



mySASY

mySASY MANUAL

version 2.0

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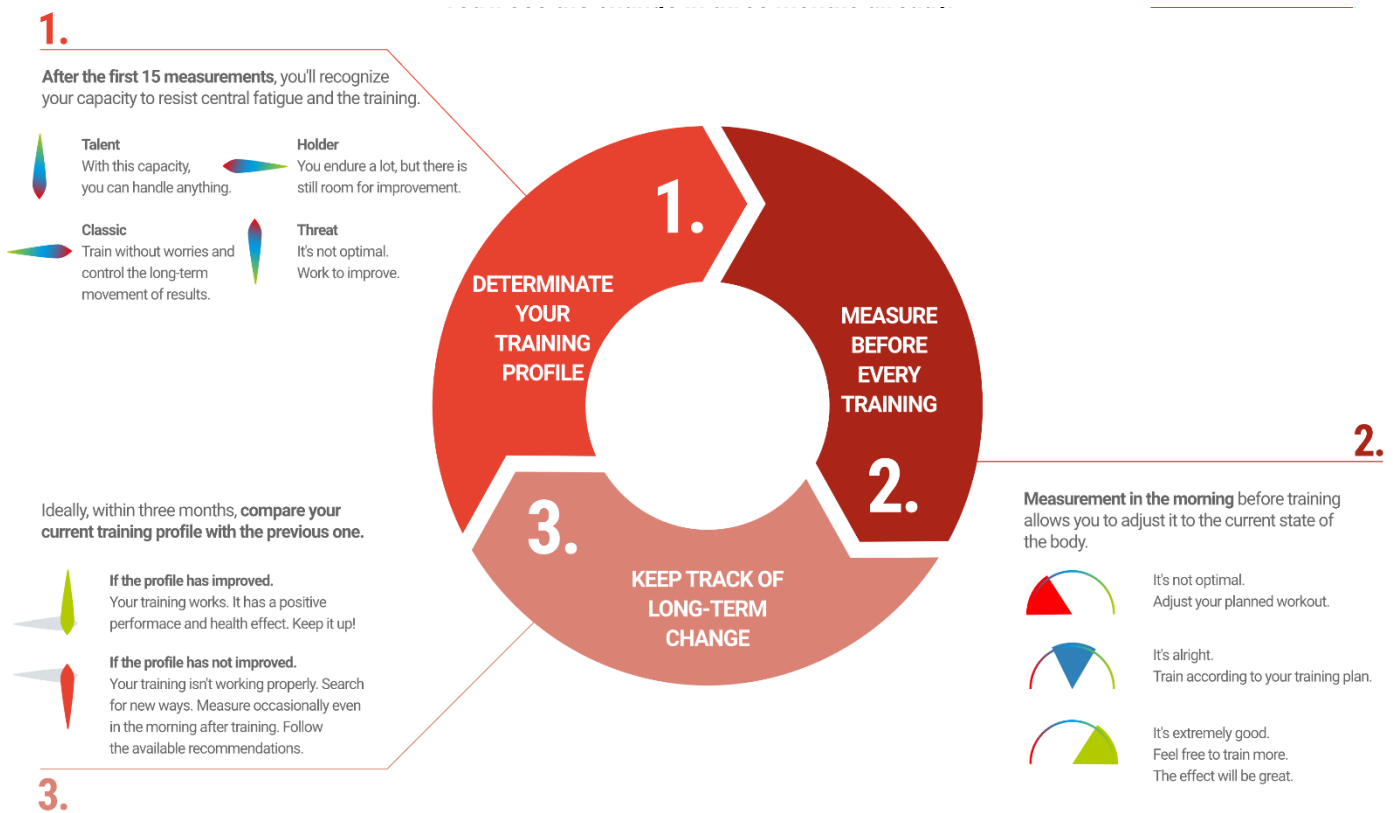
Introduction

What mySASY is...

mySASY is a web-based application that allows you to easily and very accurately evaluate the activity of the basic system in the human body = the Autonomic Nervous System (ANS), using a mobile phone and a HRV monitor. Autonomic nervous system controls the most important processes and the condition of the human body. Thanks to mySASY measurement results it is possible to monitor the long-term and current reactions of the organism to the selected training processes/ regime and significantly increase the efficiency of the training.

Three smart steps to effective and safe training

You'll see the change in three months already. For more information on working with mySASY results, see Chapter **“Step 4. Working with results of SA HRV monitoring in mySASY“**.



HRV monitor

HRV monitor is required for mySASY measurement. It can be purchased from our [shop](#).

If you already have an HRV monitor you can use your own. For monitoring with mySASY, the device needs to meet the following technical requirements:

- It must be connectable via Bluetooth.
- It must be able to measure the RR interval (pulse) accurate to one-thousandth of a second (0,001).

It should be possible to verify these parameters with the HRV monitor manufacturer.

Despite the fact that monitors from other manufacturers meet these parameters, mySASY a.s. is not able to guarantee the measurement accuracy of any third-party devices.



How monitoring with mySASY works

Monitoring with mySASY takes place in 4 steps:

1. Account activation
2. Mobile app download
3. Setting up the mobile app and syncing it with HRV monitor
4. Monitoring of SA HRV and working with results

Step 1. Activation of account

To create an individual account, it is necessary to register online at <https://eshop.mysasy-profile.com>. You can start using mySASY after registering (= creating personal login) and downloading the mySASY application.

The account is non-transferable and it is necessary for each individual to always activate their own account.

TRAINING PROFILE E-SHOP LOGIN

mySASY

CZ
EN
CZK
EUR

Get a Training profile and measure yourself FOR FREE!

The easiest way to monitor central fatigue and load resistance

GET FREEMIUM

f i y

Step 2. Download mySASY mobile to your mobile device

The application is designed for mobile devices (mobile phones/ tablets) running Android (version 4.3 and higher), iOS - (version 7 and higher).

To transmit a signal, your mobile device needs Bluetooth 4.0 / BLE (Bluetooth Low Energy).

Note: Due to the ongoing development of mySASY, some images, especially application demos, may differ from the last graphical version. It should always be clearly understood, where to find the currently described function and how to use it. If you have any questions, please contact support@mysasy.com.

mySASY mobile application is designed for all registered users with an individual account and active program FREE, BASIC +, SPORT or SPORT +.

The mobile app is for measuring purposes only. Trainers with TEAM program do not need this application.

Installation and activation of the application:

1. Open the app store on your phone/ tablet (Android - Google Play, iOS - AppStore) and search for mySASY mobile. You will be redirected after clicking the buttons below.
2. Download mySASY mobile app and install it.



Step 3. Set up mobile application and synchronize HRV monitor

(for Android, it is important to enable GPS positioning for pairing HRV monitor with the application during installation, and to allow access to files / storage for storing measurements in offline mode (Figure 1)).

When you open mySASY application the first time, the index screen shows up (Figure 2) and notify you that you need to enter your login and synchronize a HRV monitor. To do this, you need to ensure that you have got an active and undisturbed Bluetooth function. The application also warns you about the correct procedure of measurement.

You can select “SHOW VIDEO TUTORIAL/ SHOW VIDEO” or “CLOSE” on the start screen. The “SHOW VIDEO TUTORIAL/ SHOW VIDEO” button (recommended) will take you to our instructional video tutorial to guide you through the app setup and measurement process. The “CLOSE” button allows you to enter the application directly and start setup.

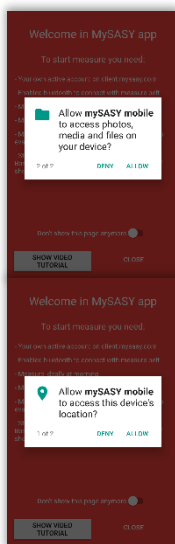


Figure 1

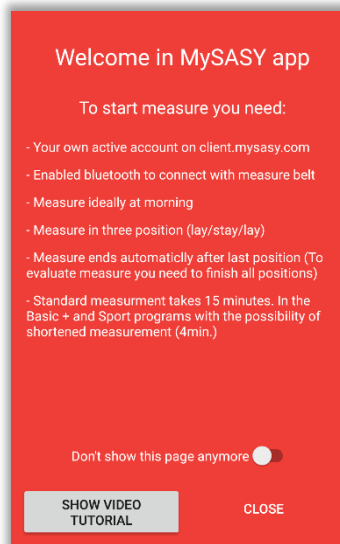


Figure 2 (Android)

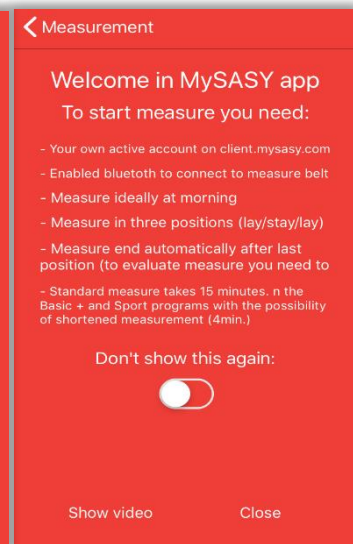


Figure 2 (iOS)

Setting up mySASY mobile application

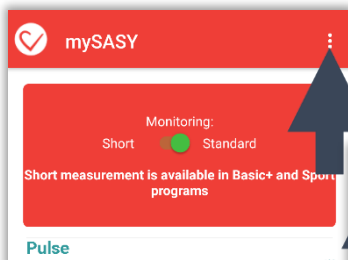


Figure 3 (Android)



Figure 3 (iOS)

Entering the login and synchronizing the monitor could be done in the “SETTINGS” section, which can be found directly in the menu of the application. You can see it on Android by clicking the three dots in the upper right corner / iOS by clicking the three horizontal lines in the upper left corner (Figure 3).

When you enter "SETTINGS", you will see the "email" and "password" fields in which you enter your login (Figure 4). Use the button in the password row to verify that the information you entered is correct. Entering the login allows sending measured data from the application to your account, where all results and graphs are displayed.

The next step in this section is to synchronize the HRV monitor.

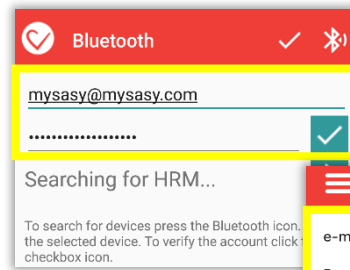


Figure 4 (Android)

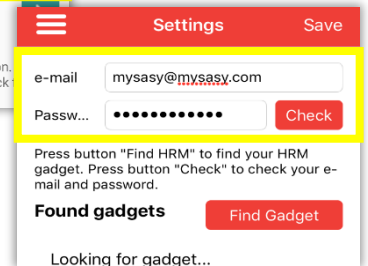


Figure 4 (iOS)

Synchronization of HRV monitor with mySASY mobile application

To synchronize the HRV monitor with your phone/tablet, you must turn on the "Bluetooth" function on your mobile device. It is important to ensure that the phone is not paired with another Bluetooth device (eg, speaker, watch, bracelet,...) at the same moment.

Put the HRV monitor on your chest (Figure 5), moisten the electrodes and skin for better transmission and tighten the belt properly (the system captures data with high accuracy, so the belt needs to be in perfect contact with your body). Furthermore, please make sure that the mySASY sign on the transmitter is in the "readable position" (i.e. not upside down).

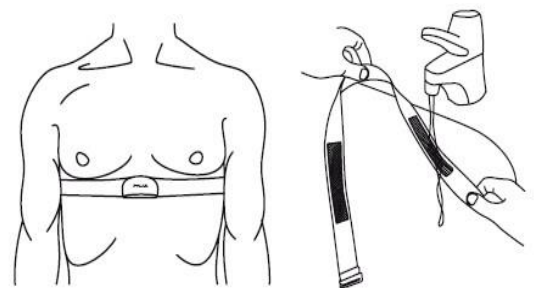


Figure 5

After putting the monitor on your chest, click on the button to search for nearby Bluetooth devices in the mySASY mobile "SETTINGS" section (Bluetooth symbol/ "Find Gadget", Figure 6). After a few seconds, your monitor should be found. It will appear among the searched devices. Keep in mind that it is conditional that the monitor meets the technical requirements, the monitor is in the correct position and bluetooth functionality is on and not impaired by another device or other phone function."

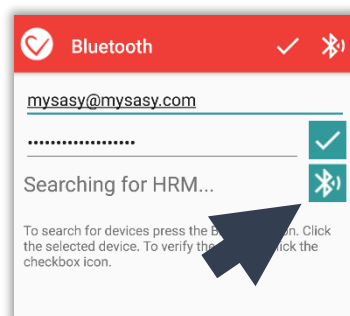


Figure 6 (Android)

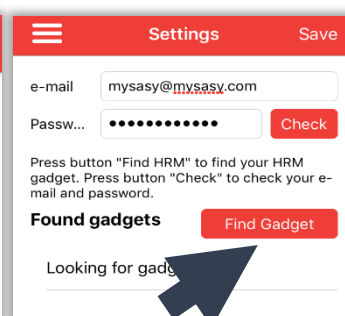


Figure 6 (iOS)

Click on the heart rate monitor to select it (Figure 7 arrow 1) it will be marked with a checkmark in the right part of the display. Then you need to save the whole setting. Click on tick (Android) or Save (iOS) at the top of the screen to confirm (Figure 7 arrow 2).

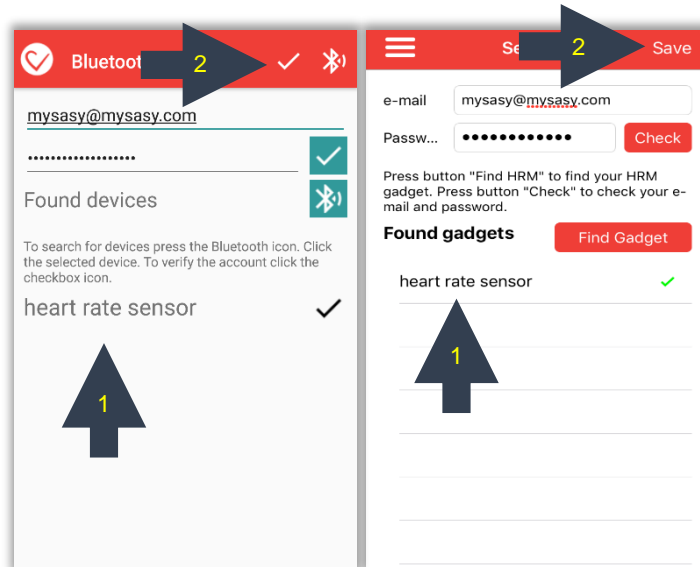


Figure 7 (Android)

Figure 7 (iOS)

After the setting is saved the application will go to the basic screen. There should appear indication of the connected monitor, information about the current heart rate and the length of the RR interval (Figure 8). If the data does not appear, repeat the process - make sure the strap with the monitor is in the correct position and tightened properly, and make sure that the location permission is set on in your mobile device.

Once the monitor data is displayed and the capture recording starts, the application is ready for measurement. In case of complications, please contact support@mysasy.com.

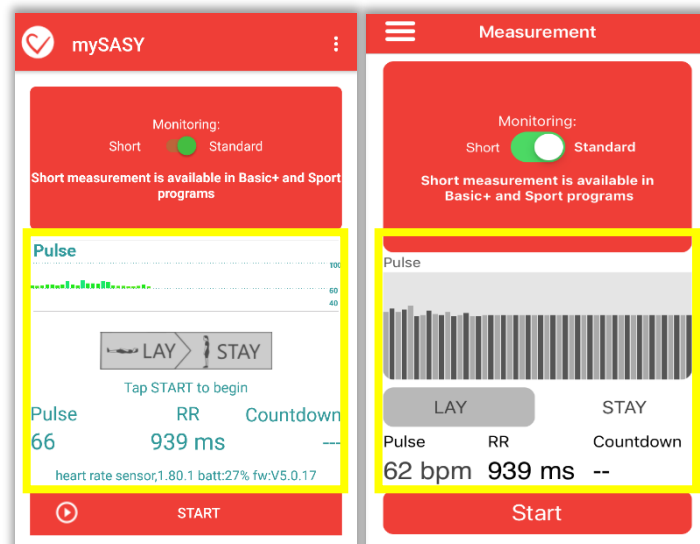


Figure 8 (Android)

Figure 8 (iOS)

Monitoring of SA HRV by mySASY

It is necessary to maintain the basic methodological procedures during the measurement, if the result should have the maximum validity. The mySASY measurement should be:

1. performed in restful conditions ideally in the morning,
2. performed without any other disturbing activities (such as walking, morning hygiene, speaking,...),
3. the belt should be properly worn, tighten and moistened.

Measurement can be done in two versions:

A. Standard/ long version

B. Short version

You can choose the version of the measurement before starting the measurement with the switch button in the application (Figure 9). The result of the standard/ long version of the measurement is indicated in the graph as a circle. The result of the shortened version of the measurement has the form of a square.

Start the measurement by pressing the "START" button on the basic screen (after verifying your login and connection of the HRV monitor - see previous steps).

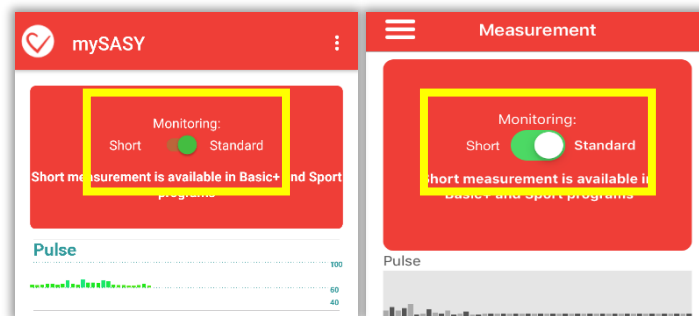



Figure 9
(Android)


Figure 9
(iOS)

A. Standard/ long version

The standard/ long measurement itself takes place in two positions and 3 phases:

1. Supine position (lying) – sensing 120 heartbeats (approx. 2 min) 

2. Standing position (staying) – sensing 360 heartbeats (approx. 5 min) 

3. Supine position (lying) – sensing 360 heartbeats (approx. 7 min) 

You can start the measurement with the "START" button (Figure 10). The application will always show you the concrete position at which the heart rate should be sensing. The application notifies you with a sound signal when a position is changed (you can control the volume of the audio notification by adjusting the media volume on your mobile device).

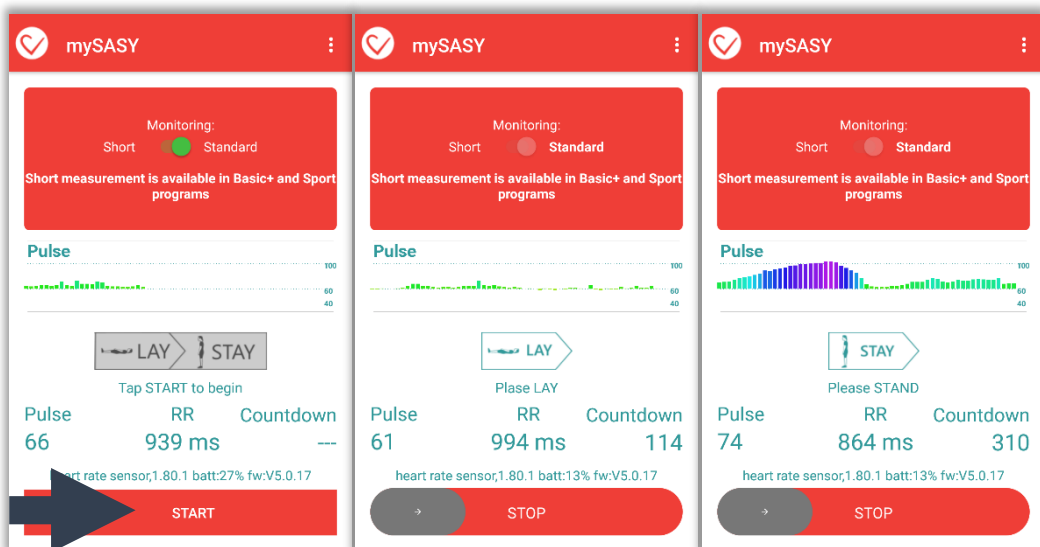


Figure 10
(Android)

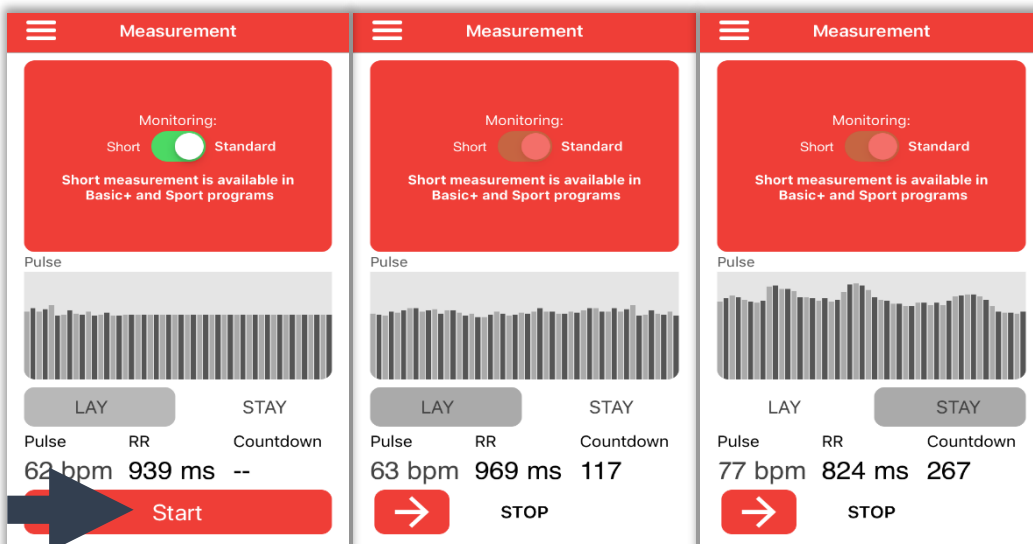



Figure 10
(iOS)

B. Short version

The short version of the measurement sensing 240 heartbeats (approx. 4 minutes) in the supine position (lying). 

To run the short version (switch the button in the application), it is necessary to meet the following conditions:

- 15 standard measurements in the last 90 days
- valid BASIC+/ SPORT/ SPORT+ program
- Internet connection

After switching the button (Figure 11 arrow 1) you can start the measurement with the "START" button (Figure 11 arrow 2). If any of these conditions are not met, the switch button remains "fixed" to the standard measurement version and the short version cannot be run.

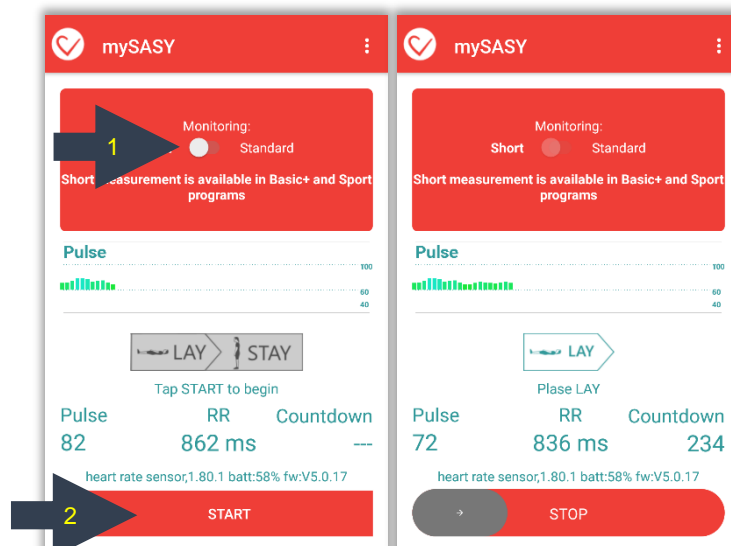


Figure 11
(Android)

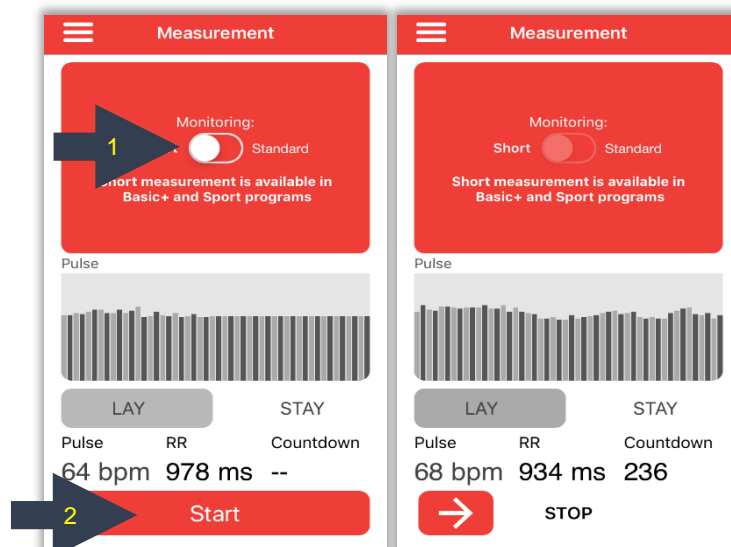
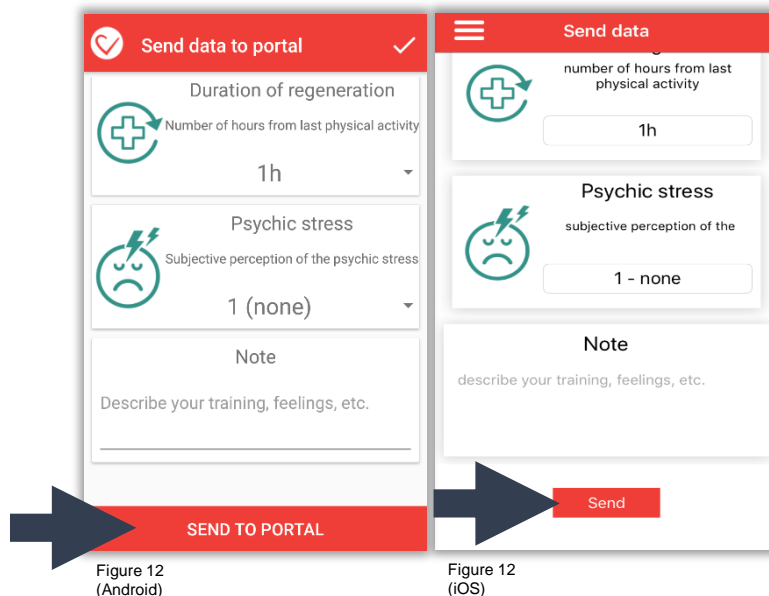


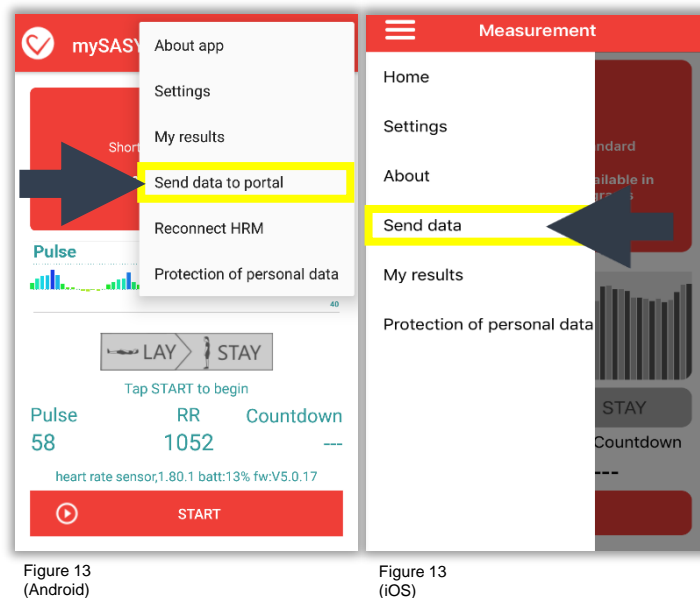
Figure 11
(iOS)

At the end of every measurement, the questionnaire shows up. It is necessary to fill in the questionnaire with information concerning your subjective feelings and the last training. The measured data can be sent for evaluation after that: Android - "Send to portal"/ iOS - "Send" (Figure 12). Quality Internet connection is necessary. The result will be immediately displayed in your online account.

The data entered in the questionnaire are reflected in the verbal recommendation of the result.



If you end the measurement without Internet access (offline), you can send the data from the LAST (!!!) measurement whenever you are connected to the Internet again. To do so, use the "Send Data"/ "Send Data to Portal" option in the Mobile App Menu (Figure 13).



After meeting all the above points and sending measured data, you can go to your profile and see and analyze current results directly from your mobile device (Figure 14).

If you do not want to see results immediately after the measurement, use the "End,/" "No" option.

You can also access the results by logging in from <https://client.mysasy.com> or <https://www.mysasy.com>.

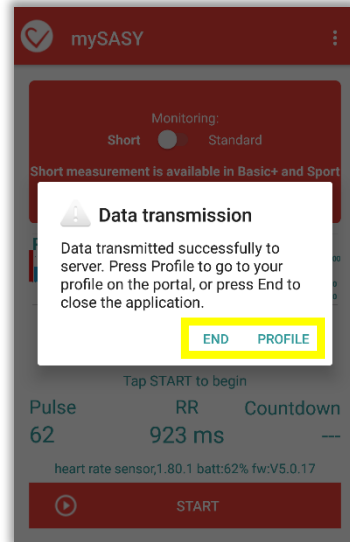


Figure 14 (Android)



Figure 14 (iOS)

Access to SA HRV monitoring results:

From the phone/ tablet that you use to monitor SA HRV, you can access the results automatically after sending the measurement data or from the application menu by selecting "my results".

You can log in to your account also at www.mysasy.com (Figure 15) or directly at <https://client.mysasy.com> (Figure 16), in any Internet browser anytime. All you need to do is enter your login (email and password) correctly in the login form.

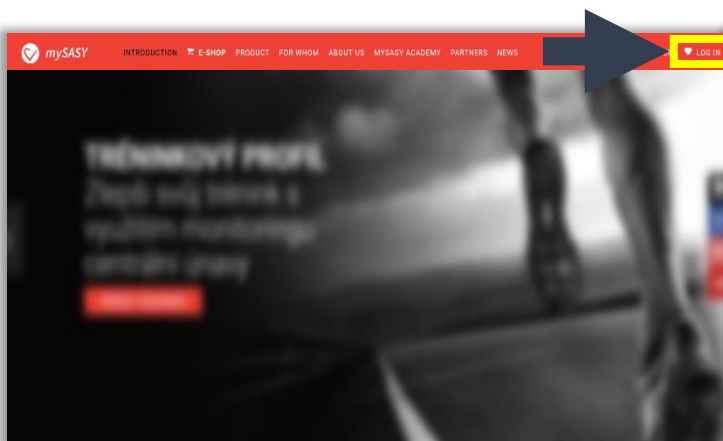


Figure 15

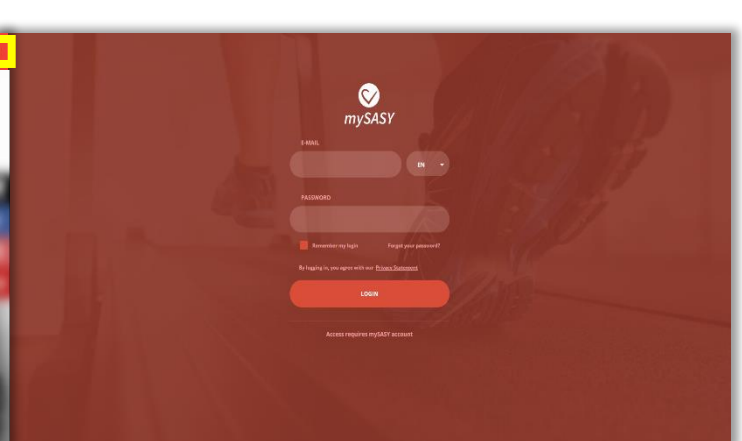


Figure 16

Processing and displaying results

1. Training Capacity Chart (2D Chart)

The graph (Figure 17) shows the tune of the organism over the selected period (ANS activity). The result is indicated in the graph by the point: circle - standard measurement / square - short measurement. Use the calendar to view results for any time period.

The numbering of each result is in the order from newer to older records (most recent measurement = 1). Working and interpreting the results is described in the chapter - [Step 4. Working with results of SA HRV monitoring in mySASY](#)

Information in a graph:

- Location of the point on the X-axis = Refuelling - the level of regeneration/ replenishment of organism resources (parasympathetic).
- Location of the point on the Y-axis = Consumption - the level of activation/ consumption of organism resources (sympathetic).
- Total power - total system activity (point size).
- Total score - summary assessment of the impact of overall activity and the proportion of both components of the system.

(individual values are listed in the table, which is displayed after clicking the result in the graph)

Heatmap mode button

It shows the individual heatmap of measurement results (positioning and movement of values within the individual spectral profile). The function is available after 8 standard measurements and is continually updated. The mode can be switched on/ off.

Only standard measurement x non-standard measurement button

This option appears only if you have more than one measurement per day.

Standard measurement only - only results marked as "standard" appear for each day

Non-standard measurements - all measurements made within the selected period appear.



Figure 17

2. Compensation

The value of the current compensation (Figure 18) is determined based on a comprehensive comparison of the current measurement result with the results of previous measurements, the so-called individual spectral profile. Therefore this option is shown for the first time after 8 measurements, which suppose to be made over maximum 20 days.

The compensation level helps determining the appropriate regime for the following load. Work with the compensation results is described in the chapter - [Step 4. Working with results of SA HRV monitoring in mySASY](#)

Verbal recommendations

The basic recommendation is created algorithmically, based on the results of current and previous measurements and information entered into the training load questionnaire that appears at the end of each measurement (the accuracy of the recommendation is directly dependent on the accuracy of the data entered in the questionnaire).

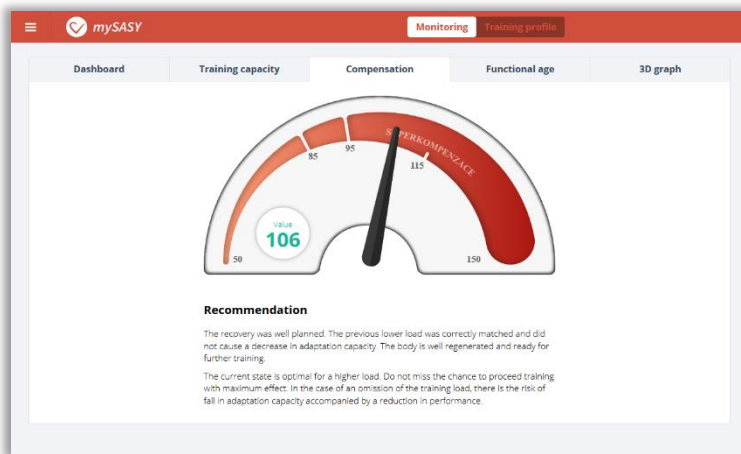


Figure 18
(marking one result/ day)

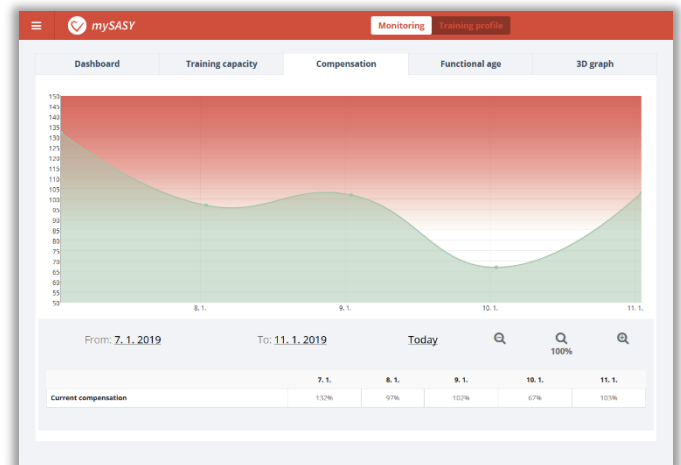


Figure 18
(marking multiple results/ days)

3. Functional age

Functional age (Figure 19) shows "current age of body" compared to calendar age. Tachographs of relative values of the Training capacity graph (consumption, refueling,..) are also shown in this tab.

When you select multiple results, they appear in the form of bar graphs where:

Graph column = Total System Activity (Total Power). Its red part is the proportion of refueling activity (regeneration levels), its green part is the proportion of consumption activity (activation levels).

Graph link (Total score) = cumulative assessment of the effect of total activity and the proportion of both components of the system.

In this view, you can also show/ hide the information entered in the questionnaire after the measurement.

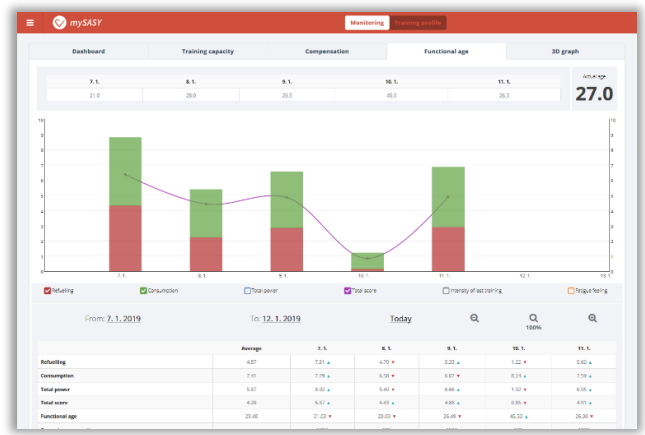
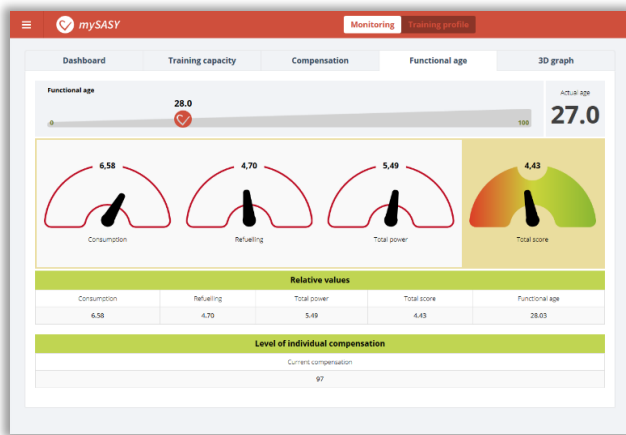


Figure 19 ((marking one result / day)

Figure 19 (marking multiple results / days)

4. 3D graf

The 3Dgraph (Figure 20) graphically and tabularly presents the results of spectral analysis of heart rate variability in the form of absolute values (= all values that are the original output of the mathematical-statistical method used). Values are in accordance with internationally accepted standards ([Link here](#)). This functionality is only part of the program SPORT and SPORT+. All the values can be exported.

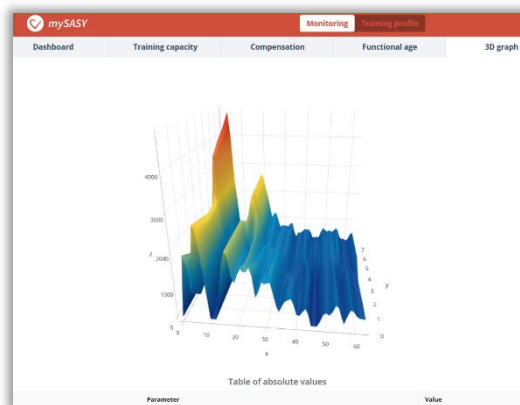


Figure 20

Step 4. Working with results of SA HRV monitoring in mySASY

1. Determinate your Training profile (TrP)

The training profile is an individual description of the body's ability to withstand central fatigue and physical and mental stress. It is obtained by evaluating 15 standard mySASY results over the monitored period. The determination of individual TrP is an important basis for working with mySASY. TrP will describe starting state and help to reveal the space for modifying your workouts/training. Long-term monitoring of changes in TrP will help controlling the effectiveness of training adjustments.

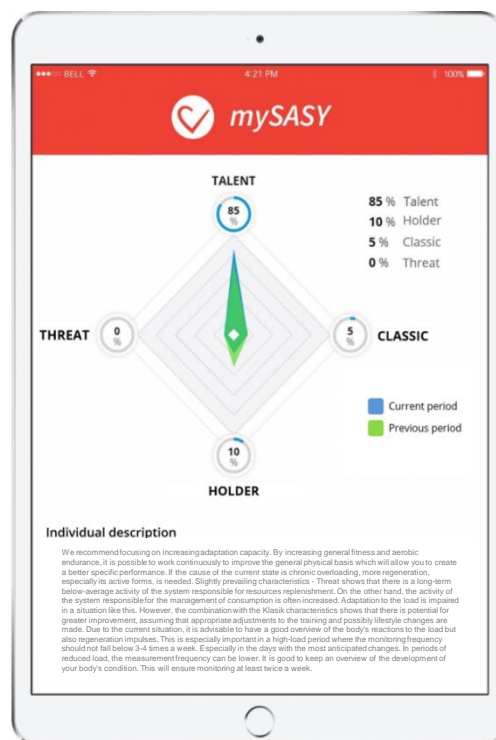
The determination of TrP and the monitoring of the body's response to individual types of training and regeneration impulses provide important information for defining the optimal training approach. It is a description of current organism disposition, which is given by long-term and medium-term factors.

The long-term factors affecting the training profile:

- 35-45% genotype (genetic predisposition)
- 55–65% phenotype (long-term disposition = influenced by previous lifestyle, training, stress,...)

Medium-term factors affecting the training profile:

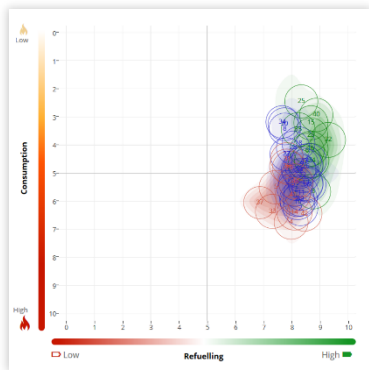
- Current health condition, phases of the training process
- Factors influencing the central management of the organism (sleep, stress, motivation, emotions, nutrition,...)



4 basic types of TrP were identified in the analysis of tens of thousands previous measurements. The determination of individual TrP is then based on a comparison between individual results and defined basic types or their combinations. Results also include a detailed analysis of the impact of individual training days on the overall training regime.

It is clear from the names of the basic TrP types that some are more suitable for sports training than others. In this context, however, it should be added that for each TrP type, appropriate adjustments in the training regime can be identified which may lead to further training improvements.

TrP types and their basic description:

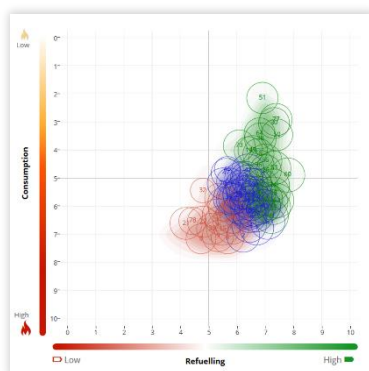
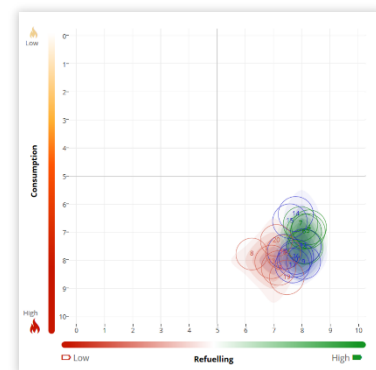


1. Talent

The steady high activity of recovery system balanced by the significant response of the system responsible for activation. Excellent disposition for training. Excellent adaptation after every training/ load. Low risk of overloading and overtraining. mySASY will help to find the right training regime to achieve further performance growth and preventing stagnation.

2. Holder

Significant stability of Regeneration and Activation system. Constant slight activation of the system responsible for resource consumption prevail. Low risk of overload and overtraining, but low adaptation response to the training load. The recommendation is to include stronger training impulses and see if they stimulate an adaptation response that is a condition for training improvement. Training can be further intensified if mySASY monitors the risk of overloading.

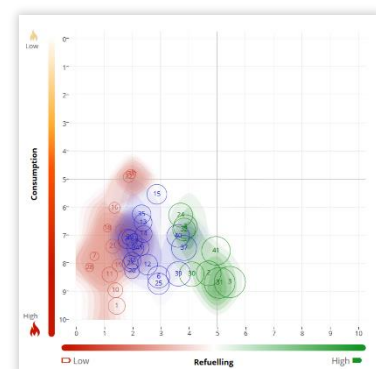


3. Classic

Both the regeneration and activation systems react adequately dynamically. Good disposition for training with good organism response to load enabling quality feedback control of training. With mySASY you can try adjusting the training load without the risk of overloading. At the same time, it will allow you to identify impulses which stimulate adaptation that is a prerequisite for training improvement.

4. Threat

The low level of the recovery system is often accompanied. Low activity of the recovery system is often accompanied by a significant negative response of the activation system to load/ stress. The current training regime is not optimal. It is possible to identify situations that pose a threat of overloading or chronic deterioration. mySASY will help you find impulses that will help stimulate better adaptation of organism. As a result, the adaptation capacity of the organism can be gradually increased.



2. Identify impulses that cause significant ANS reactions

Determining the TrP will reveal individual capacity to resist central fatigue and to cope with training. That verifies the basic reactions of body to the training impulses. Among these impulses, it is possible to identify the significant extreme results of the TrP (red and green) and compare them to the activities that preceded the results. Based on this comparison, it is possible to edit and refine each aspect of your training regime.

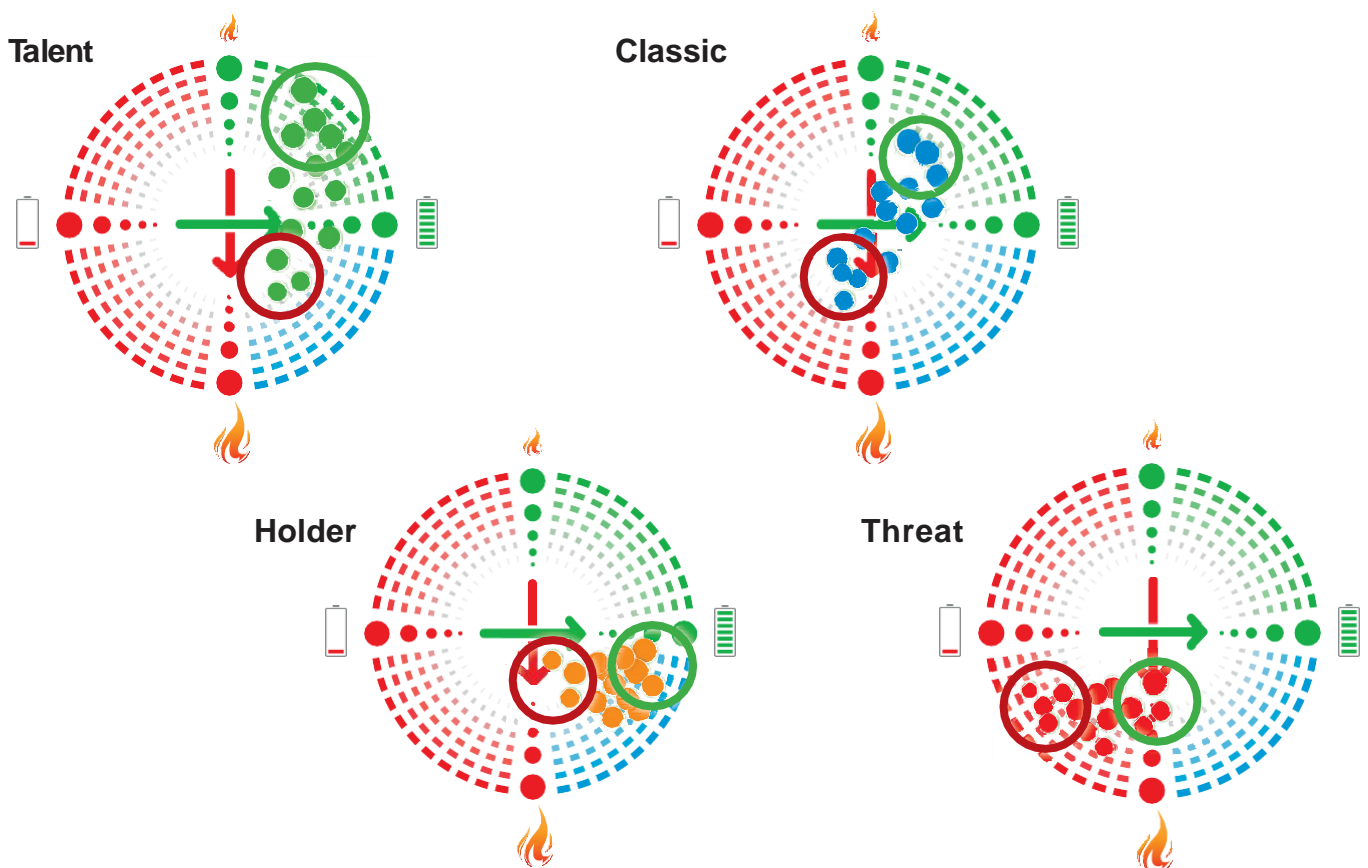
In principle, it is advisable to avoid results signaling previous low efficiency or overloading impulses/ regime. The long-term (3 or more consecutive results) occurrence of such results is not desirable as it may indicate a tendency to deteriorate the ANS adaptation capacity. Training in this state does not bring the expected effect. In such cases, it is better to adjust the training so that it would be primarily aimed at increasing the adaptation response. Signs of increased adaptation should occur regularly (green). Such a result indicates the capacity to continue the demanding workload. Training in this state brings the greatest effect and the greatest training gain.

Not effective or overloading Impuls/ regime.

It must not occur in the long term.
Training in this condition does not bring maximum effect.
It is better to modify the training and try to increase the adaptation response.

Increased adaptation reaction.

It should occur regularly.
Indicates capacity to continue the training load.
Training in this state brings the biggest effect and the biggest training growth.



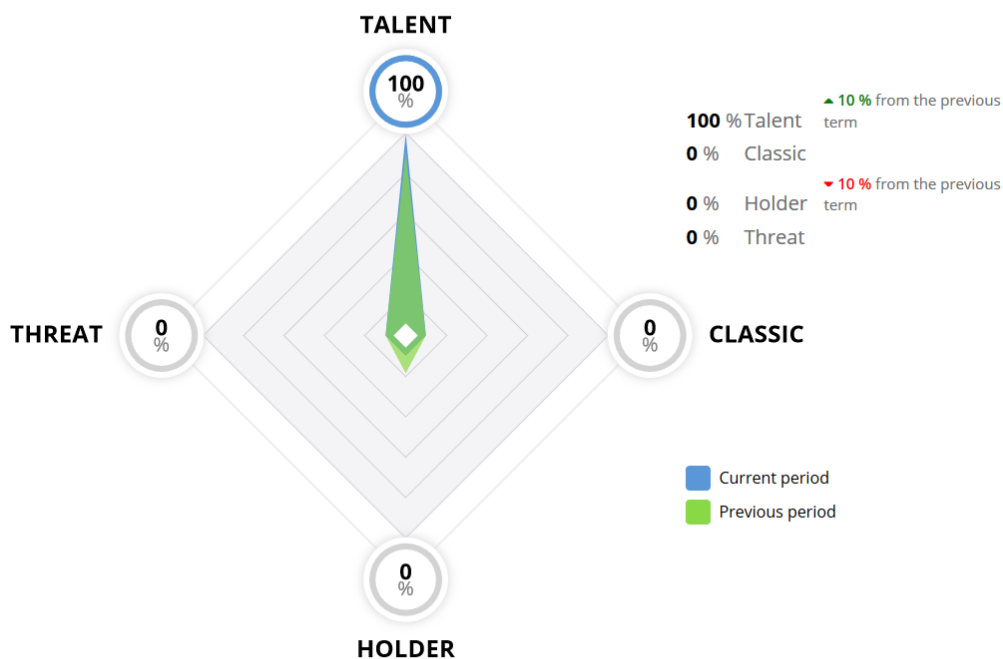
3. Determine Training Profiles continuously and regularly monitor long-term change.

If the training is managed correctly, i.e. in the period of strong adaptation, sufficient training impulses are included for further development and in the period of poor adaptation the training is optimized so that negative reactions do not accumulate, in the long term the overall adaptation capacity of the organism will improve, its durability and trainability.

For easier monitoring of the individual's long-term adaptation capacity, mySASY enables repeated determination of TrP (with BASIC+/ SPORT/ SPORT+ program) and comparison new TrP with the previous one (the Training Profile section). This makes it easy to track shifts in the overall training capacity of an individual. TrP determination is recommended at least every 3 months.

If TrP has improved, then the training regime works. It has a positive performance and health effect and we recommend continuing and regularly monitor long-term change.

If TrP has deteriorated, then the training regime is not working properly and we recommend focusing on optimizing it. mySASY will help you find out if the regime adjustments were positive or negative.



Interpretation of the result in the Training Capacity graph

For basic interpretation of SA HRV results in mySASY, we use the Training Capacity chart (2D chart) (described in the chapter - [Processing and displaying results](#)), which shows the current activity of both evaluated ANS branches:

- **parasympathetic = responsible for anabolic processes**, i.e. refueling and storage of resources (longitudinal axis of the graph (indicated by the battery symbol in Figure 24)).
- **sympathetic = responsible for catabolic processes**, i.e. the release and consumption of resources (transverse axis of the graph (indicated by the flame symbol in Figure 24)).

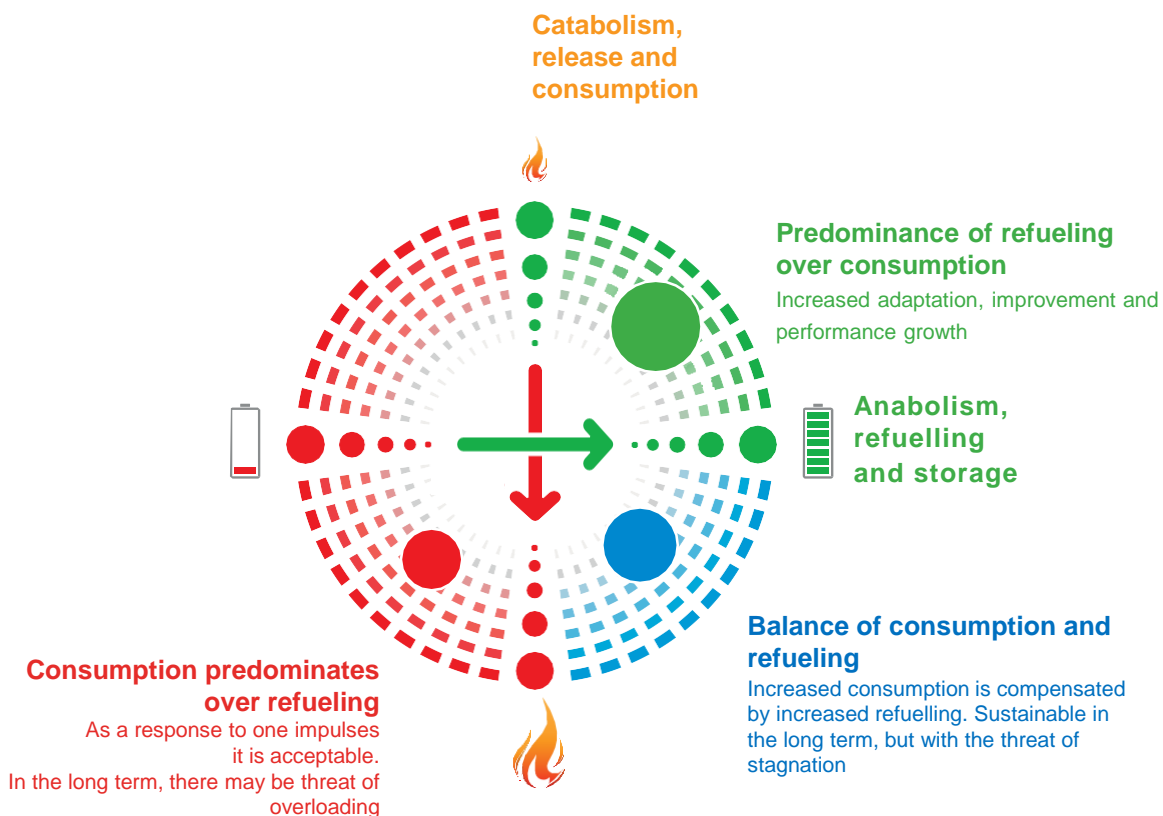


Figure 24

In the graph, each measurement result is displayed as a single "point". The size and position of this point show the current ANS status in relation to the population standard. From the point's position, you can guess the following:

- The location of the point on the top right (green) indicates the supremacy of energy refueling over consumption (Figure 22).
- The location of the point on the bottom right (blue) indicates the balance of refuelling and consumption (Figure 23).
- The location of the point to the left (red) indicates the predominance of consumption over energy refueling (Figure 24).

The point size shows the total current ANS activity, so it is also an important parameter for evaluating the result. If the system activity is low (= point small), it is not very important which ANS branch is more represented in this result. If the activity is high (= point large), it is very important to track which branch of the ANS is more represented in the result.

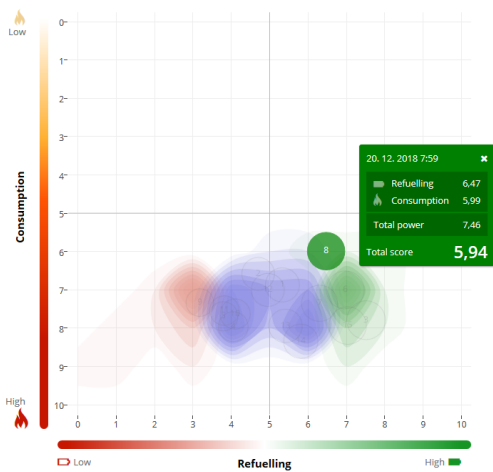


Figure 22

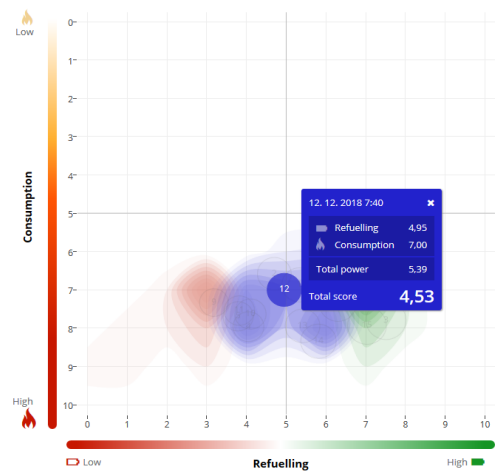


Figure 23

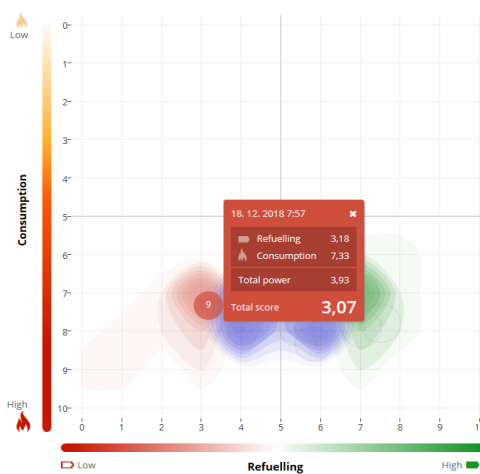
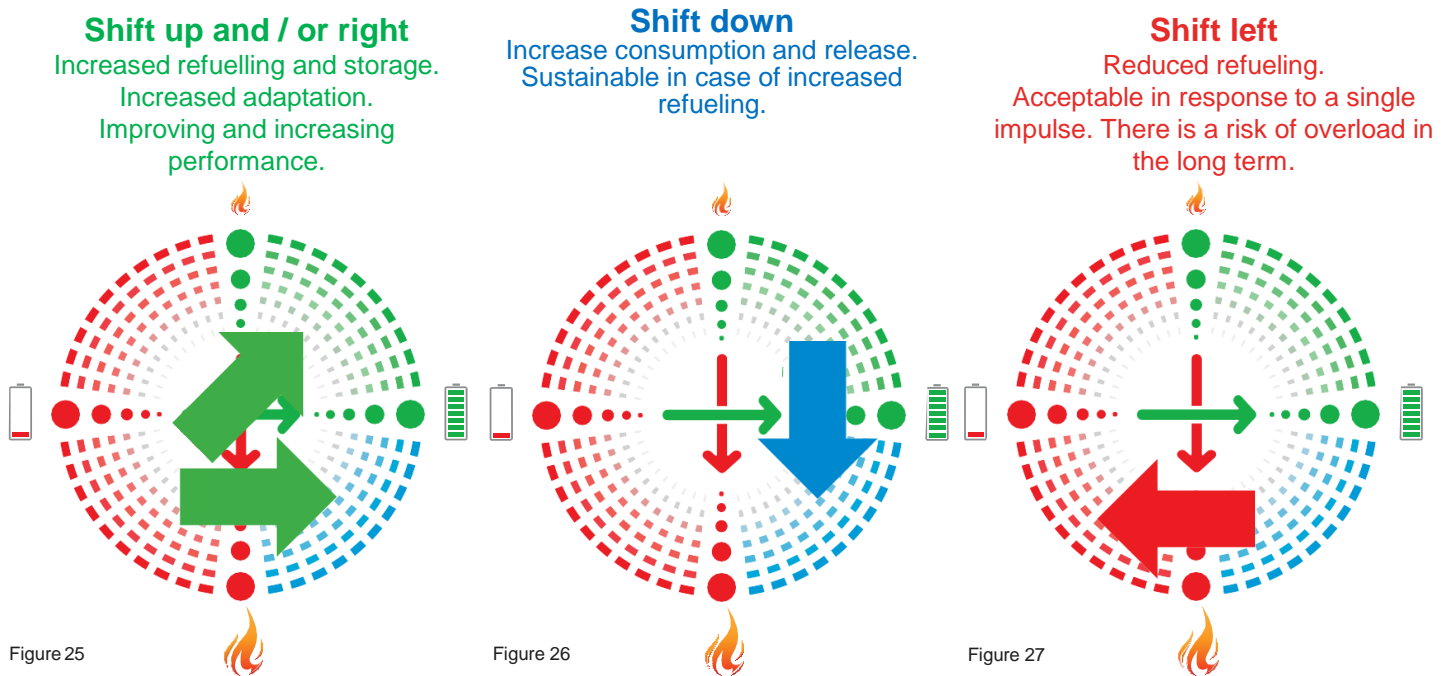


Figure 24

For individual evaluation and the resulting adjustment of the training process, it is essential to monitor the direction and extent of the result shift in response to the previous impulses:

- Moving up and/ or right signals an increase in refueling and storage of resources, an increasing adaptation (Figure 25).
- A downward shift is a sign of increasing consumption and releasing resources, which is sustainable if the level of refueling does not decrease (Figure 26).
- Shift left/ left-down means a drop in the level of refueling, which is manifested also by a reduction of the point (decreased overall ANS activity). On a one-time basis, in response to a disproportionate impulse, this shift is acceptable. Prolonged persistence in this state indicates the need to significantly adjust the load to eliminate the risk of impending overload or health complications (Figure 27).



Interpretation of the compensation

To simplify the work with mySASY, it is also possible to control the training according to values of Current Compensation (CC) (function is described in the chapter - [Processing and displaying results](#)). Based on this assessment, a less effective or overloaded impulses/ regime is manifested by a decrease in CC value and an increased adaptation response is reflected in an increase in CC value.

50 - 95% - the organism has not yet completely equaled the previous load, or the previous load was too low to induce an optimal adaptation reaction.

95 - 115% - the organism's response is optimal for continuing the training in the previous régime.

115 - 150% - the organism is in the phase of supercompensation, which should be used for further intensive training or racing load.



mySASY application for evaluation and analysis of results:

Controlling the entire web application should be as intuitive as possible. However, due to the abundance of functions and data displayed, it requires some user experience. In case of any questions, please contact our support.

Email: support@mysasy.com,

Phone: **+420 730 541 924**.



mySASY

