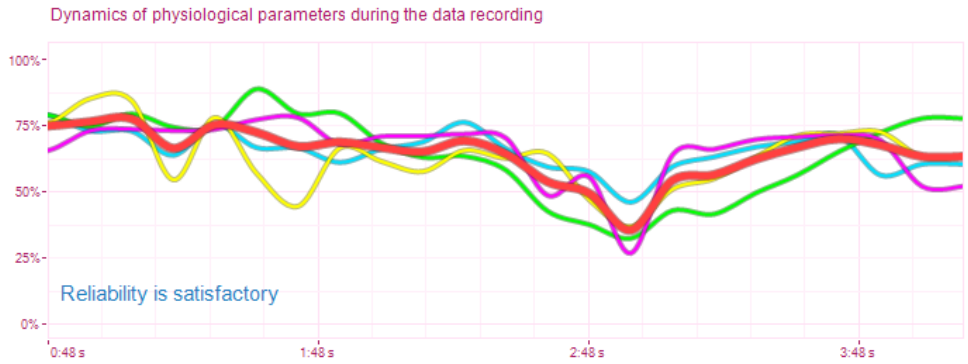
Rhythmogram

Depending on the Application operating mode, this graph displays either the previously recorded patient rhythmogram, or the one being recorded at the moment.

The rhythmogram is a graph in which the horizontal axis shows the R-R interval number, and the vertical axis shows the R-R interval duration in seconds.

"Artifacts" – extrasystoles or interference – are highlighted in white on the rhythmogram. The graph is scaled with the right mouse button, and moved with the left one. When you double-click on any R-R interval, the corresponding ECG section will be displayed on the ECG graph.

Dynamics of physiological parameter during exam



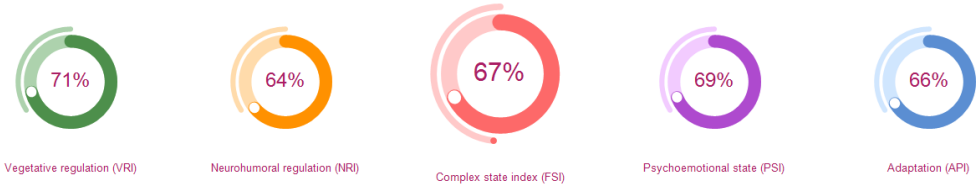
The graph Dynamics of physiological parameter during exam clearly shows how the functional state parameters changed during the exam. It allows you to assess the reliability of the results obtained as a result of the exam.

If the functional state parameters remain at the same level throughout the exam, this means that the exam was performed correctly and its results can be trusted. If the physiological parameter dynamics graph has sharp level changes, this means that the patient was not in a state of complete rest during the exam, or the ECG signal coming from the patient was affected by external interference.

This graph also displays an assessment of the exam reliability: high, satisfactory or low.

Exam results with satisfactory and, especially, low reliability should not be trusted, and it makes sense to re-measure the patient, having previously eliminated the factors that negatively affect the quality of the recorded ECG signal.

Functional state indicators



These indicators display the normalized values of the functional state indicators:

- API – body adaptation level
- VRI – vegetative regulation indicator
- NRI – neurohumoral regulation indicator
- PSI – psychoemotional state indicator
- FSI – functional state – complex state index

On the API, VRI, NRI, PSI and FSI indicators, a thin strip indicates the norm for a given parameter. At the same time, the norm for the FSI parameter may change depending on the patient's age at the time of exam (for this, it is necessary to indicate the patient's date of birth in his card).

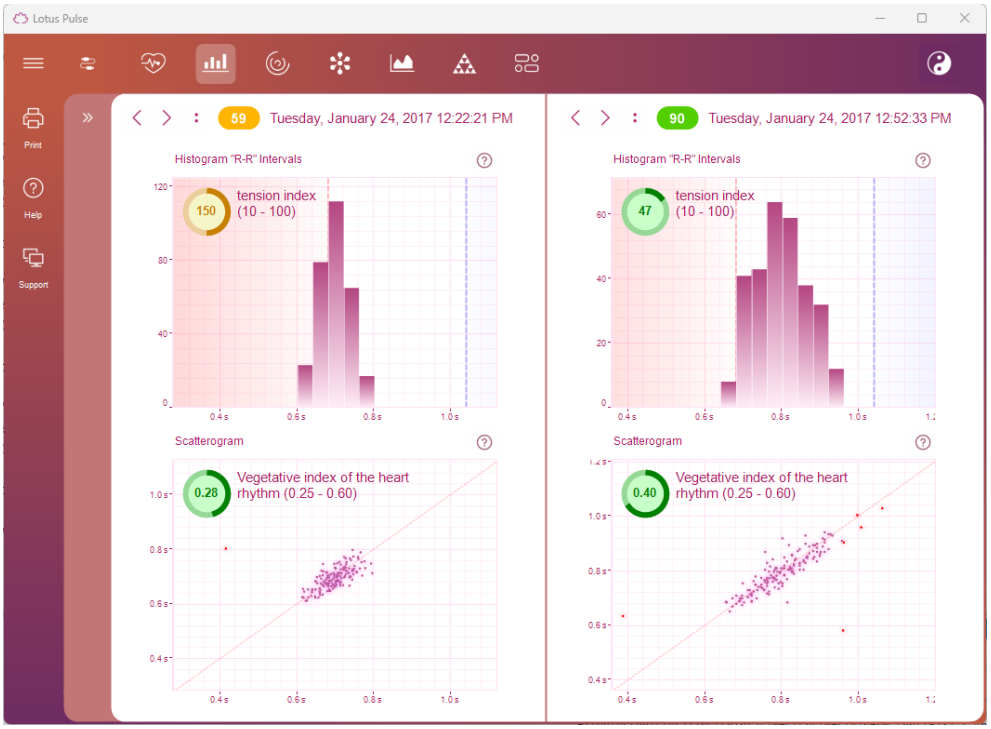
Field for notes to the exam

Here the user can add and change text explanations related to this exam.

By default, this field displays an automatic output about the patient's current measured functional state. You can change it or replace it with your own note.

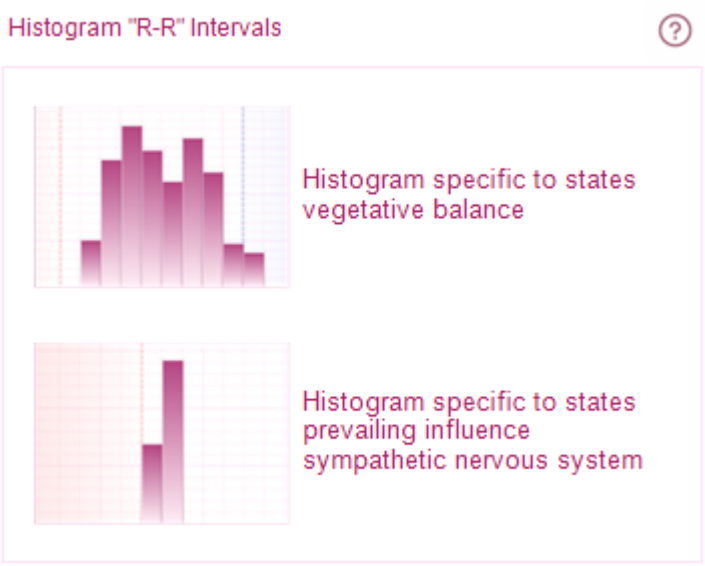
Variation Analysis

This tab displays information about the patient's vegetative regulation parameters.



Vegetative regulation is carried out by the autonomic nervous system, which controls physiological processes independently of human consciousness. It quickly responds to changes in the external and internal environment, affecting the cardiovascular system, the efficient operation of which determines the supply of oxygen and nutrients to the body.

R-R interval histogram

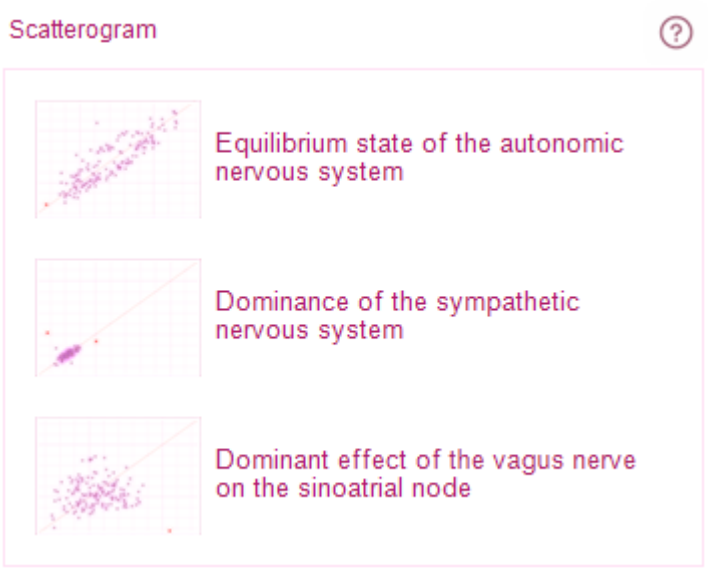


R-R interval histogram is a diagram of R-R interval distribution by duration. The abscissa axis shows the duration of R-R intervals, and the ordinate axis shows the number of R-R intervals that fall within the corresponding range. The histogram step is 0.04 sec.

The state of vegetative balance is characterized by the central location of the diagram columns with the localization of the highest column (mode) in the range of 0.7–1.0 sec. In the case of the prevailing influence of the sympathetic division of the autonomic nervous system, a significant shift to the left and narrowing of the histogram base are characteristic. With parasympathetic influence, the opposite effect is observed.

The tension index characterizes the degree of tension of the heart muscle – myocardium.

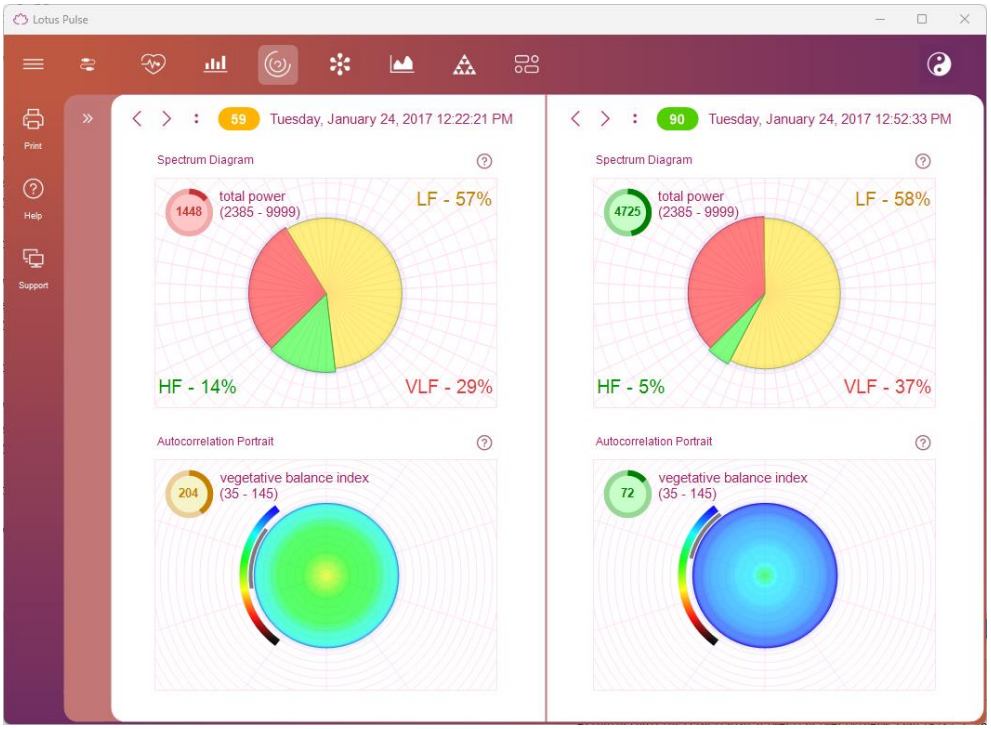
Scatterogram



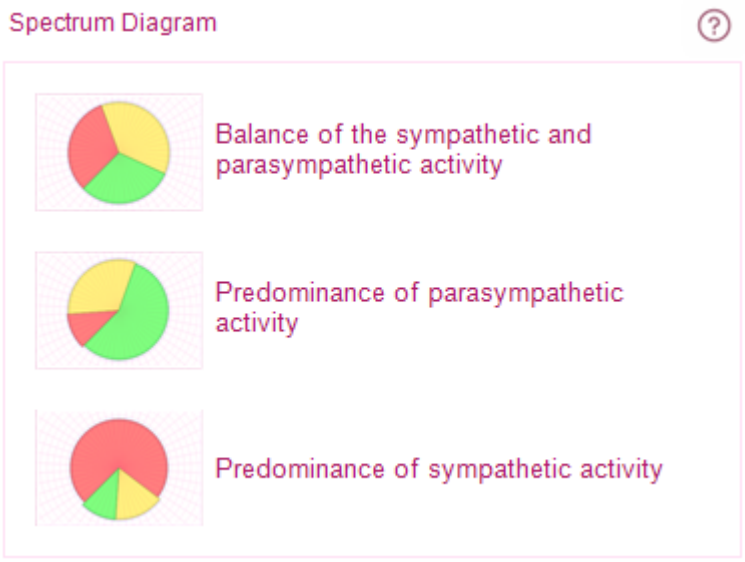
R-R interval scatterogram is a two-dimensional display of the heart rhythm, allowing you to identify heart rhythm disturbances. The abscissa axis shows the R-Ri interval value in seconds, and the ordinate axis shows the RRi+1 interval value in seconds. A uniform cloud will indicate an equilibrium state of the autonomic nervous system. The tightness of the scatterogram cloud and its displacement from the center to the lower left corner indicate the predominance of the sympathetic division of the autonomic nervous system. On the contrary, a significant spread of scatterogram points and its displacement to the right indicate the predominance of the influence of the vagus nerve on the sinus node.

Spectral Analysis

Spectral analysis is based on the physical transformation of cardiac rhythm oscillations into simple harmonic oscillations (fast Fourier transform) with different frequencies.



Spectrum Diagram



The Spectrum Diagram, consisting of three sectors for different frequency components, is intended for visual assessment of the patient's health condition using the spectrogram. It characterizes the ratio of sympathetic and parasympathetic activities.

High Frequency (HF) – 0.15-0.40 Hz. The parasympathetic division of the autonomic nervous system plays a predominant role in the formation of oscillations in this frequency range. The power in this frequency range increases during breathing with a certain frequency and depth, and under cold exposure. In athletes and well-trained people, the HF power also significantly exceeds that of untrained people, and should prevail over the power of low frequencies. A decrease in HF power in athletes may indicate tension in the regulatory systems of the heart, overtraining, although its excessive increase indicates the danger of sinus rhythm disturbance.

Low frequencies (LF) – 0.04-0.15 Hz. The physiological interpretation of this indicator is ambiguous. It is believed that the power in this frequency range is affected by both changes in the tone of the parasympathetic and sympathetic divisions of the nervous system.

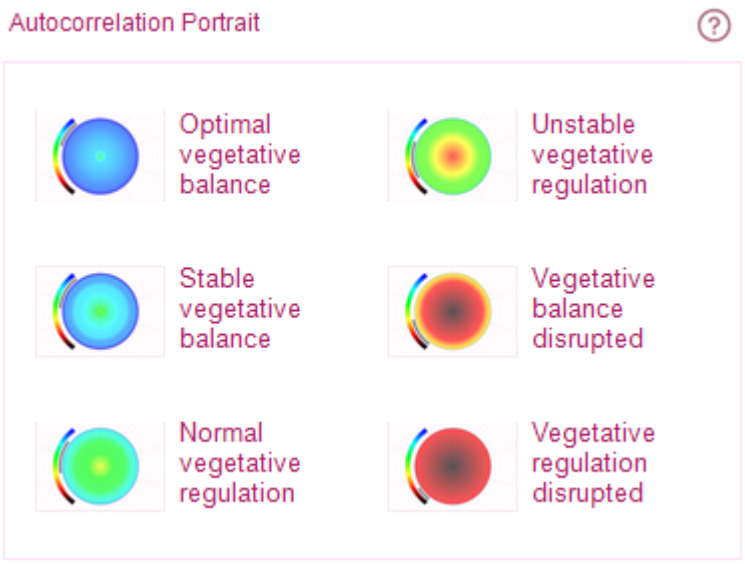
The ratio of sympathetic and parasympathetic influences is characterized by the ratio of LF/HF powers. At the same time, with an increase in the tone of the sympathetic division, this indicator increases significantly, with vagotonia – vice versa. In many cases, reciprocal changes in LF and HF powers are noted. A significant increase in LF power is noted during an orthostatic test, psychological stress, moderate physical activity in healthy individuals. Therefore, recently there has been a widespread view that the power in the LF range, as well as the LF/HF indicator, can serve as an indicator of the activity of the sympathetic division of the autonomic nervous system.

Very Low Frequencies (VLF) – 0.003-0.04 Hz. The physiological significance of this frequency range has not been clarified. However, there is an opinion that the power of this range increases significantly with the depletion of the body's regulatory systems.

Total Power. This indicator is integral and reflects the impact of both the sympathetic and parasympathetic divisions of the autonomic nervous system. In this case, an increase in sympathetic effects leads to a decrease in the total power of the spectrum, and activation of the vagus leads to the opposite effect. This indicator is equivalent to the standard deviation and the variation range.

When interpreting the data of the time analysis of the dynamics of heart rhythms in athletes, it is necessary to take into account that a significant predominance of parasympathetic influences on the sinus rhythm is normal for them. Therefore, it is necessary to adjust the limits of the norm of the numerical values of statistical indicators when measuring athletes. Namely, it is necessary to expand the limit of the norm to that in a state of moderate vagotonia in untrained people. At the same time, values close to moderate sympathotonia will indicate a pronounced violation of the cardiac rhythm regulation system and a decrease in the adaptation reserve of this athlete.

Autocorrelation portrait



The autocorrelation portrait characterizes the degree of similarity of various fragments of the rhythmogram.

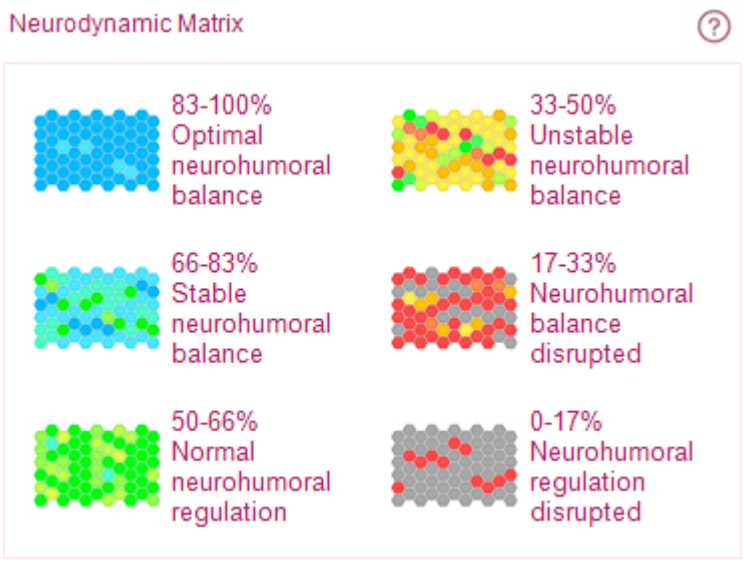
The index of vegetative balance characterizes the relationship between the activity of the sympathetic and parasympathetic divisions of the autonomic nervous system.

Neurodynamic Analysis

This tab displays information about the patient's neurohumoral regulation parameters.

The neurohumoral regulation system controls the composition and structure of biochemical substances in the body, ensuring the constancy of the internal environment and the body's adaptation to changing conditions of existence in the long term.

Neurodynamic Matrix

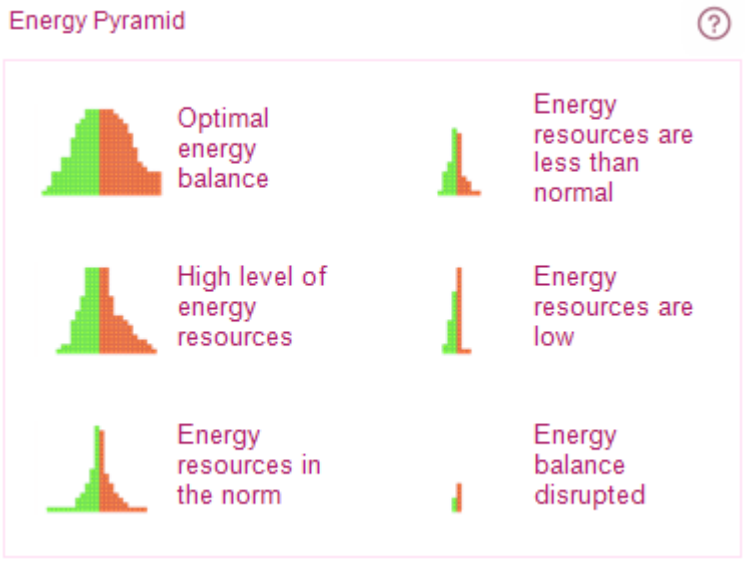


The structure of physiological rhythms is presented in the form of a neurodynamic matrix, each element of which characterizes the dynamics of the corresponding rhythms. Individual elements of the matrix represent the rhythms of individual body systems, and the color of each element determines the degree to which the parameters of these rhythms correspond to a single universal law of the functioning of living nature – the law of two exponentials.

The parameters of the "ideal exponent" are subject to the "golden section". Compliance with such parameters ensures the most efficient operation of the body's life support systems with minimal energy costs. Yellow-red colors of the matrix elements indicate that the parameters of a given rhythm are far from optimal.

The neurohumoral regulation indicator characterizes the efficiency of the endocrine system and determines how optimally the body uses its energy and physiological resources. The neurohumoral regulation system is responsible for the constancy of the internal environment and the adaptation of the body to changing living conditions.

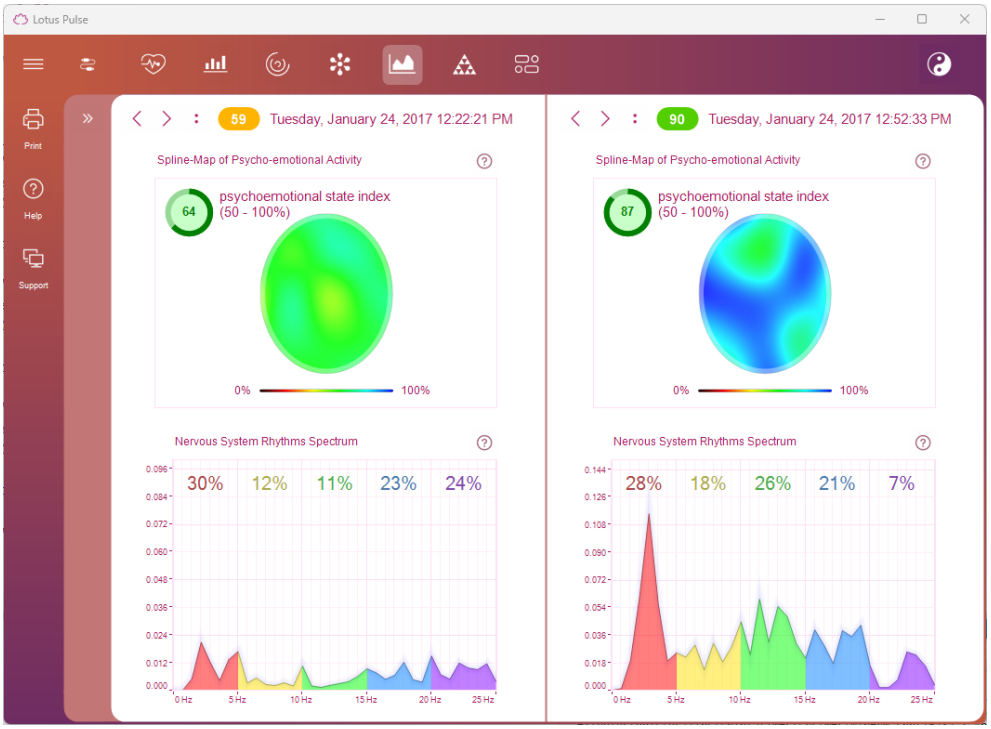
Energy Pyramid



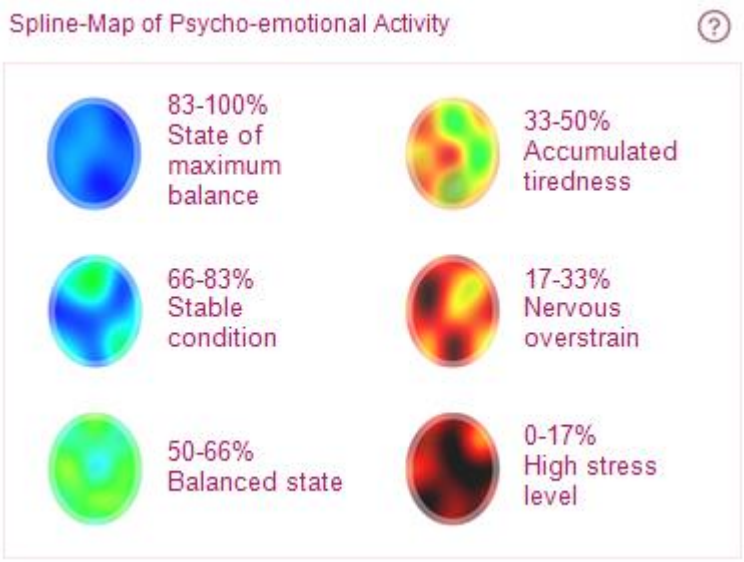
The energy pyramid characterizes the total volume of the body's physiological resources and the balance between the cycles of expenditure and restoration of these resources at the existing rhythm of life. The ratio of the areas of the left and right parts of the pyramid characterizes the dynamics of anabolic and catabolic processes occurring in the body. The volume of the blue part of the pyramid is proportional to the time of resource restoration, the volume of the red part is proportional to the time of resource expenditure. The minimum volume of the entire pyramid signals the depletion of the body's physiological resources.

Psychoemotional State

This tab displays information about the parameters of the patient's psychoemotional state.



Spline Map of Psychoemotional Activity



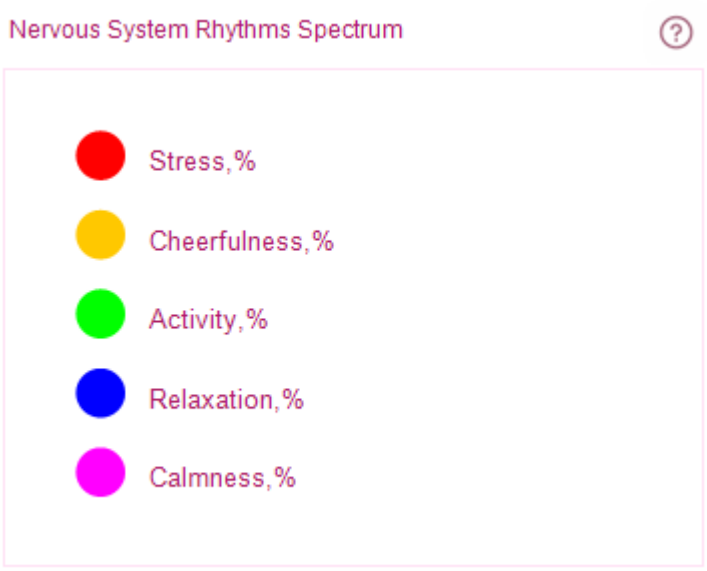
The spline map is the result of spline interpolation of dynamic indicators of the psychoemotional state obtained by neurodynamic analysis of heart rhythms.

Areas with black and yellow-red colors indicate decreased psychoemotional activity due to a painful condition, nervous exhaustion, or stress.

Spline maps are not an analogue of electroencephalogram mapping and cannot be used to diagnose brain pathologies.

The psychoemotional state indicator characterizes how deep the destructive impact of stress on the body was.

Nervous System Rhythm Spectrum

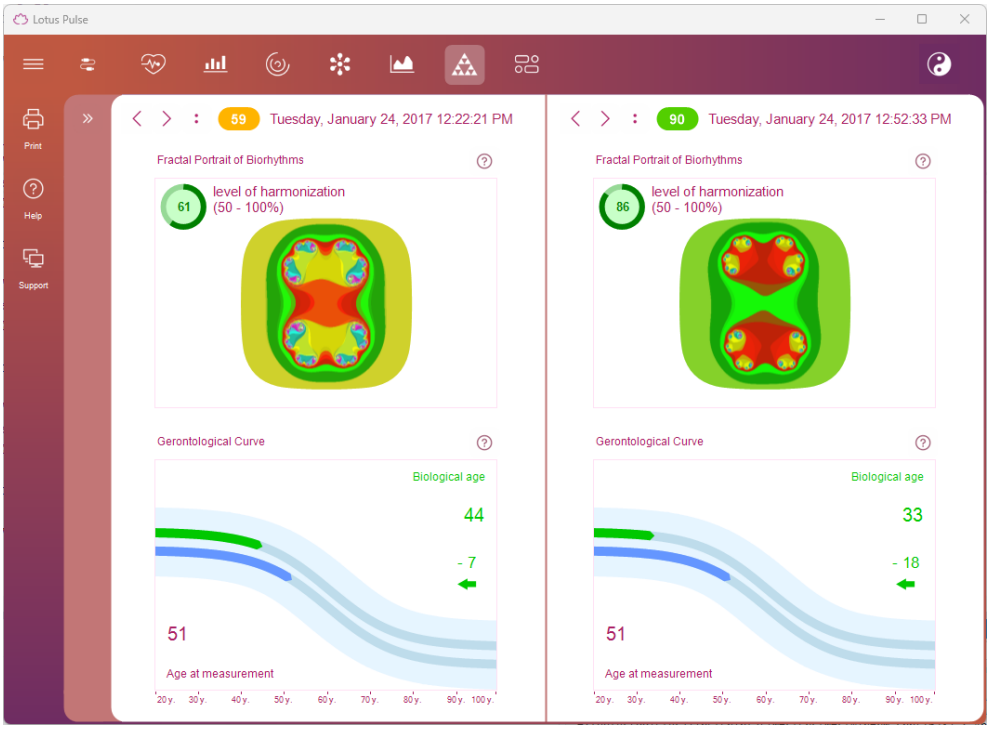


The nervous system rhythm spectrum shows the distribution of various states of the nervous system during the exam process.

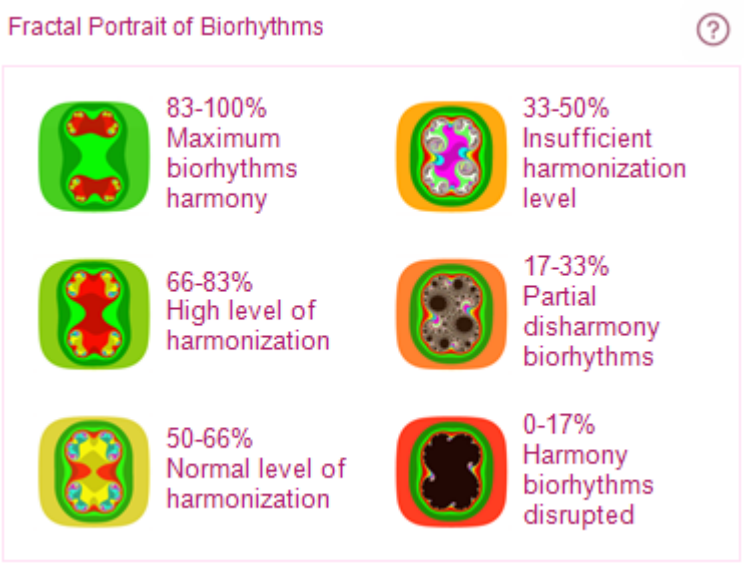
A normal state corresponds to a uniform distribution of rhythms across the entire frequency range. The predominance of stress rhythms indicates a painful condition or nervous exhaustion.

Fractal Analysis

Fractal analysis is designed to visually assess the degree of harmonization of the rhythms of various organs and systems of the body. The degree of coherence of these rhythms determines the quality of the functioning of the body as a whole. The ability to maintain and preserve such harmony characterizes the body's resistance to changing conditions of the external and internal environment and reflects its adaptive capabilities (immunity).



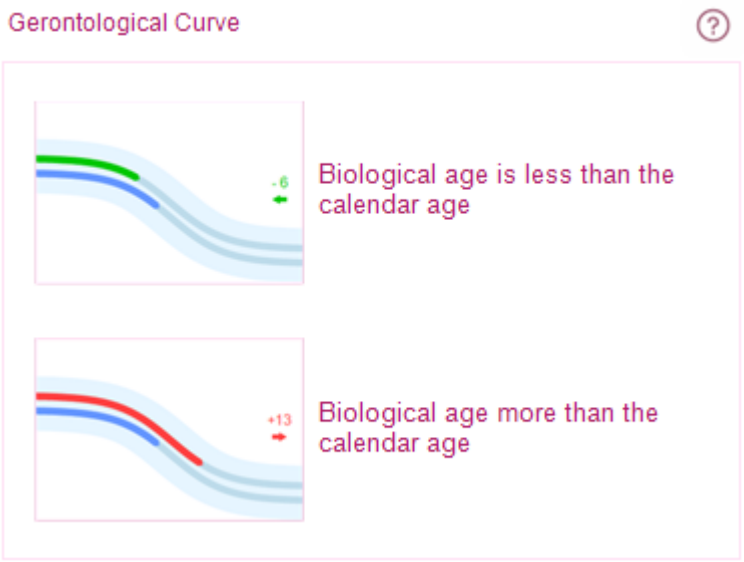
Fractal Portrait of Biorhythms



The fractal portrait of biorhythms allows you to show changes in the coherence of rhythms during the exam process.

The degree of harmonization of biorhythms is an informational indicator of the immune status of the body, demonstrating its ability to adapt to new conditions.

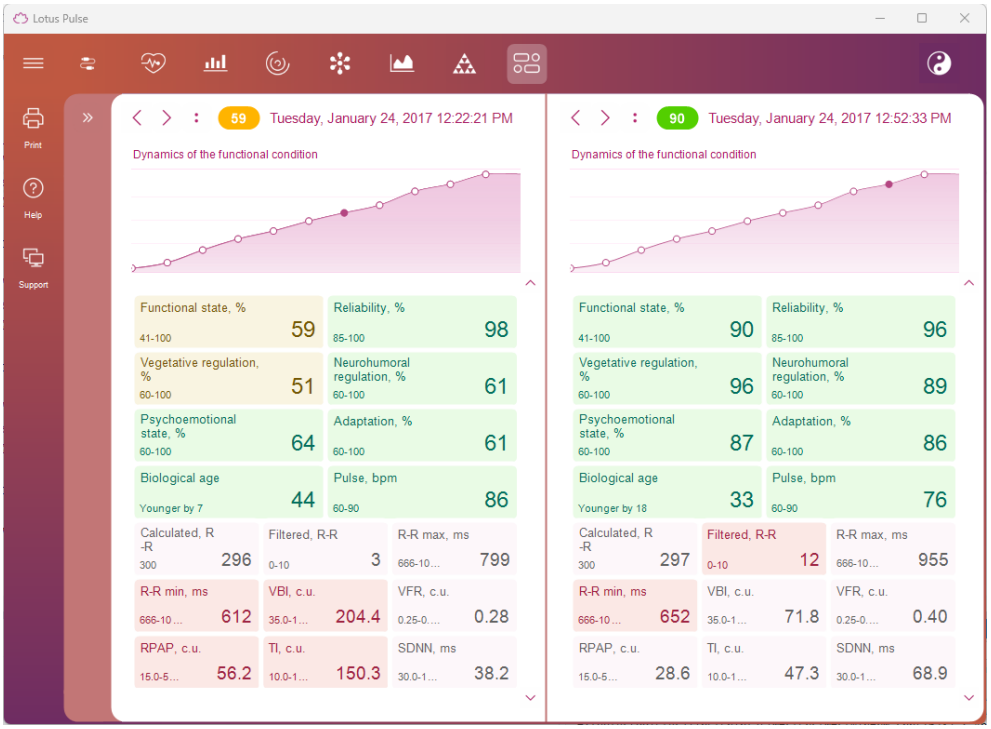
Gerontological Curve



The gerontological curve shows how much the functional state of the patient's body at the time of exam corresponds to the average statistical indicators of his age group. Calculation of biological age is possible for patients over 20 years old, and provided that the patient's date of birth is indicated in the patient's card. From a biological point of view, an organism can be younger or older than the years actually lived, so diseases and death associated with aging occur at different calendar ages. The differences between calendar and biological age are determined by both genetics and a person's lifestyle. A person's biological age is determined not by the time that has passed since birth, but by indicators that reflect his or her viability.

Functional Status Indicators Dynamics

This tab displays the process of changing functional status indicators over time.



At the top of the tab is a graph of the patient's functional status changes over several exams. If the selected patient has had a large number of exams, this graph will display no more than 30 exams older and newer than the selected one. When you hover the mouse over any point of this graph, it displays the exam date and the functional status measured in it. If you left-click on any exam in the Exam Dynamics graph, all the main parameters of this exam will be displayed at the bottom of the tab. This table of parameters can be scrolled using the mouse wheel or the buttons to the right of the table. In this case, the exam tables in the right and left parts of the tab, related to two different exams, will scroll synchronously, for easy comparison of parameters.

Energy Potential

Here, information about the patient's aura is displayed. The patient's aura is presented as an animation of a person's silhouette, and the color of the aura depends on its general condition.

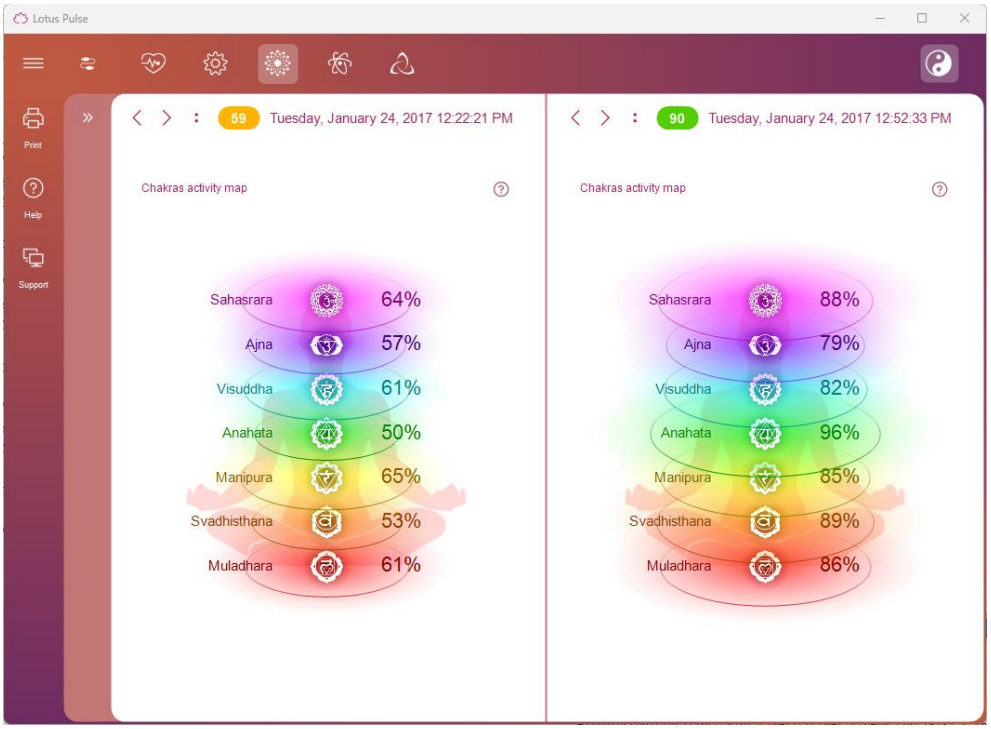
The human body is a kind of generator of electromagnetic waves, and the quality and speed of the release and absorption of energy by the human body is determined by the quality and speed of chemical reactions that occur in the organs of our body at the cellular level.

Discussing the quality of energy exchange in the human body, Eastern natural philosophers operate with the concept of "aura".

Discussing from a scientific point of view, we cannot talk about the existence of some magical methods that allow you to "photograph" or otherwise record the aura. However, the analysis of energy processes inside human organs, processes that are reflected in cardiac rhythms, allows us to form an integral indicator that will objectively reflect the quality of the cardiovascular, nervous, endocrine and vegetative systems. Such an indicator, in its physical content, will be close to the concept of “aura”, in the sense that Eastern healers understood it.

Chakra Activity Map

This tab displays information about the state of the patient's chakras.



The chakras are represented as a human silhouette, with the brightness and size of the chakra depicted on the silhouette depending on the state of the corresponding chakra of the patient. The relative power of each chakra is displayed to the right of the silhouette.

Muladhara – Main (root) chakra

Location of the chakra:

- in the perineum area, at the point located between the genitals and the anus

Hormonal glands associated with the chakra:

- sex glands and adrenal glands

Organs of the body associated with the chakra:

- “hard” organs of the body – the spinal column, skeleton, bones, teeth and nails
- excretory organs – anus, rectum, intestines
- reproductive organs – prostate and gonads. And also blood and cellular structure

Problems and diseases arising from imbalance in the chakra:

- constipation, hemorrhoids, fatigue, apathy, lethargy, blood diseases, problems with tension in the back, problems with joints and bones, problems with tissues and skin

Svadhisthana – Sexual chakra

Location of the chakra:

- in the pelvic area, between the pubic bones

Hormonal glands associated with the chakra:

- gonads – ovaries, testicles – prostate and lymphatic system

Organs of the body associated with the chakra:

- pelvis, lymphatic system, kidneys, gall bladder, genitals and all fluids present in the body (blood, lymph, digestive juices, seminal fluid)

Problems and diseases arising from imbalance in the chakra:

- muscle spasms, allergies, physical fragility, constipation, sexual imbalance and lack of libido, infertility, blockages and depression, lack of creativity

Manipura – Solar Plexus Chakra

Chakra location:

- below the diaphragm, between the sternum and the navel

Hormonal glands associated with the chakra:

- pancreas and adrenal glands

Body organs associated with the chakra:

- respiratory system and diaphragm, digestive system, stomach, pancreas, liver, spleen, gallbladder, small intestine, adrenal glands, lower back and sympathetic nervous system

Problems and diseases that arise due to imbalance in the chakra:

- mental and nervous exhaustion, isolation, communication problems, gallstones, diabetes, digestive problems, ulcers, allergies, heart disease

Anahata – Heart chakra

Chakra location:

- parallel to the heart, in the center of the body

Hormonal glands associated with the chakra:

- thymus gland

Body organs associated with the chakra:

- heart, circulatory system, lungs, immune system, thymus gland, upper back, skin, hands

Problems and diseases arising from imbalance in the chakra:

- respiratory diseases, heart pain, heart attacks, high blood pressure, tension, anger, dissatisfaction with life, insomnia, fatigue

Vishuddha – Throat Chakra

Chakra location:

- throat

Hormonal glands associated with the chakra:

- thyroid and parathyroid glands

Body organs associated with the chakra:

- throat, neck, vocal cords and organs, thyroid gland, parathyroid gland, jaw, tops of the lungs, ears, muscles, hands and nerves (not everyone shares this opinion)

Problems and diseases that arise due to imbalance in the chakra:

- difficulties expressing thoughts, speech delays, respiratory diseases, headaches, pain in the neck, shoulders and back of the head, throat diseases, including infectious diseases, diseases of the vocal cords, communication difficulties, low self-esteem, lack of creativity, infectious diseases of the ear, inflammatory processes and hearing problems

Ajna – Third Eye Chakra

Location of the chakra:

- center of the forehead

Hormonal glands associated with the chakra:

- pituitary gland and pineal gland

Organs of the body associated with the chakra:

- brain and all its components, central nervous system, face, eyes, ears, nose, sinuses

Problems and diseases that arise due to imbalance in the chakra:

- eye diseases, diseases of the ear, respiratory tract, diseases of the nose and sinuses, diseases of the facial nerves, headaches, nightmares

Sahasrara – Crown Chakra

Chakra location:

- crown

Hormonal glands associated with the chakra:

- pineal gland

Body organs associated with the chakra:

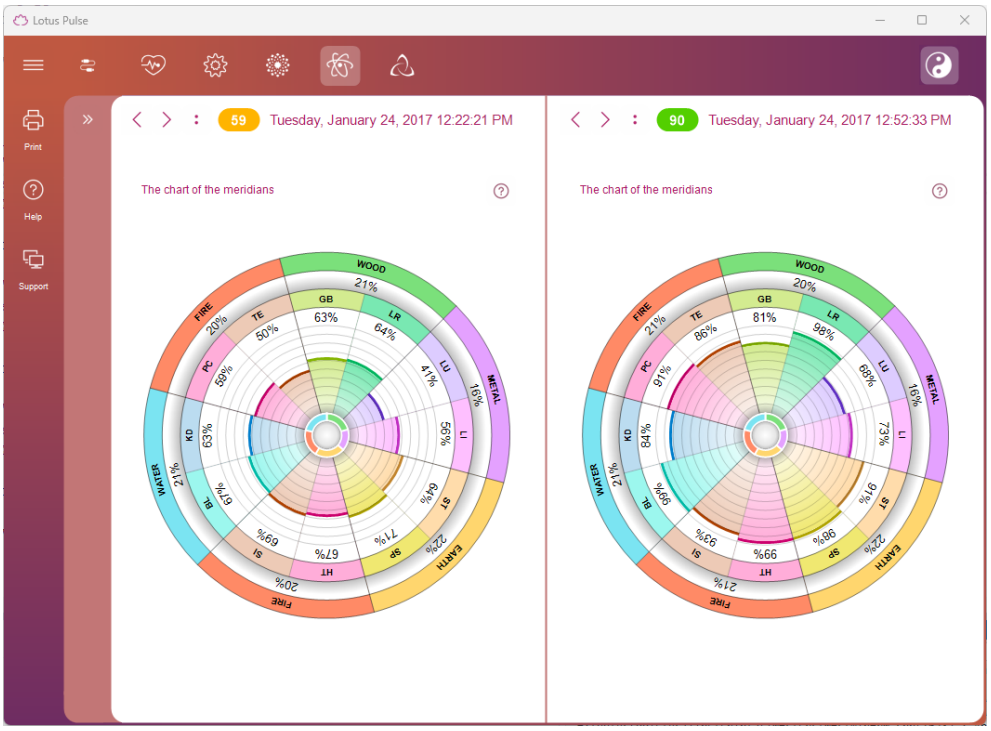
- brain

Problems and diseases arising from imbalance in the chakra:

- migraine

Meridian Diagram

This tab displays information about the patient's meridian status. The screen displays the relative size of the meridians, the volume of which depends on the patient's meridian status.



The meridian diagram also displays estimated information about the status of the five primary elements according to the Chinese Wuxing tradition – fire, earth, metal, water, wood. These elements are estimated based on the calculation of the patient's paired meridian score.

Earth

Earth influences the pancreas, spleen and digestive system, and also affects connective and muscle tissue.

Fire

Fire influences the cardiovascular system. And first of all, this element has a direct impact on the heart.

Metal

In the human body, the influence of the Metal element is manifested in the large intestine and lungs.

Water

The Water element is responsible for the functioning of the kidneys and bladder, as well as bone tissue.

Wood

Wood influences the functioning of the gallbladder and liver, as well as the eyes. In addition, this element can affect the muscular system, ligaments and tendons.

GB – gallbladder meridian

Energy activity:

- less than 30%

Excess energy – symptoms:

- feeling of fullness in the stomach, heaviness and pain in the head, pain and cramp in the hypochondrium

Lack of energy – symptoms:

- loss of strength, tearfulness, chills, dizziness, difficulty breathing, heavy and deep sighs, unsteady gait

Diseases:

- dysfunction of the gallbladder, pain along the meridian, gastrointestinal disorders, neuropsychiatric disorders

Recommendations:

- stop injections and taking medications, consult a doctor, give up alcohol, meat, avoid physical activity and eye fatigue

LR – liver meridian

Energy activity:

- less than 30%

Excess energy – symptoms:

- tearfulness, irritability, irascibility, illness, impulsiveness, desire work without a break until all work is completed

Lack of energy – symptoms:

- unsteady gait, clumsiness, dizziness, fatigue

Diseases:

- pain in the right hypochondrium, jaundice, pain along the meridian, in the lower back, diseases of the genitals, colds, fever

Recommendations:

- stop injections and taking medications, consult a doctor, give up alcohol, meat, avoid physical activity and eye fatigue

LU – meridian of the lungs

Energy activity:

- less than 30%

Excess energy – symptoms:

- pneumonia, low lung capacity, severe cough with pain, abundant sputum

Lack of energy – symptoms:

- chills, coughing, runny nose

Diseases:

- diseases of the lungs and upper respiratory tract with congestion, as well as the cardiovascular system

Recommendations:

- quit smoking, avoid excessive cold and hot air, breathe fresh air

LI – meridian of the large intestine

Energy activity:

- less than 30%

Excess energy – symptoms:

- noises in the digestive tract, dry lips and mouth, constipation

Lack of energy – symptoms:

- pain and stiffness in the shoulders and arms, dizziness, diarrhea, sometimes constipation

Diseases:

- limited movement and pain in the joints of the upper limbs, inflammatory processes along the meridian, disorders of the digestive organs, especially the intestines

Recommendations:

- quit smoking, avoid excessive cold and hot air, breathe fresh air

ST – meridian of the stomach

Energy activity:

- less than 30%

Excess energy – symptoms:

- overeating, heat in the body, pain and cramps on the outer lateral surface of the legs

Lack of energy – symptoms:

- loss of appetite, sometimes to complete refusal to eat, weakness and coldness in the legs

Diseases:

- digestive disorders, pain along the meridian

Recommendations:

- avoid overeating, do not drink alcohol and sweets, avoid humidity

SP – meridian of the spleen and pancreas

Energy activity:

- less than 30%

Excess energy – symptoms:

- unstable appetite, feeling of heaviness and numbness in the body, desire to rest often, lie down

Lack of energy – symptoms:

- passion for sweets, memory impairment and daytime sleepiness, flatulence

Diseases:

- pain in the epigastric region, in the hypochondrium and chest

Recommendations:

- avoid overeating, do not drink alcohol and sweets, avoid humidity

HT – heart meridian

Energy activity:

- less than 30%

Excess energy – symptoms:

- pain in the heart, shoulder, forearm, excitability, heaviness in the chest, sometimes fever and dry mouth

Lack of energy – symptoms:

- indecision, depression, fear, anxiety, tachycardia, shortness of breath, dizziness

Diseases:

- pain in the heart area, irregular heartbeat, anxiety, memory loss

Recommendations:

- increase the frequency of food intake, reduce its quantity, in one meal the food should be of the same type

SI – small intestine meridian

Energy activity:

- less than 30%

Excess energy – symptoms:

- pain around the neck or in one half of the head, tinnitus, hearing loss

Lack of energy – symptoms:

- pain in the temples, side of the neck, forearm, coldness limbs

Diseases:

- intestinal obstruction, pain along the meridian, neuropsychiatric disorders

Recommendations:

- avoid overeating, do not drink alcohol and sweets, avoid humidity

BL – bladder meridian

Energy activity:

- less than 30%

Excess energy – symptoms:

- pain in the lower back and lower limbs, frequent painful urination with a small amount of urine, pain in the eyes, headache, cramps in the calf muscles

Lack of energy – symptoms:

- rare profuse urination, pain in the spine, heaviness in the legs and back, dizziness, decreased vision

Diseases:

- cystitis, cystalgia, nephritis, heart disease, eye disease, pain in the spine and hip joint, headache, nosebleeds, hemorrhoids

Recommendations:

- abstain from sexual activity, avoid physical and mental overload, humidity, excessive heat and cold, reduce fluid and salt intake

KD – kidney meridian

Energy activity:

- less than 30%

Excess energy – symptoms:

- unusual surge of energy, desire to work without breaks, tinnitus, dark brown urine

Lack of energy – symptoms:

- decreased willpower, sexual desire, impatience, insecurity, cold feet, tense neck

Diseases:

- urinary disorders, diseases of the genitals, neuropsychiatric disorders, weakening of vital forces and predisposition to fatigue

Recommendations:

- abstain from sexual activity, avoid physical and mental overload, excessive heat and cold, as well as humidity, reduce fluid and salt intake

PC – pericardium meridian

Energy activity:

- less than 30%

Excess energy – symptoms:

- pain, heaviness, heat in the head, abdominal pain, constipation, heat in the palms

Lack of energy – symptoms:

- poor sleep with a lot of dreams, shortness of breath, fear of heights, fatigue, desire to lie down, diarrhea

Diseases:

- heart disease, lung disease, mental disorders, pain along the meridian

Recommendations:

- reduce the amount of food you usually eat to 1/3, avoid physical and mental overload

TE – the meridian of three heaters

Energy activity:

- less than 30%

Excess energy – symptoms:

- hearing loss, pain in the neck, shoulders, shoulder blades, upper limbs, ears, poor tolerance to heat, irritability, insomnia

Lack of energy – symptoms:

- pain in the temples, chills, weakness

Diseases:

- arthritis of the joints of the hands, tinnitus, deafness, depressive conditions

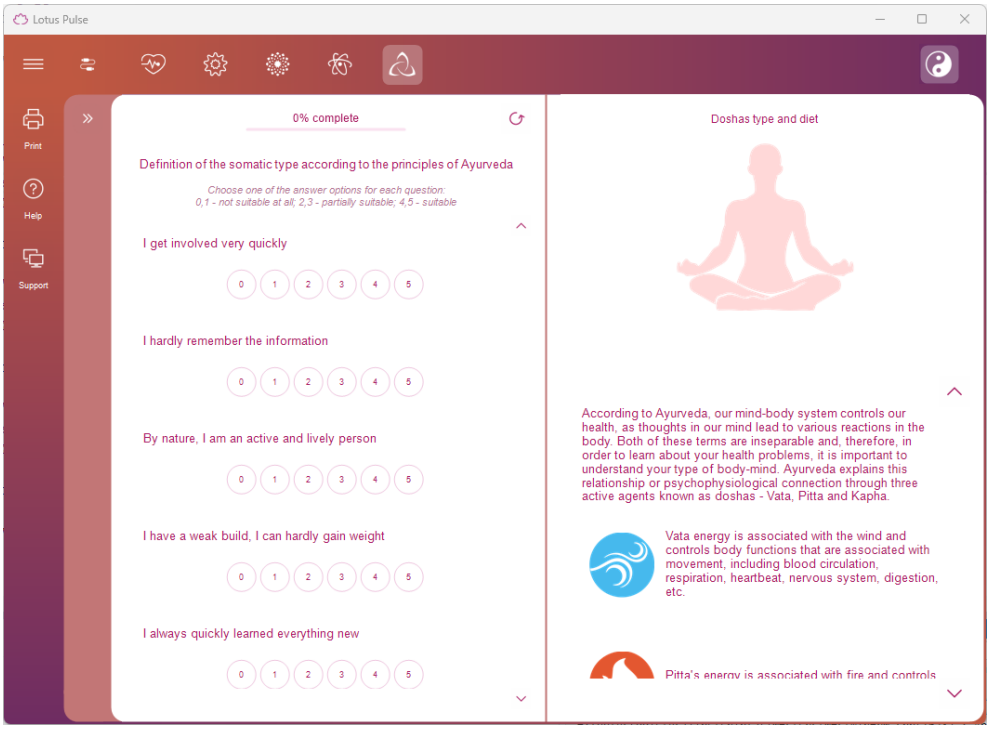
Recommendations:

- reduce the amount of food you usually eat to 1/3, avoid physical and mental overload

Dosha Type and Diet

This tab displays information about the patient's dosha proportions and the recommended diet.

The ratio of doshas – Vata, Kapha and Pitta – is genetically determined. The ratio of doshas in the body determines the physiological characteristics of the body and the psychological properties of the individual. They change extremely slowly throughout a person's life. Therefore, to determine them, a questionnaire of 60 questions is used instead of measuring the patient's functional state:



The patient must give evaluative answers to all questions from the exam, from a rating of 0 (completely incorrect) to a rating of 5 (absolutely correct). The list of questions can be scrolled up and down with the mouse wheel or the buttons to the right of the exam. To select an answer, left-click on one of the answer circles. The answer to any question can be changed at any time, and you can also completely clear all exam answers – for this, use the Start exam again button:

After marking the answers to all exam questions, the exam result will be displayed on the right side of the tab – the patient's predominant dosha (one or more) and the diet recommended for patients with this type of dosha.

Vata Diet

In a Vata-dominated constitution, the metabolism is active and dynamic. The digestive fire (Agni) is usually unstable and restless, and the appetite is irregular. Sometimes Agni is strong (good absorption), but the digestive functions are significantly weakened. Increased Vata is accompanied by flatulence and changeable bowel movements.

Vata Diet Basics:

- At least 3 hot meals a day (ensure sufficient healthy fats and proteins!).
- Prepare meals fresh, do not reheat.
- Prefer moist foods, avoid dry foods because they increase Vata.
- Food categories: salty, sour, sweet, warm.
- Sit quietly while eating, limit talking to a minimum.
- After eating, plan a rest period of 15 to 30 minutes for digestion.
- Drink warm or hot water and/or ginger or herbal tea regularly.

Foods to compensate for Vata

- Spices: anise, basil, cumin, ginger, garlic (cooked), bay, marjoram, nutmeg, cloves, oregano, saffron, sage, thyme, cinnamon. Use in moderation: Pepper, turmeric, chili, and fenugreek
- Fruits: Apricots, berries, dates, figs, cherries, mango, oranges, papaya, plums, grapes
- Vegetables: Avocado, fennel, green beans, green asparagus, carrots, kohlrabi, pumpkin, okra, parsnips, beets, sweet potatoes, zucchini, onions (cooked)
- Protein sources: Buttermilk, eggs, poultry, green beans, mung beans, white meat, lentils, milk, soft plain yogurt, nuts, quinoa, rice, cream, seeds
- Grains: Spelt, oats, kamut, wheat
- Fats: Butter, ghee, sesame oil

Kapha Diet

In a Kapha-dominated constitution, metabolism and digestion are rather sluggish, and the digestive fire (Agni) is weak. Therefore, food is digested slowly, and a feeling of satiety may occur after eating. Kapha types often feel a lack of drive, fatigue and a tendency to inactivity. Increased Kapha is accompanied by obesity, mucus accumulation in the lungs, bronchi and sinuses, diabetes, lithiasis and depression.

Kapha Diet Basics:

- Eat small portions, i.e. a maximum of 3 times a day and no snacks between meals.
- Avoid eating early in the morning and late at night or only light snacks.
- Regular physical activity before or after meals (digestive walk).
- Warm, light and dry foods (cooked without much water), low in fat and sugar, and some raw vegetables.
- Food categories: hot (stimulating), bitter, astringent (to be avoided: sweet, salty, sour).
- Drinking source: water, herbal teas (hot and bitter), cranberry juice, green vegetable juices, wheatgrass juice. Generally, avoid milk.

Foods to compensate for Kapha

- Spices: anise, basil, fenugreek, cayenne, chili pepper, dill, ginger, calamus, cardamom, garlic, coriander, cumin, turmeric, bay leaf, marjoram, horseradish, mint, nutmeg, cloves, oregano, pepper, peppermint, rosemary, saffron, sage, black pepper, mustard, thyme, juniper berries, cinnamon
- Fruits: apples, apricots, bananas, berries, pears, dates, figs, pomegranate, cherries, mango, grapefruit, peaches, plums, cranberries
- Vegetables: alfalfa sprouts, seaweed, artichokes, eggplant, cauliflower, broccoli, chicory, chili peppers, peas, fennel, green beans, green leafy vegetables, cabbage, carrots, potatoes, garlic, lettuce, corn, okra, peppers, mushrooms, radishes, brussels sprouts, turnips, hot peppers, celery, asparagus, spinach, onions

- Protein sources: amaranth, buckwheat, eggs, chicken, rabbit, mung bean, turkey, quinoa, freshwater fish
- Grains: barley, wheat
- Fats: pumpkin seed oil, vegetable oil, almond oil, sunflower oil, walnut oil

Pitta Diet

In a Pitta-dominated constitution, the digestive fire is strong and stable. Pitta types have a lot of energy, vitality and good health. Increased Pitta is accompanied by increased appetite, increased acidity and burning in the gastrointestinal tract, inflammation, migraines, skin problems, increased sensitivity and irritation.

Basics of a Pitta diet:

- Regular food intake to avoid excessive fasting.
- The main meal is lunch, hearty, healthy, with enough protein.
- Cooling foods are preferable (raw vegetables, fresh salad, crispy stewed vegetables).
- Food categories: bitter, sweet (avoid: hot, salty, sour).
- Eat slowly, chew well and salivate.
- Avoid: alcoholic and carbonated drinks, soft drinks, tomato and fruit juices, dairy products, coffee and vinegar.

Foods to Balance Pitta

- Spices: basil, dill, fennel, fresh juice, ginger, cardamom, coriander, cumin, turmeric, peppermint, saffron, sage, vanilla
- Fruits: pineapple, apples, prunes, blackberries, cranberries, dates, strawberries, figs, blueberries, raspberries, cherries, coconut, mango, cantaloupe, nectarines, raisins, grapes
- Vegetables: alfalfa sprouts, seaweed, artichokes, leafy greens, cauliflower, bean sprouts, broccoli, peas, fennel, green beans, green asparagus, green cabbage, cucumber, potato, kale, watercress, pumpkin, chard, paprika, parsnips, mushrooms, brussel sprouts kale, lettuce, asparagus, spinach, celery, zucchini, onion (well cooked)
- Protein sources: egg whites, chickpeas, mung beans, nuts, quinoa, red lentils, rice, seeds, black lentils, freshwater fish (trout), turkey
- Grains: spelt, barley, oats, kamut, rye, wheat
- Fats: butter, ghee, olive oil

Pitta-Kapha Diet

Kapha-Pitta constitution is a combination of Kapha and Pitta present in a person with similar strengths. Basically, this type of constitution has the right level of digestive fire (Agni) and tolerates almost everything well. However, this quality decreases with age (50+). Basically, there is a tendency towards an unhealthy lifestyle with excessive overeating and stimulant use, combined with a lack of exercise. Accordingly, Kapha-Pitta subjects often tend to be overweight, but also have skin problems and unpleasant body odor. In addition, this mixed type is usually characterized by robust health.

For this type of constitution, one should consider the recommendations for both doshas. In principle, the more dominant component of the dosha should be balanced first. In addition, the more active dosha should be balanced in its seasonal peak phase: Kapha peaks from February to May, Pitta from June to September.

The basic rule is generally warm, well-seasoned foods and hot drinks, with occasional cool drinks. Bitter and astringent tastes have a calming effect on Kapha-Pitta individuals and should be included in a balanced diet for this mixed type. Sweet, sour and pungent foods should be eaten in moderation and in equal amounts. If Pitta is increased, sweet foods can be increased, and sour and hot tastes can be used to calm Kapha.

Foods to Balance Pitta

- Spices: basil, dill, fennel, fresh, ginger, cardamom, coriander, cumin, turmeric, peppermint, saffron, sage, vanilla
- Fruits: pineapple, apples, prunes, blackberries, cranberries, dates, strawberries, figs, blueberries, raspberries, cherries, coconut, mango, cantaloupe, nectarines, raisins, grapes
- Vegetables: alfalfa sprouts, kelp, artichokes, leafy greens, cauliflower, bean sprouts, broccoli, peas, fennel, green beans, green asparagus, green cabbage, cucumber, potato, kale, watercress, pumpkin, chard, peppers, parsnips, mushrooms, brussels sprouts, lettuce, asparagus, spinach, celery, zucchini, onion (well cooked)
- Protein sources: egg whites, chickpeas, mung beans, nuts, quinoa, red lentils, rice, seeds, black lentils, freshwater fish (trout), turkey
- Grains: spelt, barley, oats, kamut, wheat

- Fats: butter, ghee, olive oil

Kapha-compensating foods

- Spices: anise, basil, fenugreek, cayenne pepper, chili pepper, dill, ginger, calamus, cardamom, garlic, coriander, cumin, turmeric, bay leaf, marjoram, horseradish, mint, nutmeg, cloves, oregano, pepper, peppermint, rosemary, saffron, sage, black pepper, mustard, thyme, berries juniper, cinnamon
- Fruits: apples, apricots, bananas, berries, pears, dates, figs, pomegranates, cherries, mango, grapefruit, peaches, plums, cranberries
- Vegetables: alfalfa sprouts, seaweed, artichokes, eggplant, cauliflower, broccoli, chicory, peas, fennel, green beans, green leafy vegetables, carrots, potatoes, garlic, cabbage, lettuce, corn, okra, peppers, mushrooms, radishes, brussels sprouts, turnips, hot peppers, celery, asparagus, spinach, sprouts, onions
- Protein sources: amaranth, buckwheat, eggs, chicken, rabbit, mung bean, turkey, quinoa, freshwater fish
- Grains: barley, wheat
- Fats: butter pumpkin seeds, flaxseed oil, almond oil, sunflower seed oil, walnut oil

Vata-Kapha Diet

Vata-Kapha constitution is a combination of Vata and Kapha present in a person with similar strengths. Basically, you need to increase the digestive fire (Agni). The weaknesses of this dosha combination are the gastrointestinal tract and the tendency to mucous congestion. People with this constitution type get cold easily, they have very weak digestion, they often feel bloated and are prone to constipation. The Vata-Kapha type is cautious, sometimes excessively so, prone to passivity, fluctuates between unstable and excessive sleep. This mixed type often has a tendency to lithiasis, edema and depressive mood.

For this constitution type, the recommendations for both doshas should be taken into account. In principle, the more dominant component of the dosha should be balanced first. In addition, the more active dosha should be balanced in its seasonal peak phase: Kapha peaks from February to May, Vata from October to January.

The basic rule: regular warm, well-seasoned meals and hot drinks.

Foods to compensate for Vata

- Spices: anise, basil, cumin, ginger, garlic (cooked), bay, marjoram, nutmeg, cloves, oregano, saffron, sage, thyme, cinnamon. Use in moderation: Pepper, turmeric, chili, and fenugreek
- Fruits: Apricots, berries, dates, figs, cherries, mango, oranges, papaya, plums, grapes
- Vegetables: Avocado, fennel, green beans, green asparagus, carrots, kohlrabi, pumpkin, parsnips, beets, sweet potatoes, zucchini, onions (cooked)
- Protein sources: Buttermilk, eggs, poultry, green beans, mung beans, white meat, lentils, milk, soft plain yogurt, nuts, quinoa, rice, cream, seeds
- Grains: Spelt, oats, kamut, wheat
- Fats: Butter, ghee, sesame oil

Foods to compensate for Kapha

- Spices: Anise, basil, fenugreek, cayenne, chili, dill, ginger, calamus, cardamom, garlic, coriander, cumin, turmeric, bay leaf, marjoram, horseradish, mint, nutmeg,

cloves, oregano, pepper, peppermint, rosemary, saffron, sage, black pepper, mustard, thyme, juniper berries, cinnamon

- Fruits: apples, apricots, bananas, berries, pears, dates, figs, pomegranates, cherries, mango, grapefruit, peaches, plums, cranberries
- Vegetables: alfalfa sprouts, seaweed, artichokes, eggplant, cauliflower, broccoli, chicory, chili peppers, peas, fennel, green beans, green leafy vegetables, cabbage, carrots, potatoes, garlic, lettuce, corn, okra, peppers, mushrooms, radishes, brussels sprouts, turnips, hot peppers, celery, asparagus, spinach sprouts, onions
- Protein sources: amaranth, buckwheat, eggs, chicken, rabbit, mung bean, turkey, quinoa, freshwater fish
- Cereals: barley, wheat
- Fats: pumpkin seed oil, flaxseed oil, almond oil, sunflower seed oil, walnut oil

Vata-Pitta Diet

Vata-Pitta constitution is a combination of Vata and Pitta present in a person with similar strengths. The main meaning for this type of constitution is that the digestive fire (Agni) must be maintained constant, as it is either too low or too high. People with a predominance of these two energies of the body are more likely to suffer from digestive disorders such as constipation and diarrhea, bloating, flatulence, heartburn, inflammation, migraines, sleep disorders (falling asleep and sleeping during the night), internal tension, increased irritability, fits of anger, sometimes strong, and skin problems.

For this type of constitution, the recommendations for both doshas should be taken into account. In principle, the more dominant component of the dosha should be balanced first. In addition, the more active dosha should be balanced in its seasonal peak phase: Pitta – from June to September, Vata – from October to January.

The basic rule is to eat warm, easily digestible and freshly cooked food whenever possible. According to Ayurveda, sweet tastes have a calming effect on Vata-Pitta individuals and should be included in a balanced diet of this mixed type. Drink plenty of water throughout the day.

Foods to compensate for Vata

- Spices: anise, basil, cumin, ginger, garlic (cooked), bay, marjoram, nutmeg, cloves, oregano, saffron, sage, thyme, cinnamon. Use in moderation: Pepper, turmeric, chili, and fenugreek
- Fruits: Apricots, berries, dates, figs, cherries, mango, oranges, papaya, plums, grapes
- Vegetables: Avocado, fennel, green beans, green asparagus, carrots, kohlrabi, pumpkin, okra, parsnips, beets, sweet potatoes, zucchini, onions (cooked)
- Protein sources: Buttermilk, eggs, poultry, green beans, mung beans, white meat, lentils, milk, soft plain yogurt, nuts, quinoa, rice, cream, seeds
- Grains: Spelt, oats, kamut, wheat
- Fats: Butter, ghee, sesame oil

Pitta-compensating foods

- Spices: Basil, dill, fennel, fresh, ginger, cardamom, coriander, cumin, turmeric, peppermint, saffron, sage, vanilla
- Fruits: pineapple, apples, prunes, blackberries, cranberries, dates, blueberries, figs, raspberries, cherries, coconut, mango, cantaloupe, nectarines, raisins, grapes
- Vegetables: alfalfa sprouts, kelp, artichokes, leafy greens, cauliflower, bean sprouts, broccoli, peas, fennel, green beans, green asparagus, green cabbage, cucumber, potato, kale, watercress, pumpkin, chard, peppers, parsnips, mushrooms, brussels sprouts, lettuce, asparagus, spinach, celery, zucchini, onions (well cooked)
- Sources Proteins: Egg whites, chickpeas, mung beans, nuts, quinoa, red lentils, rice, seeds, black lentils, freshwater fish (trout), turkey
- Grains: Spelt, barley, oats, kamut, rye, wheat
- Fats: Butter, ghee, olive oil

Tridosha Diet

When almost all three doshas are present in a person with similar strengths, we speak of a tridosha constitution. Since tridosha people are usually in balance, the digestive fire (Agni) is balanced and effective. Accordingly, only a few regulatory measures can be suggested.

If tridosha people live contrary to their inner nature or one-sidedly (e.g., improper diet and lifestyle), problems with Vata, Pitta and Kapha may arise:

- with Vata disorders: e.g., digestive disorders, sleep disorders, anxiety
- with Pitta disorders: e.g., gastritis, hot flashes, sleep disorders
- with Kapha disorders: e.g., weight gain, passivity, depressive mood

In case the dosha ratio becomes unbalanced, the diet should be balanced and contain all the elements necessary to maintain the existing balance.

ASSESSMENT OF TREATMENT EFFICIENCY

Assessment of Treatment Efficiency can be performed by means of express control as well as by means of long-term observation.

Express Control

The express control method is applied in such treatments where the effect of treatment exposure can be immediately perceivable.

First initial indices are measured in patient, then the patient is exposed to therapeutic intervention of any kind (fast-acting medication intake, physiotherapy, reflex therapy, etc.) and immediately after the therapy exposure repeated exam of indices is performed.

Repeated exam results are compared to the initial exam.

If the functional state has improved, it means that the therapeutic intervention has had a positive effect.

Therapeutic effect might start the organism's recovery process, in this case deterioration of indices takes place as the body needs forces to combat the disease. If after the therapeutic treatment the indices have deteriorated, it is recommended to wait for some time (15-30 minutes) and then conduct exam for the third time.

Long-Term Observation

Long-term observation is applied with a view of regular control of functional status of the patient under treatment. Before starting the course it is necessary to gauge the initial indices as well, and then periodical exams are to be conducted. To obtain objective data it is desirable, that all the exams be conducted at the same time and at regular intervals.

TROUBLESHOOTING

The Application does not start

Description: When trying to start the Application, nothing happens or an error message appears.

Check the operating system version

The Application is designed to work only under Microsoft Windows 10 and higher operating systems. The Application can be used on Apple computers either by using the Boot Camp utility and loading the MS Windows 10/11 OS, or by using the Parallels® Desktop utility and starting the Windows 10/11 guest system in it. In this case, to work using the Parallels® Desktop utility, you must use only the DCR-8 Monitor.

Reinstall the Application

The Application files may have been damaged. The easiest way to fix this situation is to reinstall the Application. In this case, no patient data will be affected. You can always download the latest version of the Application from the Company's website in the Downloads section.

Check your antivirus

The Application may have been blocked for some reason by the antivirus installed on your computer. This could be caused, for example, by a virus attack on your computer, as a result of which the Application files were infected with a virus and subsequently blocked by an antivirus. It is recommended that you thoroughly scan your computer for viruses and then reinstall the Application. It is also strongly recommended that you re-download the latest version of the Application from the Company's website.

The application does not detect the Monitor

Description: The application is running, the Monitor is connected to the computer, but it is impossible to start recording an ECG, because the application thinks that the Monitor is not connected.

Check the connection of the Monitor to your computer

The USB cable connecting the Monitor and the computer should not be longer than 3 meters. Longer cables or various USB extension cables may prevent the Monitor from working correctly.

Check the functionality of the USB port on the computer by connecting any working USB device, such as a USB drive. If the computer has several USB ports, try connecting the Monitor to different USB ports.

Check the Monitor

The Monitor and connecting cables should not have any visible damage. If the USB cable is damaged, you can replace it yourself with a similar one purchased at any computer store. If the Monitor or electrode cables are damaged, contact the Company or its representative in your region.

The LED on the Monitor connected to the computer should be constantly lit or blinking. If this is not the case, the USB cable may be damaged.

Check the model of the Monitor you are using – perhaps you took it from another Application and its model is not suitable. In this case, use only Monitor and Application that match each other.

Check the Monitor driver

Make sure that the Monitor is correctly recognized by the operating system of your computer. To do this, open the Windows Control Panel and launch the Device Manager from it (it is in the Hardware and Sound group). In the Device Manager:

- **For the DCR-7 Monitor:** expand the USB Controllers group and make sure that the USB Serial Converter device is listed. Then right-click on this item and select Properties from the menu that opens. The device properties window will open. Make sure that the Device Status field says "The device is working properly", then switch to the Driver tab and make sure that the installed driver version is 2.8.14.0 or higher.
- **For the DCR-8 Monitor:** expand the HID Devices group and make sure that a device named "Vendor-defined HID-compliant device" appears in this list when the Monitor is connected. Next, right-click on this device and select Properties from

the menu that opens. The device properties window will open. Make sure that the Device Status field says "The device is working properly".

If any of the above is not true, it is recommended to reinstall the Monitor driver. To do this, open the main Application menu and select Technical Support/Install Driver. You can also download this driver from the Company's website in the Downloads section. Before starting the driver installation, be sure to make sure that the Monitor is connected to your computer.

Problems with the patient list

Description: The patient list does not contain names, it is impossible to delete some patients, the entered names and dates of birth of patients are not remembered.

Run the Application with the System Administrator rights

This problem occurs because the Application does not receive sufficient rights from the operating system to access the patient list on the computer disk.

To work normally with the patient list, you must run the Application only with administrator privileges. To do this, find the Application icon on the Windows desktop, right-click on it, and select Run as administrator from the menu that appears. You may need the administrator password – you can find it from the person who installed the operating system on your computer.

No ECG signal

Description: The Monitor is detected by the Application, but nothing happens when you click the Start exam button.

Check your antivirus or firewall settings

It is possible that your antivirus and/or firewall has blocked the signal reading from the Monitor.

To fix this situation, open the Windows Control Panel, select the Firewall and network security section and in the settings window that opens, select the Allow the application through the firewall link. Click the Change settings button in this window.

Next, click the Allow another app… button, select the Dynamic Tech Device Driver program file in the Explorer window that opens (by default, it is located at this path: C:\Program Files (x86)\Dynamic Technologies\LotusPulse\dnahost.exe), and when the Dynamic Tech Device Driver line appears in the Allowed programs and components table, you need to check three boxes: next to the Dynamic Tech Device Driver name, in the Private network column and in the Public network column.

After this, you should close the firewall settings window by clicking OK.

If any third-party antivirus/firewall is installed on the user's computer, it must be configured so that it does not block the network capabilities of the Dynamic Tech Device Driver program. How to do this should be described in the operating instructions for this firewall.

Problems with ECG signal recording

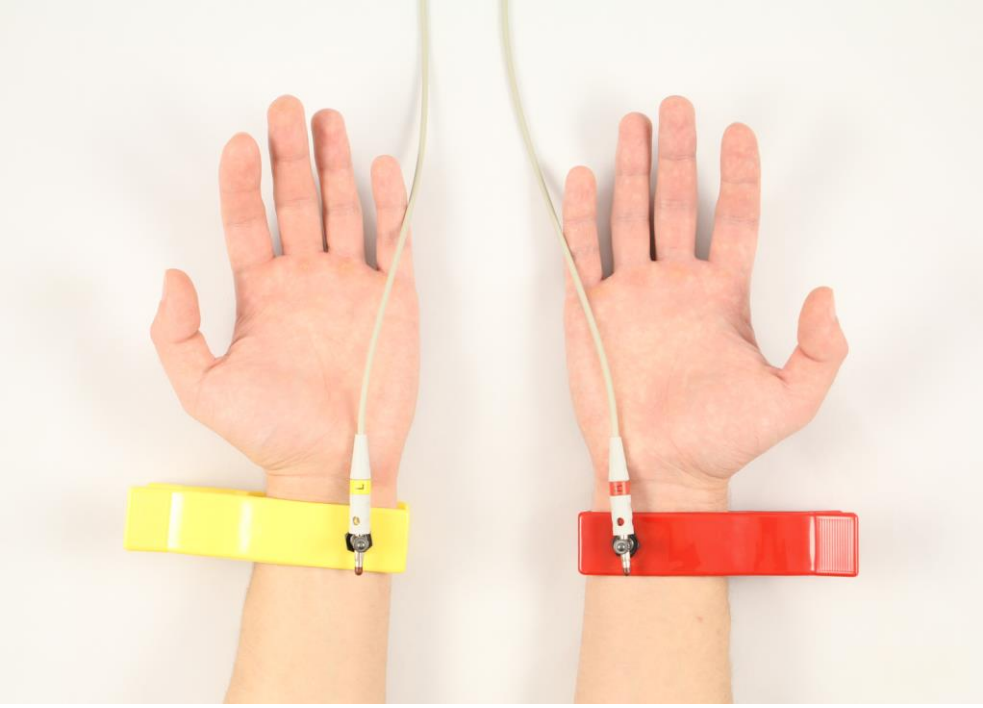
Description: ECG signal is received from the Monitor, but ECG signal recording does not start or is interrupted during the recording process.

Check the polarity of the ECG signal

It is important to make sure that the patient's ECG signal looks correct – the peaks of the cardiac complexes should be clearly visible and they should be directed upwards. If they are directed downwards, then the polarity of the ECG signal is reversed. In this case, you should swap the electrodes placed on the patient or invert the polarity of the signal in the application.

Check the correctness of the exam procedure

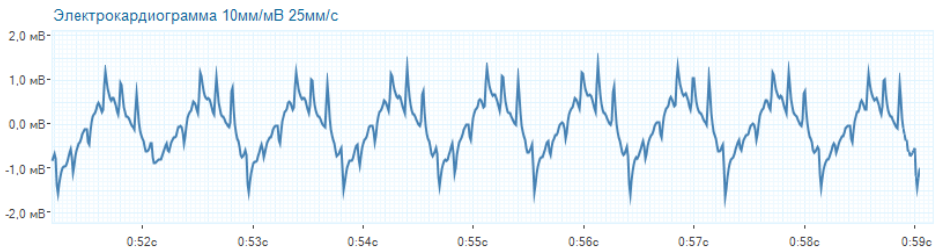
Make sure that the patient's exam procedure is carried out correctly. The patient's arms and legs should be motionless and relaxed. When sitting, the patient's hands should be on the knees, when lying down – placed along the body. No strangers should move within a radius of 1-2 meters from the patient. During the exam, the patient should be in the most comfortable and relaxed state. It is not recommended to distract the patient with conversations or show him the computer screen with the recorded ECG. You can also ask the patient to close his eyes.



The electrodes should be placed on the patient's wrists so that the metal contact pad fits snugly against the inside of the wrist. Before starting the exam, the patient's wrists should be moistened with saline or plain water at the points of contact with the electrode contact pads. The use of distilled water is not recommended, since it practically does not conduct an electrical signal. If even after this the correct ECG signal does not appear on the screen, you can connect the electrode with the yellow plug instead of the left wrist to the left ankle, also having previously moistened the contact area.

Check for interference in the ECG signal

During the ECG recording, interference from the 220V electrical network is possible. Most often, this occurs due to the absence of grounding in the electrical network. Network interference is also possible due to powerful industrial equipment operating nearby: fans, transformers, air conditioners, etc. In this case, the signal coming from the Monitor looks like a frequently repeating ornament, which has little in common with correct cardiac complexes. Despite the fact that the Application can recognize this interference as an ECG signal, the result of such a exam will not be correct.

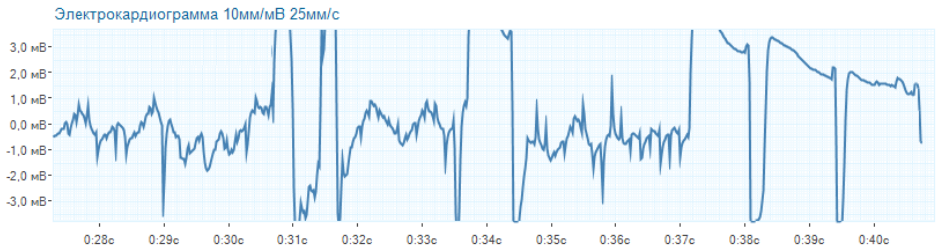


If you use a laptop to work with the Application, then the easiest way to suppress interference is to disconnect the power cable from it while working with the Application, that is, so that the laptop works from the built-in battery. If you are using a desktop computer, you must use high-quality network wiring with mandatory grounding. You

should check with your power supplier about the presence of grounding in your network or the possibility of connecting it. Keep in mind that even if your laptop is powered by a built-in battery, network interference can be transmitted through peripheral devices connected to the laptop and simultaneously to the power supply network. Pay special attention to connected printers and network devices. While searching for the source of interference, it is strongly recommended to disconnect all devices from your laptop, including the mouse, even if it seems to you that interference cannot be transmitted from this device. After detecting the source of interference, it can either be completely disconnected from the computer or temporarily disconnected for the duration of the exam.

Check the integrity of the electrode cable

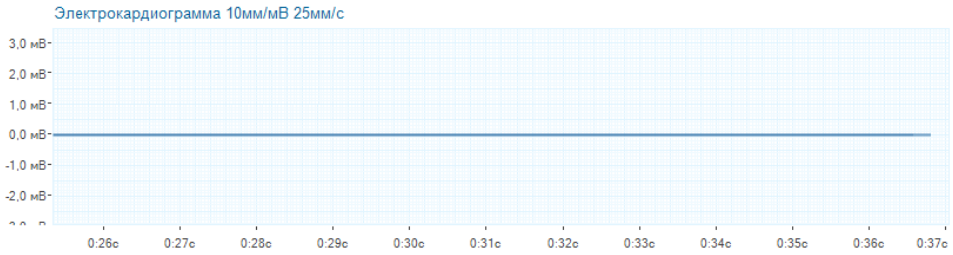
The electrode cable is made of a special thin copper conductor that transmits the smallest changes in electrical potential well, and with prolonged careless use it can be damaged. A cable break may be completely unnoticeable from the outside, since the braiding of the electrode cable is much stronger than the conductor itself. In this case, the ECG signal is chaotic, regardless of whether the electrodes are on the patient or not.



In order to determine the damage to the electrode cable, you need to do the following simple procedure:

- Launch the Application and start a new exam. The ECG signal should be visible on the screen, even if its shape is strange, and the Application will report that the signal is incorrect.
- Disconnect the clamps from the electrode cable, and then tightly touch the electrodes to each other. It is the metal parts of the electrodes that must be closed, and not their braiding, so that the electrical signal from one electrode flows to the other.

If the electrode cable is in good condition, then when you connect both electrodes to each other, the ECG signal on the screen should quickly take the form of a perfect straight line. In the first seconds, this straight line will fluctuate from the top to the bottom of the graph, but very quickly it should be located exactly in the center of the ECG graph and then not change its form until you disconnect the electrodes.



If the electrode cable is damaged, then connecting the electrodes to each other will not affect the shape of the ECG signal in any way – it will still remain chaotic. But even if this does not happen and the signal takes the form of a straight line, it is worth making sure that this is not a coincidence, and the cable is really intact.

To do this, holding both electrodes closed with one hand, with the other hand carefully bend (but do not break them!) the electrode cables along their entire length, while monitoring the shape of the ECG signal on the screen. Most often, the cable is damaged due to careless use near its attachment to the electrode clamps, in the place where the braid of the plug ends and the cable itself begins.

If, in the process of bending the cables, the ECG signal becomes chaotic or the contact of the electrodes with each other does not lead to a smooth line on the ECG graph at all,

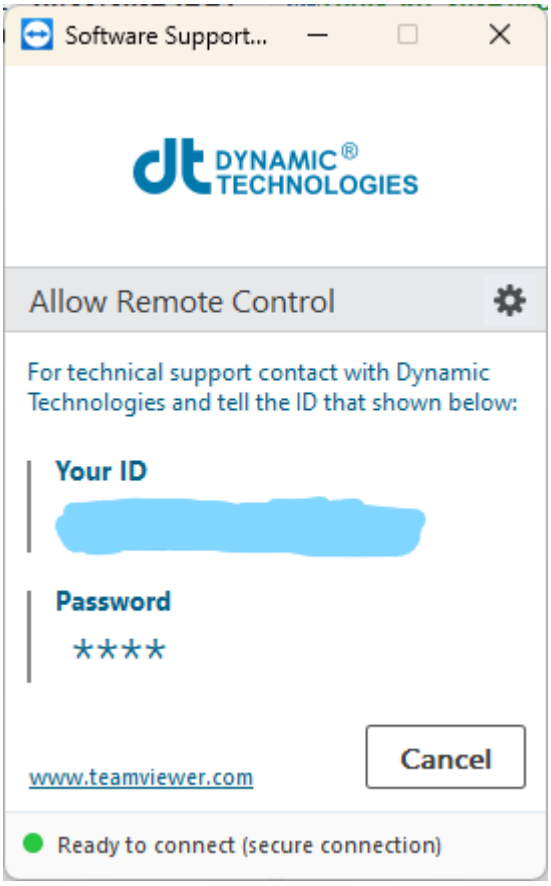
then the electrode cable has an internal break and requires replacement. Repeat the above procedure again to make sure that the problem is in the cable, and not, for example, in poor contact between the electrodes.

After this, contact the Company's Technical Support Service and provide the technical support operator with access to your computer. After this, under his guidance, repeat everything described above to exclude the possibility of an error.

After the technical support specialist confirms that the problem is indeed in the damage to the electrode cable, send your Monitor to the Company for repair.

Contacting technical support

In some cases, a remote connection to your computer may be required to solve the problem. Technical support is provided using a special application included in the Application. Using this application, a technical specialist can connect to your computer and fix the problem. This is absolutely safe, since a specialized version of the remote control application from the well-known company TeamViewer is used for this.



Make sure that your computer is connected to the Internet, connect the Monitor to the computer and launch the Application.

In the main menu of the Application, select Technical support…/Start remote control of the computer.

After opening the remote control application window, wait for the identifier to appear in the Your ID field and tell it to the Technical Support employee. If the Password field contains symbols other than asterisks, then also tell them to the Technical Support employee.

After this, do not touch the mouse and keyboard of your computer and follow all instructions of the Technical Support employee.

TERMS AND DEFINITIONS

Application – software for working with the Monitor.

Company – Scientific and Production Firm “Dynamics” (also known as Dynamic Technologies), the manufacturer of the Monitor and the Application.

ECG – electrocardiogram.

Exam – the result of a patient examination using the Application and the Monitor.

HR – heart rate.

Menu – the main menu of the Application

Monitor – Lotus Pulse Heart Activity Monitor: a device manufactured by the Company for measuring and transmitting a patient’s ECG to a computer.

R-R – interval between R-waves on an electrocardiogram.