



Research for Electro-smog Devices

Description

Protection from EMF (electromagnetic frequencies) using the Regumed Protector

Report on biophysical testing of the REGUMED Protector device and its protective effect when exposed to electromagnetic radiation emitted eg. by Wi-Fi or WLAN (Wireless Local Area Network) technologies, mobile radio transmitters, mobile phones, smartphones, wireless DECT phones, and geopathogenic zones

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1. Background information

Versatile use of modern technology is not possible without electricity and high-frequency electromagnetic radiation. There has been developed a number of devices for the production and distribution of electric energy: from power plants, transformer stations, power lines and medium-voltage power cables to the wiring in our houses. This low-frequency grid to the power supply generates electric and magnetic fields, which means that it represents a significant part of the electromagnetic pollution of the environment, the so-called electrosmog. Elektrosmog is also produced by all electrical and electronic equipment.

Nowadays, wireless networks are widely used in numerous industries, for example in manufacturing, logistics and medical technology. We use these technologies daily in private life, too; for many people, mobile end-devices such as mobile phones or PDAs have become indispensable. Wireless phones, Bluetooth, Wireless LAN, remote controlled garage door opening, equipment and machinery – all of these technologies are based on wireless communication systems. It can be assumed that in future, the wireless networking technology will be used even more widely and in new areas.

Powerful transmitters of mobile and television signals, radars, military surveillances, data transmission, directional transmission etc. emit electromagnetic waves – high frequency electrosmog that cannot be avoided.

At the end of May 2011, the World Health Organization classified high frequency radiation as “possibly carcinogenic”. This was the conclusion of the expert group of the International Agency for Research on Cancer (IARC) in Lyon. There were 31 experts from 14 countries evaluating “almost all the available scientific evidence.”

Exposure to radio frequency electromagnetic radiation induces, among others, poor quality of sleep, loss of vitality, headaches, impaired concentration, tinnitus, decreased mental and physical endurance and a higher burden on the cardiovascular system. The list prepared in accordance with international researches extends to serious diseases such as increased risk of cancer, genetic modification and changes in the immune and central nervous system.

In towns and cities, the technically generated level of communication radio signal radiation, that is typical nowadays, is from ten million up to billion times higher than the natural electromagnetic relict radiation which is necessary for life.

This development leads to the fact that we are all constantly exposed to electromagnetic pollution; people have never had to face this pollution in such a form and intensity. The hazards of this new type of environmental burden lie in the fact that the information system of the human body operates with natural electromagnetic signals – however, these energy levels are million times lower! The excessive incidence of technical electromagnetic fields and beams leads to numerous nature, animal and human biological disorders, caused by penetration of technical electromagnetic signals in the natural environment and in the information systems of our cells and body organs.

Each person reacts to electromagnetic load in our surroundings differently. On one hand, the response depends on the intensity and length of exposure to electromagnetic frequencies and modulation, resulting in the unique combination of effects; on the other hand, it also depends on the disposition of the individual, the individual history and current state of health, the immune system, the body's ability to compensate for ambient pollution and its resistance to external influences.

Despite numerous studies documenting health risks of electromagnetic radiation, we probably already cannot imagine today's society without electronic and electrical devices, such as mobile phones and mobile signal transmitters. It is therefore understandable that people are trying to come up with some solution of how to protect us against the effects of electromagnetic radiation

The aim of the following testing was to find out whether and to what extent the REGUMED Protector device is suitable for protection against harmful effects of electromagnetic radiation and electrosmog.

2. Testing of the REGUMED Protector device and its protective effect when exposed to electromagnetic radiation, eg. from mobile signal transmitters, Wi-Fi and WLAN technologies, mobile phones, smartphones, wireless phones, and geopathogenic zones

The protective effect of the REGUMED Protector device when exposed to harmful high frequency electromagnetic radiation, electrosmog and geopathogenic zones (as described below) was tested on ten test persons, both men and women, in different test situations. As the test persons were chosen only people who claimed to be sensitive to electrosmog.

Justification of the choice of heart rate variability measurement as a diagnostic system for the testing

Autonomic nervous system dynamically controls internal balance of our body, depending on the actual external and internal level of pollution. Our heart responds both to the conscious and unconscious stimuli, for example to electromagnetic radiation entering into our vegetative nervous system from the environment. Healthy person's heart rate variability is based primarily on the BICOM optima®I interplay between the sympathetic and parasympathetic branches of the autonomic nervous system.

Our heart is a source of electromagnetic energy (2.4 watts); its vibrations can be measured even in the smallest cell of the human organism. All the rhythms of life are reflected in heart rate. If these rhythms are coherent and in harmony, we feel good. The main measurable quantity of this information chain is heart rate variability (HRV) as the most important parameter for accurate assessment of mental well-being and vitality.

Heart rate variability refers to the ability of an organism (of humans or mammals) to change the frequency of cardiac rhythm. Even when relaxing, we can monitor spontaneous changes of time between two heartbeats. Health organism uses autonomic physiological regulation and is constantly adapting our heart beats to our current needs. Therefore, physical exertion or mental stress usually result in increased heart rate, while the release of tension and relaxation usually lead to decreased heart rate. Greater strain adaptability manifests itself as increased heart rate variability. In chronic stress, both capacities are more or less limited and reduced due to long-term extreme stress.

Negative or harmful effects caused e.g. by high frequency mobile radiation, low frequency electrosmog or geopathogenic zones, are usually identified as vital threat by our nervous system. When our body suffers from the interfering fields for a long time, these stress parameters cannot be returned back to normal values, which leads to a reduction in heart rate variability, ie. to reduced ability of our organism to adapt to changing external influences. Knowing all of this, we can demonstrate the protective effect of a product or a measure based on measurements of heart rate variability.

Spontaneous stimulation of the autonomic nervous system by electromagnetic radiation and geopathogenic zones is usually well below the threshold of body perception. But sensitive technique of modern measurement systems of biofeedback is able to capture even the smallest response of the autonomic nervous system, especially on the basis of heart rate variability parameters. In scientific research, the repeatability of the results of modern measuring instruments of heart rate variability was confirmed by measurements at short intervals.

Therefore, a method of variability heart beat measurement was chosen as a diagnostic system, by which it was examined whether the energy information field of the REGUMED Protector device improves probands' heart rate variability, and whether it can contribute to the individual adaptability of biological system.

When exposed to harmful high frequency electromagnetic radiation, electrosmog and geopathogenic zones, using the REGUMED Protector device should thus lead to a demonstrable improvement in heart rate variability, have a positive effect on circulation and help autonomic nervous system to maintain internal balance.

3. Biophysical testing of the energy performance of the REGUMED Protector device using biofeedback Stress Pilot Plus measurement system.

In this study, we recorded changes in physiological signals of proband groups, such as the feedback of their autonomic nervous system to bioenergy information sent by the REGUMED Protector device, based on measurements of heart rate variability. The measurement results were analysed by statistical methods.

Optimum heart rate regulation (example)



In case of a well-functioning neurovegetative regulation, breath and heartbeat adjust to each other during this measurement of heart rate variability. Heart rate curve is a sinusoid in the rhythm of breathing. The greater is the deviation of heart rate in the breathing cycle (respiratory sinus arrhythmia, RSA), the better usually is neurovegetative regulation.

Autogenous nervous system function is that it adapts the basic regulation of biological systems to the changing parameters of the internal and external strain. Health, well-being and functional vitality are inextricably linked to processes of regulation and the rhythms of life, which are reflected in heart rate.

Limited heart rate regulation (example)



Disorders of the neurovegetative regulation manifest as little or no heart rate adaptation to current phase of respiration in the measurement. Heart rate in the breathing cycle changes only slightly or does not change at all. Skill of regulation also decreases with age. The result of measurement of heart rate variability will therefore also take into account the age groups.

3.1. Selection of the test subjects and measurement protocol

10 test persons of different sex were chosen to participate in this biophysical testing; the test persons are exposed to electromagnetic radiation in open-plan offices and geopathogenic zones on a level that is usual today. The age group of probands was between 19 and 67 years. Subjects 1, 2, 3, 4, 7, 8 and 10 undertook measurement of heart rate variability at their workplaces in the open-plan offices. Subjects 5, 6 and 9 were family members, who used the REGUMED Protector device at home at night during the four-week test phase. In the first phase, heart rate variability was measured always without the REGUMED Protector device, and then again after a few days of using the REGUMED Protector device.

3.2. Selected device for measurement

The biophysical testing of the energy effects of the REGUMED Protector device was provided by the Stress Pilot Plus system – the system of biofeedback measurement. For the statistical evaluation were used only values from the last minute of each period of time. The test results were compared with standard values, which were obtained for each age group and gender in a comparable reference group.

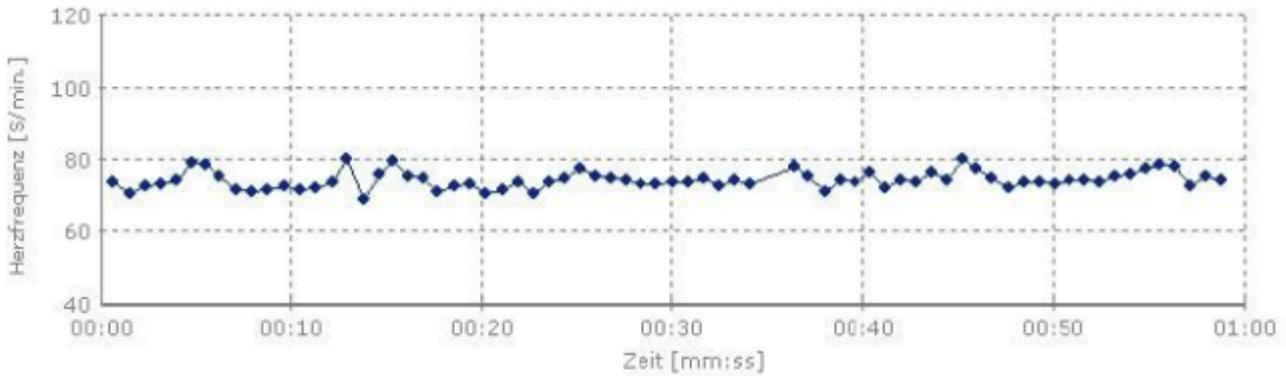
Different ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones is expressed as a percentage ratio of values that are worse than values of the reference group. Thus, 0% is the lowest value and 100% is the theoretical maximum value of the test subjects' ability to regulate heart rate and adapt the autonomic nervous system to the health burden of electrosmog and geopathogenic zones.

Key: RSA = respiratory sinus arrhythmia that describes the variation in heart rate depending on breathing. During inhalation, the heart rate increases, and during exhalation, it decreases again.

4. Measurement results

Test person 1

Regulation of heart rate without the REGUMED Protector device

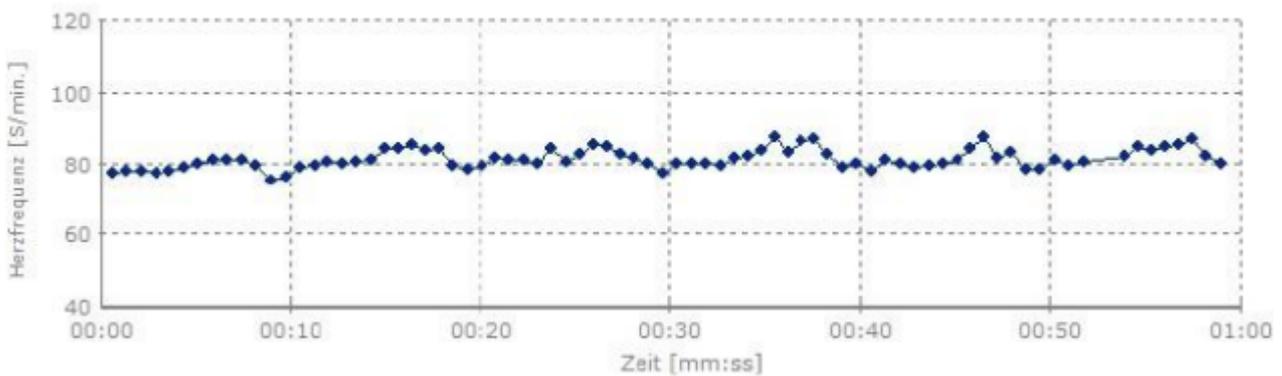


Measurement results without the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	8.42	t/min	31.18%

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 31.18% of the theoretical maximum value of 100%.

Heart rate regulation after 5 days of using the REGUMED Protector device



Measurement results after 5 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	8.39	t/min	31.00 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 31.00 % of the theoretical maximum value of 100%

Heart rate regulation after 9 days of using the REGUMED Protector device

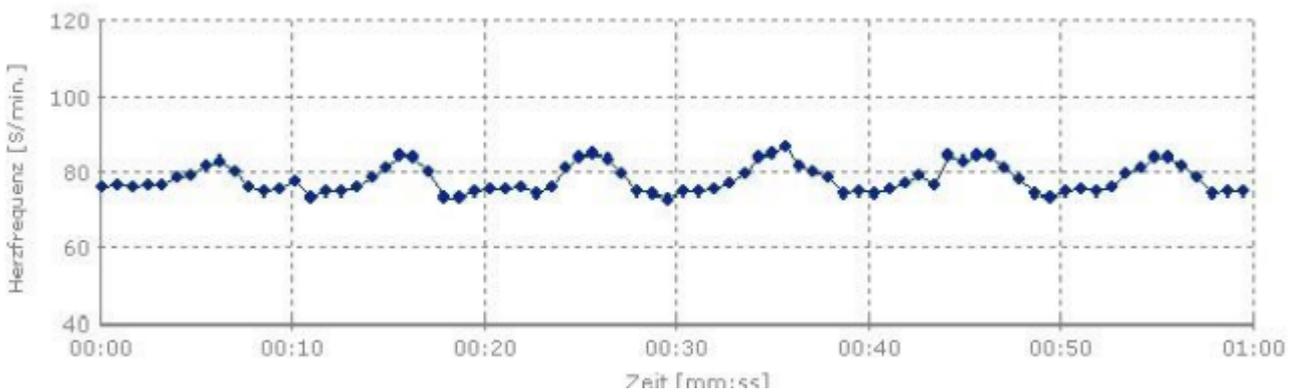


Measurement results after 9 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	10.62	t/min	33.77 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 33.77 % of the theoretical maximum value of 100%.

Heart rate regulation after 14 days of using the REGUMED Protector device

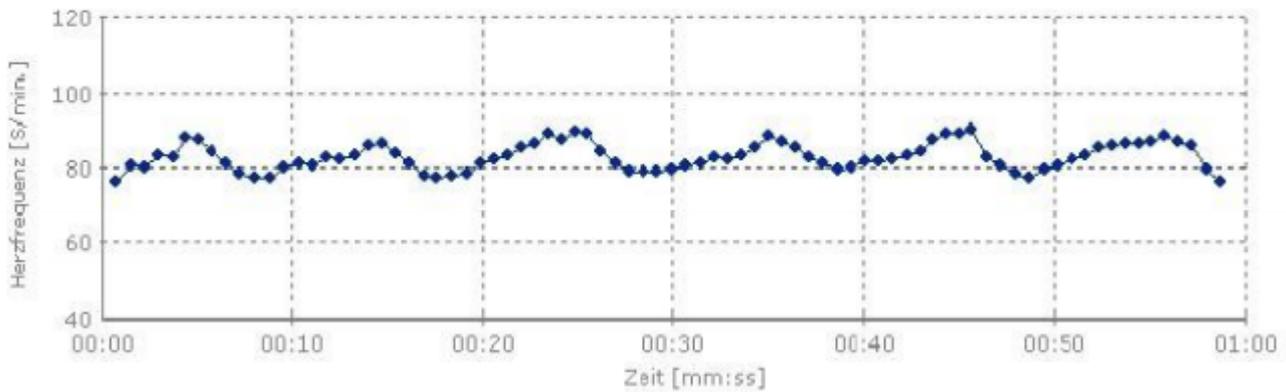


Measurement results after 14 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	11.60	t/min	34.91 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 34.91 % of the theoretical maximum value of 100%.

Heart rate regulation after 20 days of using the REGUMED Protector device



Measurement results after 20 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	14.38	t/min	41.03 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 41.03 % of the theoretical maximum value of 100%.

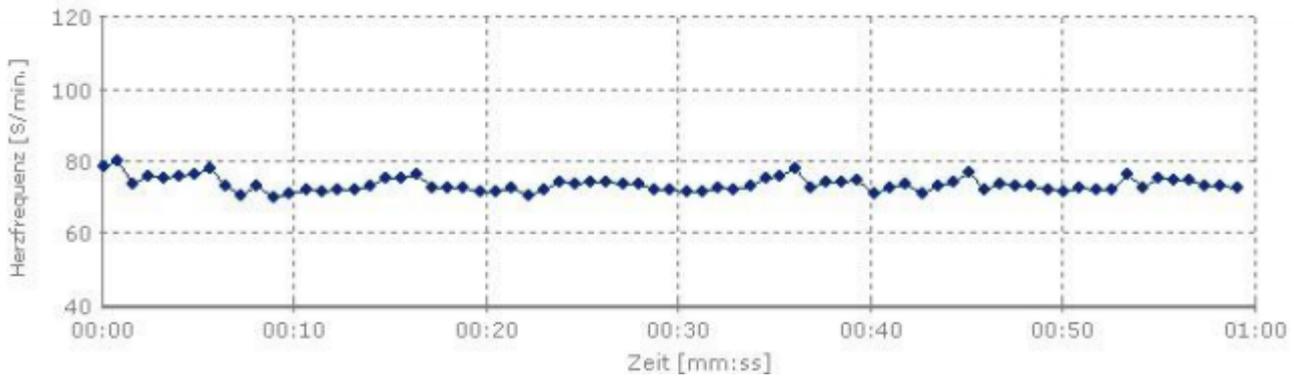
Summary of test results: In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

- without using the REGUMED Protector device: 31.18 %
- after 5 days of using the REGUMED Protector device: 31.00 %
- after 9 days of using the REGUMED Protector device: 33.77 %
- after 14 days of using the REGUMED Protector device: 34.91 %
- after 20 days of using the REGUMED Protector device: 41.03 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 2

Regulation of heart rate without the REGUMED Protector device



Measurement results without the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	5.94	t/min	17.32 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 17.32 % of the theoretical maximum value of 100%.

Heart rate regulation after 4 days of using the REGUMED Protector device

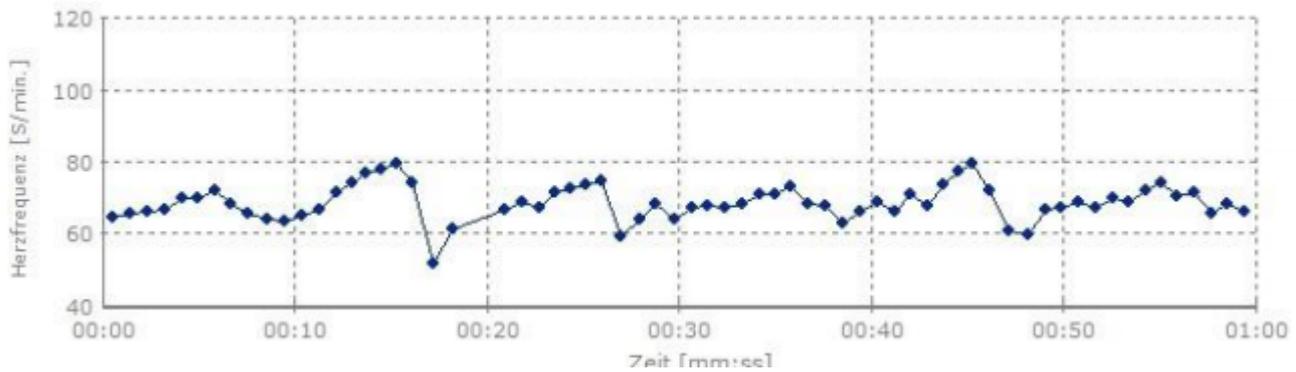


Measurement results after 4 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	6.72	t/min	18.45 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 18.45 % of the theoretical maximum value of 100%.

Heart rate regulation after 12 days of using the REGUMED Protector device

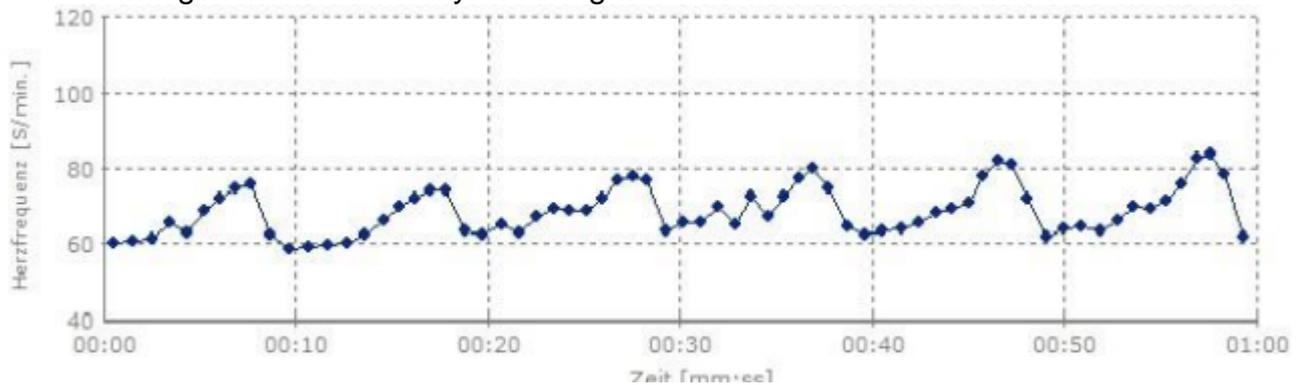


Measurement results after 12 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	15.09	t/min	32.95 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 32.95 % of the theoretical maximum value of 100%.

Heart rate regulation after 20 days of using the REGUMED Protector device



Measurement results after 20 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	25.83	t/min	48.25 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 48.25 % of the theoretical maximum value of 100%.

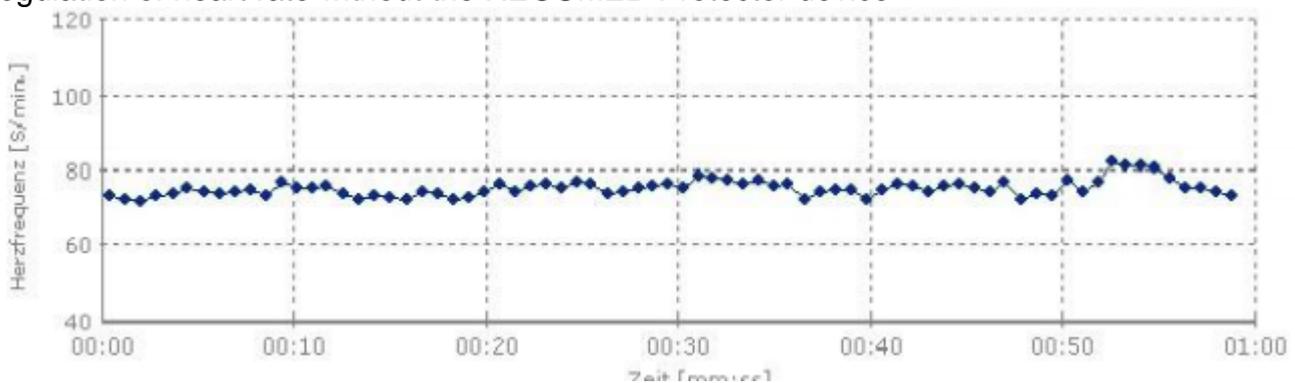
Summary of test results: In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 17.32 %
 after 4 days of using the REGUMED Protector device: 18.45 %
 after 12 days of using the REGUMED Protector device: 32.95 %
 after 20 days of using the REGUMED Protector device: 48.25 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 3

Regulation of heart rate without the REGUMED Protector device

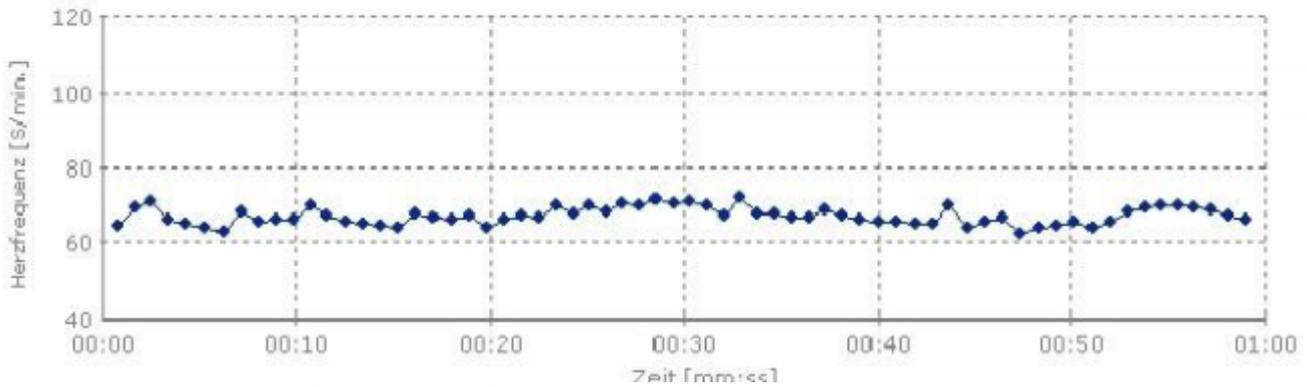


Measurement results without the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	5.19	t/min	5.68 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 5.68 % of the theoretical maximum value of 100%.

Heart rate regulation after 4 days of using the REGUMED Protector device

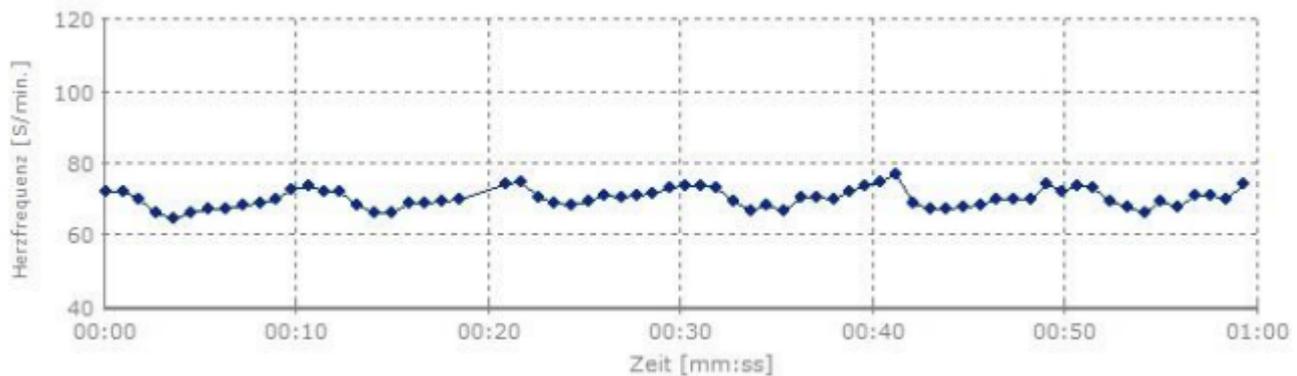


Measurement results after 4 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	6.17	t/min	7.22 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 7.22 % of the theoretical maximum value of 100%.

Heart rate regulation after 9 days of using the REGUMED Protector device

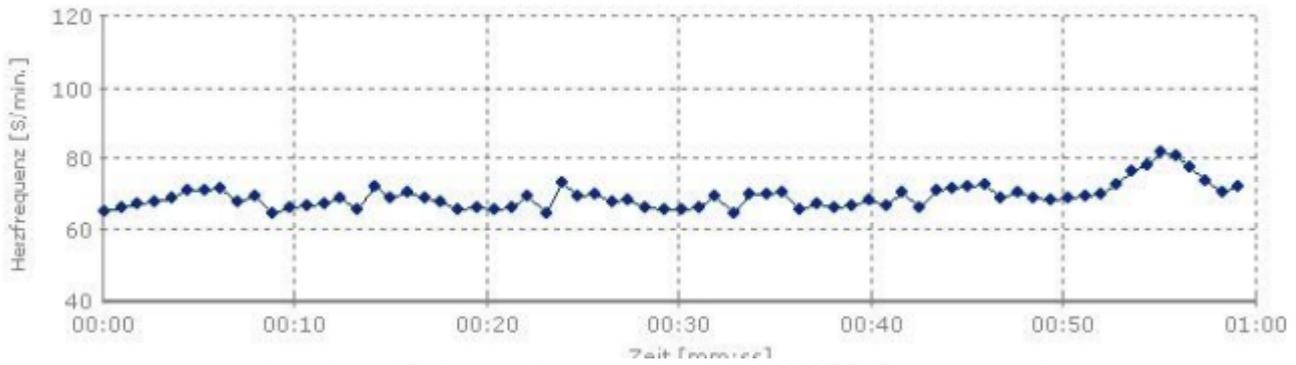


Measurement results after 9 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	7.62	t/min	9.10 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 9.10 % of the theoretical maximum value of 100%.

Heart rate regulation after 15 days of using the REGUMED Protector device



Measurement results after 15 days of using the REGUMED Protector device

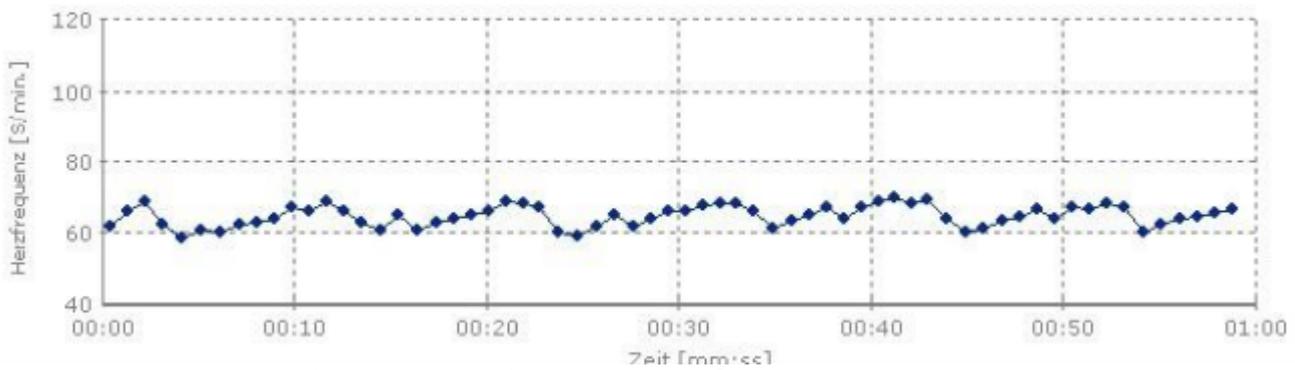
Parameter Value Unit Rank/age

Respiratory sinus arrhythmia (RSA) 6.65 t/ min 8.59%

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic

nervous system to the health burden of electrosmog and geopathogenic zones reached 8.59 % of the theoretical maximum value of 100%.

Heart rate regulation after 17 days of using the REGUMED Protector device

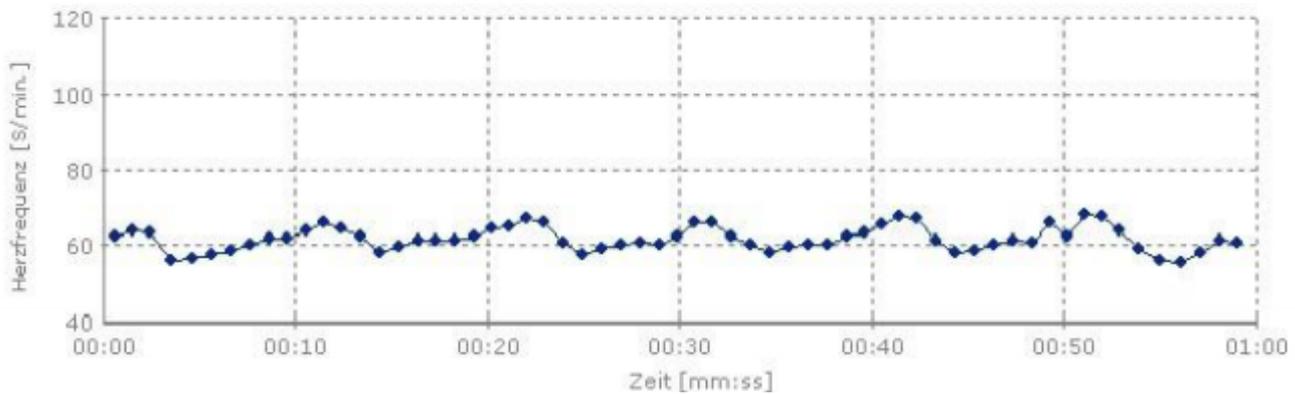


Measurement results after 17 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	9.33	t/min	13.88 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 13.88 % of the theoretical maximum value of 100%.

Heart rate regulation after 20 days of using the REGUMED Protector device



Measurement results after 20 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	9.37	t/min	14.10 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 14.10 % of the theoretical maximum value of 100%.

Summary of test results: In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

5.68% without using the REGUMED

Protector device:

after 4 days of using the REGUMED Protector device: 7.22 %

after 9 days of using the REGUMED Protector device: 9.10 %

after 15 days of using the REGUMED Protector device: 8.59 %

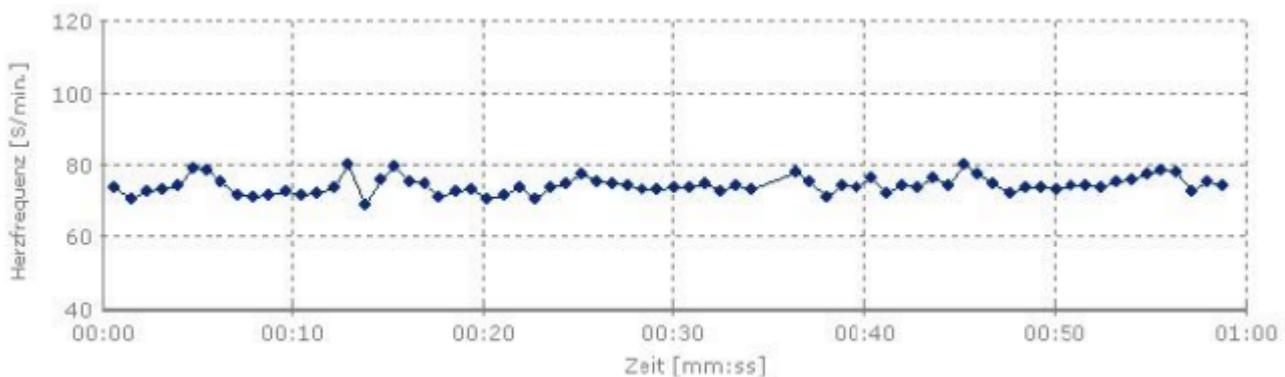
after 17 days of using the REGUMED Protector device: 13.88 %

after 20 days of using the REGUMED Protector device: 14.10 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 4

Regulation of heart rate without the REGUMED Protector device

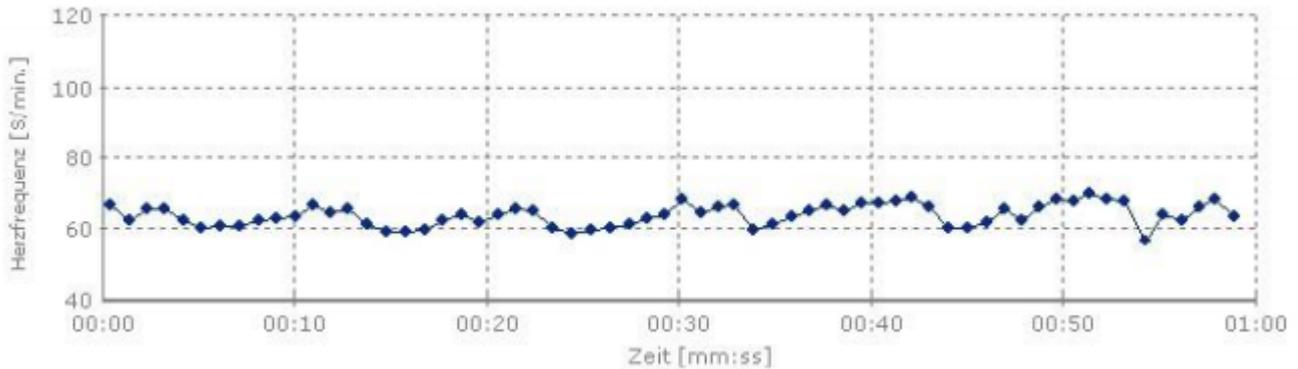


Measurement results without the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	6.62	t/min	28.29 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 28.29 % of the theoretical maximum value of 100%.

Heart rate regulation after 8 days of using the REGUMED Protector device

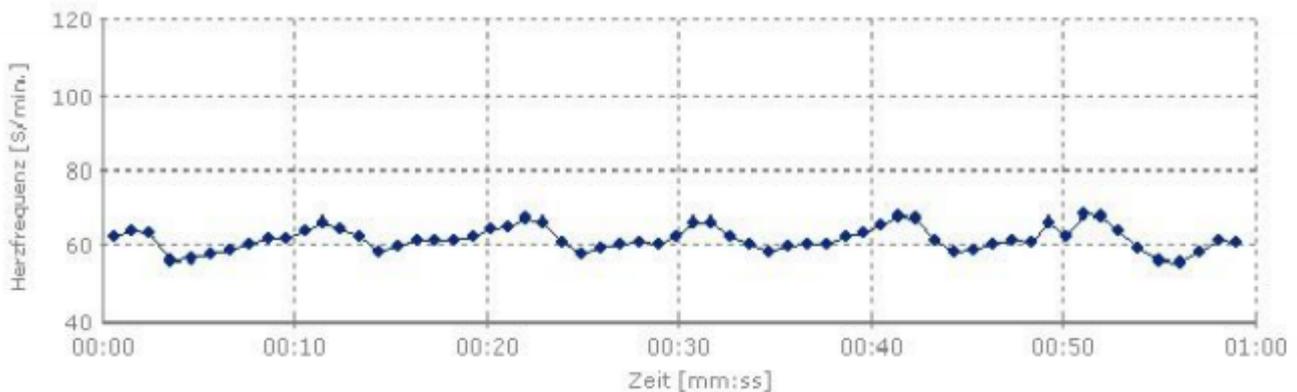


Measurement results after 8 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	8.34	t/min	38.80 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 38.80 % of the theoretical maximum value of 100%.

Heart rate regulation after 20 days of using the REGUMED Protector device



Measurement results after 20 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	9.31	t/min	43.24 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to

adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 43.24 % of the theoretical maximum value of 100%.

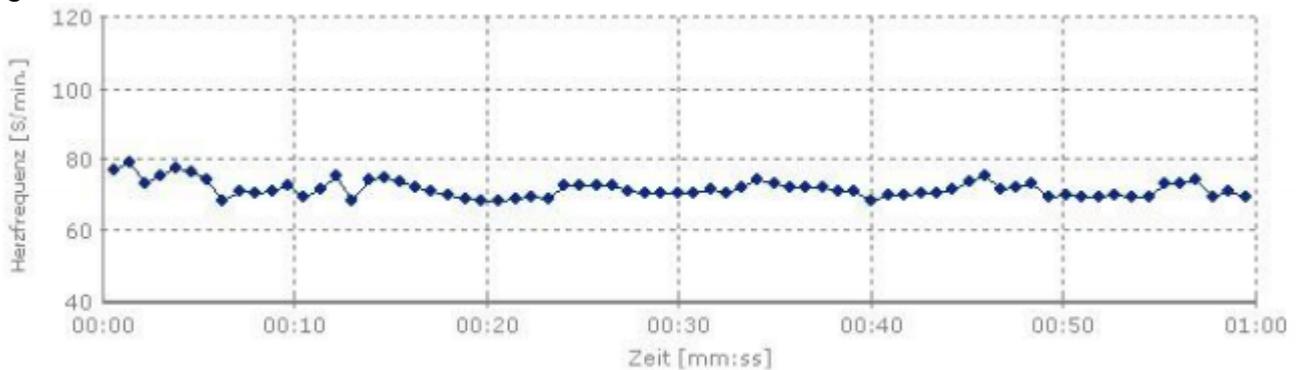
Summary of test results: In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

- without using the REGUMED Protector device: 28.29 %
- after 8 days of using the REGUMED Protector device: 38.80 %
- after 20 days of using the REGUMED Protector device: 43.24 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 5

Regulation of heart rate without the REGUMED Protector device



Measurement results without the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	6.61	t/min	25.45 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 25.45 % of the theoretical maximum value of 100%.

Heart rate regulation after 5 days of using the REGUMED Protector device



Measurement results after 5 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	7.08	t/min	26.31 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 26.31 % of the theoretical maximum value of 100%.

Heart rate regulation after 10 days of using the REGUMED Protector device

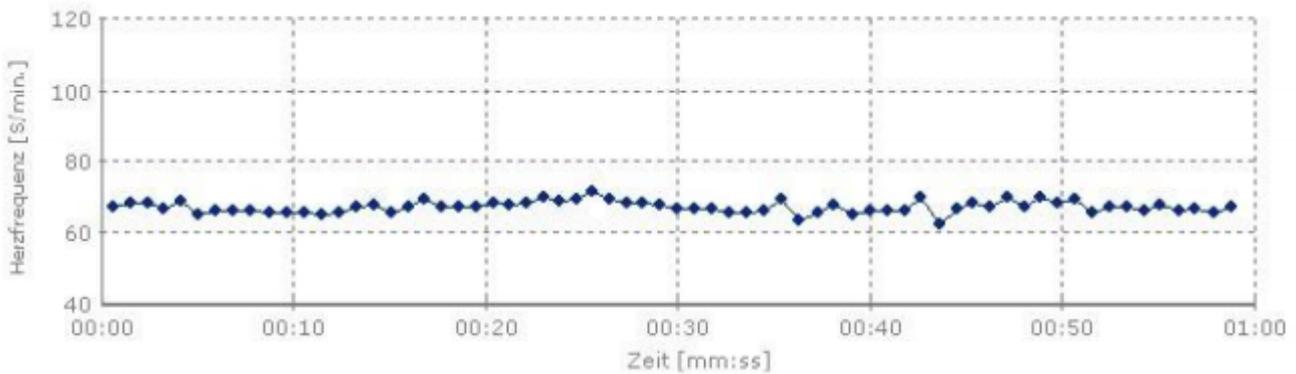


Measurement results after 10 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	3.35	t/min	21.17 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 21.17 % of the theoretical maximum value of 100%.

Heart rate regulation after 17 days of using the REGUMED Protector device

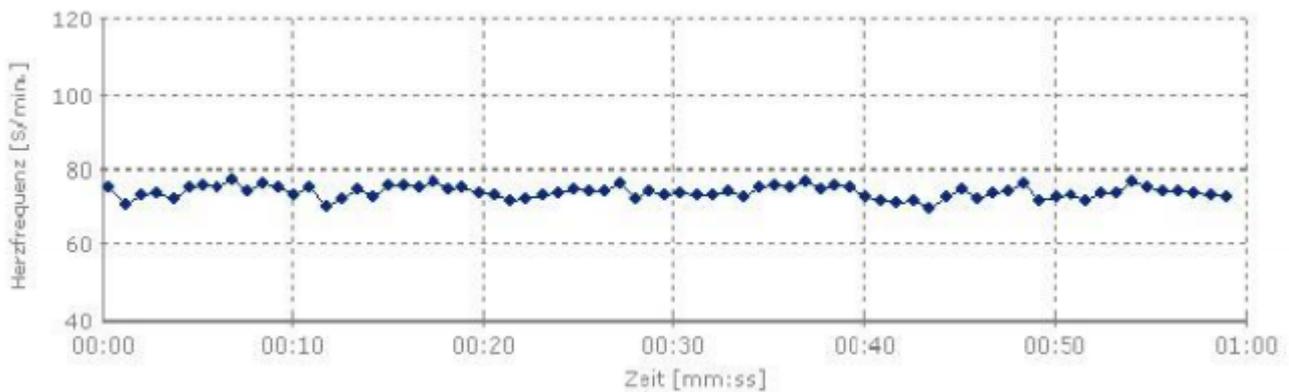


Measurement results after 17 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	3.97	t/min	22.12 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 22.12 % of the theoretical maximum value of 100%.

Heart rate regulation after 28 days of using the REGUMED Protector device



Measurement results after 28 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	5.62	t/min	24.34 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 24.34 % of the theoretical maximum value of 100%.

Summary of test results: In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

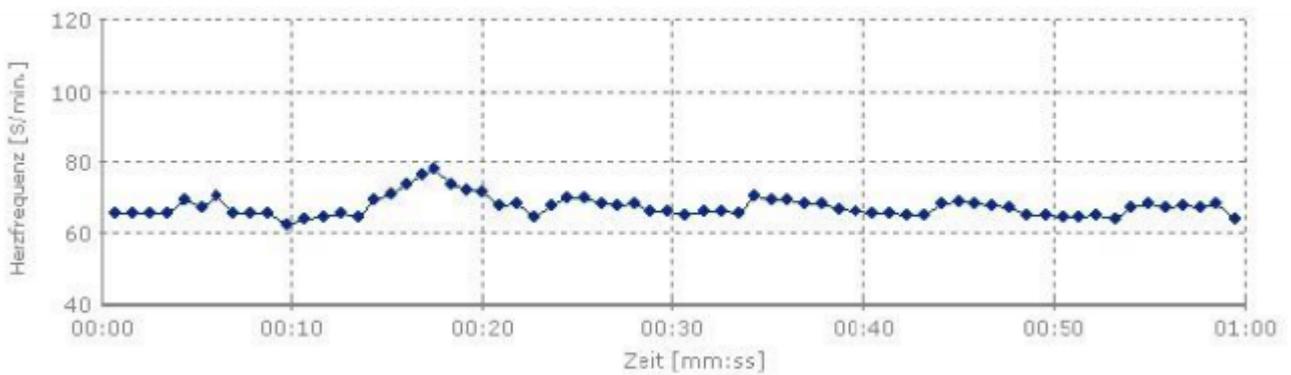
- without using the REGUMED Protector device: 25.45 %
- after 5 days of using the REGUMED Protector device: 26.31 %

after 10 days of using the REGUMED Protector device: 21.17 %
 after 17 days of using the REGUMED Protector device: 22.12 %
 after 28 days of using the REGUMED Protector device: 24.34 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to no permanent improvement in heart rate variability.

Test person 6

Regulation of heart rate without the REGUMED Protector device

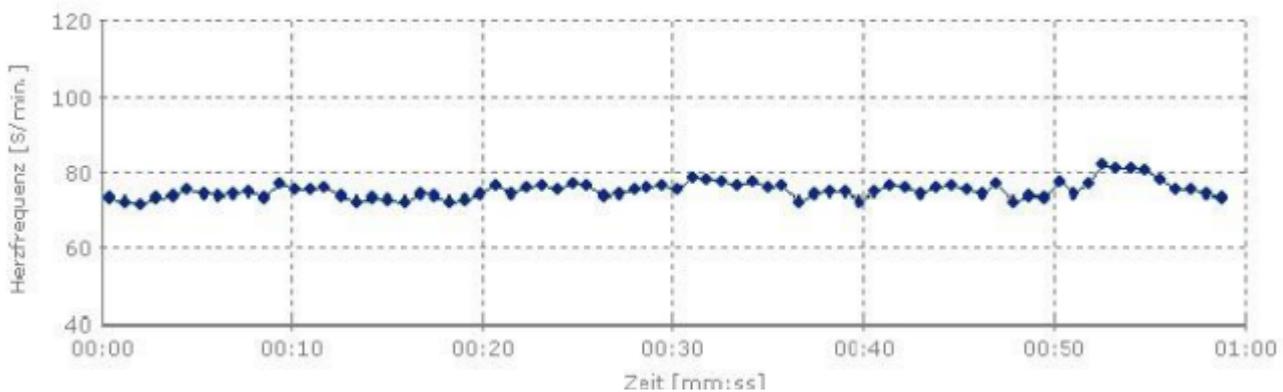


Measurement results without the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	6.75	t/min	29.09 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 29.09 % of the theoretical maximum value of 100%.

Heart rate regulation after 2 days of using the REGUMED Protector device



Measurement results after 2 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	7.72	t/min	30.38 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 30.38 % of the theoretical maximum value of 100%.

Heart rate regulation after 5 days of using the REGUMED Protector device

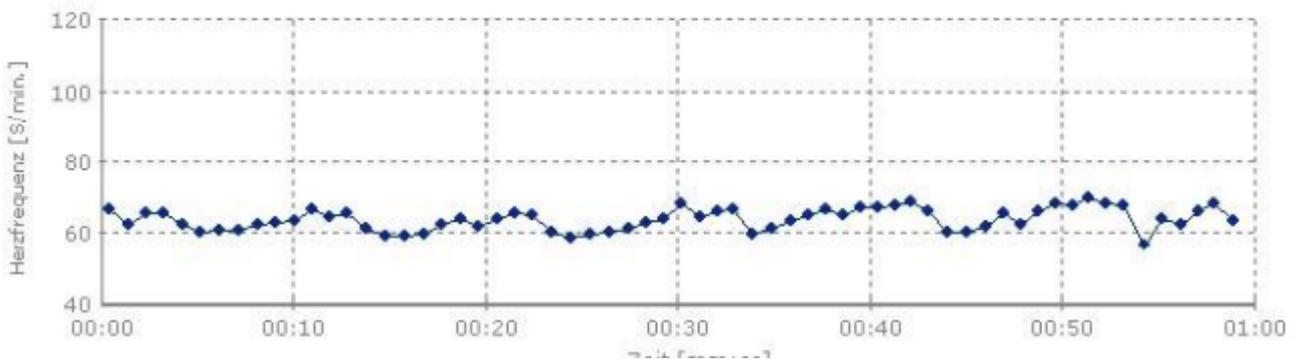


Measurement results after 5 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	6.63	t/min	28.90 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 28.90 % of the theoretical maximum value of 100%.

Heart rate regulation after 15 days of using the REGUMED Protector device

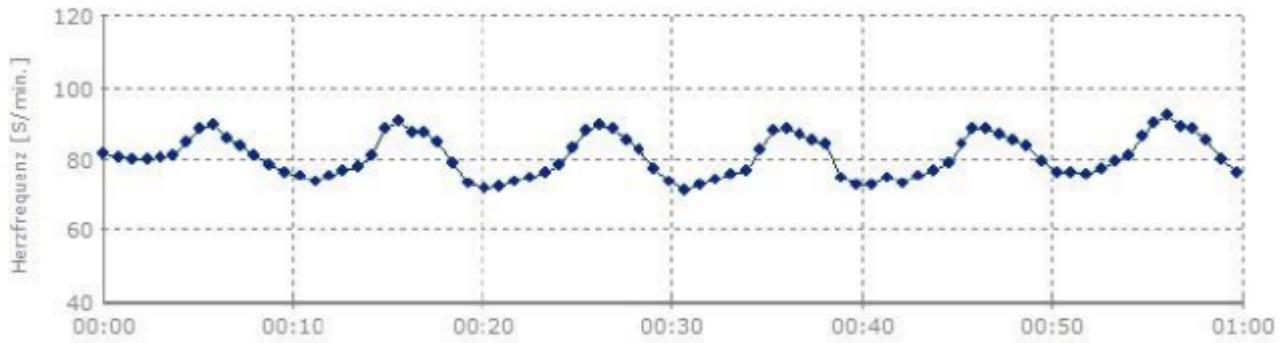


Measurement results after 15 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	8.69	t/min	32.08 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 32.08 % of the theoretical maximum value of 100%.

Heart rate regulation after 28 days of using the REGUMED Protector device



Measurement results after 28 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	17.41	t/min	37.59 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 48.55 % of the theoretical maximum value of 100%.

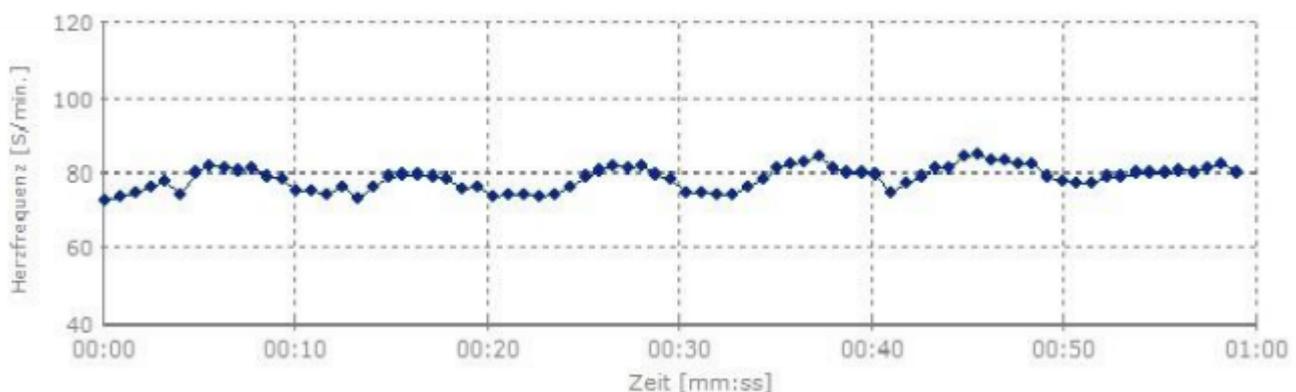
Summary of test results: In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

- without using the REGUMED Protector device: 29.09 %
- after 2 days of using the REGUMED Protector device: 30.38 %
- after 5 days of using the REGUMED Protector device: 28.90 %
- after 15 days of using the REGUMED Protector device: 32.08 %
- after 28 days of using the REGUMED Protector device: 37.59 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 7

Regulation of heart rate without the REGUMED Protector device

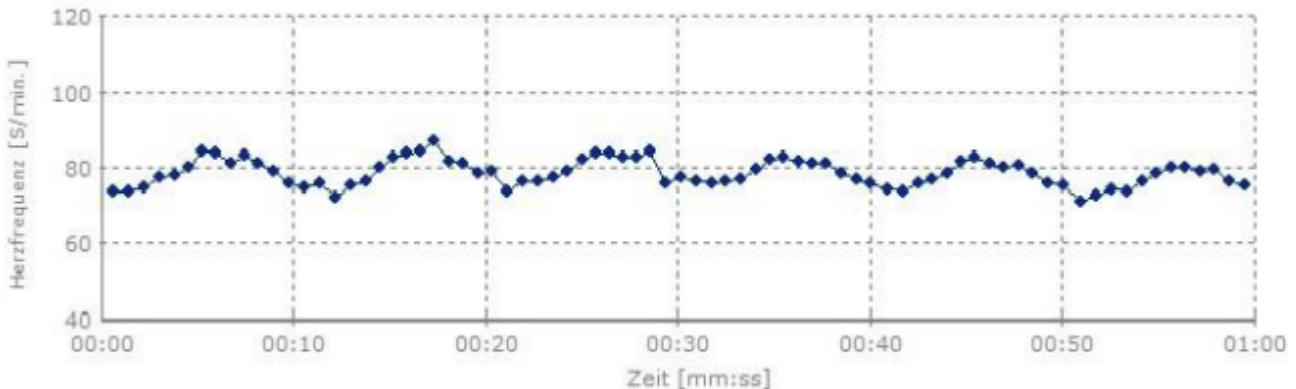


Measurement results without the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	9.43	t/min	31.56 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 31.56 % of the theoretical maximum value of 100%.

Heart rate regulation after 3 days of using the REGUMED Protector device

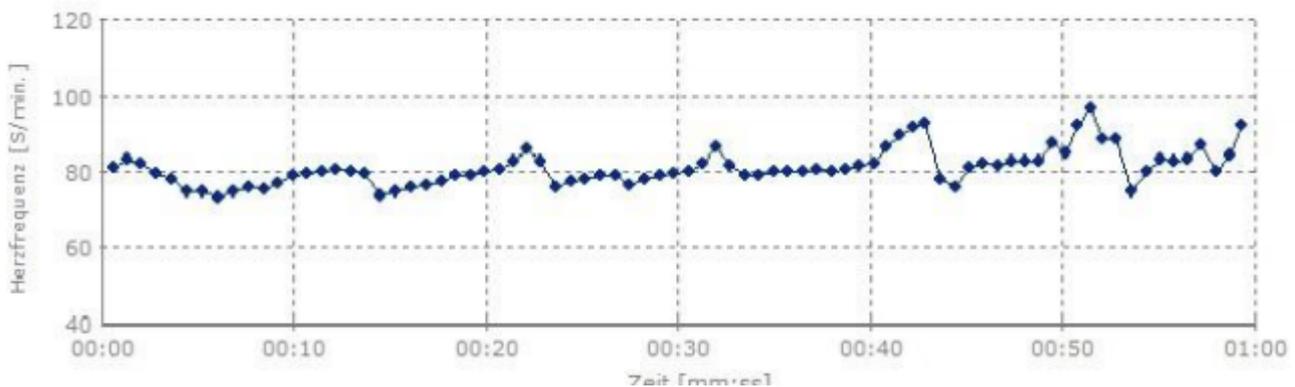


Measurement results after 3 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	10.39	t/min	34.61 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 34.61 % of the theoretical maximum value of 100%.

Heart rate regulation after 8 days of using the REGUMED Protector device



Measurement results after 8 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	10.16	t/min	32.58 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 32.58 % of the theoretical maximum value of 100%.

Heart rate regulation after 17 days of using the REGUMED Protector device



Measurement results after 17 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	13.18	t/min	36.10 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 36.10 % of the theoretical maximum value of 100%.

Heart rate regulation after 20 days of using the REGUMED Protector device



Measurement results after 20 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	12.27	t/min	35.22 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 35.22 % of the theoretical maximum value of 100%.

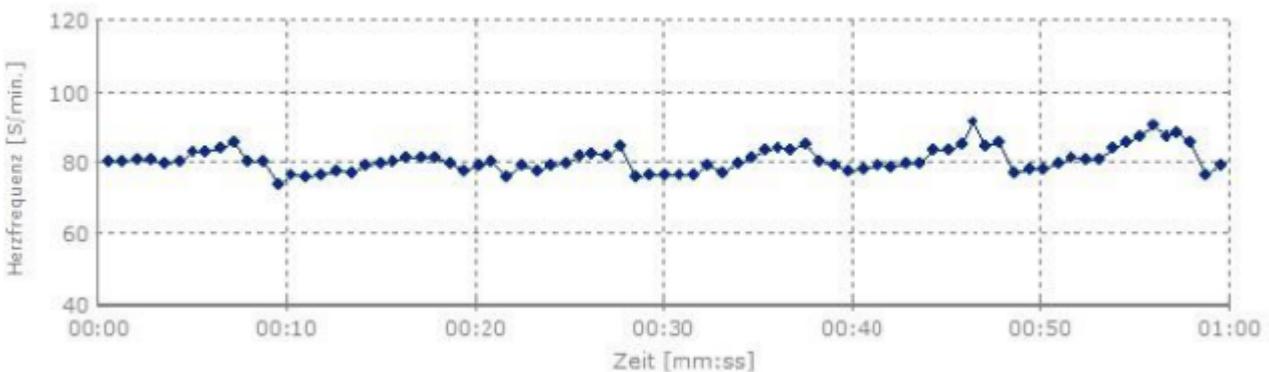
Summary of test results: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

- without using the REGUMED Protector device: 31.56 %
- after 3 days of using the REGUMED Protector device: 34.61 %
- after 8 days of using the REGUMED Protector device: 32.58 %
- after 17 days of using the REGUMED Protector device: 36.10 %
- after 20 days of using the REGUMED Protector device: 35.22 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 8

Regulation of heart rate without the REGUMED Protector device

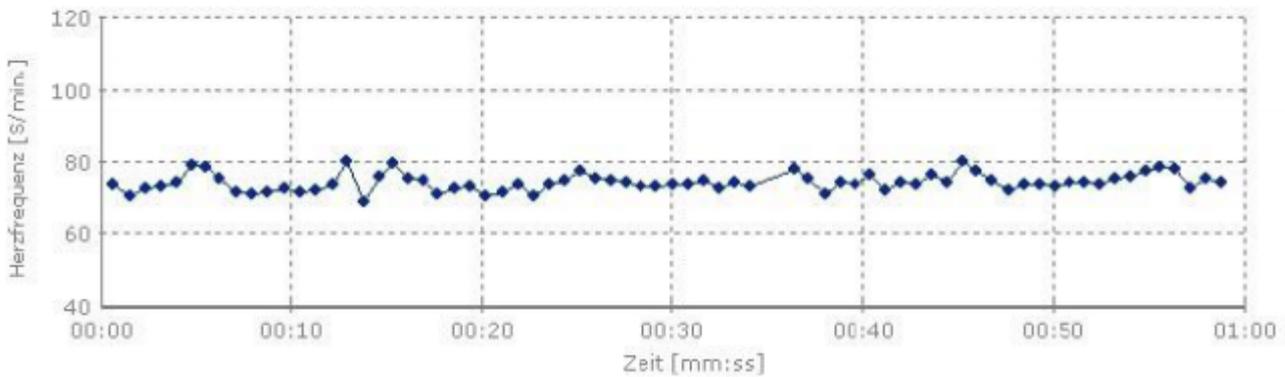


Measurement results without the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	10.19	t/min	35.81 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 35.81 % of the theoretical maximum value of 100%.

Heart rate regulation after 10 days of using the REGUMED Protector device

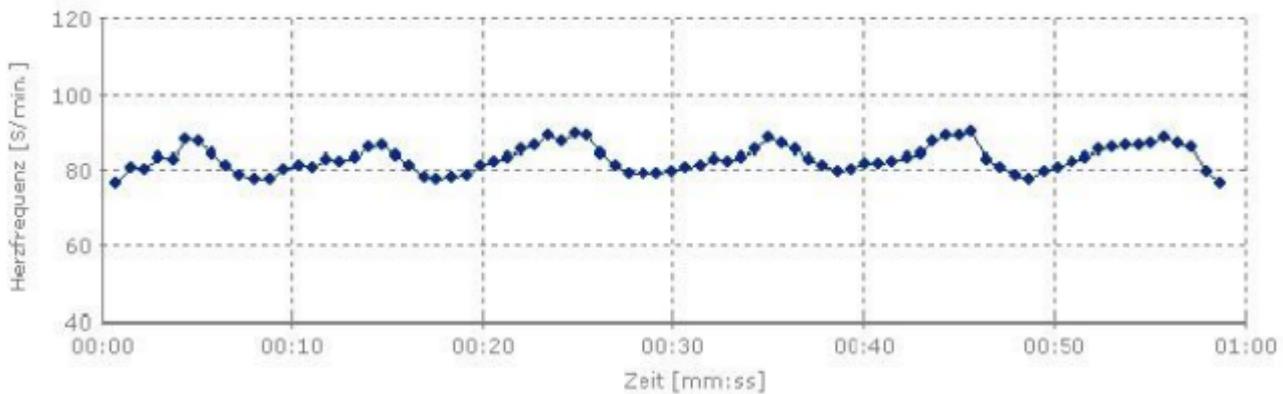


Measurement results after 10 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	8.43	t/min	24.11 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 24.11 % of the theoretical maximum value of 100%.

Heart rate regulation after 20 days of using the REGUMED Protector device



Measurement results after 20 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	11.27	t/min	36.35 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 36.35 % of the theoretical maximum value of 100%.

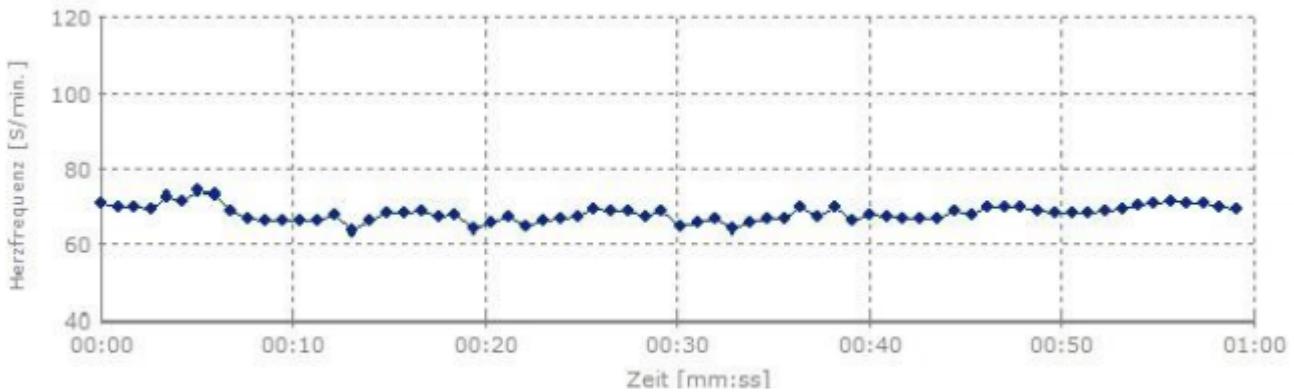
Summary of test results: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 35.81 %
 after 10 days of using the REGUMED Protector device: 24.11 %
 after 20 days of using the REGUMED Protector device: 36.35 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to slight improvement in heart rate variability of this test person.

Test person 9

Regulation of heart rate without the REGUMED Protector device

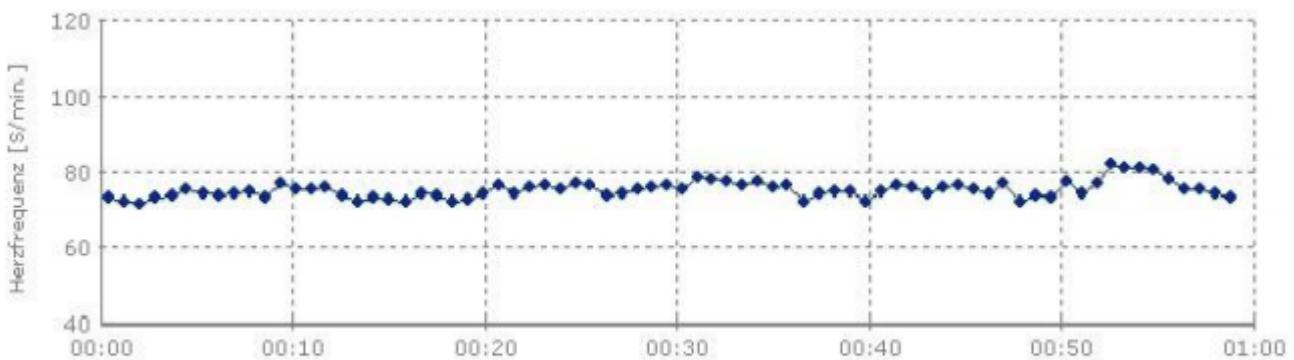


Measurement results without the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	5.19	t/min	5.65 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 5.65 % of the theoretical maximum value of 100%.

Heart rate regulation after 3 days of using the REGUMED Protector device

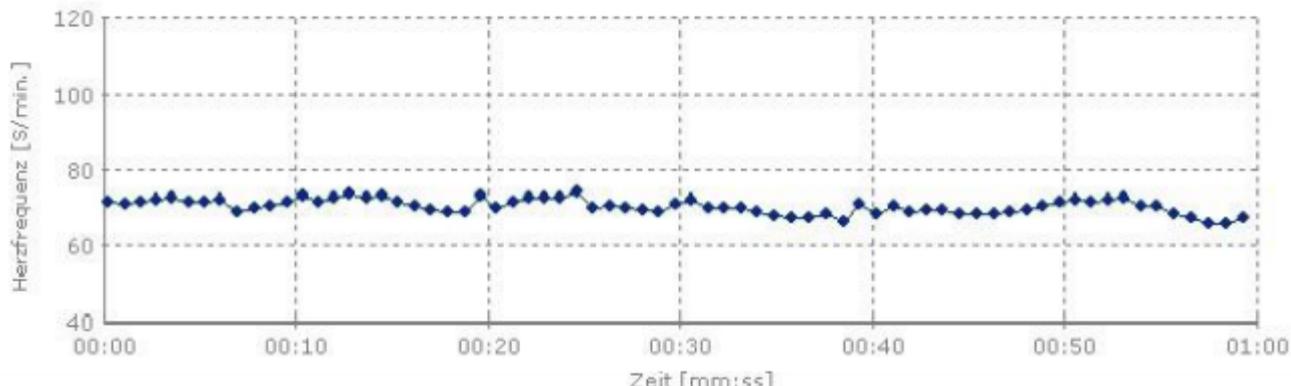


Measurement results after 3 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	5.15	t/min	5.68 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 5.68 % of the theoretical maximum value of 100%.

Heart rate regulation after 7 days of using the REGUMED Protector device

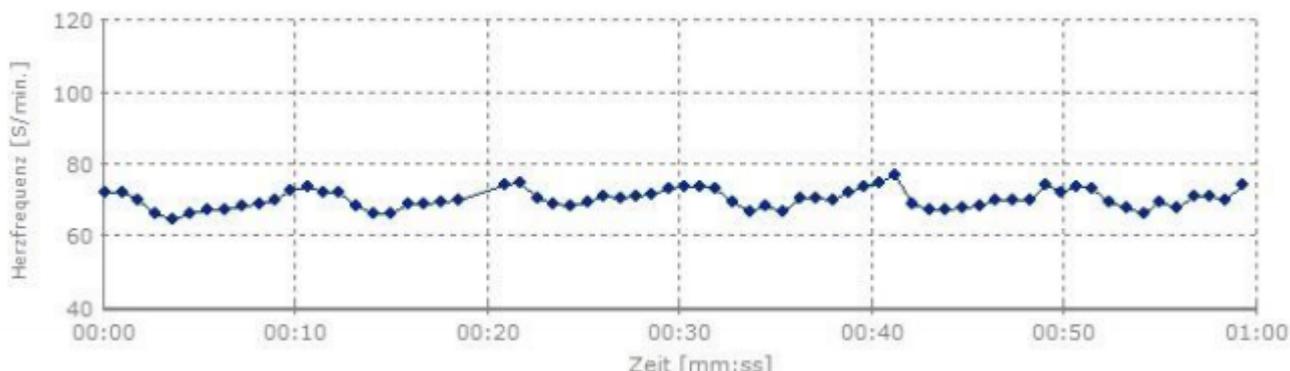


Measurement results after 7 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	5.34	t/min	5.85 %

In this test situation and in this reference group, the ability of tested people to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 5.85 % of the theoretical maximum value of 100%.

Heart rate regulation after 12 days of using the REGUMED Protector device

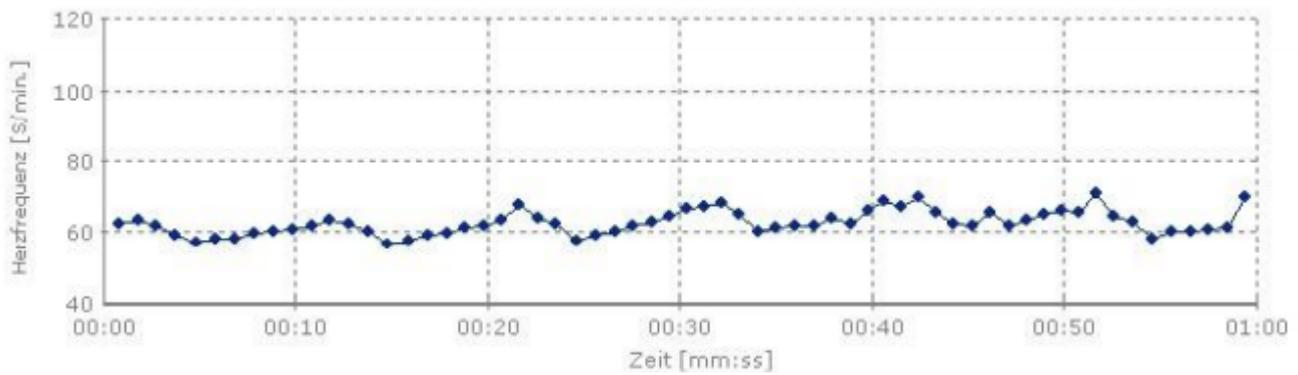


Measurement results after 12 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	7.62	t/min	8.39 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 8.39 % of the theoretical maximum value of 100%.

Heart rate regulation after 16 days of using the REGUMED Protector device



Measurement results after 16 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	8.39	t/min	11.17 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 11.17 % of the theoretical maximum value of 100%.

Heart rate regulation after 24 days of using the REGUMED Protector device

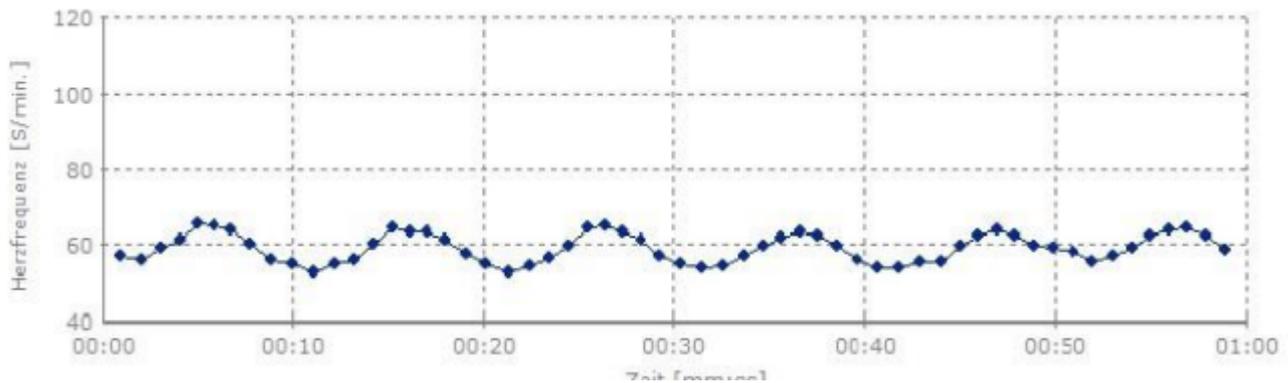


Measurement results after 24 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	9.91	t/min	14.83 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 14.83 % of the theoretical maximum value of 100%.

Heart rate regulation after 28 days of using the REGUMED Protector device



Measurement results after 28 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	10.77	t/min	16.22 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 16.22 % of the theoretical maximum value of 100%.

Summary of test results: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%:

- without the REGUMED Protector device: 5.65 %
- after 3 days of using the REGUMED Protector device: 5.68 %
- after 7 days of using the REGUMED Protector device: 5.85 %
- after 12 days of using the REGUMED Protector device: 8.39 %
- after 16 days of using the REGUMED Protector device: 11.17 %
- after 24 days of using the REGUMED Protector device: 14.38 %
- after 28 days of using the REGUMED Protector device: 16.22 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 10

Regulation of heart rate without the REGUMED Protector device

Measurement results without the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	8.66	t/min	22.25 %

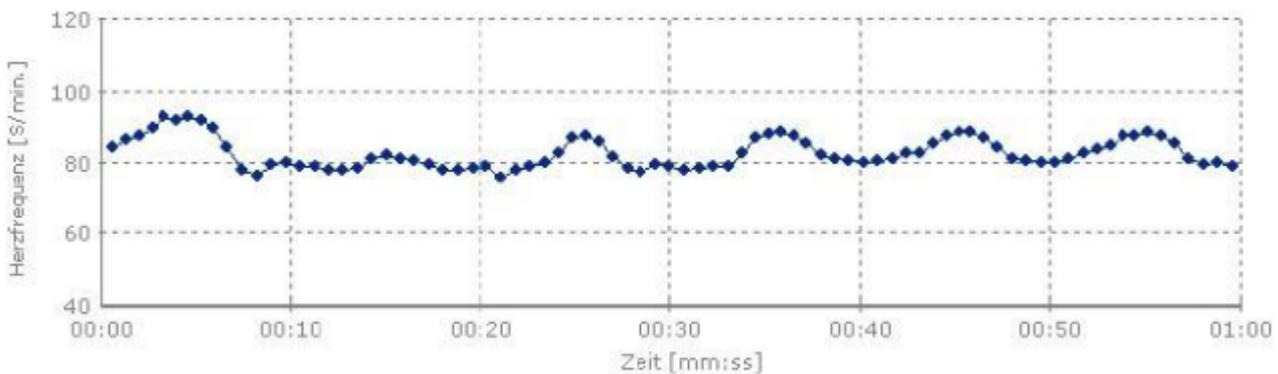
In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 22.25 % of the theoretical maximum value of 100%.

Heart rate regulation after 3 days of using the REGUMED Protector device
Measurement results after 3 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	11.18	t/min	25.33 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 25.33 % of the theoretical maximum value of 100%.

Heart rate regulation after 8 days of using the REGUMED Protector device

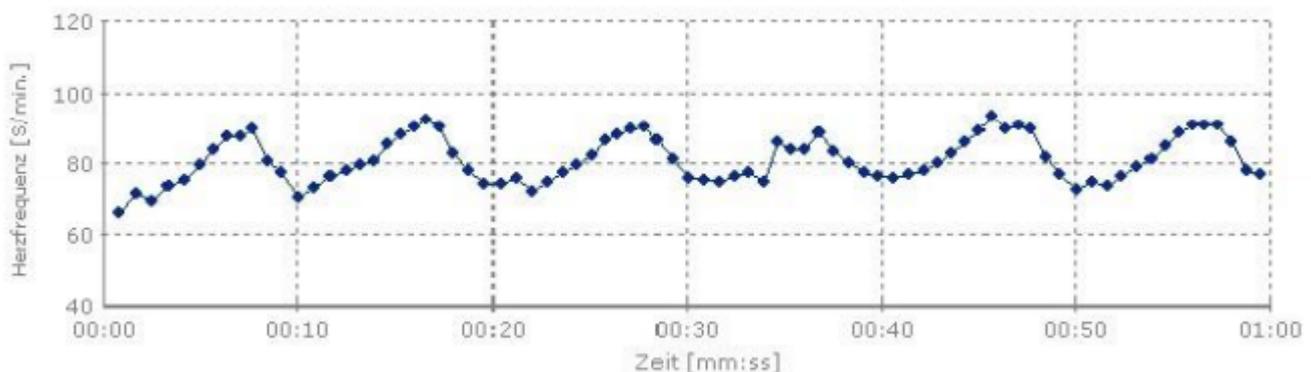


Measurement results after 8 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	10.68	t/min	24.90 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 43.24 % of the theoretical maximum value of 100%.

Heart rate regulation after 20 days of using the REGUMED Protector device



Measurement results after 20 days of using the REGUMED Protector device

Parameter	Value	Unit	Rank/age
Respiratory sinus arrhythmia (RSA)	18.69	t/min	30.28 %

In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached 30.28 % of the theoretical maximum value of 100%.

Summary of test results: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 22.25 %
after 3 days of using the REGUMED Protector device: 25.33 %
after 8 days of using the REGUMED Protector device: 24.90 %
after 20 days of using the REGUMED Protector device: 30.28 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

4. Summary of all test results of the biophysical testing of the REGUMED Protector device using the biofeedback measurement system Stress Pilot Plus

Test person 1: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 31.18 %
after 5 days of using the REGUMED Protector device: 31.00 %
after 9 days of using the REGUMED Protector device: 33.77 %
after 14 days of using the REGUMED Protector device: 34.91 %
after 20 days of using the REGUMED Protector device: 41.03 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 2: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 17.32 %
after 4 days of using the REGUMED Protector device: 18.45 %
after 12 days of using the REGUMED Protector device: 32.95 %
after 20 days of using the REGUMED Protector device: 48.25 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 3: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 5.68%
after 4 days of using the REGUMED Protector device: 7.22 %
after 9 days of using the REGUMED Protector device: 9.10 %
after 15 days of using the REGUMED Protector device: 8.59 %
after 17 days of using the REGUMED Protector device: 13.88 %
after 20 days of using the REGUMED Protector device: 14.10 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 4: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 28.29 %
after 8 days of using the REGUMED Protector device: 38.80 %
after 20 days of using the REGUMED Protector device: 43.24 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 5: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 25.45 %
after 5 days of using the REGUMED Protector device: 26.31 %
after 10 days of using the REGUMED Protector device: 21.17 %
after 17 days of using the REGUMED Protector device: 22.12 %
after 28 days of using the REGUMED Protector device: 24.34 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to no permanent improvement in heart rate variability.

Test person 6: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 29.09 %
after 2 days of using the REGUMED Protector device: 30.38 %
after 5 days of using the REGUMED Protector device: 28.90 %
after 15 days of using the REGUMED Protector device: 32.08 %
after 28 days of using the REGUMED Protector device: 37.59 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 7: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 31.56 %
after 3 days of using the REGUMED Protector device: 34.61 %
after 8 days of using the REGUMED Protector device: 32.58 %
after 17 days of using the REGUMED Protector device: 36.10 %
after 20 days of using the REGUMED Protector device: 35.22 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 8: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 35.81 %
after 10 days of using the REGUMED Protector device: 24.11 %
after 20 days of using the REGUMED Protector device: 36.35 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to slight improvement in heart rate variability of this test person.

Test person 9: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without the REGUMED Protector device 5.65 %
after 3 days of using the REGUMED Protector device: 5.68 %
after 7 days of using the REGUMED Protector device : 5.85%
after 12 days of using the REGUMED Protector device: 8.39 %

after 16 days of using the REGUMED Protector device: 11.17 %
after 24 days of using the REGUMED Protector device: 14.38 %
after 28 days of using the REGUMED Protector device: 16.22 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

Test person 10: In this test situation and in this reference group, the ability of tested person to regulate heart rate and to adapt autonomic nervous system to the health burden of electrosmog and geopathogenic zones reached the following values of the theoretical maximum value of 100%.

without using the REGUMED Protector device: 22.25 %
after 3 days of using the REGUMED Protector device: 25.33 %
after 8 days of using the REGUMED Protector device: 24.90 %
after 20 days of using the REGUMED Protector device: 30.28 %

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of this test person. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance.

5. Summary of all test results of the biophysical testing of the REGUMED Protector device using the biofeedback measurement system Stress Pilot Plus

From the measurement results, it can be concluded that the use of the REGUMED Protector device leads to demonstrable improvement in heart rate variability of 80% of test persons. It has a positive effect on the heart circulation and helps the autonomic nervous system to maintain internal balance. The measured results show that the positive effect of the REGUMED Protector device increases with increasing duration of use.

After several days of adaptation, eight tested persons showed improvement of their ability to regulate heart rate and to adapt their autonomic nervous system to various electrosmog and geopathogenic zones pollution. The measured results were largely confirmed also by tested people who talked about their subjective perception of their body responding to the bioenergy information field of the REGUMED Protector device.

6. The REGUMED Protector device awarded by the IGEF certification seal

Both results gained by the IGEF research laboratory and results of biophysical testing confirm that using the REGUMED Protector device when exposed to harmful high frequency electromagnetic radiation, electrosmog and geopathogenic zones, leads to a demonstrable improvement in heart rate variability. It has a positive effect on the heart circulation.

Both results gained by the IGEF research laboratory and results of biophysical testing confirm that using the REGUMED Protector device when exposed to harmful high frequency electromagnetic radiation, electrosmog and geopathogenic zones, leads to a demonstrable improvement in heart rate variability. It has a positive effect on the heart circulation. and helps the autonomic nervous system to maintain internal balance.

This makes the REGUMED Protector device also suitable as a protective device when exposed to high frequency electromagnetic radiation, electrosmog and geopathogenic zones. Note that in case of illness, using the REGUMED Protector device does not replace medical care



The REGUMED Protector device has been awarded by the IGEF certification seal under a license agreement with Internationale Gesellschaft für Forschung Elektrosmog-IGEF company, governing conditions of the IGEF certification seal.

Dr. Sofia Maria Vergara
IGEF Testing and Research Laboratory

Dipl.-BW Wulf-Dietrich Rose
IGEF Certification Centre

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